Phase II

# Textile Transformation Nova Scotia



Executive Summary, Overview, Recommendations, Appendices, & References

## Master Report

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October 2026

NACTR

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# Textile Transformation Nova Scotia (TTNS) Phase II

Textile Waste Characterization Study, Donation Etiquette Analysis, & End-Use Pathways Brief

**Prepared for:**

The National Association for Charitable Textile Recycling (NACTR)

**Prepared by:**

EnsembleCo Consulting

**In collaboration with:**

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## Report Authorship

This volume brings together three deliverable reports plus the master document prepared under TTNS Phase II. Authorship, contributions, and reviewers for each report are listed below.

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**Genge, C. (2026).** End-use pathways brief. In Textile Transformation Nova Scotia (TTNS) Phase II. Prepared for National Association for Charitable Textile Recycling.

This master report provides the overall project context and relationship among the three integrated deliverables produced through **TTNS Phase II**, as well as all references and appendices. Together, the reports examine Nova Scotia's textile system from material, behavioural, and market perspectives. Part 1, the **Waste Characterization Study**, focuses specifically on the physical characteristics of post-consumer textiles entering Nova Scotia's reuse and recovery system; part 2, the **Donation Etiquette Analysis**, focuses specifically on how donor behaviours influence the quality and rewear potential of post-consumer textiles; and part 3, the **End-Use Pathways Brief**, focuses specifically on identifying investment opportunities capable of retaining greater value from Nova Scotia's post-consumer textile stream.

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# 0.0 Master Executive Summary

In 2023, Nova Scotia sent 58,561 tonnes of textiles to landfill, up from 24,364 tonnes just six years earlier *(Divert NS, 2023)*. In a circular economy, unwearable and surplus textiles need to be considered resources rather than waste. Realizing this potential requires ensuring brands only produce what can be reasonably absorbed by the population, improving the quality of what enters the donation stream, building on existing domestic capacity to sort and process what does, and creating reliable markets that can absorb what thrift retailers cannot sell.

Nova Scotia has a well-established charitable donation network and growing appetite for circular economy investment, but it lacks the market and processing capacity to keep pace with what its textile donation stream now generates. **TTNS Phase II** provides the province's first integrated evidence base on this system: **what is entering and exiting the donation stream, how donor behaviour shapes it**, and **where targeted policy intervention and investment could alleviate current pressures while creating new economic, environmental, and circular economy opportunities.**

## Why this matters

Charitable and for-profit thrift stores are the backbone of Nova Scotia's textile collection and reuse system, but they were built to resell clothing, not to absorb the full downstream burden of sorting, repairing, exporting, and recycling end-of-life items arriving at the donation door.

**Figure 1** illustrates this movement: textiles pass from donation into sorting, then into a recovery stage spanning resale, repair, export, and recycling, before ideally reaching an end-use market or next life. At each stage, material that cannot find a home leaks into landfill.

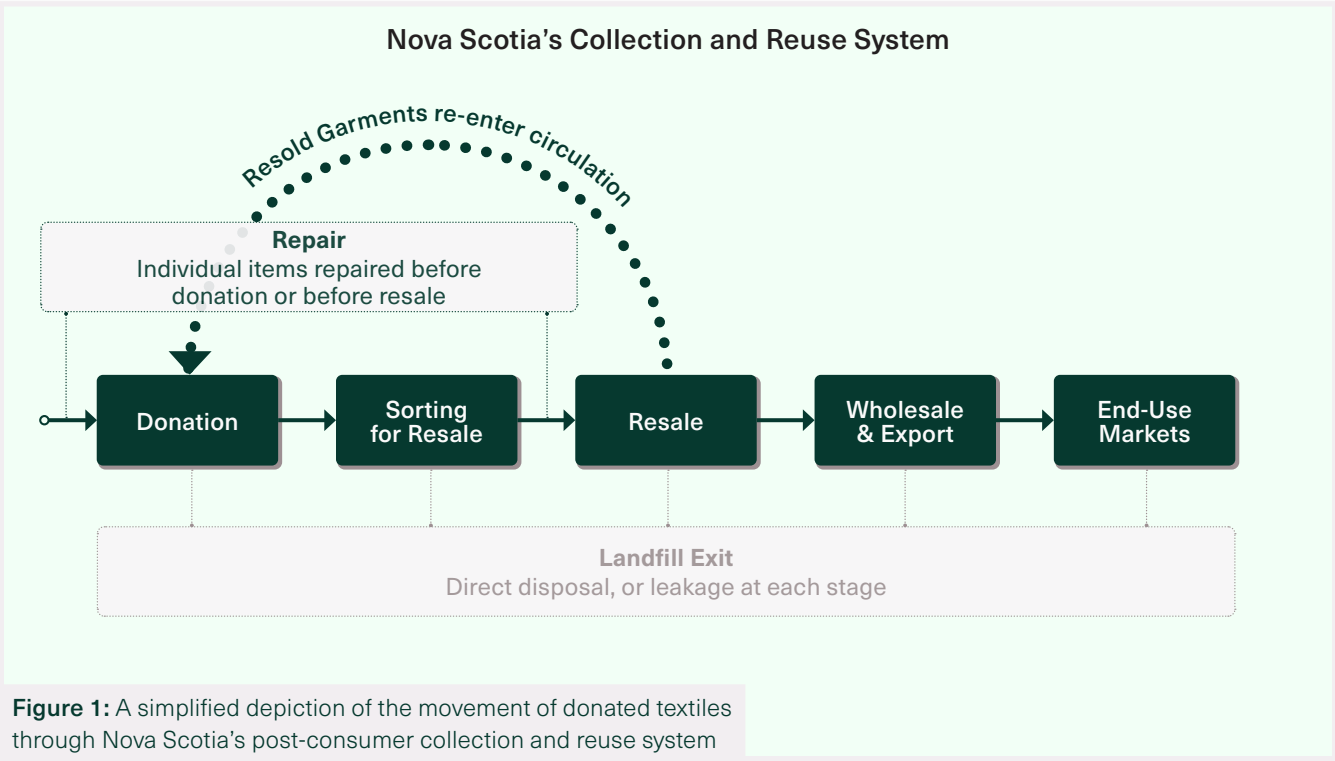



**Figure 1:** A simplified depiction of the movement of donated textiles through Nova Scotia's post-consumer collection and reuse system

