



Looping Textiles into the Circular Economy

by

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for the

Recycling Market Development Center

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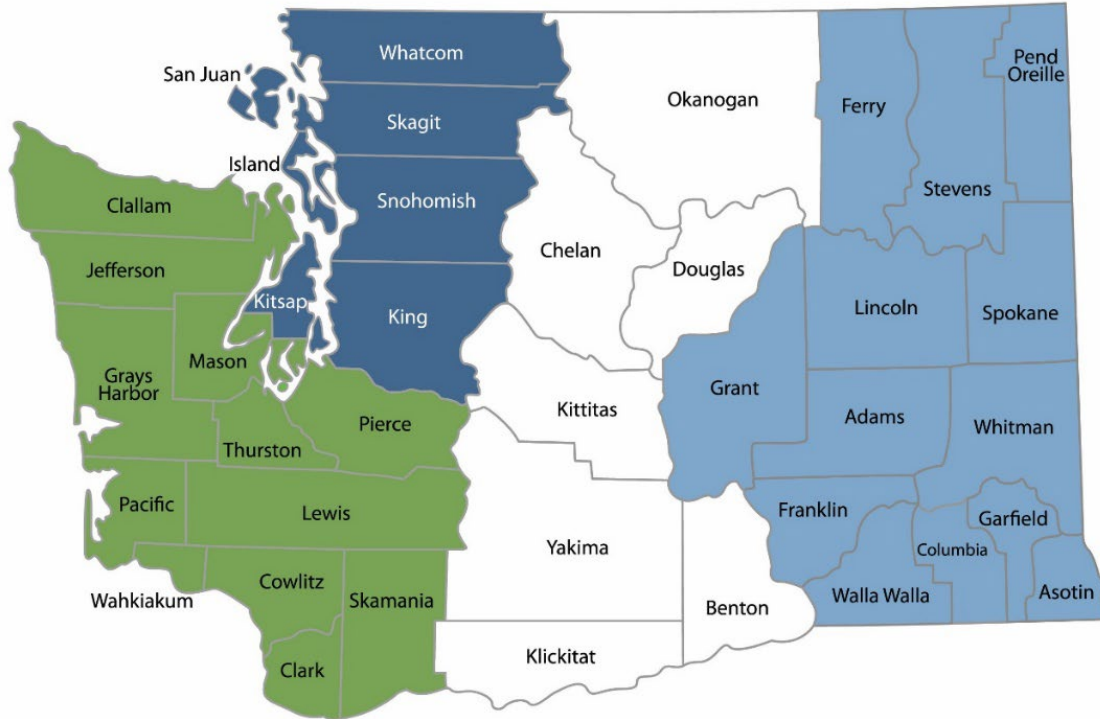
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Executive Summary

The Recycling Market Development Center (RMDC), a division within the Department of Ecology that works to advance circular economies, is looking to advance circularity in the textile industry in Washington. To assist these efforts, this report examines the current landscape and future opportunities for textile circularity. We used a mixed-methods approach that provides an overview of the textile industry, circularity, recycling processes, and the challenges and opportunities that are present in policy design, textile waste diversion, and workforce development. We performed ten semi-structured interviews with stakeholders across the public, private, and non-profit sectors and identified the following challenges:

- **Consumer awareness is low**, both of textile best recycling practices and of policies that drive circularity. This is compounded by **consumer convenience and accessibility challenges**.
- **Extended Producer Responsibility (EPR) legislation may not be the “silver bullet” solution to circularity**. Several other policy types are discussed as alternatives or complements to EPR. EPR also does not effectively address sustainable design, which is imperative in a circular textile system.
- **Technology limits and financial barriers** are an important aspect of any textile circularity policy and can prevent significant progress without provisions to address them.
- **Data scarcity on textile reuse, repair, and recycling**. Data is incomplete, out of date, and often part of trademarked business practices. It is also much more difficult to obtain reuse and repair data.
- **Lack of strong policy guardrails and quality benchmarks in the workforce** shifts safety, labor, and environmental risks onto vulnerable workers and communities.

Expert interviews also allowed us to identify opportunities, which we used to formulate our recommendations for RMDC, as well as an actionable toolkit to use to support textile circularity. We recommend that:

1. **RMDC prepares Washington for future textile policies and supports local policies**, such as incentivizing participation in second-hand markets or providing grants for community-driven reuse and repair initiatives. **Statewide textile infrastructure should be mapped, and an economic impact assessment should be performed**. This information would address data scarcity in the industry.
2. **RMDC to lead the design and coordination of community engagement and workforce development infrastructure**. RMDC should establish clear, consistent, and accessible public communication standards; expand convenient, equitably sited textile collection infrastructure; and connect community engagement to inclusive workforce development pathways.
3. **RMDC establishes a Multi-Stakeholder Textile Circularity Working Group** to collectively advance circular textile markets in Washington.

Circularity in the textile industry presents multiple challenges, but there are opportunities for RMDC to support and advance it in Washington. The findings and recommendations in this report provide a foundation for RMDC to build a more circular, accessible, and equitable textile circular economy in Washington.

Acknowledgements

This report would not exist without the support of our client, the Recycling Market Development Center within the Washington Department of Ecology. We are especially grateful to Mya Keyzers and Megan Davis, who guided our research direction and shared their expertise. Their deep knowledge of and passion for textile circularity, along with the extensive resources they provided, enabled us to produce a robust and comprehensive report. They also leveraged their professional network to connect us with textile industry experts, whose insights and perspectives make up the backbone of this report. We would also like to thank the entire RMDC team, who generously provided their thoughtful feedback on each draft of this report, as well as continued support throughout our research process.

We would also like to sincerely thank our interviewees for taking the time out of their busy schedules to discuss textile circularity with us. Our discussions were truly insightful, and each perspective was critical for deepening our understanding of the current textile landscape and developing actionable recommendations for the RMDC.

Finally, we would also like to thank our faculty advisor at the University of Washington Evans School of Public Policy and Governance, Dr. Kevin Werner. His support was incredibly valuable to our team, and he provided us with the skills and resources for a well-structured and professional research paper.

Positionality Statement

The authors of this report consist of a group of graduate students at the University of Washington, all receiving training in public policy and governance, and all are interested in research and work surrounding the broad field of environmental policy.

Amelia is a white woman from San Jose, California. She began her academic career with an associate's degree in business administration, but her lifelong passion for climate change motivated her to pursue a bachelor's degree in environmental studies and economics. Her interest in the tradeoffs and intersections between cost effectiveness and environmental effectiveness in policymaking led her to pursue a master's degree in public administration, where she focuses on environmental policy. Her current internship at Seattle Public Utilities in the Solid Waste Division further informs her knowledge of and passion for solid waste management.

Catherine is an Asian woman born in China; she was educated bilingually in both Mandarin Chinese and English, which allowed her to engage with the researched topics in both languages. Her academic background is in international studies, psychology, and public administration; her policy interests include environmental policy and internationally oriented sustainable development, which is relevant to the questions that this research project intends to explore. Her professional experience is rooted in media management and strategies, along with sustainability consulting, which she draws on in completing this project.

Emilio (he/him) is a Mexican-American man from Chicago, Illinois, with a background in retail and public-facing work. These experiences inform his understanding of how policy decisions affect people in their everyday lives, particularly those navigating economic and institutional constraints. His academic training in public policy and his internship experience at a public utility shape an approach to policy analysis that emphasizes equity and practical implementation. His policy interests include climate and environmental policy.

The authors of this report are a diverse group of individuals. Though none of us are native to Washington, we are united by our interest in exploring, understanding, and advancing the state's circular textile economy. While we derived the information in this report from various resources, we recognize that our backgrounds, identities, and privileges may have influenced the content. As academic researchers and learners of the circular textile economy, we acknowledge our position and the accompanying bias. We invite feedback to continuously improve our understanding and better capture the breadth and depth of the topic.

Chapter 1. Introduction

1.1 Research Context and Background

The history of textiles is almost as long as the history of humans. From the simplest ropes and nets to luxurious couture clothing and carpets, textiles are an essential part of human life and exist in various forms. Textile production is one of the world's biggest and most important industries. However, if not managed correctly, it can also take a toll on our shared environment. Textile production is one of the world's most polluting industries, emitting 1.2 billion tonnes of CO₂ equivalent (CO₂e) annually, accounting for approximately 5% of total worldwide emissions ("The Price of Fast Fashion," 2018). The garment industry uses more than 60% of all textiles. "Textile waste" refers to any undesired item made primarily of fibers or fabric, whether natural (e.g., cotton, wool) or synthetic (e.g., polyester, nylon). It is generally divided into two categories: Pre-consumer waste includes offcuts and scraps from cutting and sewing, production defects, unsold inventory, damaged stock, and fabric rolls that never reach consumers. Post-consumer waste refers to products abandoned after usage, including clothing, shoes, linens, soft furnishings, et cetera.

According to the Environmental Protection Agency (EPA), textiles are one of the fastest-growing types of waste in the United States. The EPA estimates that in 2018, 11.3 million tons of textiles were landfilled, representing 7.7% of all municipal solid waste (MSW) that year (US EPA, 2017). In December 2024, the Government Accountability Office (GAO) released the first federal report on textile waste. The report indicated that the volume of U.S. textile waste increased by more than 50% between 2000 and 2018 (U.S. Government Accountability Office, 2024). The GAO linked this growing trend with fast fashion and the lack of coordinated collection and sorting systems for textile waste. The report recommended that Congress take action to establish federal-level guidance and systems to address textile waste and promote textile recycling. This is because textiles that end up in landfills contribute to greenhouse gas emissions, microplastic pollution, and the leaching of contaminants into soil and water as they decompose.

This pattern is not unique to the U.S., as global textile waste is also growing at an alarming rate. This trend reflects the broader patterns of overproduction and shorter product lifespans. A 2025 report by Boston Consulting Group indicates that global textile waste reached 120 million metric tons in 2024, with 80% of discarded clothing and textiles landfilled or incinerated, only 12% reused, and less than 1% recycled into new fiber materials (Sajdeh et al., n.d.). Without systematic changes, BCG projects that global textile waste could exceed 150 million tons per year by 2030; statistically, this figure can be roughly translated into 82 lb. of textile waste per year per an average American (US EPA, 2017).

The prevalence of fast fashion and a predominately linear recycling system contribute to increasing volumes of production waste and the lack of effective recycling. Finished clothing is composed of almost entirely (98%) fiber, yet less than 1% is recycled into new textiles because fibers are small and exposed to rough processes during recycling, which degrades their quality (Chen et al., 2021). Linear textile

systems, designed for short-term use and rapid consumption, typically follow a “take-make-use-dispose” model.

In contrast, circular textile systems aim to keep products in use for as long as possible by extending their lifecycles through intentional design choices, reuse, repair, and high-quality recycling. Exporting used textiles to other countries does not resolve this crisis; low-value garments often overwhelm receiving markets and end up dumped or burned in places like Ghana and Chile’s Atacama Desert, shifting environmental and social burdens onto communities with fewer resources to manage the waste. Moreover, a growing number of countries, such as China, have begun implementing national-level policies that restrict or ban the import of solid waste, including textiles, from overconsuming countries and regions such as the U.S. and Europe. Taken together, these phenomena emphasize the necessity for stakeholders across the textile supply chain to transition from a linear to a circular economy.

The absence of federal action has created a clear and well-documented case for state-level intervention, leaving a policy vacuum. As a result, the burden of addressing textile waste has increasingly shifted to states and local communities. While a bottom-up approach can offer timely responsiveness to local conditions, infrastructure needs, and labor markets, it is most effective when complemented by coordinated federal leadership. State and local governments are well positioned to tailor solutions to regional economic and industry needs, but broader alignment can help scale impact and ensure consistency across markets. Across the U.S., states have begun exploring localized solutions within the textile sector, gradually working to rebuild recycling infrastructure. However, capacity remains limited and fragmented: markets are still dominated by charitable thrift, and most post-consumer textiles continue to be landfilled, incinerated, or exported to countries with weaker environmental and labor protection protocols and regulations.

Domestically, policy responses are beginning to emerge. California became the first U.S. state to enact an Extended Producer Responsibility (EPR) law for textiles with its Responsible Textile Recovery Act of 2024 (SB 707). The bill requires producers to form Producer Responsibility Organizations (PROs) and fund collection, sorting, repair, and recycling infrastructure (*SB 707- CHAPTERED*, n.d.). The California law also prohibits point-of-sale fees and is intended to build stable funding streams for end-of-life infrastructure. Following California, Washington introduced its own textile EPR legislation, House Bill 1420, which would have required producers to register with a PRO by Jan 1, 2027, and included provisions for eco-modulated fees and minimum wage requirements for all program contractors (Washington State Legislature, 2026b). However, despite being reintroduced for consideration in the 2026 regular session, Washington’s textile EPR bill did not advance out of committee and therefore did not pass (Washington State Legislature, 2026a).

Internationally, the regulatory environment taking shape in the European Union is more ambitious. The EU’s Waste Framework Directive (WFD) was first adopted in 2021 and later formally amended to include the first EU-wide legal framework for textile EPR, requiring Member States to have separate textile waste collection in place from January 2025 and fully operational national textile EPR schemes by 2027 (Lüttin, 2026). These obligations apply to companies as soon as a Member State activates its EPR system. Micro-enterprises with fewer than ten employees and an annual turnover of less than €2 million have an

extended grace period of 12 months. (Barsony, 2026). Since then, countries such as France, the Netherlands, Hungary, and Latvia have approved respective EPR laws, while others like Italy and Spain have submitted proposals (Lüttin, 2026). These developments globally signal a general shift toward producer responsibility and circularity efforts in the textile sector, with implications for trade, manufacturing, and employment in both export-oriented consumer markets and importing and processing countries.

For Washington State, the rapidly shifting policy landscape for textile policy creates a critical opportunity for our state to shape how textiles are recycled, reused, and valued within the state and across the broader Pacific Northwest. Washington is in a position to design policy systems that divert waste and support the development of high-quality circular economy infrastructure. This research thus investigates the structure of textile circularity in Washington to minimize waste and facilitate a fair transition for the workforce involved.

1.2 Project Scope and Approach

The Washington Recycling Market Development Center (RMDC), created in 2019 under Chapter 70A.240 RCW, works to advance circular economies in Washington by developing, supporting, and promoting recycling markets. The Evans School of Public Policy & Governance Student Consulting Lab at the University of Washington partnered with the RMDC as an external consulting team (“the consultants”) to help develop an evidence-based approach to circular textile markets in Washington. The RMDC was established to strengthen Washington’s recycling system by growing domestic markets for recyclable materials and has identified textiles as a priority focus area, conducting outreach, promoting public awareness, and building cross-sector partnerships in the textile space.

This report examines the current landscape and future opportunities for textile circularity in Washington. The research team uses a mixed-methods approach that includes a broad survey of the domestic and international policy landscape; semi-structured interviews with stakeholders across the public, private, and non-profit sectors; and analysis of the economic, labor, and infrastructure conditions specific to Washington. This report's analysis focuses on outcomes within Washington, despite the global impacts of textile production, trade, and disposal. This includes labor conditions, policy design, and waste diversion strategies relating to the production, exchange, and end-of-life management of textile wastes. We discuss upstream and global supply chains for context, but they do not form the primary focus of the recommendations.

This report intends to serve as a resource not only for the RMDC but also for Washington policymakers, industry stakeholders, communities at large, and other actors interested in advancing a more circular and just textile sector. It is our aim to provide actionable, responsible, and practical recommendations grounded in Washington’s specific conditions and needs.

1.3 Research Question

This report is guided by the central research question:

What policies can Washington State adopt to most effectively advance resilient, sustainable, and equitable circular textile markets while supporting high-quality workforce outcomes?

To further define and operationalize this question, the consultants will examine the following sub-questions:

1. What benchmarks and performance indicators can Ecology use to assess the effectiveness of relevant textile policies?
2. What policy tools and best practices from Washington and other jurisdictions are most effective in advancing textile reuse, repair, and recycling?
3. How do policy incentives shape employer labor practices, and what safeguards or accountability mechanisms are needed to prevent inequitable labor outcomes?

These sub-questions reflect the RMDC's interest in policy approaches that go beyond end-of-life management. As articulated during client consultations, success in Washington is not defined solely by waste diversion rates but encompasses GHG emissions reductions, regional workforce and economic development under equitable market mechanisms, local material circulation, sustainable and long-term job creation with fair wages, and the protection of vulnerable communities and workers.

1.4 Research Objectives

The following have been identified as research objectives for this report:

- Textile Waste Diversion Goals: This report defines the circular economy, provides an overview of textile recycling practices, and identifies barriers and opportunities to develop circularity through a review of case studies.
- Policy Levers: This report reviews and analyzes several policy methods and strategies that can be utilized to incentivize circularity in the textile industry, as well as their potential effects on the textile industry in Washington.
- Equitable Workforce Development: This report offers a comprehensive overview of the current employment landscape in the textile industry by identifying key equity and access barriers and currently available frameworks and practices. These can inform the design of an equitable workforce development infrastructure for Washington's circular textile system.

1.5 Report Structure

Chapter I Introduction: This chapter provides context and background for the policy problem identified by RMDC and student consultants and defines the research question and research objectives of this report.

Chapter II Literature Review: Provides a comprehensive literature review of the policy tools, textile waste diversion goals, and equitable workforce development goals in Washington.

Chapter III Research Methods: The main data collection tool used in this research was semi-structured interviews of government officials, industry experts, and small business owners involved in or knowledgeable about the textile industry. This chapter outlines the methods used to conduct each interview, which were tailored to each expert to obtain their unique perspectives.

Chapter IV Data Analysis: This chapter analyzes the interviews conducted via the methods outlined in the previous chapter. Provides deep analysis of interviews and identifies main themes, barriers, incentives, and benchmarks for successful implementation of policy tools reviewed in this report.

Chapter V Recommendations and Analysis: Using the analysis in the previous chapter, this report synthesizes recommendations for RMDC to implement in their interest to advance circularity in the textile industry in Washington.

Chapter 2. Literature Review

2.1 Overview

Solid waste management reform and textile EPR legislation are gaining momentum nationwide, with jurisdictions including Washington expanding their textile recovery networks and shifting toward circularity. Internationally, many nations (especially the European Union) far surpass domestic textile recycling policy, from mandatory textile collection to nationwide EPR laws. Technological innovations such as chemical recycling, fiber-to-fiber systems, bio-based textiles, and emerging recovery networks are rapidly expanding the textile circularity landscape, outpacing current regulatory and policy frameworks. Recent uncertainty around U.S. tariffs is further disrupting the textile industry, supply chains, and consumers both nationally and in Washington.

The textile industry generates waste during material extraction, the production process, and at the end of a textile's useful life (Larney & Van Aardt, 2010). Generally, textiles follow a linear economic model, in which textiles are produced, consumed, and discarded at a rapid rate. This report provides an overview of the circular economy in the context of the textile industry, which is complex and spans multiple points in an international supply chain. Thoughtful consumer behavior informed by knowledge of environmental benefits of textile recycling, paired with green design practices, is only part of textile waste diversion goals. Textile recycling, reuse, repair, and collaboration across sectors are also needed to promote an equitable circular textile economy. Case studies reviewed in this section help identify drivers and barriers to circularity in the textile industry.

In this report, equitable employment in circular textile systems refers to the creation and improvement of jobs that are safe, fairly compensated, and accessible to workers who have historically faced barriers to quality employment opportunities and to the fair distribution of the benefits and burdens of circular textile activities across diverse Washington communities. Workforce development, therefore, sits at the center of a “just transition” approach, which entails inclusive policies and frameworks that will not only expand the labor market and support economic growth but also ensure this transition reaches and benefits marginalized and disadvantaged communities and individuals. The literature reviewed in this section intends to provide a comprehensive overview of the current employment landscape, identify key equity and access barriers, and describe currently available frameworks and practices that can inform the design of an equitable workforce development infrastructure for Washington's circular textile system.

2.2 Textile Waste Diversion Goals

2.2.1 Textile and Textile Waste Defined

Textiles are flexible materials made from spinning fibers into threads, which are then twisted into yarns and/or woven into fabrics (Schumacher & Forster, 2022). Fibers can be naturally or chemically derived,

and fabrics can be woven from a single type of fiber, or blends of multiple fibers (Schumacher & Forster, 2022). The term “textile” refers to clothing, outdoor equipment, upholstery, bedding, linens, towels, and stuffed animals (Schumacher & Forster, 2022). Textiles can be further categorized as pre- and post-consumer textiles. Pre-consumer textiles, also known as post-industrial, are those that are never consumed by the public, and include items like scraps of fabric, clippings, and overstock - also known as deadstock and are considered surplus or unwanted fabric (Schumacher & Forster, 2022, Hawley et al., 2005). Post-consumer fabrics, as the name suggests, are any fabrics that have been purchased or used by a consumer (Hawley et al., 2005).

Textile waste can be generated in three main ways: through fiber, yarn, and fabric processing; manufacture of sewn products; or discarded at the end of its useful life (Hawley et al., 2005). Textiles are a fast-growing material in landfills - despite being largely recyclable, 75-80% of textiles end up in landfills, with only 15% being reused or recycled (Wagaw & Babu, 2023, U.S. Environmental Protection Agency, n.d.). Additionally, the European Commission estimates that only 1% of textiles are recycled into new clothes (European Commission, n.d.).

2.2.2 The Circular Economy

This section will provide an overview of the circular economy, the textile industry and supply chain, and case studies of several countries or municipalities with different strategies of implementing circularity in their textile markets.

The Circular Economy in the Textile Industry

To understand the circular economy model, we first need to understand the linear economic model. In the linear economic model, also known as the “take-make-use-discard” model, resources are extracted to make products that end up as waste after they are used. Typically, these products are used before their full potential has been realized. Resources used in this model are finite, while global production and economic development require increasing amounts to be extracted. Ultimately, there exists a point at which all our natural resources will have been depleted (Ellen MacArthur Foundation, 2023). In the context of the textile linear economy, the production process generates waste, consumption occurs globally as textiles are exported, then they generate waste after use. Population growth and increasing demand for clothing is causing consumption and landfill of textiles to grow to alarming rates.

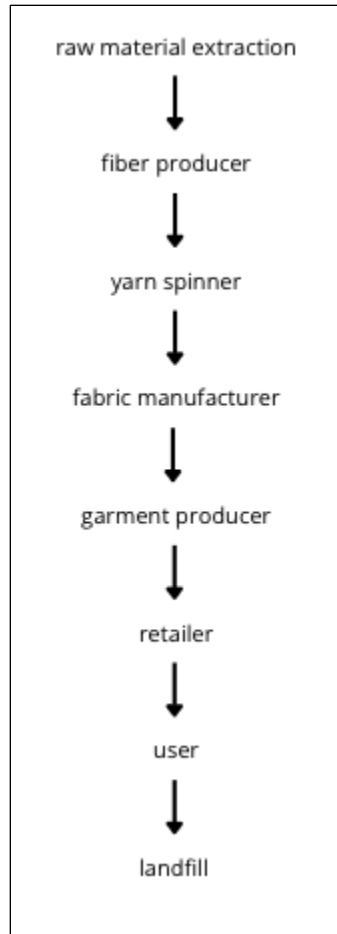


Figure 1: Textile Linear Economy Diagram. Based off of Sandin & Peters (2018).

In contrast, a circular economy is a system in which materials never become waste - instead, products and materials are kept in circulation for as long as possible through processes like reuse, repair, and recycling. (Ellen MacArthur Foundation, 2019)

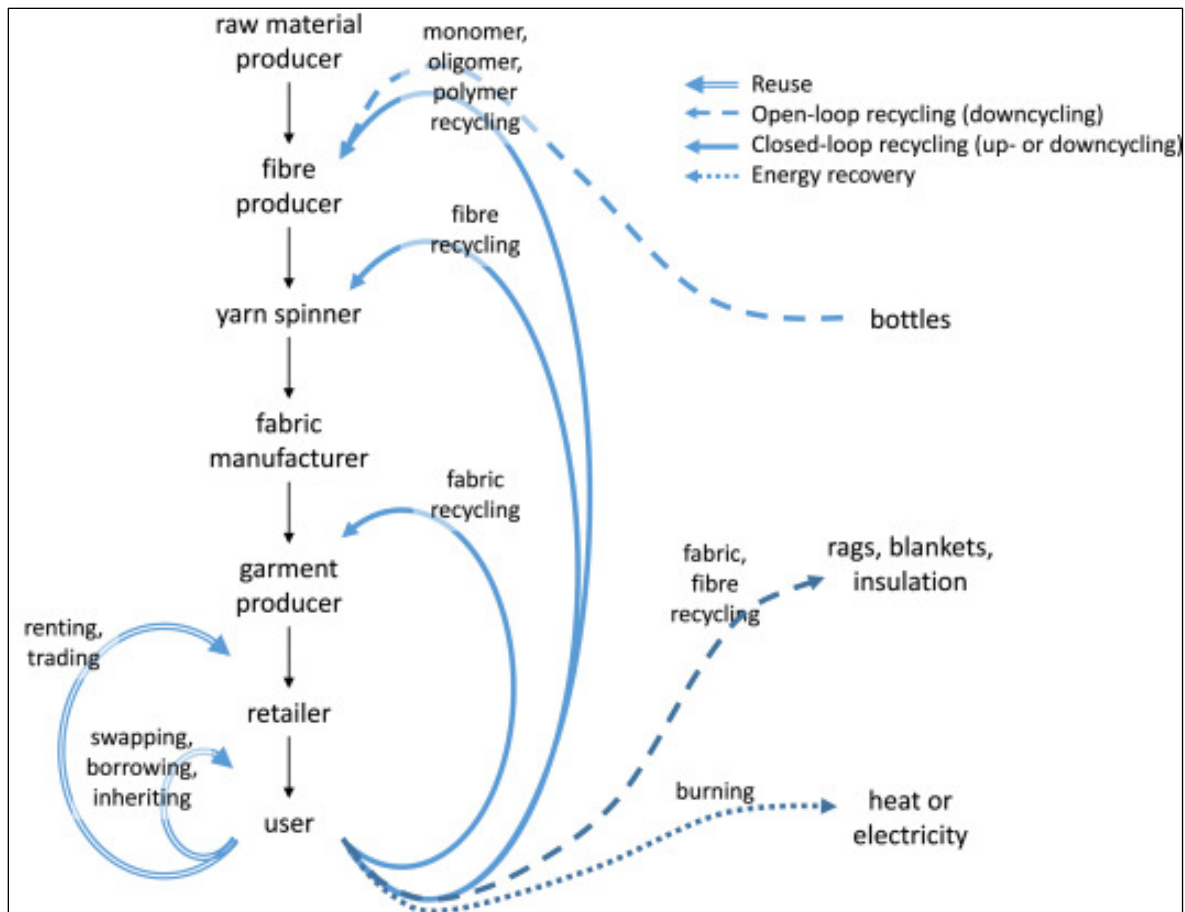


Figure 2: Textile Circular Economy Diagram (Sandin & Peters, 2018).

In the textile supply chain, fabrics, fiber, and other materials used in textile production are kept in circulation for as long as possible. Inputs to the system, noted here as “raw materials,” include naturally derived fibers such as silk, wool, cotton, and plant-based fibers, as well as synthetically made fibers such as acrylic, nylon, polyester, or spandex (Schumacher & Forster, 2022). The textile circular economy diagram also shows used plastic bottles as an input to the system, as they can be downcycled into monomers and polymers that are used in synthetic fiber production. At the user level, garments and other textiles can be traded, borrowed, resold, donated, and/or inherited, extending their useful life. Depending on the quality of the used textile, it can then be recycled into fabric or fiber; alternatively, textiles can also be downcycled into rags, blankets, or insulation. Otherwise, textiles are landfilled or incinerated - though Sandin and Peters (2018) note that heat or electricity could be captured during this process. Ultimately, in the textile circular economy, very little value is wasted.

According to the Ellen MacArthur Foundation, the three main principles of a circular economy are eliminating waste and pollution, circulating products and materials at their highest value, and regenerating nature (Ellen MacArthur Foundation, 2019). By redesigning items to make them easier to recycle at their highest value, we decrease our reliance on material extraction from nature and instead

focus on regeneration. The circular economy model prevents waste from occurring in the first place, though it should be noted that some waste is inevitable.

Within the circular economy, processes can be open- or closed-loop. In a closed-loop system, materials are recovered from used products and used in the production of that same product (Wagaw & Babu, 2023). In an open-loop system, materials are still recovered but are used in the production of other items (Wagaw & Babu, 2023). We can also classify recycled products as either up-cycled or down-cycled. Up-cycled products are higher quality than the original product, while down-cycled products are lower quality than the original products (Wagaw & Babu, 2023). In the context of the textile circular economy, recycled textile processes tend to be more open loop (Parnell et al., 2025), and recycled textile products are often lower in quality as the recycling process can shorten fibers, leading to a less durable fabric (Parnell et al., 2025). According to Sandin & Peters, 2018, there is strong evidence that reuse and recycling of textiles reduce environmental impact compared to landfilling and incineration.

Obviously, the textile supply chain cannot transform overnight from a linear economy to a circular economy. In the intermediary, policy tools and levers, such as EPR, sustainable design, waste bans, and others discussed in the policy section below, are intended to incentivize upstream changes, designing textiles to be more durable and less likely to be landfilled.

2.2.3 The Spectrum of the Textile Waste System - Micro to Macro

An important aspect of the textile circular economy is that it has multiple layers and different considerations at each point in the supply chain (Hawley, 2000). Best practices of textile recycling happen at the consumer, producer, and recycling levels.

- Consumers - The people who wear or use textiles. In order to work towards a more circular model, consumers can rethink their purchases and avoid fast fashion, increase their knowledge of reuse/repair/recycling, and participate in thrift and resale markets (Hawley, 2000).
- Producers - Producers design or produce textiles. Creating and designing for durability, reuse, and recyclability is an important aspect of the circular economy as it increases the useful life of textiles. Producers can also develop repair or take-back programs, where used garments or other textiles are accepted to be repaired or recycled.
- Recycler - A recycler can mean anything between those who mechanically or chemically recycle textiles, to those who up-cycle or down-cycle to other products. This involves equitable supply chain management and job creation, as well as the development of more efficient recycling processes.

Consumer Level: Fast Fashion and Overconsumption

Fast fashion is a business model that offers fashionable clothes at affordable prices, and is characterized by speedy production, consumption, and disposal (Gomes de Oliveira et al., 2022, Niinimäki et al., 2020). The fast fashion business model relies on cost-efficient manufacturing, which can lead to cheap, low-quality materials used; consequently, the useful life of fast-fashion garments is short (Niinimäki et al.,

2020). Short lifespans of clothing spurs disposal and encourages impulsive consumption, often based on quick trends (Niinimäki et al., 2020). Some studies estimate that the fashion industry overall contributes between 2-8% and even up to 10% of global GHG emissions (Mizrachi & Sharon, 2025), and uses 79 trillion liters of water per year, with cotton production being particularly water intensive (Niinimäki et al., 2020). Some studies found that the fashion and textile industry is the second largest industrial polluter, second only to the oil sector (Nguyen et al., 2026). On top of the extreme environmental costs, increased consumption and disposal patterns disproportionately impact low- and middle-income countries (Bick et al., 2018). Compared to the year 2000, clothing companies are now estimated to produce twice as much clothing as they had previously (Niinimäki et al., 2020).

Many studies have reviewed consumer behavior patterns regarding sustainability in the fashion industry. Consumers are increasingly aware of the environmental impact of the fashion industry, and many have turned to the second-hand or thrift market (Mizrachi & Sharon, 2025). However, as Mizrachi & Sharon (2025) found, despite increased consumer knowledge, consumers do not decrease their consumption of new clothing when purchasing secondhand clothing - instead, consumption increases in both markets. Mizrachi & Sharon (2025) discuss possible causes, like the affordability of secondhand clothing driving increased consumption or the moral virtuousness of thrifting, where consumers justify their increased consumption because they are preventing disposal of textiles (Mizrachi & Sharon, 2025). The Stockholm Research Institute recommends strategies to incentivize reduced clothing consumption, including outreach and education for consumers (Broekhoff & Ghosh, 2024).

Producer Level: Design, Durability, and Supply Chain Management

The supply side of the textile market is global and fragmented (Schumacher & Forster, 2022). Studies have shown that textile designers can control up to 80% of a product's environmental impact through creative design that promotes sustainability (D'Itria & Colombi, 2022). But, with so much variation in firm size, production style, and lack of collaboration between firms, the transition to the circular economy will be extremely challenging (Schumacher & Forster, 2022). Rese et al. (2022) reviewed success factors in sustainable textile production, and found that customer fulfillment of expectations, compliance with regulation, and green creativity were among the three most important factors, showing that movement towards a circular textile economy is complex and involves internal production and external actions. A discussion of drivers and limitations to the circular economy is below, in section 4.

Textile Recycling: An Overview of Processes

This section provides an outline of the process to recycle textiles. The process of textile recycling involves the breakdown of textile products into fabric, fiber, or polymers through mechanical, thermal, chemical, or combined means (Wagaw & Babu, 2023). Textile recycling is beneficial for the environment as it reduces virgin fiber production and reliance on resource extraction (Juanga-Labayen et al., 2022). Contamination can be an issue, as it is difficult to identify fiber types and blends, especially since preliminary sorting is performed manually (Schumacher & Forster, 2022).

Parnell et al. (2025) provide an excellent overview of the recycling process. Textiles are first sorted by fiber type and color. Textiles are then separated from their components, such as zippers, buttons, or

rivets, as they can damage recycling equipment. Afterwards, fabric, usually pre-consumer deadstock, can be sold to manufacturers who produce new textiles in a closed loop process. Alternatively, fabric can be mechanically reduced into fibers through shredding, cutting and tearing processes. The fibers can then be spun into new threads or yarns and woven into new fabrics. However, as Parnell et al. (2025) note, there are several limitations to the mechanical recycling process. Fabric recycling is limited, post-consumer fabric recycling especially so, due to several unknown factors such as wear and tear, age, finishes or dyes, and material diversity (Juanga-Labayen et al., 2022, Johnson et al., 2020). Fiber recycling is limited in that each round of tearing, cutting and shredding shortens the length of the fibers, which reduces the strength of the thread and lowers the durability of the textile product. Recycled fibers must be blended with brand new or virgin fibers to augment their strength and durability when making new textile products (Damayanti et al., 2021). In an open-loop process, shortened fibers can be used as insulation or stuffing for products like mattresses (Damayanti et al., 2021), layered and heat-bonded to create mats or bags (Shahid et al., 2025), or melted and manipulated to make plastic netting (Parnell et al., 2025).

Sorted textiles that are synthetically derived can be broken down chemically into monomers, which are the molecules that form chains called polymers. Recycled polymers can be used in the manufacture of new fibers and textiles, similarly to virgin polymers. Parnell et al., (2025) describe several techniques for chemical recycling of textiles, and note that textiles recycled this way can be structurally the same as virgin materials, which can lead to uncertainties in recycled content at the manufacturing level. There are other considerations in chemical recycling, such as safe workforce practices, as dangerous chemicals are used throughout the process. Environmental concerns exist as well, as the process to recycle polyester can create microfibers and microplastics that pollute waterways. Several studies note that much of textile recycling is limited because textile recycling machinery is new or under-researched, hard to scale, and end-markets are difficult to develop (Parnell et al., 2025, Damayanti et al., 2021).

Equity

An important aspect of the textile circular economy is equity. Outsourcing production to low- and middle-income countries keeps prices low for consumers, at the expense of low-wage workers in China and Bangladesh (Bick et al., 2018). Through production, manufacturing, assembling, and disposal, Bick et al., (2018) discuss the treatment of workers and environmental hazards of the textile supply chain. In manufacture and production, the materials used can be harmful to the environment - i.e. pesticides or textile dyes that mix with water and are discharged into local water systems, as well as microplastics (Khan et al., 2023). At end of life, textiles not sent to landfills are exported to low- and middle-income countries to be manually sorted for recycling, while sorted clothing that is unsold in the secondary market becomes solid waste, leading to further environmental health hazards from pollution on land or in waterways (Bick et al., 2018).