**Textile Transformation Nova Scotia (TTNS) Phase II** consists of three integrated reports that examine Nova Scotia's textile system from **material**, **behavioural**, and **market perspectives**.

The reports are designed to build on one another to provide a comprehensive evidence base for textile circularity, infrastructure planning, and policy development.

### The project objectives are as follows:

1. **Increase the economic value potential of Nova Scotia's textile donations by identifying donation best practices that reduce items' rejection from resale streams.**
2. **Characterize fibre composition to determine viable recycling technologies and potential end uses for recycled textile feedstock in the region.**
3. **Support policy development by providing evidence to guide eventual EPR and stewardship programs.**
4. **Foster end-use markets and explore opportunities for partnerships and product development using recycled textile feedstock.**

In Nova Scotia, this system is under growing strain. Several structural factors are converging into what industry stakeholders describe as a "downstream rupture" *(Grant, 2026)*:

- The **rise of fast and ultra-fast fashion** is filling the market with clothes designed to be bought at very low prices, worn a few times, and then replaced, reducing their potential for reuse and fuelling a throwaway culture.
- International secondhand markets that once absorbed Nova Scotia's surplus are tightening, as countries across the global south raise concerns about textile waste dumping and introduce **stricter import rules**.
- **Rising transportation and fuel costs** and **protectionist trade policies** (e.g., tariffs) are eroding the already narrow margins of textile recovery, a particular challenge given Nova Scotia's distance from major textile sorting and processing hubs.

Addressing these pressures will require improving what enters the donation stream in the first place, closing existing data and infrastructure gaps that limit textile recycling, and building the market demand that makes recovery commercially viable.

**The resulting reports answer three questions:**



## A portfolio of pathways

A system this complex requires multiple, coordinated solutions. **TTNS Phase II** identifies opportunities across three areas: the material entering the system, the behaviour that influences their quality, and the markets that can create value from them.

At the point of donation, an estimated 47% of items are immediately resaleable (Grade A-C), with another 20% (Grade D1) being wearable but requiring minor repair. The remaining 33% are not currently suitable for resale. In total, 53% of items are not immediately resaleable. **(Waste Characterization Study,** Section 3.5**)**. Together, these findings point to the need for pathways that can capture greater value from both wearable and non-wearable textiles.

Two pathways stand out as the most immediately actionable:

- **Reuse and Sorting Hub:** a centralized facility could aggregate surplus textiles from charitable retailers across the province, extend the life of wearable garments through outlet and pay-by-the-pound retail, sort remaining materials into consistent feedstock for downstream markets, and leverage economies of scale to negotiate more favourable terms with buyers and processing partners. This represents the most urgent infrastructure investment identified through this research.
  **(End-Use Pathways Brief,** Section 6.0, MKT-1**)**
- **Denim Recovery and Insulation Manufacturing:** a two-stage, capital-efficient pathway that begins by supplying specified denim shred to existing North American insulation manufacturers (an estimated $200,000 machinery investment) before piloting in-province insulation manufacturing with a confirmed buyer already seeking Canadian-sourced supply.
  **(End-Use Pathways Brief,** Section 6.0, MKT-2**)**

Beyond these, a number of further opportunities warrant continued development. A selection are listed below:

- **Repair-to-resale infrastructure** for minor repair (Grade D1) items, potentially delivered through vocational training or social enterprise partnerships.
  **(Donation Etiquette Analysis,** Section 5.0, BEH-5**)**
- **Green procurement policy** requiring recycled textile content in government-funded construction, creating stable demand for recovered material.
  **(End-Use Pathways Brief,** Section 6.0, MKT-4**)**
- **A textile value chain coordination body** to set common grading standards and match surplus material with downstream processors.
  **(End-Use Pathways Brief,** Section 6.0, MKT-5**)**
- **Producer-facing measures**, including eco-modulated fees and fibre-content labelling standards, to close the material traceability gaps this research identified.
  **(Waste Characterization Study,** Section 5.0, MAT-7, MAT-8**)**

## Nova Scotia's growing capacity

Nova Scotia already has meaningful capacity to build on:

- The **TTNS Phase I Landscape Scan** laid the policy and stakeholder groundwork this research expands upon
- Charitable and for-profit thrift organizations provide **established collection, sorting, and retail infrastructure** spanning all seven of Nova Scotia's solid waste regions
- Community collection events, donor education tools, and sector messaging campaigns offer **low-cost, near-term ways to improve donation quality** at the source
- A confirmed buyer of denim insulation has **expressed active demand** for Canadian-sourced recycled denim insulation

Despite this foundation, only an estimated 47% of donations are suitable for resale outright *(***Waste Characterization Study,** Section 3.5*; NACTR, 2023)*, and donations collected from unstaffed community bins are graded E or F at roughly 2.4 times the rate of those collected at staffed centres.