2.2.4 Case Studies: the Textile Circular Economy

This section provides an overview of the textile recycling industry globally, and efforts to improve circularity. We acknowledge that these case studies occur in places dissimilar to Washington State; however, the obstacles and incentives are helpful to understand and used to inform our research into best practices and barriers to the circular textile economy.

South Africa

Larney & Van Aardt, (2010) reviewed the textile industry in South Africa and surveyed manufacturers to determine their attitudes on recycling and their current practices. They found that a majority of apparel manufacturers in South Africa disposed of pre-consumer textile waste, such as cutting waste and thread waste, in the landfill, as it was commonly the cheapest disposal option. 42.4% practiced recycling; however, the most common recycled item was cardboard. Of those who did not landfill their fabric cutting waste, 23.4% sold their cutting waste to other companies that used the waste in their production process, 7.8% processed the waste within their own production process, 7.8% donated to charity, and 20.3% sold their waste to companies specializing in recycling. While many manufacturers were willing to use recycled materials in production, in practice, many did not, citing financial feasibility. Manufacturer attitudes of recycling were found to be positive, but a lack of equipment, technology, and available material to recycle were the biggest barriers to increasing the recycling rate of textile waste. Larney & Van Aardt, (2010) also note that consumers, who were found to be unaware of the benefits of recycled textiles, had low demand for recycled products. The authors concluded that further development of the recycling markets was needed in South Africa.

China

Textile production makes up 7% of China's Gross Domestic Product (GDP) (Yun Yang & Yin Wang, 2020) and is the leading exporter of textiles globally (Juanga-Labayen et al., 2022). Authors Yun Yang and Yin Wang (2020) examine how textile manufacturing in China can improve sustainability through economic, social, and environmental considerations. Authors measured several criteria under the three main pillars, and found that economic incentives, such as investments in research and development, were the most powerful tool to encourage manufacturers to improve their sustainability. Notably last in significance under the social criteria were improvements to the health and safety of employees, and last under environmental criteria was collaboration, which is in contrast to other case studies below.

Taiwan

In a study conducted in Taiwan that evaluated obstacles to a circular textile economy, authors Huang et al., (2021) found that low consumer demand for recycled textiles, a lack of successful circular business models, challenge of collaborative innovation among supply chain partners, a lack of high-quality recycling materials, and high costs with low economic benefits in the short term as the main barriers to manufacturers. These barriers are in contrast with the recent trend of rising consumer knowledge of environmental benefits of textile recycling. Similarly to South Africa, and noted above as a limitation in

textile recycling, there is simply a lack of materials suitable for recycling. Taiwan, per the Taiwan Textile Federation, is researching and developing sustainable materials; however, further research is needed to determine strategies to scale the recyclability of post-consumer textiles beyond current levels. Additionally, as with the case study in China, a lack of collaboration was identified as a barrier to sustainability.

Vietnam

In Vietnam, textiles make up 18% of export revenue and the textile manufacturing industry employs 1.6 million people (Nguyen et al., 2026). The industry is largely made up of small to medium sized enterprises, which are constrained by lack of capital access and capacity of technology that hinders sustainable development. Authors Nguyen et al., (2026) performed a study that evaluated barriers to the textile circular economy. They interviewed small and medium manufacturers and other experts in Vietnam and found that the drivers of circular development were leadership commitment and business model innovation. The authors found that firm leaders should be committed to educating internally about sustainability, the circular economy, and technological limitations. Firm leaders should also encourage creative innovation - using deadstock fabric to cut down on new material usage, shifting or adapting to a repair or rental business model to discourage disposal of textiles, and developing upcycling and open-loop recycling practices. Nguyen et al., (2026) emphasize a strong bottom-up and top-down approach - echoing Hawley (2000), who analyzed the textile supply chain at a macro to micro level.

Nguyen et al. (2026) also identify four main barriers to a circular economy - the first of which is financial barriers, mirroring other case studies in this section. Investments into circular economies are expensive and require strong commitment from manufacturers to recyclers alike. Secondly, the authors find that weak regulations, which are regulations that are unclear or hard to enforce, as a barrier to circularity. Similarly to South Africa and China, authors find that there is little consumer demand for recycled textiles, though the authors note that this demand is specifically driven by an aversion to paying a “premium” for textile products that are circular. Finally, low stakeholder collaboration and limited transparency were identified as barriers. Unlike in China, but similar to Taiwan, authors recommend that additional collaboration between manufacturers as well as other stakeholders is key to developing textile sustainability.

Summary

Of the case studies examined here, there are a variety of barriers to increasing circularity in the textile industry. The most common were low consumer demand for recycled fabrics, the high costs of investing in recycling equipment or purchasing recycled fabrics for production, and a lack of suitable materials to be recycled or used after recycling. These case studies highlight the fact that circularity in the textile industry is complex, and solutions to support and develop circular textile markets will not be one-size-fits-all. These case studies also highlight the need for further research and discussion about developing circular textile markets.

2.3 EPR and Policy

2.3.1 Around the U.S.

Several states have enacted or are currently pursuing EPR legislation. As policy shifts state by state, recycling infrastructure and networks gradually reinforce a culture of circularity by both businesses and consumers.

California

In 2024, California became the first state to enact textile EPR law with the passage of the Responsible Textile Recovery Act (RTRA). Like many EPR laws, it creates a PRO to represent textile producers and mandates the PRO to create plans for recycling, reuse, and repair. The law mandates a statewide collection infrastructure for textiles and creates a producer fee structure to fund the entire system. The law is currently in the planning process and will be fully implemented by July 2028 (SB 707- CHAPTERED, n.d.).

After California's Department of Resources Recycling and Recovery (known as CalRecycle) announced the selection of Landbell USA as the program's PRO in late February 2026, the American Apparel & Footwear Association (AAFA) filed a petition to the California Superior Court requesting the court to reverse the decision. AAFA claims that the selection of Landbell USA as the PRO is unlawful because the RTRA specifically states that the PRO must be both formed by producers and hold 501(c)(3) nonprofit status; AAFA contests that Landbell USA fails to meet both requirements. Landbell USA is a subsidiary of the international EPR service provider Landbell Group, whose companies operate in 59 countries historically specializing in waste streams for batteries, e-waste, and packaging.

Curbside Collection

Municipal curbside textile collection is being piloted by WM in Troutdale, Oregon and Albany, California (WM 2026; Albany 2026). In addition, over 50 municipalities in Massachusetts offer curbside textile collection programs through various partners such as Helpsy. Such municipal programs may be slow to scale up, but they indicate that both regional collectors and national haulers are thinking proactively about curbside collection in the U.S.

Massachusetts

In 2022, Massachusetts banned textiles from the garbage stream, encouraging residents to utilize a "Beyond the Bin" recycling directory to find locations to take their items (Massachusetts Department of Environmental Protection, n.d.). Two years after the ban, the Massachusetts Department of Environment (MassDEP) reported that 50,869 tons of textiles were recovered by 18 vendors, a 9% increase from 2023 (Massachusetts Textile Recovery 2024 Textile Data Update Fact Sheet, 2025). Despite MassDEP recently considering a variety of EPR approaches for several product categories, there

is no current textile EPR law being advanced in the state. With a textile disposal ban in place without EPR, the responsibility falls onto charity thrift networks, private textile collectors, and export markets.

Washington

In Washington state, some existing laws and climate action plans already indirectly promote circular thinking. The Climate Commitment Act (CCA) of 2021 established a statewide cap-and-invest program, creating emissions allowances to be purchased and traded by large emitters. The revenue generated from the sale of these allowances is re-invested in projects that help Washington meet GHG emissions limits and climate targets. Several projects that received CCA funding in 2025 were local or county governments receiving funding for methane emissions monitoring systems at landfills (Ecology, 2025b).

The Healthy Environment for All (HEAL) Act, also passed in 2021, is Washington's comprehensive environmental justice framework. The law authorizes Ecology to include environmental justice into strategic plans and budget processes, conduct environmental justice assessments, and develop metrics on key goals (Ecology, n.d.-b).

A November 2025 environmental justice assessment on reducing per- and polyfluoroalkyl substances (PFAS, colloquially known as "forever chemicals") exposure recognizes the presence of PFAS in several product categories, including outdoor apparel, athletic wear, hats, gloves, and everyday clothing. PFAS are commonly added to such products to make them water-resistant and stain-resistant. The assessment identifies "workers who manufacture apparel from textiles containing PFAS, who may be exposed during product construction" as a group that would benefit from restricting the use of PFAS (Ecology, 2025a). The sale of new carpets and rugs containing PFAS was banned effective January 1, 2025; manufacturers must report intentionally added PFAS to outdoor apparel "intended for extreme and extended use" as of January 1 2026; and the sale of other apparel containing intentionally added PFAS will be restricted beginning January 2027 (Ecology, n.d.-a)

As mentioned in Section 1.1 - Research Context: HB 1420, titled "Establishing producer responsibility for textiles", was introduced in the Washington House of Representatives by Representative Kristine Reeves in January 2025. The bill would have made Washington the second state, after California, to adopt a statewide system for managing textile waste and holding textile producers responsible for their products' lifespans. After facing hurdles in the Legislature, an amended version of the bill was proposed in the 2026 regular session. The scaled-back version called for an implementation study to assess how a potential EPR scheme might be designed, but the bill failed to advance out of the House Appropriations Committee (Ford, 2026). Because the State Legislature operates on a biennium, the bill is now effectively dead and a new bill with a new number would need to be introduced in the 2027 legislative session.

Although HB 1420 is broadly modeled after California's textile EPR law, opponents claimed that Washington should wait until California's program is fully implemented. Other concerns raised were the complexity of managing textiles relative to packaging EPR, and a push to exclude company uniforms. The Washington Hospitality Association, Washington Retail Association, Association of Washington Business

were among the trade organizations who testified as opposing the bill (Washington State Legislature, 2026a).

Summary

The CCA, the HEAL Act, and state action on PFAS indirectly advance circularity by promoting safer chemical use, improving material transparency, reducing incentives for carbon-intensive production, and encouraging equitable participation in environmental policy decisions.

Without federal coordination or a nationwide policy, EPR effectiveness is limited. Many textile producers conduct business across state lines, forcing them to comply with a patchwork of varying requirements and slowing the system. A 2024 GAO report recommended Congress should delegate authority to federal agencies “to take coordinated federal action to reduce textile waste and advance textile recycling” (GAO 2024). This would strengthen U.S. textile recycling markets relative to other nations, require producers to take responsibility for their textiles, and create the consistent national standards needed to scale textile recycling infrastructure effectively. Despite this, state and local governments are continuing to move circular textile policies forward without EPR.

2.3.2 An International Lens

In October 2025, the European Union (EU) began implementation of textile EPR for all member states, following the EU Circular Economy Action Plan and representing the first region to mandate textile EPR on a continental scale (European Commission, 2025). In July 2026, the EU will forbid large companies from destroying unsold clothing and shoes (European Commission, 2026). While the EU provides the framework, requirements, and definitions, each member state must devise its own national system. France was the first nation to implement a nationwide textile EPR scheme in 2007, and as a result has a robust culture and infrastructure for managing materials (Ellen MacArthur Foundation, 2024). Colombia and Australia are piloting voluntary textile EPR to meet GHG emissions targets (Boiten & Elobeid, 2024). In both developed and developing nations around the world, textile EPR is being advanced to reduce waste, limit GHG emissions, and create jobs.

2.3.3 Technological Advancements

One of the largest challenges to EPR effectiveness is the end-of-life (EOL) management. EPR systems fundamentally depend on high quality, consistent feedstocks, so issues such as unclear fiber composition, inconsistent sorting and collection, and variable recyclability often present bottlenecks. New identification, sorting and recycling technologies are developing to confront these challenges. Certain technologies are limited by factors such as scalability, cost, and material availability. A brief non-exhaustive overview of a few emerging technologies is provided below.

Studies that build textile fiber identification models using near-infrared technology (NIR) show prediction accuracies of higher than 90% for cotton fiber and 100% for polyester, polyamide (known as nylon), acrylic, silk, and wool (Zhou et al., 2018). NIR is reported to be limited in “detecting textile waste

with core yarns, decorative threads, and coated fabrics” while noting that particle size, color, moisture content, and coating could influence NIR signals. Fourier transfer infrared spectroscopy (FTIR) is a related tool being investigated as a complementary technology to NIR.

Studies report that artificial intelligence (AI) is being increasingly used for fiber identification and classification, “offering greater speed, accuracy, and scalability than traditional methods... using spectroscopy and pattern recognition models to support automated recycling and circular economy applications” (Barbosa et al. 2026). Combining FTIR with machine learning yields higher discrimination accuracy than traditional approaches alone. It is expected that AI and machine learning will continue to transform the industry and related supply chains.

2.3.4 Global Trade and Tariffs

Textiles are covered as duty-free under the United States-Mexico-Canada (USMCA) Agreement, which stipulates specific rules of origin for textile and apparel production in North America. Most types of textiles covered follow a yarn forward rule: the yarn used in the production process (and following processes) must originate from a USMCA country, but the fibers used for the yarn may be sourced from outside the USMCA. For some other types of textile and apparel product categories, the rules of origin apply the similar concepts of fiber forward or fabric forward.

An exception to the rules of origin applies to de minimis items, where the USMCA states that “Up to 10% of the weight of the fibers and yarns that make up the component that determines the origin of a fabric or apparel good do not have to meet the rule of origin and thus may come from outside the region” (International Trade Administration, 2020). The term de minimis is also used to allow people to buy imported low-value items (under \$800) duty-free. Online e-commerce marketplaces like Temu and Shein often utilized the exemption to ship items directly to U.S. buyers until the Trump Administration terminated the exemption in summer of 2025 (Escobar 2026).

Prior to the Trump Administration taking office, sweeping universal tariffs were not commonly part of modern U.S. trade policy; the use of tariffs was targeted and is normally governed by the World Trade Organization (WTO) and the General Agreement on Tariffs and Trade (GATT). These multilateral agreements commit nations to rules that ensure fair trade practices. Tariffs have been noted to hurt U.S. apparel imports from China, increased the cost of apparel imports from everywhere else, and that there is no clear evidence the tariffs increased domestic apparel production (Lu, 2023). In general, tariffs are thought by most economists to be a form of regressive taxes. A Centre for Economic Policy Research study claims that tariff burdens vary widely and arbitrarily across categories for U.S. consumers, and that women and single parents face a higher burden (Russ et al., 2017).

In the first half of 2025, President Trump invoked the International Emergency Economic Powers Act (IEEPA) to impose tariffs on imports from China, Mexico, Canada, and later, almost all U.S. trading partners. On February 20th, 2026, the Supreme Court ruled that IEEPA’s language does not give the President authority to impose tariffs. After this court decision, the Trump administration announced the continued use of IEEPA to suspend the de minimis exception (first suspended in August 2025) as well as

new universal tariffs invoked under Section 122 of the Trade Act of 1974 (Congressional Research Service, 2026).

As a major port of entry for goods originating from Asia, tariffs have a distinct impact on Washington. In 2024, textiles and apparel represented the fourth largest import sector in the state at almost \$1.3 billion, excluding passthrough (Passthrough trade refers to goods that enter a state but are not intended for use there and leave again for other states or countries without significant processing). An August 2025 Washington State Office of Financial Management report modeled a tariff war scenario and estimated its economic effects between 2025 and 2029. The report notes that textiles and apparel mills are one of only three industries projected to experience job gains, and Washington’s textiles and apparel industry would add a cumulative change of \$1.77 billion in output sales. This positive impact is outweighed by the loss of output sales in most other industries, summing to a net loss of \$8.1 billion for the state (Office of Financial Management, 2025).

2.4 Equitable Workforce Development in Circular Textile Systems

The United States is one of the world’s leading consumers of textiles, especially clothing and footwear, yet only a small share of these materials is effectively recovered at the end of their life cycle. According to the EPA, the recycling rate for all textiles in 2018 was 14.7%, and the rate for clothing and footwear was even lower at 13%, with far larger volumes landfilled or combusted for energy generation (US EPA, 2017). Meanwhile, competition from lower-cost production countries has eroded domestic production and workforce development over the past few decades. Offshoring and outsourcing have hollowed out the domestic apparel and textile manufacturing base, eliminating many skilled jobs and local production capacity that once supported American-made clothing and regional textile economies. According to Kim Gias, president and CEO of the National Council of Textile Organizations (NCTO), domestically produced apparel accounts for only about 2% of the domestic market today, a stark contrast from around 50% in the 1990s (Tymkiw, 2025).

1960-2018 Data on Textiles in MSW by Weight (in thousands of U.S. tons)

Management Pathway	1960	1970	1980	1990	2000	2005	2010	2015	2017	2018
Generation	1,760	2,040	2,530	5,810	9,480	11,510	13,220	16,060	16,890	17,030
Recycled	50	60	160	660	1,320	1,830	2,050	2,460	2,570	2,510
Composted	-	-	-	-	-	-	-	-	-	-
Combustion with Energy Recovery	-	10	50	880	1,880	2,110	2,270	3,060	3,170	3,220
Landfilled	1,710	1,970	2,320	4,270	6,280	7,570	8,900	10,540	11,150	11,300

Figure 3: 1960-2018 Data on Textiles in MSW by Weight (in thousands of U.S. tons)

Date Sources: American Apparel and Footwear Association, International Trade Commission, the U.S. Department of Commerce's Office of Textiles and Apparel, and the Council for Textile Recycling.

As production and consumption continue to grow, the scale of this market gives the U.S. the potential to become not only a major generator of textile waste but also one of the world's largest textile recycling economies. Expanding the textile recycling and reuse market would deliver significant ecological and environmental benefits, while also generating additional economic benefits through new employment opportunities across collection, sorting, recycling, repair, and resale.

Globally, an estimated 121–142 million people are already employed in circular economy activities, representing roughly 5% of total employment across 177 International Labour Organization (ILO) member states (International Labour Organization et al., 2025). The Ellen MacArthur Foundation has similarly projected net employment gains in the textile sector specifically, estimating in 2024 that circular business models (rental, resale, repair, and remaking) could grow to 23% of the global fashion market by 2030, representing a \$700 billion opportunity (*Press Release*, 2024). Furthermore, because informality is one of the defining characteristics of the circular economy, millions more who work in its informal sectors are not accounted for, highlighting the sector's enormous hidden potential. This rapidly expanding sector thus provides significant opportunities and direct implications for Washington as policymakers and industry actors consider how to manage growing textile waste streams and build out new reuse and recycling infrastructure.

2.4.1 Employment Landscape of Circular Textiles

Global Employment Projections

The International Labour Organization (ILO) estimates that a broader sustainability transition could generate a net addition of 18 million jobs globally by 2030, encompassing energy, efficiency and circular economy activities (Jensen-Cormier et al., 2018). Within this broader transition, the ILO projects that circular economy practices specifically (reuse, recycling, remaking) could contribute approximately 6 million of those new positions.

Within the textile sector, the types of jobs created span the circular value chain, which mainly include collection and sorting, repair and alteration, secondhand retail, fiber processing, and advanced recycling operations. Textile-to-textile recycling offers longer-term strategic advantages such as supply chain resilience and reduced import dependence, which are benefits that resale and reuse alone could not achieve.

U.S. Employment Baseline

Despite limited textile-specific employment data, the Accelerating Circularity White Paper offers a rough U.S. benchmark by applying the EPA's most recently updated recycling employment share, approximately 0.5% of total jobs in 2012, to 2021 total U.S. employment of 153 million, yielding an estimated 765,000 total recycling job opportunities (*Accelerating Workforce Development in the U.S. Circular Textile Economy*, n.d.). However, it is important to note that this figure spans all recycled materials and not just textiles alone and is extrapolated from data that was last updated in 2012. More

recently, the Recycled Materials Association's 2024 Economic Impact Study found that U.S. recycling operations directly supported approximately 171,470 full-time-equivalent (FTE) jobs, paying an average of \$90,100 in wages and benefits, with an additional 424,690 indirect FTE jobs supported throughout the broader economy (*U.S.-Based Recycled Materials Industry*, n.d.).

Washington State Context

In Washington, the RMDC envisions that policy could drive job creation across multiple tiers: from community-based repair and reuse operations to higher-skilled positions in sorting technology and fiber-to-fiber processing. Processing and repurposing textile domestically rather than shipping them abroad could also reduce cost under the currently unstable trade policy environment. U.S. exporters of both pre- and post-consumer textiles face increasing uncertainties as trade restrictions and tariffs continue to generate international market volatility, threatening jobs and businesses in the U.S. and abroad (Niclazon, 2025).

2.4.2 Current Barriers & Equity Concerns

Labor Stratification and Skill Spectrum

The types of jobs created by circular textile activities span a wide skill spectrum, from entry-level manual sorting and collection to mid-level skilled repair and alteration work to higher-skilled positions in fiber identification technology, chemical recycling, and feedstock preparation. This breadth creates both an opportunity for inclusive employment and a risk of labor stratification, where the lowest-skill, lowest-wage tasks are often borne disproportionately by marginalized communities. The Circle Economy report underscores this dynamic at a global scale: of the 121–142 million people employed in circular economy activities worldwide, over 74 million (52%) work informally, particularly in low- and lower-middle-income countries, where informal rates reach 84% (*Employment in the Circular Economy - Leveraging Circularity to Create Decent Work*, n.d.). While the U.S. context differs, the pattern of vulnerable populations concentrating in the least desirable circular economy roles is likely to follow the same observed patterns.

Wage Quality and Working Conditions

A central concern in the circular textile workforce is the risk that new jobs will replicate or worsen existing patterns of low-wage, precarious, and exploitative labor. The RMDC has specifically flagged concerns about wage quality, distinguishing between “high-road” jobs and “low-road” jobs. Inclusive Economics’ High-Road Workforce Guide for City Climate Action formally defines “high-road” employment as providing family-sustaining living wages, comprehensive benefits, and opportunities for career advancement, while “low-road” employment produces “dead-end jobs” marked by low wages, poor benefits, menial responsibilities, and little or no career mobility (*High-Road Workforce Guide for City Climate Action*, n.d.). The guide argues that high-road workforce development must simultaneously improve job quality and job access, which requires intentional demand-side interventions such as establishing wage standards, credentialing requirements, and targeted hire promotions. Future climate and circular economy investments risk undermining the equity goals of the green transition and replicating labor inequities without these considerations.

This framing is directly relevant to the circular textile sector, where much of the emerging work falls into precisely the low-skill, physically demanding categories most vulnerable to low-road conditions. The end-of-life garment sorting and recovery work can often be very physically demanding and unhealthy, as workers in these roles often face exposure to chemical residues, fiber dust, biological contaminants, and repetitive physical strain. EPR systems can help address these conditions by funding infrastructure improvements and preventing workers from being confined to low-value, manual material separation with inadequate safety protections (Pacini, 2021).

Labor Equity (Race, Gender, Incarcerated Labor)

In the U.S., Goodwill Industries provides a useful domestic benchmark for understanding which populations are most engaged in circular textile work. Goodwill operates more than 3,300 retail and outlet store locations, and in 2023 had provided more than 1.7 million people services such as skills development, job placement, and career advancement services (*PDF*, n.d.). Goodwill's service demographics are also helpful indicators. In 2023, 38.1% of people who sought Goodwill services were Black or African American, and roughly 59,670 people impacted by the justice system used Goodwill services for a fresh start. Revenue from the sale of donated goods is reinvested directly into local communities to fund these programs, a model that directly links textile circularity to equitable employment outcomes and can also be referenced in our work.

Environmental Justice & Facility Siting Work

The assumption that recycling and resource recovery work will automatically lead to equitable employment outcomes is questionable and has been challenged by academic literature. Gregson et. al. in their 2016 study found that Europe's promise of a "clean and green" recycling economy masks the uncomfortable reality that resource recovery is predominately dirty, low-paid work predominately spread across secondary labor markets and heavily reliant on migrant labor (Gregson et al., 2016). Through empirical analysis of three resource recovery sectors: dry recyclables, textiles and ship recycling in northern EU member states, they documented that when wastes remain within the EU rather than being exported, labor moves to process them instead. In the EU, this is predominantly realized through the form of migrant workers from EU accession states. These workers fill roles that local populations are reluctant to take due to their high physical demands, lower pay, and the cultural associations between recycling work and "waste work". The European Environment Agency itself acknowledged that employment in recycling "include low skilled work in particular."

This finding has direct implications for Washington State. As federal and international constraints on textile waste exports continue to grow, and Washington moves to build domestic sorting and recycling infrastructure, the key question of "Who will do this work, and under what conditions?" will become centerstage. Without deliberate intervention, historical patterns suggest that the most physically demanding and least desirable tasks in the circular textile economy will default to the most vulnerable populations and workers, which might be immigrants, formerly incarcerated individuals, and BIPOC communities. The RMDC's explicit equity framework, which commits to ensuring that historically underserved populations are "not only protected from environmental harm but included in economic opportunity, infrastructure access, and decision-making," provides a policy foundation for disrupting this

pattern, but translating this commitment into enforceable labor standards, siting protections, and equitable hiring practices remains a critical challenge.

2.4.3 Just Transition Framework

Definitions

The concept of “just transition” originated in the global trade union movement in the late 1970s, initially focused on protecting fossil fuel workers displaced by environmental regulation. It has since been broadened considerably and adapted to a variety of different sectors. The ILO Guidelines for a just transition claims that: “Promoting environmentally sustainable economies in a way that is fair and inclusive to everyone concerned – workers, enterprises and communities – by creating decent work opportunities and leaving no one behind.” (*ILO Guidelines for a Just Transition: Action Framework*, n.d.), a definition which was endorsed and later embedded in the Paris Agreement preamble. This definition establishes the institutional standards which are useful and widely used by governments, international organizations, and independent research agencies. The International Trade Union Confederation (ITUC) provides a more worker-centric perspective and emphasizes the agency of organized labor. They define just transition as a process that “secures the future and the livelihoods of workers and their communities in the transition to a zero-carbon economy. It is based on social dialogue between workers and their unions, employers, government and communities.” (*What’s Just Transition?*, n.d.)

Textile-specific Application

In 2023, the ILO updated their conclusions, adding emphasis on financing, gender dimensions, human rights, migration, indigenous peoples, and value chains, while noting that there is no “one size fits all” to a just transition. In February 2026, the ITUC, along with IndustriALL, launched a new union-led manifesto for the textile and garment supply chain. Key demands of the manifesto include (International Trade Union Confederation (ITUC) & IndustriALL Global Union, 2026):

- Living wage as a contractual obligation backed by traceable verification
- Company-funded "green transition funds" to finance retraining and income protection
- Formal recognition of environmental union delegates
- Strong brand accountability: "brands cannot claim sustainability while externalising the costs of transition onto suppliers and workers"
- Decent work for informal and home-based workers
- Gender equity and protections for informal, migrant, and vulnerable workers

This brand new announcement, despite being launched in Europe and likely prioritizing just transition issues within the EU, provides valuable and relevant insights on how similar considerations could be incorporated into frameworks based in the U.S.

2.4.4 Workforce Development Infrastructure

The establishment and implementation of successful workforce development efforts require the support of relevant infrastructure. However, there are still many gaps that currently constrain the development of high-quality workforce both in the U.S. and abroad. As the previous sections establish the normative

framework for a just workforce development transition and presented models for existing models where employment is already generating positive outcomes, this section intends to take a closer look at the many structural prerequisites, such as training protocols, certification schemes, wraparound supports, and physical infrastructures, that need to be in place to bring the outcomes to scale.

Training Protocols and Pipelines

Adequate workforce training and preparation are urgently needed in developing a high-quality circular textile economy but unfortunately are not yet well-defined and currently lack clear training pathways in the U.S. The ILO identifies skills development as one of its nine priority policy areas, emphasizing the importance for governments and private sector players to invest in skills development and lifelong learning (International Labour Organization et al., 2025). The report also calls for the offering of technical and vocational education and training systems that adapt to technological, regulatory, and market changes; cater to new circular job profiles, and support workers to move into higher-productivity roles.

What are the specific skillsets needed in the circular textiles industry and economy? A UK study conducted in 2025 identified four key areas of skill development that are essential for transitioning from linear to circular business models (Briggs-Goode & Ball, 2025):

- Technical skills: examples of this include fiber identification, quality grading, and operating advanced sorting and recycling technologies
- Design and innovation skills: examples include designing for future disassembly and lifecycle thinking
- Cross-cutting skills: examples include digital literacy, data handling, and traceability
- Social/Behavioral skills: examples include systems thinking and collaboration across value chains

This study also identifies existing risks, noting that manufacturing has one of the highest “skills-shortage vacancy densities” in the UK. It also points to decades of offshoring, an aging workforce, and weak connections between educators and industries as factors that have eroded the domestic training base in textiles. While UK-specific, this paper provides useful parallels that can inform domestic assessment efforts on the textile and recycling workforce.

Certification Schemes

Certification systems establish de facto standards for what constitutes “recycled” materials and the conditions under which they are produced. These systems are a critical component of circular textile governance. The Global Recycled Standard (GRS), administered by Textile Exchange, is currently one of the main voluntary standards for recycled materials. The GRS includes social responsibility requirements that explicitly prohibit forced, bonded, indentured, and prison labor “in all its forms, including prison labor when not in accordance with ILO Convention 29,” and stipulate that all work must be voluntary and that employers may not retain identity documents or require deposits (Textile Exchange, n.d.). Facilities must also comply with legal requirements on wages and working hours and are also subject to audits that include document checks and confidential worker interviews. In Europe, regional schemes add a more operational dimension. The Dutch Textile Recycling Certification Scheme (VHT) certifies

textile collectors, sorters, and recyclers against criteria on quality management, legal compliance, environmental performance, and labor conditions (Lejeune Association Management, n.d.). As EU-level textile EPR regulations come into force, these schemes are useful additions to public tenders and brand procurement processes, effectively turning them into a licensing mechanism for participation in the recycling market.

Domestic Implications & Conclusions

For U.S. policymakers, these schemes present both opportunities and challenges. California's Responsible Textile Recovery Act of 2024 (SB 707) requires producers to join a Producer Responsibility Organization and finance end-of-life management for textiles, but its enacted statute does not specify labor standards, training obligations, or certification requirements for PRO-funded operations (Kapor, 2024). In Washington the potential risks associated with textile recycling, including the possible reliance on incarcerated labor paid below minimum wage, call for an evaluation of how EPR and tariff policy intersect with these issues. The contrast between GRS's explicit ban on non-compliant prison labor and current U.S. requirements suggests potential considerations for EPR designs that could adopt stronger labor-related criteria than existing domestic law requirements.

Taken together, the above literature and case studies suggest that we cannot treat developing an equitable workforce as a mere downstream add-on. From the outset of designing circular textile systems, inclusive workforce development efforts should be included and enabled by thorough, holistic thinking; capacity-building preparations; and demand-side guarantees for effective outputs.

2.4.5 Case Studies

Domestic Case Study: Next Cycle Washington

NextCycle Washington is a partnership between the RMDC, Washington Department of Ecology, and Department of Commerce, which provides a Washington-specific case for this analysis. Through three cohorts of its Circular Accelerator Program, NextCycle has supported 14 accelerator teams, disbursed 41 seed grants, catalyzed \$13.5 million in investment, created 70 new jobs, and diverted 4 million pounds of material from landfills. The 2025 cohort at NextCycle includes textile-specific projects, such as repurposing local textile waste with Indigenous heritage craft techniques. NextCycle employs a localized, bottom-up approach, aiming to foster collaboration among communities in developing innovative and sustainable solutions to waste reduction. NextCycle's program design aligns with the RMDC's equity commitments, emphasizing the development of equitable local economies while reducing waste. The program is particularly tailored to cater to underserved entrepreneurs. This program's subsidiary initiatives demonstrate how circular economy programs in Washington can create access points for marginalized communities. For example, one of the prior cohort winners, the Refugee Artisan Initiative, employed refugee women to repurpose retired fire hoses.

Domestic Case Study: Key Works, Homeboy Industries, and UTEC

The following three programs demonstrate that circular material recovery work is particularly well-suited to populations facing structural barriers to conventional employment, including individuals in mental health and substance use recovery and those with criminal records. Together, they offer a model

for how high-quality workforce development can be designed from the outset to serve two objectives: diverting waste and expanding dignified, stable employment for those most systematically excluded from it.

Key Works is a Washington-based organization that integrates long-term patient treatment with hands-on recycling-centered work. Participants develop real job skills and access pathways to living-wage employment, while the program generates recycling revenue that funds treatment services. This self-reinforcing model is a proof of concept for combining environmental work and human-centered recovery. Physically meaningful work can support sustained recovery while building credentials and work history that translate into long-term employment.

Other examples of similar models prove the concept's broader viability: Los Angeles' Homeboy Industries operates one of the country's largest gang intervention and reentry programs and has extended its model into the circular textile economy. The organization provides a program that employs formerly incarcerated workers to sort, repair, and upcycle textiles, diverting over 200,000 pounds of garments from landfill annually while providing structured reintegration pathways (Potter, 2023). Homeboy's approach demonstrates that textile recovery work, often dismissed as low-skill, can anchor meaningful reintegration when paired with wraparound support, peer community, and a clear progression toward stable employment.

Massachusetts' nonprofit, the United Teen Equity Center (UTEC) has built a mattress recycling program in partnership with the MassDEP following the state's ban on mattresses and textile waste. This mattress recycling program provides statewide mattress recycling services to state organizations while also serving as a landing spot for young people with criminal records (Noe, 2022). Since 2024, the program has recycled nearly 50,000 mattresses and box springs (Ruhalter & Wintersmith, 2025). Notably, UTEC's model was directly enabled by a state-level disposal ban, illustrating how policy design and reentry workforce goals can be mutually reinforcing.

Domestic Case Study: Evergreen Goodwill of Northwest Washington

Evergreen Goodwill of Northwest Washington (EGNW) is a 501(c)(3) nonprofit focused on providing quality and effective employment opportunities and training for Washingtonians. It currently operates five job training centers, 23 retail stores and outlets, and 25 donation sites in King, Snohomish, Skagit, Whatcom, and Kitsap counties. As a non-profit organization, in addition to in-kind donations and support, they have a self-reinforcing revenue model where proceeds from retail sales and other recycling operations fund the organization's tuition-free adult education and job training programs. This means that circularity and workforce development are financially mutually reinforcing. In fiscal year 2025, EGNW generated \$147.5 million in total revenue, of which \$12.3 million was from surplus, salvage, and recycling programs. Subsequently, EGNW was able to reinvest \$9.4 million directly into job training and education programs.

EGNW takes a unique, three-pillar approach to supporting its students: classroom instruction, individualized case management, and active job placement. Unlike many other programs that only provide skill training, EGNW addresses the compounding barriers its students often face, such as

housing instability, food insecurity, and limited digital access. These barriers are common reasons why students do not complete programs. Seventy-nine percent of its core student population fall below the federal poverty line, 76% are people of color, and 9% have been involved in the justice system. Over the past decade, EGNW has served more than 50,000 students, maintained a 58% completion rate (above the 39% national community college average), and successfully placed 7,644 graduates in direct employment opportunities.

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EGNW's more recent investments indicate its ambition to develop higher-quality, more durable employment pathways. Its ELEVATE initiative now allows students to earn transferable college credits for Goodwill coursework, bridging between vocational training and higher education. A 2025 Microsoft AI for Good grant is funding an AI-assisted sorting and pricing system, which is expected to reduce costs and generate new technician roles within EGNW's own workforce, which highlights technology adoption as a skill-building opportunity.