Much of this gap is preventable: with better donor education on what and how to donate, more items entering the stream could remain sellable rather than requiring costly downstream sorting or ending up in landfill. Closing it represents one of the clearest opportunities this research quantifies, retaining material in Nova Scotia's economy through better messaging, stronger infrastructure, and continued market development.

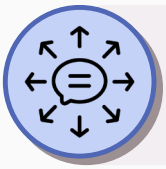
## The economic case for action

Developing Nova Scotia's textile recovery capacity can create jobs across the value chain, from sorting and repair roles suited to people facing barriers to employment, to skilled positions in manufacturing and materials science. Early evidence of this opportunity already exists: the denim-to-insulation pathway identified in this research requires an estimated $200,000 initial capital investment and is backed by confirmed buyer demand, and government procurement policy could create a stable, immediate demand signal for recycled textile content in the built environment.

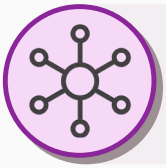
However, Nova Scotia does not yet have a systematic accounting of what its textile recovery sector currently costs, employs, or diverts, the kind of baseline that would let government, funders, and investors seize this opportunity with confidence. Establishing this baseline, building on the partial data available in the Association for Textile Recycling (AFTeR) Impact Report *(Genge, 2021)*, is therefore a key recommendation of this research **(MKT-3)**. Without a clearer understanding of the sector's economic and material flows, landfill risks remain the cheapest and easiest option by default.

## Recommendations

A coordinated approach spanning **material policy**, **donor behaviour**, and **market development** is needed to capture this opportunity. The following priority actions are drawn from the 22 recommendations detailed in the **Master Recommendations** section of this report:



Coordinate sector-wide donation messaging that resets donor expectations and improves the quality of donations. **(BEH-1)**



Establish a provincial textile aggregation, reuse, and sorting hub as the most urgent infrastructure investment. **(MKT-1)**



Advocate and prepare for a mandatory textile Extended Producer Responsibility (EPR) or stewardship framework as a funding mechanism to support further initiatives. **(MAT-1, MAT-2, BEH-2, MKT-6)**



Close fibre-content and labelling gaps through the standardization and producer accountability mechanisms, to enable fibre-specific recycling. **(MAT-7)**



Pursue the two-stage denim recovery and insulation development pathway as a capital-efficient, near-term market opportunity. **(MKT-2)**



Introduce a staged green procurement policy for recycled textile content in government-funded construction. **(MKT-4)**



Build standardized sector data and a provincial capacity and economic baseline to evaluate progress and attract investment. **(BEH-4, MKT-3, MKT-5)**



Deliver donation etiquette education through community collection events to build durable, long-term behaviour changes. **(BEH-3)**

These actions should be sequenced in stages, beginning with low-cost behaviour and data measures, and building toward the infrastructure and policy commitments needed for a fully circular textile system in Nova Scotia.

# 1.0 Master Introduction

Textile waste has emerged as one of the fastest-growing and most complex waste streams in the world, creating environmental, economic, and policy challenges for municipalities, charities, textile collectors, thrift retailers, recyclers, and governments alike *(Biyada & Urbonavičius, 2025; Wagaw & Babu, 2023)*. The fashion industry alone is responsible for an estimated 20% of waste generated globally *(Xu et al., 2022)*. Global textile waste, already an estimated 120 million tonnes per year, is projected to reach 150 million tonnes by 2030 as consumption grows by a further 63% over the same period *(Sajdeh et al., 2025; Ribul et al., 2021)*, a trajectory reflecting rising consumption, declining garment quality, limited recycling infrastructure, and underdeveloped end markets for recovered feedstock *(Saif et al., 2024)*.

The cost is not only environmental: the fashion system is estimated to lose more than $500 billion in value each year through underutilized clothing and limited recycling *(Ellen MacArthur Foundation, 2017)*.

Canada mirrors this trend. Statistics Canada's Physical Flow Account for Plastic Material recorded approximately 290 kilotonnes of synthetic textile products purchased in 2020 and roughly 280 kilotonnes discarded that same year *(Environment and Climate Change Canada [ECCC], 2024)*.

More broadly, Canadians are estimated to dispose of between 460,000 and one million tonnes of clothing and textiles annually, approximately 37 kg per person, with roughly 85% ultimately landfilled *(Cheminfo Services, 2022; McMaster, 2025; Sterling et al., 2026)*; per capita estimates of landfilled textiles specifically range from 12 to 29.6 kg *(Cheminfo Services, 2022; Statistics Canada, 2017; Weber et al., 2023)*. Synthetic textiles, largely fossil fuel-derived, account for approximately 6% of Canada's plastic waste *(Government of Canada, 2024)*, tying textile disposal directly to microplastic pollution and continued fossil fuel dependence.

Most Canadian municipalities, including those in Nova Scotia, lack dedicated infrastructure for collecting and managing post-consumer textiles, relying instead on a longstanding network of charitable organizations and for-profit collectors and retailers to divert unwanted items from landfill. In Nova Scotia, textiles now account for 18.09% of landfill composition, and landfilled textile volume more than doubled between 2017 and 2023, from 24,364 to 58,561 tonnes *(Divert NS, 2023)*, a per capita increase from approximately 25 kg to 55 kg over the same period *(Genge, 2025)*. Nationally, thrift organizations divert an estimated 240,000 tonnes of textiles from landfill each year, a meaningful share of Canada's total, but only an estimated 30 to 50% of donations received are appropriate for resale *(NACTR, 2023; Weber et al., 2023)*; because Canadian labour costs make large-scale repair and refurbishment economically unfeasible *(Martin & Ulasewicz, 2025)*, organizations rely on export, recycling, and disposal to manage the remainder, even as the international markets that once absorbed this surplus grow less reliable.

These pressures stem from interconnected shifts reshaping the post-consumer textile value chain. Ultra-fast fashion has increased the volume of garments entering the secondhand market while reducing their quality and durability, and low-value synthetic blends carry little resale or recycling value *(Yu et al., 2023)*, making downstream buyers more selective. International markets across the Global South that historically absorbed secondhand textile exports are introducing stricter import rules and raising waste-dumping concerns, narrowing outlets domestic reuse systems have long depended on. Rising transportation and fuel costs compound both pressures, particularly for Nova Scotia given its distance from major sorting, processing, and manufacturing hubs. Industry consultations conducted as part of **TTNS Phase II** describe the cumulative effect of these shifts as a "downstream rupture": a sharp contraction in the purchasing channels that once absorbed unsold textiles *(Grant, 2026)*.

The consequences fall hardest on mid-level thrift organizations, which typically lack the storage capacity, labour, and financial reserves of larger, vertically integrated charities to absorb accumulating unsold inventory. Left unaddressed, rising disposal costs and disappearing markets could push organizations to tighten donation standards, reject more material at the point of donation, or scale back collection altogether, leaving consumers to discard unwanted textiles directly to landfill rather than through a reuse channel at all. Because charitable thrift revenue funds employment programs, affordable clothing access, housing, food security, addiction recovery, and newcomer support, this risk extends well beyond diversion metrics to the community services these organizations sustain. Underlying it all is a structural imbalance: collection systems have expanded far faster than the domestic recycling infrastructure, sorting capacity, and end markets needed to absorb what they collect, shifting the burden of managing low-value textile waste onto the collectors themselves.

Nova Scotia's ambitious waste diversion goals and growing interest in circular economy development make this an especially urgent moment. Divert NS and other stakeholders have identified textiles as a priority material stream precisely because current systems are unlikely to remain sustainable under existing market conditions; understanding textile composition, donation behaviour, and viable end-use pathways has become an operational necessity for the long-term survival of the province's reuse sector, not simply an environmental research exercise.

The TTNS initiative was launched to address these concerns at the provincial level, beginning with **Textile Transformation Nova Scotia (TTNS) Phase I: Landscape Scan**, conducted by the National Association for Charitable Textile Recycling (NACTR) with support from Divert NS and Environment and Climate Change Canada *(Genge, 2025)*. **Phase I** assessed the province's textile diversion and recycling capacity and identified two priority gaps for further study: donation etiquette, the socially acceptable practices that shape how items are prepared, where they are donated, and how donation decisions are made, appeared to play a significant, underexamined role in determining donation quality; and Nova Scotia's heavy reliance on downstream grading systems and export markets outside Atlantic Canada left the province's reuse system vulnerable to global market disruption.

**TTNS Phase II** was designed to close these gaps through three complementary research components.

The **Waste Characterization Study** establishes Nova Scotia's first baseline dataset on the item type, construction, fibre content, condition, and rewearability of donated textiles, answering what is entering and exiting the province's charitable reuse stream.

**The Donation Etiquette Analysis** examines how donor behaviour affects the quality and rewear potential of donated textiles, addressing the extent to which preventable donor behaviours turn otherwise rewearable garments into waste.

**The End-Use Pathways Brief** synthesizes findings from both preceding studies, alongside industry interviews and secondary literature, to identify where Nova Scotia should invest to maximize landfill diversion, create green jobs, and build the foundation of a circular textile system.

This three-part, systems-based approach reflects international circular economy strategy, which holds that textile circularity requires coordinated investment in manufacturing, market development, collection, sorting, and recycling infrastructure rather than reliance on any single technology *(Walsh et al., 2026)*.

Together, these three components generate the material, behavioural, and market evidence needed to support textile circularity, diversion infrastructure, and policy development in Nova Scotia and across Canada. This **Master Report** presents the background and recommendations shared across all three components of **TTNS Phase II**; each accompanying deliverable presents the detailed findings, methodology, analysis, and discussion specific to its own research question. Readers seeking the full context of the initiative should begin here before proceeding to the individual deliverables.

## Global policy and market context

TTNS Phase I identified that Nova Scotia is heavily reliant on downstream grading systems and export markets outside Atlantic Canada *(Genge, 2025)*. This dependence has grown increasingly fragile as global oversupply, declining garment quality, rising transportation costs, protectionist trade policies, and weakening international demand disrupt traditional markets for surplus and low-grade textiles.

International markets are becoming a less reliable outlet more broadly. Pakistan, one of the world's largest importers, processors, and re-exporters of secondhand textiles, is considering regulatory changes that could render established sorting and recycling operations commercially unviable, threatening a supply chain that carries an estimated 500,000 metric tonnes of used clothing from the United States and Canada each year *(Hussain et al., 2025; Iqbal, 2025; Turner, 2026)*.

Uganda introduced a 30% environmental levy on imported used clothing in 2026, citing environmental concerns and a desire to build domestic textile production, and similar debates are underway across East Africa *(Chibelushi, 2026; Opio, 2026)*.

In Panipat, India, a major global hub for textile sorting, shredding, and fibre recovery, growing concern over limited oversight has drawn attention to the occupational health risks facing workers in the industry *(Shah, Montgomery, & Talreja, 2026)*.