International Case Study: ReFashion

Refashion is a France-based PRO that manages its textile EPR scheme. Initiated back in 2007, this scheme is the world's longest-running example and provides useful insights when analyzing workforce outcomes within the sector. Currently, 95% of France's textile industry players are registered members of the Refashion collective compliance scheme, which translates to over 14,000 members and 610 localized partnerships with authorities. Refashion's annual collection volume for end-of-life textiles reached 300,000 tons in 2025 (EU Textiles Ecosystem Platform Editorial Team, 2025). France's EPR model has gained international recognition for its effectiveness, proved by its high collection and recovery rates, as well as its positive employment and economic impact. In 2017, France experienced an increase of 1,400 full-time jobs in the textile sorting sector, 49% of which were allocated to workers facing employment difficulties (Roccanova et al., 2021). France's model demonstrates that EPR can be designed with social objectives baked in, as job reservations for disadvantaged individuals are an example of demand-side intervention that intends to address potential hiring inequities. However, it is worth noting that a significant portion of this work remains manual and labor-intensive. EPR schemes alone won't sufficiently address systemic issues such as overproduction or infrastructure bottlenecks.

International Case Study: CAIF/Saamuhika Shakti

The Indian Bengaluru-based Circular Apparel Innovation Factory (CAIF) program aims to establish an integrated model for managing circular textile waste to sufficiently improve the value extracted from textile waste (Banerji & Chatterjee, 2024). The program also seems to provide green, long-term employment opportunities for underserved local communities in the local waste management sector. Launched in 2021, the program utilizes a hub-and-spoke model, with 16 neighborhood dry waste collection centers all feeding into a central textile recovery facility. This program has integrated over 400 local waste collection workers into the formal textile recovery system and aims to reach 500 by 2026, with workers experiencing income increases ranging from 18%-25%. The model is now being replicated in twelve Indian cities, demonstrating its scalability. This program provides a compelling international case study of how a just circular transition could materially improve wage conditions for workers most at risk of low-road employment outcomes while also bolstering waste diversion. By the end of phase 1 of Saamuhika Shakti in December 2023, the program had successfully diverted 131,436kg of textile waste in 11 months, with its phase 2 target setting at 800,000kg.

Chapter 3. Research Methods

3.1 Overview of Research Methods

This study uses a qualitative, policy-oriented approach exploring the different frameworks, models, and pathways that Washington can advance its circular textile markets while supporting high-quality employment outcomes. We achieve these objectives through literature reviews and conducting interviews with industry experts. The qualitative data and literature review are conducted and informed by previous ecology work on this topic, University of Washington library resources, and various government publications. We combine a targeted review of existing literature and case studies with semi-structured interviews of industry practitioners, experts, and representatives from policy and community-based organizations involved in the textile industry. We believe interviews are better at capturing the broader context, nuances, subjective perspectives, and processes of understanding decisions made within the circular textile markets. Interviewees were identified in consultation with RMDC and through “snowball” referrals.

3.2 Research Design and Data Acquisition

Purpose: We designed our research to include semi-structured interviews with experts to deepen our understanding of the textile circular economy and to fill the gaps and answer the questions identified through the literature review process. Much of the literature focuses on other municipalities or on theoretical frameworks, so consulting with experts and industry members in Washington is essential to understand barriers and drivers to circularity, equitable workforce development, and the feasibility of various policy tools.

Reasoning: Interviews were designed to be semi-structured because the benefit of asking free-form follow up questions allowed for deeper and more detailed responses. Choosing semi-structured over completely structured allows for interviewers to veer off-script and obtain perspectives that may not have been revealed had they been forced to move along with the script. Semi-structured interviews are also more advantageous when obtaining data on complex topics, such as the textile circular economy. Furthermore, compared to surveys, semi-structured interviews allow for richer data collection, as respondents may not spend as much time writing out essay responses on open-ended survey questions. While the time commitment is an important consideration, the benefits of detailed perspectives obtained in a semi-structured interview are worth the increased amount of time required to conduct them.

Structure: The interviews were divided into the three main research objectives: textile waste diversion goals, policy levers, and equitable workforce development. The interviews aim to understand the interviewee’s experience with textile policies, diversion efforts, and labor practices. Each interview will be guided by a standard list of benchmark questions, followed by specific follow-up questions relevant to each interviewee’s expertise. Each consultant focused on their respective research objective and identified experts that aligned most with each area (with some overlap). Consultants rotated facilitation

and note-taking roles, and each interview was recorded with consent, with the exception of one, to ensure accurate data collection and analysis. The semi-structured interviews begin with a set of benchmarking questions to understand the background of the interviewee and their initial reactions to the subject matter. Benchmark questions also allow for better comparison and analysis between data points. Then, individual interviewees were asked targeted questions based on their background and relevance to the research objectives.

3.3 Limitations & Mitigation

Research that is qualitative and policy-oriented is often constrained by its methodological approaches. This section identifies the key limitations of our research design and outlines the mitigation strategies we employed to maintain the integrity and usefulness of our findings. We believe that the transparent acknowledgement of these limitations strengthens the credibility of our analysis and would be helpful for future research that intends to explore similar topics.

Limited Sample Size

Given the project scope and time constraints, as well as the relatively narrow and innovative topic area, we conducted ten interviews in total. While this sample size is small, the depth, relevancy, and specificity of each interview are significant advantages. The interviewees were selected for their direct, first-hand experience with textile circularity or for being in jurisdictions experiencing or having experienced similar difficulties and opportunities. The data acquired is relevant and contextually grounded, delivering insights that a larger but less targeted sample would provide. We consider our interview findings to be expert testimony to inform and substantiate our literature review, rather than statistically representative data.

Non-random Sample

Given the specificity of our research question, a random sampling approach wouldn't have been methodologically appropriate. Purposive sampling was necessary to identify experts with relevant experience and knowledge engaging with the circular textile ecosystem. Interviewees were identified through RMDC's recommendation and through snowball referrals from the interviewees. This process enabled us to reach professionals who are less visible in literature and research alone. However, we acknowledge that this approach may also introduce referral bias, as the original list of experts may have introduced individuals within their existing professional networks who share similar perspectives or organizational cultures.

Researcher Positionality Bias

As graduate student researchers in public policy, we bring particular disciplinary approaches, positions, and personal identities to this project. Our backgrounds inevitably shape how we formulate and approach research questions, interpret responses, and analyze findings. Our teams' positionalities, however, reflect a range of backgrounds across race, gender, national origin, and professional experience, which we view as a partial anecdote to any single perspective dominating our research. To

further avoid potential bias, we also employed a collaborative peer review process across team members and with classmates who share different perspectives and experiences from ours; cross-referenced interview findings against literature and case studies wherever possible; and submitted draft findings to RMDC and other experts for feedback.

Limited Stakeholder Diversity

Considering our purposive sampling strategy, we recognize that our research underrepresents certain stakeholder groups. For example, workers in informal or risky positions, including undocumented workers, informally employed workers, and low-wage workers, are largely absent from our interview sample, as are representatives of rural communities, ethnic minorities, etc. Other limitations such as language barriers, lack of institutional affiliation, and time constraints also contributed to this gap. We address this limitation in two ways: first, by drawing on published research and cases that document the experiences of these populations directly; and second, by explicitly giving recommendations for future research and actions to actively recruit and center these voices in the decision-making process.

Evolving Policy and Funding Environment

The landscape of Washington's textile policy has also changed since this project was first launched. House Bill 1420, a textile EPR law that was a centerpiece of circular textile conversations and debates, was reintroduced in the 2026 legislative session but failed to pass out of committee. Federal tariff policy also underwent significant changes during the time of our study, causing volatility in the textile import and export markets that has yet to be re-examined for its future implications. These changes mean that some contextual details in our interview findings may have already been superseded by developments that occurred after we completed data collection. We have attempted to update our literature review and recommendations to reflect the current policy environment as accurately as possible and have framed our recommendations to remain relevant beyond near-term policy scenarios or any single legislative outcomes. We recommend the readers of this report treat our findings and recommendations as "in progress" and conduct follow-up research as the policy environment continues to evolve.

Chapter 4. Findings & Analysis

4.1 Overview

In this chapter, we present key findings informed by semi-structured interviews with stakeholders working across both Washington and the U.S.'s emerging circular textile ecosystems. Building on the methods outlined in Chapter 3, we divide the experts into three thematic groups: policy design and implementation, waste diversion, and workforce development. With these interviews, we hope to understand how interviewees across the public, private, and nonprofit sectors understand and measure the “success” of a circular textile economy, what they see as main barriers and opportunities, and which safeguards or policy mechanisms they view as essential for constructing an equitable, high-quality employment market within the circular textile economy.

4.1.1 How we did the analysis

We conducted ten interviews for this report. Interviews were recorded with consent, except for one interview. Recordings were retained until June 2026, after which time they were deleted. All interviews were led by one consultant based on focus area, while the other two consultants took detailed notes on a shared document. Note takers were given several opportunities to ask follow-up questions to clarify ideas or concepts from the interviewees. After the interviews were completed, we reviewed both the recordings and notes to synthesize the main themes of each interview. Facilitators were responsible for analyzing their respective interviews, and identified key findings, challenges, and opportunities by reviewing the notes and recordings. These will be outlined below. We weighted each interview by individual focus areas but still considered the intersection between all focus areas. Finally, we provide a summary of analysis that maps major themes across all interviews, identifying where consensus was strongest.

4.1.2 Interviewee Mapping

The graph below gives a comprehensive overview of the experts that we interviewed, their location, and the type of organization that they serve. These participants were selected for their direct experience with policy design, labor standards, and on-the-ground implementation of circular textile practices, rather than to provide a statistically representative sample of Washington's or the U.S.'s textile sector. Their perspectives are therefore best interpreted as expert insights that complement the broader literature review and should be interpreted with additional stakeholder input as the project progresses.

Organization	Location	Organization Type	Theme
Massachusetts Department of Environmental Protection (MassDEP)	MA	Government	Policy

American Circular Textiles (AMCIRC)	Washington D.C.	Private	Policy
CalRecycle	CA	Government	Waste Diversion
Redesign Collective	WA	Private	Workforce Development
Washington Department of Commerce	WA	Government	Workforce Development
Evergreen Goodwill of Northwest Washington (Evergreen Goodwill)	WA	Non-profit	Workforce Development
Yale University	CT	Academia	Workforce Development
California Product Stewardship Council (CPSC)	CA	Non-profit	Waste Diversion
WM	National	Private	Waste Diversion
Douglas Strategies LLC	WA	Private	Policy

4.2 Textile Waste Diversion

4.2.1 WM

Key Findings

- The most important measurement of success in textile waste diversion is the diversion rate.** Interviewee recalled that the most recent EPA study was published in 2018, which was eight years ago at the time of writing. Increasing the diversion rate of textiles from the reported 15% in 2018 will show success, but interviewee notes that this is an ex post measure of success and does not capture the results of current diversion efforts. Diversion rates may be currently higher or lower, but there is no way of knowing without another national study from the EPA. Other important measures of success are the number of households serviced, as well as the volume of textiles collected to be recycled; however, without updated textile diversion rate information, we have no indication of progress.
- A successful textile recycling program is like a stool with three legs: collection, sorting, and end markets.** All three legs depend on each other - textile collectors and haulers can collect and even sort as much textile waste as they want, but the system will not be viable without an end market. Conversely, end markets cannot exist without the collection and sorting of textile materials. When recycling facilities and end markets are established, it signals to collectors and

sorters that they can collect more as more end market capacity becomes available. As collectors and sorters invest in trucks and increase capacity, it signals to end markets that they should invest in more textile recycling facilities. Ultimately, a balance must be found between all three legs to spread the risk of financial investment and progress more evenly throughout the supply chain.

Challenges

- **There is a lack of financial incentive for waste collectors.** Waste collectors must prioritize profitable business models. Collection costs must be minimized and the value of materials in the end market must be maximized. However, at this time, end market prices for recycled materials are volatile, making the process unattractive financially and challenging the growth of a circular economy. Furthermore, the order of magnitude of investment in recycling facilities to expand end markets is enormous, often in the range of hundreds of millions of dollars.
- **Consumer awareness of textile recycling hinders development of a circular textile market.** Consumers typically only donate textiles that they believe have a useful life, leaving out items with stains, rips, or holes. Consumers should understand that there is still value from the cotton that can be obtained from a ripped pair of jeans, for example.
- **Textiles must be diverted from the waste stream before they get to the trash can.** Convenience can be a big barrier - it is far easier for the consumer to simply throw out old clothes compared to bundling them up and driving to a collection bin, or listing them online for resale. Interviewee noted that the process of collecting and hauling can rip, stain, and contaminate textiles with other waste items, making it extremely difficult to recover them from the waste stream. Additionally, because of the time and mobility requirements of diversion, there may be a perception that recycling textiles correctly is a “luxury,” which can justify the behavior of the consumer to throw textiles in the garbage.

Opportunities

- **More advanced technology would allow for cheaper collection, sorting, and recycling costs,** making textile recycling a more attractive business model for more waste collectors. For example, in material recovery facilities (MRFs), infrared technology is used to more efficiently sort recyclable materials, increasing efficiency and reducing processing costs.
- **Curbside collection for consumers would alleviate the issue of convenience.** Removing the time and mobility requirements for consumers to correctly dispose of used textiles will improve diversion rates. WM has piloted this in some municipalities, and more municipalities may be testing this in the future. This will require collaboration with other end of life management partners such as Goodwill and recyclers throughout the U.S., as well as plenty of outreach and education to consumers.
- **Rethink how to engage consumers and producers with textiles and end of life use.** Textile waste diversion can be improved by educating consumers on what can and cannot be recycled, and meeting brands where they are at to help them manage collection and recycling. We can

look to fast-fashion business models to see how they respond so rapidly to consumer needs - can recycling markets learn from that?

4.2.2 CalRecycle

Key Findings

- **Extended Producer Responsibility Legislation is complex.** CalRecycle oversees and enforces the Responsible Textile Recovery Act (RTRA) of 2024 in California, while implementation is managed by the Producer Responsibility Organization (PRO). CalRecycle approves the PRO as part of the implementation of RTRA. This presents unique challenges and advantages in California, from which Washington can gain important insights.

Challenges

- **Convenience is a barrier to textile waste diversion.** Compared to driving to a collection bin, simply throwing away textiles is much easier and faster for the consumer. A sub-challenge to this is the location of collection bins. Bin locations must comply with local regulations, which can be challenging, especially when the trade-off is accessibility to the consumer.
- **Not all consumers are aware of the legislation or the correct textile recycling practices.** This causes consumers to incorrectly throw their used textiles in the garbage, or donate unwearable textiles to secondhand stores, where they are also sometimes thrown into the garbage.
- **With the current lack of transparency in the textile industry and textile management, it is difficult to know that textiles are truly recycled.**
- **Storage space was identified as a logistics challenge.** As textile collection ramps up, they will need to be stored somewhere while end markets are established and recycling can be scaled up.

Opportunities

- **Consumer education through transparency of the recycling system could drive circularity.** Interviewee also advocated for marketing promotion of textile recycling so that consumers will use it correctly and more often. Outreach must happen through the PRO - CalRecycle suggested strategies such as workshops, websites, and frequent engagement with the public to disseminate textile recycling information; specifically, what can be recycled, how, and when. Interviewee believes that information is the biggest driver to consumer behavior change.
- **Establishing an easy and accessible collection system should be the first step to driving a circular textile economy.** Interviewee notes that recovery of textiles from the waste stream is next to impossible due to contamination issues; so, it is extremely important to prevent textiles from entering the waste stream in the first place.
- **Needs Assessments and Waste Characterization Studies are needed to obtain data** on the amount of textile waste produced and percentages that are truly resold, reused, or recycled. Essentially, more robust information is needed for diversion rates for textiles. These studies should be done in collaboration with Tribes and other environmental justice communities to ensure equitable implementation and avoid bias, as the findings from these studies will be used

to develop stewardship plans, which will be implemented to establish circular economies under EPR legislation.

- Design changes at the producer level were mentioned as an opportunity in the fast fashion industry, since clothes have low durability and are challenging to recycle or repair.

4.2.3 California Product Stewardship Council (CPSC)

Key Findings

- **EPR legislation is the strongest type of legislation to drive a more circular economy**, but working within structures and authorities that already exist is important as well. Interviewee highlighted the difference between policy creation and implementation, and the unforeseen behaviors that arise from legislation. Additionally, EPR legislation at the state level is strong, but better when complemented with local initiatives. Market driving policies, such as requiring retailers to sell textiles with recycled content, were identified as good complementary strategies.
- **Interviewee measures a successful policy or intervention by whether or not new legislation has to be passed to close loopholes.** This also demonstrates the importance of well designed and clearly defined policies, including how they will affect the textile market and what behaviors may be incentivized, intentionally or unintentionally.

Challenges

- **Education and engagement, both at the producer and consumer level, needs to be better.** Interviewee mentioned challenges in understanding ecofees and understanding of the EPR legislation.
- **Lack of financial feasibility is a barrier to circularity.** Financing for any industry is difficult these days, and end markets are not worth developing without more funding.
- **Equity in mail-back programs is challenging.** Interviewee expressed frustration with mail-back programs, where companies accept used textiles with the purpose of repairing or recycling them. Mail-back programs often shift jobs to other areas in the country, when ideally they would stay in the area to support local job growth.

Opportunities

- **Coordination between states is an opportunity to learn and improve policies and programs.** Washington, Oregon, and California can all learn from and work with each other. The opportunity to “upgrade” EPR in Washington is here.
- **Clothing label disclosures are an opportunity to increase transparency** and provide a pathway to requiring a certain percentage of recycled content in textiles.

4.2.4 Connections to Other Focus Areas

- Most, if not all, mentioned more education for consumers, whether that be consumption patterns or educating on what to do after a garment or textile has reached the end of its useful life. Consumers should understand - like with traditional recycling of bottles, cans, paper, cardboard, and plastic - why textiles should be recycled. We don't question recycling now because we know that it helps the environment and reduces our waste—how to get to that point with textiles.

4.3 Policy Levers

Interview Synopsis: Massachusetts Department of Environment (MassDEP), American Circular Textiles (AMCIRC), Douglass Strategies LLC

Key Findings

- **EPR is not a magic bullet solution (but it's a great first step in the right direction).** Although EPR is the most popular lever, the coordination of a suite of textile policies aimed at upstream interventions as well as different stakeholders (producers, consumers, haulers, recyclers) can improve textile circularity. Other textile policy options may include design & product standards, labeling requirements, environmentally preferable purchasing, and reuse and repair incentives.
- **Policy should create incentives, not dictate outcomes.** In the context of building circular systems, the less prescriptive the policy is, the more accessible participation becomes. Allowing the market to react and grow to conform to the policy allows for flexible schemes and can reduce compliance burden.