In response, governments and industry bodies across North America and Europe are advancing EPR frameworks that shift responsibility for textile waste upstream to producers and brands, promote durable and recyclable design, and fund collection and processing systems. Environment and Climate Change Canada has named textiles a priority sector within its Zero Plastic Waste agenda *(Government of Canada, 2024)*, while in Europe, Germany has joined France and the Netherlands in calling for stronger EU measures targeting ultra-fast fashion, including recycled content, repairability, and recyclability requirements *(Brennan, 2026)*. Voluntary, industry-led models are emerging alongside regulation: Australia's Seamless scheme funds circularity initiatives through a per-unit levy on new garments, with reduced rates for circular design, and targets full clothing circularity by 2030, though strong industry support for a mandatory model suggests voluntary participation alone may not achieve change at scale *(Australian Fashion Council and Consortium, 2023)*; in the United Arab Emirates, the national initiative Naseej has taken a partnership-based approach, signing memorandums of understanding with 14 strategic partners across retail, logistics, reuse, and recycling *(Glover, 2026)*. Together, these developments reflect a broadening recognition that the linear textile economy is no longer tenable, and that coordinated, multi-stakeholder approaches to reuse and recycling are needed regardless of jurisdiction.

# 2.0 Master Recommendations

This section consolidates the recommendations from all three TTNS Phase II deliverables into a single set, organized by the type of change each recommendation targets.

Each recommendation is condensed to its core action and rationale here; the full supporting evidence, discussion, and implementation detail remain in the source deliverable.

**Master Recommendation Key**

**Waste Characterization Study**

**MAT** = Material

**Donation Etiquette Analysis**

**BEH** = Behaviour

**End-Use Pathways Brief**

**MKT** = Market

| ID | Recommendation | Priority | Audience |
|---|---|---|---|
| MAT-1 | Engage concentrated parent companies in policy development | High | Policymakers; Textile Industry Stakeholder Conveners; EPR program developers |
| MAT-2 | Close EPR and stewardship infrastructure gaps | High | Policymakers; EPR program developers |
| MAT-3 | Formally include textiles in waste strategy and audits | High | Provincial and municipal governments; NACTR |
| MAT-4 | Consider fibre- and recycled-content procurement mandates | High | Provincial and municipal governments |
| MAT-5 | Explore consumer incentives | High | Provincial governments |
| MAT-6 | Consider repair subsidies | Medium | Provincial and municipal governments |
| MAT-7 | Address missing fibre-content information | Medium | Producers; standards bodies; policymakers |
| MAT-8 | Explore eco-modulated producer fees | Medium | Policymakers; EPR program developers |
| BEH-1 | Coordinated sector messaging updates | High | NACTR and Member Organizations |
| BEH-2 | Textile EPR framework advocacy | High | NACTR, Provincial Governments, Stewardship Organizations, Future PROs |
| BEH-3 | Donation etiquette education through community collection events | High | Secondary Schools, Post Secondary Institutions, Municipalities, Active Industry Partners |
| BEH-4 | Sector data and reporting infrastructure | High | NACTR and Member Organizations |
| BEH-5 | Repair-to-resale infrastructure for D1 items | Medium | NACTR, Member Organizations, Active Industry Partners |
| BEH-6 | Pre-donation self-assessment tools | Medium | NACTR and Member Organizations |
| BEH-7 | Post-donation journey transparency | Medium | NACTR and Member Organizations |
| BEH-8 | Donation bin reform | Medium | NACTR, Donation Bin Operators, Municipalities |
| MKT-1 | Establish a provincial textile aggregation, reuse, and sorting hub | High | Provincial government; NACTR; thrift retailers |
| MKT-2 | Develop a denim recovery and insulation manufacturing pathway | High | Provincial government; manufacturers; NACTR |
| MKT-3 | Commission a provincial textile capacity and economic baseline study | Medium-High | Provincial government; NACTR; Divert NS; researchers |
| MKT-4 | Develop a green procurement policy for recycled textile content | Medium | Provincial government |
| MKT-5 | Establish a textile value chain coordination body and standardized data | Medium | Divert NS; NACTR; industry working groups |
| MKT-6 | Advocate for and prepare for a mandatory provincial textile stewardship program | Medium | Provincial government; NACTR |

## 2.1 Material Recommendations

Full detail: Waste Characterization Study, Section 5.0

### MAT-1 Engage Concentrated Parent Companies in Policy Development

**Priority:** High ▲ | **Audience:** Policymakers; Active industry partners; EPR program developers

Engage the parent companies most represented in this study's sample, including Gap Inc., Walmart Inc., Loblaw Companies Limited, H&M Group, and Giant Tiger Stores Limited, as stakeholders in policy development, given their concentrated contribution to the reuse and waste stream.

### MAT-2 Close EPR and Stewardship Infrastructure Gaps

**Priority:** High ▲ | **Audience:** Policymakers; EPR program developers

Identify gaps in EPR or stewardship infrastructure, including brand representation, fee allocation, and reporting and traceability systems. The study found a highly concentrated ownership structure beneath a fragmented brand landscape (the top 25 parent companies accounted for 34.1% of items while owning only 5.9% of identified brands), warranting further investigation into whether retailers commissioning private label or licensed goods should also be considered producers under EPR.

### MAT-3 Formally Include Textiles in Waste Strategies and Audits

**Priority:** High ▲ | **Audience:** Provincial and municipal governments; Stewardship organizations; NACTR

Explicitly include textiles in provincial and municipal circular economy and waste reduction strategies and in waste audits, working with NACTR on audit definitions to ensure data harmonization with other Canadian jurisdictions.

### MAT-4 Consider Fibre- and Recycled-Content Procurement Mandates

**Priority:** High ▲ | **Audience:** Provincial and municipal governments

Consider procurement policy that includes fibre-content or recycled-content mandates.

### MAT-5 Explore Consumer Incentives

**Priority:** High ▲ | **Audience:** Federal and provincial governments

Explore consumer incentives and disincentives, such as sales tax exemptions on used textiles.

### MAT-6 Consider Repair Subsidies

**Priority:** Medium ▲ | **Audience:** Provincial and municipal governments; Resale organizations

Consider subsidies that incentivize paid repair practice, to stimulate demand for repair skills and support job growth in that sector.

### MAT-7 Address Missing Fibre-Content Information

**Priority:** Medium ▲

**Audience:** Federal and provincial governments; Industry; Manufacturers; Research Institutions; Standards organizations

Address missing and unreliable fibre-content information (labels were unavailable for 21.7% of items, and fibre content could not be determined at all for 6.2%) through labelling standardization, digital product passports, and producer accountability mechanisms.

### MAT-8 Explore Eco-Modulated Producer Fees

**Priority:** Medium ▲ | **Audience:** Provincial governments; Industry; Manufacturers; EPR program developers

Explore producer incentives and disincentives, such as eco-modulated fees that account for blend complexity or number of materials and reward the use of recycled content.

## 2.2 Behavioural Recommendations

**Full detail:** Donation Etiquette Analysis, Section 5.0

### BEH-1 Coordinated Sector Messaging Updates

**Priority:** High ▲ | **Audience:** NACTR and Member Organizations

NACTR should coordinate a sector-wide “donate smarter, not less” messaging strategy that resets donor expectations, since the sector’s long-standing “donate anything” norm means individual charities have little incentive to act alone. NACTR should develop a shared messaging framework, signage standards, and condition guidelines organized around the study’s four donation etiquette dimensions (suitability for reuse, responsible donor judgment, recipient needs and preferences, and efficient donation processing), which members can adapt to their own capacity and donor base.

### BEH-2 Textile EPR Framework Advocacy

**Priority:** High ▲ | **Audience:** NACTR; Provincial Governments; Stewardship Organizations; Future PROs

NACTR should lead national advocacy for a textile EPR framework that shifts end-of-life management costs from charitable collectors to producers, citing this study’s finding that 53% of assessed items were not immediately suitable for resale. Pending a full EPR framework, NACTR should pursue near-term municipal or provincial cost-sharing arrangements to offset transportation and disposal costs for unwearable material.

### BEH-3 Donation Etiquette Education Through Community Collection Events

**Priority:** High ▲ | **Audience:** Secondary Schools; Post-Secondary Institutions; Municipalities; Active Industry Partners

Municipalities, schools, and charitable collectors should jointly organize periodic textile collection drives with structured pre-event education covering what is donatable, how to assess condition, how to separate rewearable from non-rewearable items, packaging, and which organization is collecting, modelled on school-based recycling education. Effectiveness should be tracked using the TTNS Phase II A-C, D1-D2, and E-F grading framework, with a small pilot recommended before wider adoption.

### BEH-4 Sector Data and Reporting Infrastructure

**Priority:** High ▲ | **Audience:** NACTR and Member Organizations

NACTR should build standardized sector-wide reporting on disposal volumes, rejection rates, processing costs, and downstream losses, since no such tracking currently exists. This would strengthen the evidence base for EPR advocacy, enable benchmarking across members, and turn the TTNS Phase II data into an ongoing measurement practice rather than a one-time baseline.

### BEH-5 Repair-to-Resale Infrastructure for D1 Items

**Priority:** High ▲ | **Audience:** NACTR; Member Organizations; Active Industry Partners

Since D1 items consistently make up approximately 20% of both raw donations and surplus stock, NACTR should explore sector-level investment in repair infrastructure, potentially through vocational training programs, social enterprises, or community repair initiatives, to restore some of these items to resale quality and reduce recurring storage and disposal costs. A pilot with one or two member organizations is recommended.

### BEH-6 Pre-Donation Self-Assessment Tools

**Priority:** Medium ▲ | **Audience:** NACTR and Member Organizations

NACTR should develop low-cost donor-facing tools, such as a visual quality guide, a rewearability checklist, or QR-linked resources, deployable digitally, at staffed donation centres, and on community bin signage, to help donors assess item suitability before and at the point of donation.

### BEH-7 Post-Donation Journey Transparency

**Priority:** Medium ▲ | **Audience:** NACTR and Member Organizations

NACTR should communicate publicly what happens to donated textiles after drop-off (sorting, reuse, export, or disposal), since survey respondents understood far less about post-donation outcomes than about what charities accept. Making these consequences visible can improve donation quality and build public support for EPR.

### BEH-8 Donation Bin Reform

**Priority:** Medium ▲ | **Audience:** NACTR, Donation Bin Operators, Municipalities

Since bin-collected items received E or F grades at approximately 2.4 times the rate of items from staffed donation centres (23.3% versus 9.7%), municipalities should enforce the NACTR Donation Bin Operator Code of Conduct (NACTR, 2026), including clear signage, and require that municipal textile collection service providers be NACTR members or maintain formal NACTR partnerships.

## 2.3 Market Recommendations

**Full detail:** End-Use Pathways Brief, Section 6.0

### MKT-1 Establish a Provincial Textile Aggregation, Reuse, and Sorting Hub

**Priority:** High ▲ | **Audience:** Policymakers; Active industry partners; EPR program developers

Nova Scotia's most urgent and immediately actionable investment is a centralized reuse and aggregation facility that receives surplus textiles from charitable and independent retailers, extends garment life through outlet or pay-by-the-pound retail, and performs sorting and baling to create consistent feedstock for downstream pathways. Key elements include a feasibility and site study, anchor partnerships with The Salvation Army Thrift Store and other NACTR members, exploring adaptive reuse of transitioning MRF facilities, logistics assessment, and a sustainable operating model.