Challenges

- **Harmonization is important, but monopolization should be avoided.** Consistent rules, definitions and reporting requirements across jurisdictions are valuable, but may run the risk of unintentionally favoring large organizations who are better positioned to operate across multiple jurisdictions, potentially reducing fair competition from smaller service providers.
- **Policy does not fix overproduction and overconsumption.** The rise of fast fashion business models and globally connected supply chains inherently disincentivize circularity, especially the upstream interventions of reuse and repair. Many American consumers may not be aware of the social, economic, and environmental costs of linear systems. Influencing behavioral change takes time and involves more than policy.
- **Domestic recycling infrastructure limits textile policy.** Textile EPR and related policies are constrained by infrastructure (sorting and recycling infrastructure), feedstock quality and consistency, sorting technology, and accurate reporting of material flows. EPR works effectively when stakeholders know how much of what material is being collected and where the material is destined to be sent.

Textile policy and infrastructure represent a “chicken and egg” dilemma. If a government entity mandates a jurisdiction to use recycled materials that are not yet available, the mandate is unenforceable. Conversely, a business is unable to choose to recycle materials if there is no end market for the material.

Opportunities

- **Textile recycling infrastructure and technologies are ramping up across the country.** As more systems come online and capacity grows, choosing circular actions becomes more appealing for consumers and businesses. Connecting these market participants is critical to ensuring that new infrastructure translates into real demand.
- **The heart of the circular economy is local.** Community-led initiatives and neighborhood-level collaborations are popping up in community centers, town halls, garages, and parks across the state. It is critical for policy to be cognizant of these small-scale actions by defining mechanisms that allow for growth and innovation. When talking about statewide policies, large producers, cultural behavior shifts, or well-established businesses, it is important to include diversity of scale.

4.4 Equitable Workforce Development

4.4.1 Washington State Department of Commerce

Key findings

- **Workforce development is about job quality, not just quantity.** The green and circular transitions in the textile sector should focus on improving and expanding existing job opportunities to emphasize skillset continuity, depth, and quality. Rather than destroying old jobs and assuming that workers are starting from scratch, targeted training opportunities should meet workers where they are and create new ones.
- **Success in workforce development is defined by implementing programs and achieving observable outcomes.** Success means launching concrete programs and practices in the field and seeing their actual impacts on communities, and then reflecting on how partners achieved those results together. Collective problem-solving and actionable steps are more important than any single numeric target.
- **Developing a high-quality workforce should focus on providing workers with fair pay and skills to sustain themselves.** Instead of focusing solely on job growth, offering fair wages and benefits prevents high turnover rates, increases long-term efficiency, and provides workers with the skills and resources necessary for long-term sustainability and resilience against volatilities in the textile sector.

Challenges

- **The lack of a common job-quality benchmark.** Despite agreeing on the importance of it, different agencies and sectors struggle to reach a consensus on a universal definition of "high-wage/high-skill" work. Debates over what constitutes a "good" or "circular" job become subjective and stall decision-making. This ambiguity makes designing and prioritizing training programs and funding toward jobs that genuinely advance a just transition especially challenging. Agreement on definitions is a prerequisite for intentional, effective workforce strategies.
- **Low-quality jobs with low wages and poor working conditions are being reframed as "labor shortages."** Due to the high level of informality in the textile sector, wages are low because worker productivity and company profit margins are often too low to allow for wages higher than the minimum wage. Rather than addressing job quality directly, employers' unwillingness to offer adequate pay is often reframed as a labor shortage.
- **Fragmentation across agencies and states.** Alignment across departments and across states is often difficult and limited due to differences in priorities, visibility, and resources. This fragmentation makes it harder to share and scale best practices that could support circular textile workforce pathways.

Opportunities

- **Integrate the textile sector into Washington's current workforce development programs.** Washington currently offers an array of apprenticeship programs and youth workshops designed to combine paid, hands-on training with classroom learning. These programs provide hands-on experience and certificates in specific fields while also matching students with employers. The textile sector could offer similar safe, supervised opportunities that lead to high-quality jobs.
- **Promote cross-state and cross-department learning so that we establish shared definitions and benchmarks for high-quality employment opportunities.** This proposal builds on concerns about the lack of a shared definition of high-wage, high-skill jobs. A cross-agency working group could be convened to co-develop a clear, measurable definition of "high-quality" textile jobs and associated indicators. The working group could review national best practices and agree on appropriate benchmarks for wages, benefits, safety, and advancement. Then, they could embed these standards into future policies, funding decisions, and programs related to circular textiles.

4.4.2 Lisa Hilbert (Redesign Collective)

Key findings

- **Circular textile work creates diverse, locally rooted employment opportunities spanning the textile supply chain.** Ms. Hilbert's experience working on many stages of the textile recycling chain, including collection, sorting, prototyping, and end-market facilitation, shows that circular systems require a mix of operational roles and creative work based in local facilitation and

community development. This work has the potential to contribute to workforce development efforts.

- **High-quality employment opportunities are hidden in currently underrecognized industry needs.** Many highly specialized and advanced skill sets in the textile sector, such as industrial sewing, pre-design, patchwork, and other upcycling work, remain underdeveloped because of limited educational opportunities and insufficiently funded apprenticeship programs, even though they could form clear career pathways that directly respond to specific labor needs in the industry.
- **Power imbalances and misaligned perceptions of "waste."** Upstream actors often treat all surplus textiles as "junk" due to an "out of sight, out of mind" mindset. They are resistant to distinguishing between different materials and properly acknowledging their value. They are also hesitant to share profits with professional recycling stakeholders and would rather donate to nonprofit facilities. This power dynamic limits the willingness to pay for collection and processing labor, which restricts market access and consequently job creation in reuse and upcycling.

Challenges

- **Economic viability and underfunded labor.** Current funding structures often do not adequately support the high-quality workforce needed to run circular operations at scale. For example, Ms. Hilbert currently relies on a combination of grants and personal income to cover labor and rent. Circular businesses must maintain higher margins to support more jobs, yet existing support is often inadequate and presents additional challenges for BIPOC communities, which often encounter accessibility issues.
- **There is a lack of demand and visibility for circular services and end markets, as well as incentives for specific waste streams and upcycling practices.** There are few robust end markets, and virtually no incentives exist for many pre-consumer and non-mono-material textiles. This narrows the range of viable circular job opportunities. Interest and supporting infrastructure largely favor mono-material collection and waste hauling and management companies, as well as established post-consumer clothing traders. Businesses are reluctant to invest in circular services, often fearing public scrutiny if other parts of their supply chains are imperfect. Currently, there is no strong mandate for green purchasing. These factors make it difficult to create stable demand for relevant job opportunities.
- **In practice, equity commitments are often merely symbolic and lacking in substance.** Despite the passage and implementation of the HEAL Act and other equity-centered protocols, there are few concrete mechanisms in funding and contracts that demonstrate the centering of equity goals in practice. Marginalized communities, who are most affected by textile production and waste—from workers exposed to toxic substances in downcycling procedures—are often excluded from decision-making.

Opportunities

- **Direct resources toward building applied training pipelines around real circular operations.** Future workforce development programs could be developed through partnerships with practitioners to offer targeted apprenticeships and curricula that feed directly into existing circular employment needs. A possible statewide circular textiles consortium could bring together stakeholders from different sectors to align workforce, infrastructure, and policy decisions. The consortium could be charged with co-developing job-quality standards, advising on EPR implementation, and identifying funding priorities for job development.
- **Future funding opportunities should support different stages of the recycling chain rather than heavily focusing on collection, sorting, and other down-cycling practices.** Future EPR/PRO funds and municipal hauling contracts could earmark a percentage for local reuse and upcycling entities, which are tied to the specific data, such as tonnage and other equitable labor metrics. Structuring grants based on collections/tipping revenues and documented diversion could balance funding opportunities and strengthen circular workforce roles.

4.4.3 Evergreen Goodwill of Northwest Washington (EGNW)

Key findings

- **Evergreen Goodwill is located at a critical juncture in the textile supply chain and sees circularity as extending beyond consumer behavior.** The company is involved in various stages of the supply chain, including logistics, sorting, downstream routing, recycling, and redistribution. Although they currently divert 80-83% of the volumes they receive, underdeveloped infrastructure and data gaps still constrain more circular flows.
- **A holistic approach is essential to establishing a better circularity system.** This includes investing in and improving infrastructure, such as AI-assisted sorting technologies, centralized logistics, storage and salvage facilities, benchmarked grading systems, and diversifying channels for donated materials to improve recyclability and diversion rates.
- **Current equitable employment development efforts largely rely on the retail and operational arms of the organization.** Finding innovative ways to reduce the gap between revenues and costs is essential for continuing to advance these efforts and provide accessible services while removing barriers for "anybody and everybody" within local communities. This will allow them to allocate more resources toward employment development and waste diversion efforts.

Challenges

- **The current system still has technology and infrastructure gaps, and it is largely manual and heavily reliant on human labor, especially for sorting and grading.** While this approach offers benefits in terms of quality control and nuanced decision-making, it also increases labor costs and limits scalability and efficiency. Technology and data constraints also hinder the ability to efficiently grade textiles according to a consistent standard, match them to the optimal outlet, and demonstrate value to potential partners or policymakers.

- **Many of the current volume received are lacking end markets**, especially for low-value or damaged items; there are few viable recycling or alternative-use markets, which leads to pressure on downstream operations such as storage, logistics, recycling, redistribution, and disposal; and in some cases it is more costly to recycle than to dispose, which is discouraging to further material recovery efforts.
- **Lack of strong policy guardrails risk rewarding only the lowest-cost vendors and shifting safety, labor, and environmental risks onto vulnerable workers and communities.** For Evergreen Goodwill, which faces high labor and real-estate costs in Washington and already receives large donated volumes, this creates a structural squeeze where they need to internally digest the costs without assurance that policy incentives or producer fees will recognize or fund their higher standards.

Opportunities

- **Policy-enabled technology infrastructure and skills upgrades.** Targeted funding and other policy supports could help Evergreen Goodwill invest in advanced technologies and infrastructure such as AI-enabled sorting systems, integrated operational data, and fiber-to-fiber recycling equipment. These improvements would enable employees to classify received volumes more consistently and efficiently, increase recyclability, and route collected items to their highest-value use, while generating the data needed to diversify downstream channels and demonstrate impact. Designed well, advanced sorting technologies, automation, and updated operational systems can also become skill-building tools by training existing staff into higher-skill technician, data, and quality-control roles rather than simply automating away manual work.
- **Aligning workforce metrics with circular, consumer-driven models.** Evergreen Goodwill can leverage Washington's strong consumer appetite for resale to expand higher-margin, curated models, such as e-commerce, specialty racks, repair-enhanced items, and upcycling collaborations. They can then track how these channels increase diversion and revenue, as well as create and improve local jobs, such as roles in repair, styling, e-commerce operations, and training programs. Linking workforce metrics such as people served, barriers removed, retention, and wage growth to specific resale and upcycling activities demonstrates how investing in circular business models advances equitable workforce development in the state.
- **Formalizing equity, safety, and advancement standards.** Evergreen Goodwill already emphasizes inclusivity, fair wages, and promotional opportunities. Codifying these practices into clearer internal standards and outcome-based metrics, such as retention, wage growth, and promotions by demographic, could strengthen their case for policies and funding that support equitable textile jobs and safe, high-quality working conditions across the circular textile system.

4.4.4 Dr. Meital Peleg Mizrachi (Yale University)

Key findings

- **The sustainable development of the textile sector requires consideration of labor and environmental factors.** A just transition and the establishment of effective metrics must include fair wages, safety, and workers' rights, as well as waste and emissions outcomes. Workers' rights violations and exploitation persist in the Global South and the Global North, particularly among immigrant and undocumented populations.
- **Weak labor protections and opaque secondary markets.** Worker exploitation remains common in textile markets worldwide, particularly affecting immigrant and undocumented workers. Even in places with large textile workforces and advanced policy structures, such as California, protection mechanisms and documentation have fallen short. Secondary markets have even less information about their products, labor practices, and environmental impact.
- **Consumer behavior and overproduction are central, not side issues.** Currently, policy and market approaches are largely reactive rather than proactive in addressing overproduction and wasteful consumption patterns. Incentives like tax breaks on secondhand clothing can increase total consumption by lowering prices without reducing the demand for new clothing. This dynamic risks undermining waste reduction and emissions goals while failing to guarantee better jobs.

Challenges

- **Policies that increase circularity without reducing production and consumption behaviors.** Despite being well-intentioned, current policy choices and market approaches sometimes risk being reactive rather than preventive when it comes to transitioning to more sustainable production and consumption patterns. Policies such as EPR and fast-fashion taxes are implemented in ways that expand collection and resale but leave overproduction and poor working conditions unchanged. These policies may even worsen disposal behavior. Without explicit production design choices, waste reduction practices, and labor standards, circular policies may entrench existing inequities.
- **Implementation of living wages and social protections is still not standard practice.** Many fashion and textile jobs lack living wages, adequate leave, and grievance mechanisms. Even when policies on minimum working conditions exist, companies sometimes claim that compliance is "too complicated." When it comes to quality workforce development, equity is a crucial externality that policymakers must consider, not an optional add-on.

Opportunities

- **Design integrated and comprehensive policy metrics.** This could entail linking circularity metrics with multifaceted benchmarks, such as adequate and just labor standards, safe working conditions, leave policies, and grievance systems, for jobs funded through public programs. It

could also entail exploring policy tools that reduce overproduction, such as incentives or disincentives for low-cost, high-turnover fashion items.

- **Draw on existing fair labor frameworks as anchors for job quality definitions.** The interview highlights resources such as the Fair Labor Association’s fair labor definitions and state-level policies, like California’s Senate Bill 62 (SB 62), also known as the Garment Worker Protection Act. This bill aims to address wage theft and promote producer accountability. These resources can be adapted or referenced when defining high-quality, circular textile jobs and when drafting job-quality clauses for Washington’s textile policy designs and discussions.
- **In addition to primary production, consider researching and regulating the secondary market.** Since resale platforms and other secondary market stakeholders can increase overall consumption, Washington has an opportunity to propose reporting requirements, transparency standards, and pilot programs to clarify their labor and environmental impacts. These programs can inform more balanced policies that do not overly rely on resale as the only solution.

4.5 Overall Analysis

Across the ten interviews spanning three thematic areas, we gain a coherent picture of Washington’s circular textile landscape. While each interviewee brought distinct sectoral expertise, sometimes leading to contradictory views, a high level of consensus still surfaced around core structural barriers, alongside a shared optimism about where meaningful intervention is most likely. Notably, the challenges identified are not isolated to any single focus area but rather systemic, interconnected, and mutually reinforcing.

The table below maps the major themes that arise during the interview process and who raised them; they illustrate where consensus was strongest:

Theme	Interviewee (s)	Count
Policy gaps (EPR limitations, policy design)	<i>CalRecycle, CPSC, MassDEP, AMCIRC, Douglas Strategies, WM</i>	6
Consumer awareness & education	<i>WM, CalRecycle, CPSC, AMCIRC, MassDEP, Douglas Strategies</i>	6
Funding & incentives	<i>WM, CPSC, Redesign Collective, Evergreen Goodwill, AMCIRC</i>	5
Infrastructure gaps (technology, end markets, etc.)	<i>WM, CalRecycle, Evergreen Goodwill, Douglas Strategies, AMCIRC</i>	5
Equity & labor standards	<i>Commerce, Redesign Collective, Evergreen Goodwill, Yale</i>	4
Data scarcity	<i>WM, CalRecycle, Evergreen Goodwill</i>	3

Overproduction & overconsumption	<i>Yale, CPSC, AMCIRC</i>	3
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The interviews revealed several key challenges and opportunities to advance textile circularity in Washington. The overwhelming consensus across experts is that there is no single “silver bullet” solution to handle textile waste; the challenges we face today do not belong to one sector, and neither do the solutions. Solutions emerge when knowledge is shared, when perspectives collide, and when trust allows stakeholders to move forward together. Effective policy response will need to address multiple challenges simultaneously.

The most consistently cited structural barrier, raised across all three focus areas, is the absence of aligned funding opportunities or financial incentives throughout the supply chain. For stakeholders concerned about waste diversion, this manifests as volatile end markets and pricing that make textile collection uneconomical; limited outlets for low-quality materials; and the high recycling costs relative to disposal costs. For community-based circular businesses, it often translates to chronic underfunding. Redesign Collective operates on a combination of grants and personal income, while Evergreen Goodwill absorbs high labor and real-estate costs without assurance that EPR fees or policy incentives will match their higher standards. These constraints indicate that circularity cannot scale unless we make it financially viable at every intersection of the supply chain.

EPR was the most frequently discussed policy mechanism, mentioned substantively in six of ten interviews, but it was also the most contested. Interviewees broadly agreed that EPR is a necessary first step but identified many of its limitations; for example, it does not address overproduction or consumption patterns; its implementation can entrench large out-of-state PROs at the expense of small community organizations; and its effectiveness heavily depends on infrastructure that either does not currently exist or is largely lacking in most states. This evidence suggests that EPR works best when it is less prescriptive, allowing market actors to determine how best to comply, but this flexibility should be paired with transparency and strong governance to prevent the emergence of opaque and monopolistic PRO structures. The tension between flexibility and accountability is something that Washington will need to navigate directly.

Consumer awareness and education were another shared theme. However, interviewees have different approaches to solutions. Government actors emphasized the importance of outreach campaigns and educational framework design; private organizations such as AMCIRC and Douglas Strategies pointed to labeling and digital product identification as structural fixes, while WM gave valuable insight into how to increase the level of convenience for consumers and provide services such as curbside collection. This divergence suggests that awareness alone is insufficient: behavioral change will require simultaneous investment on all fronts.