### MKT-2 Develop a Denim Recovery and Insulation Manufacturing Pathway

**Priority:** High ▲ | **Audience:** Policymakers; EPR program developers

Nova Scotia should pursue denim recovery in two stages: first, producing and supplying specified denim shred to existing North American insulation manufacturers (an estimated $200,000 capital investment for a pilot-scale shredder), then piloting insulation manufacturing through a contract R&D partner such as Vestechpro, informed by a confirmed buyer with active demand for Canadian-sourced recycled denim insulation. This sequencing validates feedstock and product viability before committing to capital-intensive in-province manufacturing.

### MKT-3 Commission a Provincial Textile Capacity and Economic Baseline Study

**Priority:** High ▲ | **Audience:** Provincial and municipal governments; Stewardship organizations; NACTR

Nova Scotia lacks a systematic inventory of textile collection volumes, processing capacity, and disposal costs, without which investment decisions cannot be reliably sized or sequenced. A baseline study should quantify these flows and model the economic and employment impacts of the pathways in this report, updating and expanding the AFTeR Impact Report (Genge, 2021), in partnership with NACTR, Divert NS, municipal waste authorities, and post-secondary researchers, aligned with the TTNS Phase II Waste Characterization methodology.

### MKT-4 Develop a Green Procurement Policy for Recycled Textile Content in the Built Environment

**Priority:** Medium ▲ | **Audience:** Provincial and municipal governments

The province should begin to explore a minimum recycled textile content requirement in government purchases of thermal and acoustic insulation, creating a stable demand signal that addresses the most frequently cited barrier in stakeholder interviews: the lack of reliable downstream demand for recycled textile feedstock. Elements include minimum content thresholds, phased compliance timelines, and verification mechanisms that recognize Canadian-sourced recycled content.

### MKT-5 Establish a Textile Value Chain Coordination Body and Standardized Data

**Priority:** Medium ▲ | **Audience:** Federal and provincial governments

An existing body, such as Divert NS, NACTR, or a multi-stakeholder working group, should take on a coordination function: setting common grading and sorting standards, building a provincial material flow tracking framework aligned with Divert NS reporting, matchmaking surplus producers with downstream processors, and preparing the province for future EPR or other stewardship frameworks.

### MKT-6 Advocate and Prepare for a Mandatory Provincial Textile Stewardship Program

**Priority:** Medium ▲ | **Audience:** Provincial and municipal governments; Resale organizations

Nova Scotia should position itself as an active participant in textile EPR and stewardship policy development, including through Environment and Climate Change Canada's Zero Plastic Waste agenda and coordination with other provinces (e.g., Ontario's Bill 90; McMahon, 2025), while building the data, coordination, and pilot infrastructure described in Recommendations MKT-1 through MKT-5 so the province is ready to implement a stewardship framework when one emerges. A well-designed scheme should also drive upstream design improvements, including simpler monofibre construction, safer chemical inputs, continued research and development, material standards and traceability, and demand-side policies.

## 2.4 Contributions

A key strength of this study is its sampling approach, focusing on textiles entering charitable reuse systems, which represent one of the most important pathways through which Nova Scotians divert unwanted clothing from landfill. By collecting samples through established charitable donation networks, the study provides direct insight into the quality, condition, and characteristics of textiles that organizations must manage in practice. Furthermore, the samples were drawn from donation streams representing all solid waste-resource management regions of Nova Scotia, providing broad geographic coverage and allowing the findings to reflect the operational realities of charitable textile collection across the province.

Another strength of the study is that data collection occurred over several months between February and June 2026, capturing donation activity across multiple seasons and collection periods. This timing enabled the study to incorporate donations associated with different consumer behaviours, including seasonal wardrobe changes, spring cleaning activities, and routine household decluttering, thereby providing a more comprehensive picture of textiles entering the reuse system than would have been possible through a single collection event.

Finally, the study provides a valuable snapshot of textile quality and donation behaviour during a period of significant change within the textile reuse sector. Donation streams are influenced by evolving consumer behaviour, changing garment quality, economic conditions, and shifting downstream markets. By documenting conditions within the system at this particular moment, the study establishes an important baseline against which future changes in donation behaviour, textile quality, and diversion outcomes can be evaluated.

## 2.5 Areas for Future Research

- **Quantify the economic potential of repairing D1/D2 items to restore resale value**, including defining “major” versus “minor” repair, mapping existing repair resources and gaps, and identifying ways to increase repair efficiency and lower costs.
- **Establish the average resale price and resale rate for items that pass sorting inspection**, to quantify the dollar value of moving an item up a condition grade (e.g., D1 to C).
- **Examine mechanisms for holding major contributors to the waste stream accountable**, including the trade-offs between EPR models that charge retailers versus parent brands, and the challenge of separating diffusion/house brands from parent brands (e.g., private-label lines at Costco, in-house labels at Winners/Marshalls).
- **Examine the prevalence of items with fibres present at ≤5% concentration**, since low concentrations limit reliable fibre identification for both mechanical and chemical recycling.
- **Expand validation of the value-add/value-detract framework**, which remains partly interpretive, with input from a broader range of end users including thrift shoppers, resellers, upcyclers, and recyclers, whose assessments of value may differ depending on intended use.