Equity in workforce development design and practices is another concern for future policy design. Equitable labor standards, BIPOC community access, and concrete and explicit equity commitments were highlighted as existing issues. Several interviews framed high-quality jobs and fair, livable wages not as trade-offs against efficiency, but as prerequisites for building a circular system that is durable and

scalable. A textile economy built on underpaid and often informal labor reproduces the inequities of the linear system that a circular system intends to replace.

There are some unresolved tensions that have emerged that we plan to address in the following recommendation section.

First, the infrastructure policy "chicken-and-egg" conundrum: EPR and its related mandates are most effective when collection and recycling capacity already exists, but private investment in infrastructure requires policy certainty.

Second, harmonization versus monopolization: consistent definitions and reporting requirements across jurisdictions reduce compliance burden, but risk disadvantaging smaller, community-rooted organizations that are best positioned to carry out the mission and are fastest to action.

Third, circularity without overproduction and consumption: expanding resale and recycling markets can risk This would increase overall consumption unless it is paired with upstream production constraints and shifts in consumption philosophy.

Taken together, these findings suggest that Washington's circularity strategy requires simultaneous, coordinated action across policy design, waste diversion, and workforce development, rather than fragmented interventions in any single area. The following chapter translates these findings into concrete recommendations organized around our findings, with attention to how progress in each thematic area depends on the others.

Chapter 5. Recommendations

5.1 Overview

Based on our research and interviews with industry experts, we have identified several barriers and opportunities to advancing a circular textile economy. To help guide the RMDC and answer our research questions, we have developed the recommendations below. We aimed to make our recommendations actionable, feasible, and realistic for RMDC to take in order to assist their goal of advancing the textile circular economy.

5.2 Recommendation: Prepare Washington for Future Circular Textile Policies

With Washington's passage of other product stewardship programs such as battery stewardship in 2023 (RCW 70A.555), the Recycling Reform Act for packaging product stewardship in 2025 (RCW 70A.208), and the Legislature's consideration of HB 1420 (Establishing producer responsibility for textiles), the policy environment is already broadly trending in the right direction. The RMDC is contributing to the circularity momentum through initiatives such as NextCycle Washington, the Reuse Impact Calculator, webinars, grants, and other ways.

The success of any solid waste policy is dependent on the policy's implementation and public participation; participation in turn depends on consumer education. Outreach and education initiatives, which are linked to policy effectiveness, are covered in recommendations 2 and 3. Preparing Washington now for potential policy passage and implementation in the next 5-10 years will ensure a smooth deployment.

5.2.1 Encourage stakeholders to explore textile policies at the local level

Local governments may have more textile policy levers at their disposal than it may appear. Even without statewide EPR and with limited infrastructure, some policies can be executed at the municipal level and are community driven.

Invest in recycling, sorting, and circular infrastructure policies via:

- Grants, loans, or zoning support for sorting facilities or mechanical and chemical recyclers
- Circular procurement standards for public organizations, agencies, and schools. Public purchasing decisions have strong potential to pave the path by fostering innovation, increasing product availability, reducing costs, and signaling shifts in private markets.

Support secondhand markets, reuse, and repair via incentives designed to make thrift stores, resale shops, non-profits, and repair community groups more attractive over fast fashion or linear business models. In practice, this can look like tax-free holidays for thrift stores, cities sponsoring swap events

and repair workshops, supporting tool libraries, micro grants for small circularity-focused businesses, partnering with non-profits to expand donation capacity, or partnering with local retailers to host take-back points to improve collection quantity. While some larger cities already have the resources to implement some of these policies (or already have them in place), smaller municipalities may need the RMDC's guidance in exploring these options.

Considerations

Boosting circular initiatives at the local level can have high impact, but caution should be taken to avoid creating a "patchwork" of numerous policies, if the policies are regulatory in nature or compliance-related. If statewide textile EPR is the ultimate goal, local policies should be paving the path and priming behaviors rather than confusing or hindering.

5.2.2 The Washington State Legislature should order a mapping of statewide textile infrastructure and an economic impact assessment

The Washington State Legislature should direct a comprehensive mapping of statewide textile infrastructure alongside a formal economic impact assessment. California's rollout of the RTRA and its subsequent legal challenges demonstrate the importance of clear and equitable implementation.

Assuming that a successor to HB 1420 can be passed in the next 5-10 years and in alignment with the findings in Chapter 4, a comprehensive, multifaceted assessment and mapping is needed to set up textile EPR for success in Washington.

Elements of a statewide textile infrastructure mapping should include:

- **A comprehensive directory of organizations** involved in collection, sorting, repair, reuse, resale, recycling, exporting, and disposal (aligned with Recommendation 5.4.1 - Washington Textile Circularity Working Group)
 - For private, non-profit, and labor groups: their physical capacities, operational constraints, social capital, value chains, primary markets (of products and/or consumers), solid waste generated
- **A list of all physical infrastructure:** facilities in Washington that collect, sort, or process significant amounts of textiles regularly; or facilities that export or sell recycled textiles
 - Documenting their location, service areas, transportation logistics, processing capabilities, material types accepted, annual throughput, end markets

Considerations

This mapping would provide insight into how textiles move through Washington's system and identify areas where further investment or coordination is needed. However, several challenges should be considered:

- **Confidentiality concerns:** Private firms may be reluctant to share proprietary information that could affect their competitive position.
- **Capacity constraints:** Smaller, community-based organizations may lack the resources to collect and report detailed data.
- **Data limitations:** Variation in data quality and reporting practices may affect comparability across entities.

To address these concerns, reasonable accommodations could include reporting exemptions, aggregated or anonymized data, and technical support for smaller organizations.

Elements of an economic impact assessment should include:

- **Baseline economic conditions**, including current size and structure of Washington’s textile sector. Employment across collection, reuse, recycling, and disposal systems should be estimated as closely as data availability allows.
- **Economic benefits** that statewide textile EPR would directly generate, measured in job creation in the repair, reuse, and recycling sectors, local economic development projects, reduced landfill and waste management costs, and avoided GHG emissions.
- **Cost analysis**, including costs of implementation and compliance for producers and intermediaries, administrative and enforcement costs borne by the state government, and potential costs indirectly passed down to consumers.
- **Distributional effects**, which can be measured spatially and temporally. As discussed throughout this report, impacts may differ between small businesses and large firms, as well as unique considerations for low-income consumers. Regional economic impacts can vary across urban and rural areas of the state.

Some of this information is already mandated to be collected in the 2026 second substitute version of HB 1420 (and therefore, likely to be included again in a future successor to the bill) and will likely be considered during the formation of a PRO, before a theoretical EPR scheme would begin.

5.3 Recommendation: Build Washington’s Community Engagement and Workforce Infrastructure in Preparation for Textile Circularity

Policy alone will not build Washington’s circular textile economy. Without public understanding, trust, and buy-in, even the most carefully designed policy frameworks risk underperforming and underdelivering on tangible results. For the public to engage and participate meaningfully in this process, clear, actionable, and consistent information is required. This recommendation aims to address potential fragmented and inequitable practices within Washington’s textile sector and to increase community-level circular activity to be more economically self-sustaining.

This recommendation calls on RMDC to lead the design and coordination of community engagement and workforce development infrastructure that does three things simultaneously: it builds public understanding of and trust in Washington’s circular textile system; it creates accessible, equitably

distributed entry points for participation; and it connects community-level engagement efforts to workforce development pathways, ensuring that the enthusiasm and progress generated by reuse, repair, and recycle activities translate into economically viable opportunities, particularly for vulnerable communities that have historically borne more environmental, social, and cultural burdens.

It is also worth noting that this recommendation is future-oriented. Its full realization depends on the development of Washington's future textile infrastructure, both physically and ideologically, as well as the passage of future EPR legislation and the successful implementation of the multi-stakeholder working group recommendation. However, we can assume reasonable and meaningful progress can begin immediately under RMDC's existing mandate, and early investment in community trust and engagement capacity is pivotal to the success of all the recommendations of this report.

5.3.1 Establish Clear, Consistent, and Accessible Public Communication Standards

Washington currently lacks universal language for how textile circularity information is communicated to residents. Messaging often varies across different stakeholder groups, creating confusion, undermining public trust, and consequently reducing participation rates. RMDC should lead the development of a commonly shared and agreed-upon communication standard for textile circularity: a shared vocabulary, visual identity, and messaging framework that all public-facing actors can adopt, regardless of their sector or geography.

This standard should build around accessibility early on and not be retrofitted as an afterthought. Multilingual incorporations, plain-language principles, and visual communication should be treated as baseline requirements, not optional additions. Most importantly, this standard should be developed in consultation with the communities it aims to reach; a more detailed description of what this may entail is detailed in the Washington Textile Circularity Navigator Toolkit (Section 5.5).

5.3.2 Expand Convenient, Equitably Sited Textile Collection Infrastructure

Access often constrains consumer participation in textile diversion. Even motivated consumers will resort to landfilling when the collection infrastructure is lacking or inconvenient or when it is concentrated in areas that already have ample resources. RMDC should work with stakeholders and partners to expand Washington's textile collection network in a way that is both physically convenient and equitably distributed, using equity-informed siting criteria that prioritize high-waste-generation communities, transit-accessible locations, and areas currently underserved by existing thrift and donation infrastructure.

Considering the long-term market development of the circular textile market, long-term investments in collection infrastructure should be considered with high priorities. Stable, systematic, and predictable collection points and collection schedules provide material volumes that make downstream reuse and recycling economically viable and predictable. They also create a visible, physical signal to the public that textile circularity is a serious and permanent part of Washington's waste management future. RMDC

should actively explore how future EPR funding mechanisms, modeled and informed by various domestic and international efforts, could be directed toward collection network expansion here in Washington, positioning this infrastructure work as a foundational component of any future producer responsibility system.

5.3.3 Connect Community Engagement to Inclusive Workforce Development Pathways

The central premise of this recommendation is that consumer- and community-level engagement and workforce development must be designed and implemented together, not in parallel. Community reuse and repair activities such as clothing swaps, mending classes, textile arts workshops, or upcycling demonstrations are where most residents will first encounter circular textiles in practice. RDMC should treat these touchpoints as on-ramps to formal workforce development. To accomplish this, RDMC should partner with community colleges and existing workforce training programs, such as Next Cycle Washington. Other potential partners include nonprofits like Evergreen Goodwill and independent organizations like Redesign Collective. These partners have the ability to connect interested and qualified participants with resources, such as credentialed training, apprenticeships, and employment opportunities in the growing circular textile sector.

It is worth noting that these pathways must be designed from the outset to reach populations systematically excluded from conventional workforce pipelines, particularly people with criminal records and individuals navigating mental health or substance use recovery. Sorting, repair, and materials processing work is structured, skill building, and physically meaningful—qualities consistently associated with sustained recovery and successful reintegration. As the domestic case studies in Section 2.4.5 demonstrate, this integrated approach is proven, scalable, and directly aligned with the high-quality workforce development goals that this report focuses on.

We therefore recommend RDMC to actively cultivate partnerships with reentry and recovery-focused organizations, programs, and community health providers as a core component of its workforce development strategies. Workforce trainings embedded in therapeutic or reentry settings should be eligible for the same funding streams and institutional recognition as conventional apprenticeship programs. Additionally, job placement opportunities in the circular textile sector should also be collected, mapped, and made accessible to reentry case managers and treatment providers as viable, dignified employment options. The Goodwill model and the CAIF/Saamuhika Shakti case study (section 2.4.5) further illustrate what sustained integration of marginalized workers into circular economy employment can look like at scale; these are all models that RDMC can draw on in designing Washington's own workforce development approach.

As previous literature has suggested, over half of all circular economy workers globally operate informally, without labor protections or stable income. Washington has both the opportunity and the obligation to resist this pattern. Building inclusive, protected, living-wage pathways into circular textile

work from the outset is far easier than retrofitting equity into a system that has already solidified around existing inequitable labor dynamics.

5.4 Recommendation: Establish a Multi-Stakeholder Textile Circularity Working Group

Washington’s transition to a circular textile economy cannot be achieved by actors working in silos. The challenges identified throughout this report—fragmented infrastructure; low transparency in terms of data sharing and lack of common understanding on important concepts and outcomes; unsatisfactory and low-bar labor outcomes; and competing private interests—are fundamentally collective action problems. They all require a structured, trust-based space where stakeholders across the textile supply chain can work through their differences, share information openly, and develop coordinated strategies. We therefore recommend the RMDC to establish and convene a formal working group on textile circularity (“the working group”). This working group will be a standing, multi-stakeholder body that brings together representatives from government, the private sector, the nonprofit sector, labor, and academia to collectively advance circular textile markets in Washington.

This recommendation intends to expand the scope of RMDC’s current work and mandates considerably. Rather than limiting membership to only actors from any single sector, the working group will be designed to serve as a neutral, facilitated space for Washington’s entire textile circularity ecosystem. The RMDC, given its legislative mandate and its established relationships with both public and private stakeholders, is thus uniquely positioned to convene and facilitate this body without being perceived as partisan to any one interest group.

5.4.1 Establishing the Washington Textile Circularity Working Group

Membership and representation

The working group should be structured to reflect the full spectrum of actors whose participation is necessary for advancing systemic change. We recommend including the following membership categories:

- Public sector: Representatives from the RMDC, Washington State Department of Ecology, Washington Department of Commerce, and other relevant county- or municipal-level agencies that focus on solid waste or textile waste.
- Private industry: Haulers and recyclers such as WM, Republic Services, Recology, etc.; sorters; textile processors; and retail sector representatives (including commercial brands, upcyclers, secondhand/thrift operators, online and offline resale platforms, and take-back program operators).
- Nonprofits and civil society organizations: Reuse and repair organizations, industry associations, educators, independent operators or advocates, et cetera.

- **Labor:** This category includes unions and worker advocacy groups representing those employed in the textile sector (especially involved in sorting, recycling, and processing) and other organizations that serve specific minorities or underrepresented groups working at the intersection of textiles and equity.
- **Academic and research institutions:** Researchers with expertise in textile science, circular economy, policy design and implementation, and environmental justice
- **Community voices:** Representatives from communities disproportionately affected by textile waste, general consumers, and community leaders.

Membership should be updated on a defined cycle, for example, a two-year rotating term, to prevent entrenchment and allow new voices to enter the decision-making process.

Confidentiality and Trust Mechanisms

A common challenge that multi-stakeholder platforms face is that commercially sensitive information inhibits candid participation. To protect sensitive information such as cost structure, material composition data, sorting technology, and pricing with downstream buyers, working groups risk defaulting to low-stakes public positions rather than substantive exchange. We suggest the working group address this issue early and directly by adopting a tiered confidentiality framework:

- **Chatham House Rule:** All sessions of the working group should operate under the Chatham House Rule (Chatham House, 2002) by default, meaning participants may freely use the information discussed, but may not attribute it to any specific individual or organization. This mechanism allows candid discussion while protecting participants from reputational or competitive risk.
- **Non-Disclosure Agreements (NDAs):** For designated sessions that involve sharing commercially sensitive data, targeted NDAs may be executed between relevant participants. These should be limited in scope and time-bound to avoid creating long-term barriers to transparency.
- **Safe harbor language for regulatory discussions:** When conversations touch on potential policy or regulatory directions, RMDC should work with legal counsel to establish safe harbor provisions that allow participants to explore policy ideas in good faith without creating records that could be used against them in future regulatory proceedings.

Structure and Governance

The working group requires clear governance to ensure effective and sustainable collaboration:

- **Facilitation:** RMDC should serve as the permanent convener and secretariat, responsible for setting agendas, circulating materials, and ensuring balanced participation. Additional facilitator(s) could be engaged for sessions dealing with contentious issues (e.g., policy design, fee structures, labor standards, etc.)
- **Meeting cadence:** Quarterly plenary sessions with optional need-based subgroup meetings organized around different focus topics proposed and voted on by working group members.

- Decision-making: The working group should operate by consensus where possible; a feedback, complaint, and response mechanism (CFRM) should also be in place for members to voice concerns and react to dissent. Outputs should take the form of joint recommendations, shared data reports, etc. and not binding decisions.
- Transparency and accountability: While internal deliberations are protected under the confidentiality framework mentioned above, the working group should also publish an annual report on topics discussed, progress made, and areas of ongoing discussion and improvement. This maintains public accountability without compromising the safe space of deliberation.

5.4.2 Develop a Shared Textile Circularity Data Dashboard

One of the working group's first and most tangible deliverables should be the development of a shared, publicly accessible information dashboard for transparency and accessibility. The dashboard should be updated regularly with input from working group members. Feedback should be regularly monitored and collected to identify areas for improvement and which types of data are most or least useful. As identified in the interview with WM (Section 4.2.1), a significant barrier to systemic progress in the sector is the absence of shared, standardized data on textile material flows, diversion rates, and market conditions. Individual stakeholders currently don't have a complete picture of how much textile waste is generated versus how much is diverted and where the bottlenecks occur in the supply chain.

The dashboard would:

- Aggregate material flow data contributed voluntarily by working group members, normalized under a shared methodology developed by RMDC with additional input from academic advisors or partners.
- Track key performance indicators aligned with Washington's circular economy goals, for example, tons of textiles diverted from landfill per year; diversion rate as a percentage of total textile waste generated; number of active textile collection points by country; volume of textiles reused, repaired, recycled; and jobs created in the circular textile sector, which could also potentially be disaggregated further by job types, wage levels, and demographic.

Benefits

- An up-to-date dashboard that tracks textile recycling rates would inform the design and implementation of future policies, laws, and regulations while also making tracking, trend analysis, and reimbursement efforts easier.
- Data tracking trends is extremely useful for developing targeted outreach campaigns that improve consumer education on textile circularity.
- A dashboard could pave the way for data disclosure requirements for textile waste management and codify textile transparency into legislation.
- There will be improved transparency in the textile waste system overall. Improved data availability will not only be useful for policymakers, but it will also help other actors in the textile industry who struggle with inconsistent supply and demand data for textile waste material.

Drawbacks and Limitations

- It is difficult to obtain reuse or repair data. This type of information is difficult to quantify and track. However, collaboration between attendees of recurring textile meetings could result in agreed-upon measurements for reuse and repair.
- The lead time and potential costs of future studies are significant. RMDC would need to invest in robust data collection, which requires time and resources. In the short term, RMDC should focus on voluntary and existing data from waste collection studies and recurring textile meetings, but they should plan for this investment in the future.

5.5 Washington Textile Circularity Toolkit

5.5.1 Overview and Purpose

The purpose of this toolkit is to serve as a practical, hands-on resource designed for the people who are already working, participating, or being affected by Washington's textile circularity ecosystems: residents wondering what to do with a bag of old/unfit clothes; thrift store employees navigating donated volumes; upcyclers looking for reliable material collection resources; haulers seeking to expand collection and recycling programs; and academics or advocates trying to make sense of rapidly shifting policy landscapes.

5.5.2 Toolkit Elements

Module 1: Public Engagement and Education Guide

This module's primary audience is the general public, more specifically Washington residents. This module intends to provide accessible, plain-language materials and resources to help them understand the reasons and mechanisms for building a textile circularity system, help them find their place within it, and prompt them to take meaningful action. It translates the policy and systems analysis of this report into everyday language.

This module includes:

- **Textile Lifecycle Explainer:** A visual, plain language walkthrough of a textile item's life cycle, from fiber to fabric, use, donation, sorting, reuse, and recycling or landfill. The explainer should also be made available in multiple formats (print-ready, web-access, and text) and languages to enhance accessibility.
- **Textile-Specific "Where Does It Go?" Tool:** King County and Seattle both provide online tools to help residents identify recycling channels for specific waste items, but directions regarding textiles are often vague, especially when it comes to mix-fiber and specific sub-types of fiber. This guide should thus be a simple, illustrated decision tree that walks residents through the question of what to do with a specific textile item, guiding them through the process of deciding whether to repair, donate, drop off for recycling, or discard. This guide could be organized by item type and material condition.

- **Drop-Off and Collection Directory:** A regularly updated, Washington-specific directory of textile drop-off locations, organized by county, with information on what each site accepts, hours, and contact information. Designed to integrate with the digital platform described in Recommendation 2.4 and to be printable for distribution in community settings.
- **Glossary of Key Definitions and Terms:** Plain-language definitions and explanations of terms that appear frequently in textile circularity discussions but may present themselves as barriers for understanding to the general public. Examples of such terms include circular economy, EPR, PRO, fiber-to-fiber recycling, up/downcycling, postconsumer waste, etc. This document intends to help general audiences improve understanding of the subject and engage meaningfully in ongoing discussions and debates (see also Appendix I).

Module 2: Industry and Operator Guide

This module's primary audience includes the haulers, recyclers, sorters, secondhand and thrift store operators, upcyclers, and repair businesses. This module intends to provide practical operational resources for the businesses and workers who form the backbone of Washington's existing textile recycling infrastructure. These actors often operate with significant expertise under time constraints, different levels of coordination support, and access to shared data. The goal of this module is to reduce friction, improve consistency, and make it easier for operators to participate in the broader circular ecosystem.

This module includes:

- **Sorting and Grading Reference Guide:** A standardized guide to textile sorting and grading categories used across Washington's recycling and thrift sector, with clear definitions distinguishing reusable, recyclable, other salvageable, and landfill-bound items. This document should be created in consultation with working group members, haulers, and sorters to reflect real-world conditions and constraints and aim to reduce inconsistency in how materials are categorized across the state.
- **Regulatory and Compliance Overview:** A plain-language summary of current Washington regulations relevant to textile recycling and reuse operations, including solid waste handling permits, labor requirements, and any other requirements that are relevant. This should be updated annually or when significant regulatory changes occur.
- **Grant and Funding Navigator:** A curated list of available public funding opportunities relevant to textile recycling operators in Washington. This may include information and guidance on applying for grants at federal, state, and local levels and even private funding opportunities. This should include plain-language summaries of eligibility requirements and application timelines and be updated regularly.
- **Peer Connection Directory:** A collection of Washington-based operators organized by function and focus (e.g., hauling, sorting, reuse, repair, redistribution, recycling, etc.). This document could help facilitate referrals, establish potential partnerships, and enable informational exchange between operators across the textile value chain. Operators may opt in to listing their contact information, upcoming events, and what materials they accept or generate.

Module 3: Research and Policy Engagement Guide

This module's primary audience includes researchers, analysts, and policy advocates who are building the evidence base and political conditions for systemic change in Washington's textile sector. This module will be oriented toward enabling engagement rather than providing research outputs, which means directing users toward the right resources, data, and networks rather than duplicating previous work.

This module includes:

- **Washington Textile Data Index:** A curated index consisting of publicly available data sources relevant to textile waste and circularity in Washington. The data being included in this index may include state-wise and municipal-level solid waste management data, diversion rates, working group dashboard outputs, etc. Data entries should also include other relevant information such as coverage period, geographic information, and indication of any missing data.
- **Research Priorities Document:** A publicly available statement from RMDC identifying the most important knowledge gaps in Washington's textile circularity system. This document will be updated annually in collaboration and consultation with the working group. This serves both as a guide for academic research toward actionable questions and to signal potential funders on where investment is most needed.
- **Engagement Pathways:** A document on how researchers, public actors, and policy advocates can engage with RMDC and the working group, for example, how to request or submit data, how to propose research collaborations, and how to participate in public comment processes related to textile waste and other public events hosted by RMDC.

Module 4: Coalition-Building and Stakeholder Engagement Guide

This module's primary audience includes RMDC staff, community leaders and organizers, nonprofit leaders, Washington public sector participants, and anyone seeking to build or join Washington's circular textile coalition. This module represents a strategic approach designed to help RMDC and the broader network of actors that share its goals to continuously contribute to the multi-stakeholder coalition needed to sustain and scale Washington's circular textile ecosystem over time. It intends to translate the working group structure recommended (Section 5.3) into practical onboarding and engagement resources.

This module includes:

- **The Washington Circular Textile Working Group Onboarding Materials:** This is a comprehensive packet for new working group members, covering the group's mission and purpose, governance structure, confidentiality framework, meeting protocols, CFRM, and expectations. These materials should be sharable both digitally and in print.
- **Stakeholder Mapping and Management Tool:** A structured template for RMDC to systematically identify, categorize, and track potential coalition members across Washington's circular textile ecosystem, organized by sector, geographic coverage, interests, and potential barriers to

engagement. This should be created in collaboration with working group members and updated regularly.

- **Facilitation Guide for Working Group Meetings:** A guide for facilitating multi-stakeholder convenings, including agenda templates, discussion protocols, techniques for navigating through potential conflicts of interest, and methods for documenting and following up on shared work agendas.
- **Narrative and Framing Guide:** A guide for working group members or other relevant stakeholders on how to communicate about Washington’s textile circularity work to different audiences, e.g., residents, legislators, policymakers, journalists, and investors. This includes key interests and talking points, performance indicators and statistics, and framing advice grounded by academic research and literature. This document aims to help its audience tell a consistent and compelling story about Washington’s circular textile industry and its future.

5.5.3 How and When to Use the Toolkit

To use this toolkit, we recommend that different actors should use each module according to their relative feasibility, effectiveness, and desired outcome. These guidelines are suggestions, and each stakeholder can and should use whichever modules they deem appropriate to them.

Stakeholder Type	Module	Outcome
Policy makers	Module 3	Policy makers will be knowledgeable about general textile systems, industry standards, research and data needs, and participate in coalition building. Washington’s Textile Data Index should be used to inform policy creation.
Regulatory Agencies	Modules 3, Module 4	Regulators will be knowledgeable about general textile systems, industry standards, research and data needs, and participate in coalition building. Information should be used to inform regulatory decisions, with input from stakeholders through coalition building.
Textile Waste Collectors or Haulers	Module 2, Module 4	Haulers will understand and navigate relevant and complex textile regulations, reducing friction and enabling easier participation in the circular textile market. Participation in coalition building will help inform textile waste diversion data collection.
Thrift or Secondhand Retailers	Module 2, Module 4	Stakeholders in the secondhand market will understand and navigate relevant and complex textile regulations, reducing friction and enabling easier participation in the circular textile market. Funding opportunities will be easier to access, reducing

		applicant burden and improving eligibility. Participation in coalition building will help inform reuse data collection.
Repair Organizations	Module 2, Module 4	Repair organizations will understand and navigate relevant and complex textile regulations, reducing friction and enabling easier participation in the circular textile market. Funding opportunities will be easier to access, reducing applicant burden and improving eligibility. Participation in coalition building will help inform repair data collection.
Textile Manufacturers or Retailers	Module 2, Module 4	Stakeholders in the primary textile market will understand and navigate relevant and complex textile regulations, reducing friction and enabling easier participation in the circular textile market. Participation in coalition building will help inform data collection, collaboration, and potential innovation.
Textile Recyclers	Module 2, Module 4	Stakeholders in the textile recycling market will understand and navigate relevant and complex textile regulations, reducing friction and enabling easier participation in the circular textile market. Participation in coalition building will help inform data collection, collaboration, and potential innovation.
Fashion or Textile Academics	Module 3, Module 4	Academics will be able to navigate existing research and identify future research opportunities. Participation in coalition building will help inform data collection, decisions about measurements and criteria for evaluation in future studies, collaboration, and potential innovation through creative problem solving.
Washington Residents	Module 1	Consumers in the textile industry will gain greater understanding of how to navigate the complexities of reusing, repairing, recycling, or disposing of textiles. Information is accessible and actionable, which will prompt behavior change.

Appendix 1. Glossary

Circularity: A practice in which resources and materials - such as fiber, fabric, and raw materials - are kept in circulation for as long as possible through recycling, reuse, and/or repair (Ellen MacArthur Foundation, 2019).

Climate Commitment Act (CCA): Washington’s comprehensive climate policy that establishes a cap-and-invest program to reduce greenhouse gas emissions. The law requires major emitters to purchase allowances for their emissions, generating revenue that is re-invested in climate and energy projects/initiatives to support the state’s decarbonization efforts.

Department of Ecology (DOE): Washington’s environmental regulatory agency.

End-of-life (EOL): Describes a material or object that has served its original purpose and can no longer be used as intended, reused, recycled, or repaired.

Extended Producer Responsibility (EPR): A policy structure that compels manufacturers of items (such as plastic packaging, batteries, or textile products) to be financially responsible for the disposal of their items. Through the policy, manufacturers are required to pay fees known as “ecofees” to a Producer Responsibility Organization (PRO). As haulers and recyclers incur operating fees by collecting, sorting, and transporting the item, the PRO uses the funds paid by manufacturers to reimburse the haulers and recyclers for those operating costs. The PRO may also use the funds to expand responsible recycling infrastructure. In the long run, this policy is used to incentivize manufacturers to redesign products that have short useful lives or are harmful to the environment.

European Union (EU): A political and economic union of 27 nation-states in Europe that share a single market allowing the free movement of goods, services, and people. EU member states share a common regulatory framework, laws and policies.

Feedback, Complaint, and Response Mechanisms (CFRM): Open, simple, and transparent procedures that allow individuals and other stakeholders to convey their complaints about subjects related to the organization and receive response, through safe and confidential methods (Accountability to Affected Populations Task Force. 2022).

General Agreement on Tariffs and Trade (GATT): A multilateral trade agreement that promotes international trade through reducing tariffs and other trade barriers. After the creation of the World Trade Organization in 1995, GATT became part of its legal system.

Greenhouse Gas (GHG): Gases in the atmosphere that trap heat and contribute to climate change.

Gross Domestic Product (GDP): The total monetary sum of all goods and services produced by a state, country, or multiple countries over a period of one year.

Healthy Environment for All (HEAL) Act: Washington’s environmental justice framework. The law requires Washington state agencies to incorporate environmental justice into environmental and public health decision-making, while empowering the Department of Ecology as the lead coordinating agency for implementation.

International Emergency Economic Powers Act (IEEPA): Provides authority to the President of the United States to regulate a variety of economic transactions following a declaration of emergency (Casey, et al., 2026).

International Labour Organization (ILO): An organization with 187 member countries that sets international labor standards and practices (About the ILO, n.d.).

Municipal Solid Waste (MSW): Waste or garbage generated by homes, schools, hospitals, businesses, etc.

Organization for Economic Co-operation and Development (OECD): An international organization that works to build better policies for better lives by finding solutions for social, environmental, and economic challenges. (About: Better Policies, Better Lives, n.d.)

Per- and polyfluoroalkyl substances (PFAS): A category of synthetic chemicals characterized by strong carbon-fluorine bonds that makes them resistant to heat, water, and oil. PFAS are used in many industrial processes and consumer products, including textiles, to provide water and stain resistance. Colloquially known as “forever chemicals” because of their persistence in the environment and the human body.

Producer Responsibility Organizations (PROs): Non-profit organizations that collect ecofees and distribute reimbursements to haulers and recyclers under EPR policies.

Responsible Textile Recovery Act (RTRA): The California law passed in 2024 that establishes the first statewide extended producer responsibility program for textiles.

The Environmental Protection Agency (EPA): The United States’ environmental regulatory agency.

The Government Accountability Office (GAO): A United States agency that provides timely, non-partisan information to other agencies, policymakers, and the public to improve government and save taxpayer dollars (What GAO Does, n.d.).

The Washington Recycling Market Development Center (RMDC): An organization within Washington’s Department of Ecology that works to advance circular economies in Washington by developing, supporting, and promoting recycling markets.

United States-Mexico-Canada Agreement (USMCA): A free trade agreement between Mexico, Canada, and the United States that replaced the North American Free Trade Agreement (NAFTA). Reduces barriers to trade within the trilateral North American bloc.

United States International Trade Commission (USITC): A non-partisan United States agency that provides analysis of trade issues for the President and Congress (About the USITC, n.d.).

World Trade Organization (WTO): International organization dealing with trade between nations; operates as the primary forum for resolving international trade disputes between member governments. Upholds trade agreements such as GATT. Ensures that trade flows smoothly, predictably, and freely as possible.

Appendix 2. Interview Guide

Interviewer Instructions:

Before starting the interview, please introduce yourself and explain the purpose of the interview using the template below to ensure consistency. Give the interviewees time to fully answer each question, and use follow-up prompts where helpful to gain clarity or detail. With permission, record the interview to ensure accuracy. Remind participants that they may decline to answer any question, request to stop the recording, or end the interview at any time.

Interview Template:

Names of interviewer and interviewee:

Date of Interview

Before the Interview:

Hello, my name is [Interviewer Name], and I am from the Evans School of Public Policy & Governance. We are currently conducting a research project in collaboration with the RMDC. Our goal is to explore policy pathways that support the development of equitable circular textile markets while supporting high-quality workforce outcomes in the State of Washington.

Thank you for taking the time to speak with me today and agreeing to be interviewed. The purpose of this conversation is to learn about your experiences and perspectives related to the textile market. I'll start the interview with a few general questions about your background before moving on to more specific questions about [Focus Area].

Your responses may be summarized and used as evidence in our report. If we decide to include them, we will reach out to you and share a draft of our report before publication to ensure that our writing accurately reflects your insights and viewpoints. With your permission, I would like to record our conversation to help ensure accuracy. The recording will not be shared with the Department of Ecology or anyone else in the University of Washington. We will retain this recording until the final report is finalized in June 2026. You may choose not to answer any question or stop the interview at any time. Do you have any questions before we begin?

Ending the Interview:

Thank you for meeting with us today, your input is very valuable to our research! If you'd like to make any changes or add additional thoughts, please feel free to contact us. In the meantime, if you think of anything else we didn't cover today, please don't hesitate to email us. Thank you again for speaking with us today and sharing your insights on recycling market development and related decision-making processes.

Appendix 3. List of Interview Questions

List of benchmark questions

1. Can you briefly introduce yourself and describe your experience with the textile industry? Which particular part of the textile supply chain are you involved in? (e.g., production, collection, sorting, reuse, repair, recycling, resale, policy?)
2. In your opinion, what are some best practices or effective strategies for establishing a better circular textile market?
3. What do you see as the main opportunities and challenges in establishing a more circular textile economy in Washington?
4. How do you define “success” in your area of work? What quantitative/qualitative factors most influence your decisions about textile circularity? Can you provide an example of a decision you or your organization made about textiles recycling, and how the above mentioned-metrics shaped that decision?
5. Do you have any suggestions for additional contacts/resources/cases that you think would be helpful to our research?

List of questions for textile waste diversion

1. For waste diversion, what does success look like, and how would we measure it?
 - a. Examples to prompt interviewee: Tons diverted, waste prevented, reduced new or virgin materials used in production, costs saved during production or at end of life waste management, GHG emissions avoided
2. What is the biggest challenge in textile waste diversion in WA?
 - a. What level is it in the supply chain - production, consumption, or end of life?
3. Have you experienced or observed any equity challenges with diversion work that you have seen?
 - a. If so, describe them. If not, explain how WA has worked to center equity in the textile circular economy or textile industry in general.
4. Do you see textile recycling taking off/successfully scaling upwards in WA, PNW, or the greater West Coast?
 - a. If yes, how? If no, why not?
 - b. What would need to be in place for that to happen?
5. Other existing programs we may not be aware of? (Pilot programs, non-profits, etc.)

List of questions for workforce development

1. How would you define and measure “equity” within your professional context or your organization's work?
2. Based on your experience, which communities are most affected by the environmental and health impacts of textile waste and recycling? Why?
3. What does it mean to provide high-quality and equitable job opportunities within Washington's textile sector? How does your current work contribute to this goal?

4. What safeguards, standards, or policy features would you want built into our current textile sector to ensure they create equitable, safe, and high-quality employment opportunities?

List of questions for policy levers

1. Textile recycling is far less developed in the U.S. than other nations, specifically in Europe. What policies at the state level can be modeled after textile policies from around the world, and what areas require innovation?
1. Technology and policy often depend on each other to drive each other forward. Where do you believe the biggest misalignments are between the two in textile recycling and circularity?
2. One of the biggest policy challenges is predicting end-of-life pathways for textiles (fiber identification, sorting, feedstock quality). How do you think policy should address this uncertainty, and what role should technology play in closing that gap?
3. As more states consider textile EPR laws, how important is harmonization of systems across states? What challenges or opportunities do you see in creating a national framework?

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