# 3.0 Master Appendix

## 3.1 Appendix A – Waste Characterization Study

### A1 Data Points Collected

| Data Type | Data Point | Options Provided (if applicable) |
|---|---|---|
| **Item Classification** | **Sort #** | See Item Classification Guide below |
| | **Box / Region #** | |
| | **Item #** | |
| | **Retail Section** | |
| | **Item Category** | |
| | **Item Subtype** | |
| | **Brand** | |
| **Construction and Fibre Content** | **# Layers** | |
| | **Layer 1 Construction** | Woven, Knit, Nonwoven/Other |
| | **Layer 2 Construction** | Woven, Knit, Nonwoven/Other |
| | **Layer 3 Presence** | Yes, No |
| | **Fibre Data Availability** | Yes, via fibre tag; Yes, via scanner; No, scanner cannot read |
| | **Fibre Content** | |
| **Condition:** Grade | **A, B, C, D1, D2, E, F** | |
| **Condition:** Damage and Defects | **Laundering** (For each option, choose Minor/Single OR Major/Multiple) | Unwashed |
| | | Dust/Lint/Hair/Fur |
| | | Wrinkling |
| | | Moisture |
| | | Odour/Fragrance |
| | **Structural Damage** (For each option, choose Minor/Single OR Major/Multiple) | Staining |
| | | Pilling |
| | | Thinning |
| | | Fading |
| | | Hole/Tear |
| | | Snag/Run |
| | | Print Damage |
| | | Misshapenness/Stretching |
| | **Component Damage** | Broken Zipper |
| | | Missing Button |
| | | Missing Belt/Other Closure |
| | | Stretched-Out Waistband |
| **Value Scale:** Value-Adds (Sort 2A Only) | **Holiday-Specific** | |
| | **Fan / Teamware** | |
| | **Vintage** | |
| | **Made in Canada** | |
| | **Designed in Canada** | |
| | **Premium / Luxury Brand** | |
| | **Remarkably High-Quality Materials / Construction** | |
| **Value Scale:** Value-Adds (Sort 2B Only) | **Promotional Goods** | |
| | **Uniform** | |
| | **Personalization** | |
| | **Previous Alteration** | |
| | **Missing Matching Item** | |
| | **Other** (Offensive Content Etc.) | |
| | **Remarkably Low-Quality Materials / Construction** | |

## A2 Item Classification Guide

| Retail Section | Item Category | Item Subtype |
|---|---|---|
| Men's / masc<br>Women's / fem<br>Kids'<br>Unisex / other | Tops | Short-sleeved T-shirt/polo |
| | | Long-sleeved T-shirt/polo |
| | | Tank top |
| | | Button-down shirt (masc or fem) |
| | | Blouse (not button-down) |
| | | Sports/athleticwear |
| | | Other |
| | Sweaters+ | Sweater |
| | | Hoodie (with or without zipper) |
| | | Cardigan |
| | | Vest |
| | | Blazer |
| | | Other |
| | Bottoms | Pants/trousers |
| | | Jeans |
| | | Leggings |
| | | Sweatpants |
| | | Shorts |
| | | Skirts |
| | | Sports/athletic pants/shorts |
| | | Other |
| | One-Pieces | Dresses |
| | | Jumpsuits/rompers |
| | | Overalls/coveralls |
| | | Other |
| | Outerwear | Coat/jacket |
| | | Shawl/wrap |
| | | One-piece snowsuit |
| | | Snow pants |
| | | Other |
| | Sleepwear | Robe |
| | | Onesie |
| | | Pajama top |
| | | Pajama pants |
| | | Complete pajama set |
| | | Nightgown |
| | | Other |
| | Underwear | Boxers/briefs |
| | | Panties |
| | | Bra |
| | | Sports bra |
| | | Shapewear |
| | | Other |
| | Accessories | Scarf |
| | | Hat |
| | | Gloves/mitts |
| | | Sock(s) |
| | | Shoes |
| | | Tie |
| | | Belt |
| | | Bag |
| | | Swim |
| | | Other |
| Home / Pet | Home / Pet | Towel |
| | | Sheet/pillowcase |
| | | Blanket/comforter |
| | | Table linen |
| | | Curtain |
| | | Stuffed cushion/pillow |
| | | Stuffed toy |
| | | Pet item |
| | | Other |

## A3 Sample Data Collection Forms

**Sort 1**
Manual Dry-Erase Data Collection Form

EXAMINED BY

BOX # ITEM

**1. HAS FIBRE TAG?** ◯ yes ◯ no

*If no, use fibre scanner. 2 of same readings → photo*

**2. TEXTILE CONSTRUCTION**

What best describes the primary fabric(s)?

◯ **woven** *shirts, denim, towels*

◯ **knit** *t-shirts, sweaters, socks*

◯ **leather/other**

*Add'l layer(s):* ◯ woven ◯ knit ◯ other

**3. GENDER/AGE**

In a store, where is item *most likely* found?

◯ **women's** ◯ **men's** ◯ **kids'**

◯ **home** ◯ **unisex or n/a**

**4. GRADE** *Use tags to indicate flaws in photos.*

◯ **A** Perfect; has original tags/packaging

◯ **B** Excellent; very few, or no, signs of use

◯ **C** Good; some visible use but salable

◯ **D1** Salable after light repair/cleaning

◯ **D2** Maybe salable after deep repair/cleaning

◯ **E** Not repairable, but has recycling value

◯ **F** Not repairable or recyclable; contaminated (ie. mould, strong odour)

**OTHER NOTES:**

**Sorts 2A & 2B**
**Digital Data Collection Form** (First Page Shown)

Apr 13 - 17 2026 Sort

theakerb@ualberta.ca Switch account

Not shared

* Indicates required question

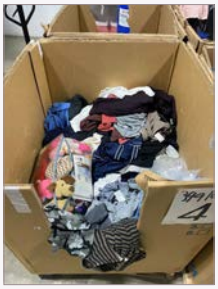
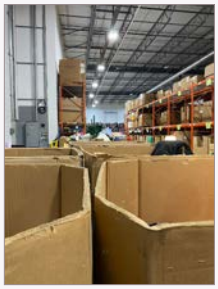
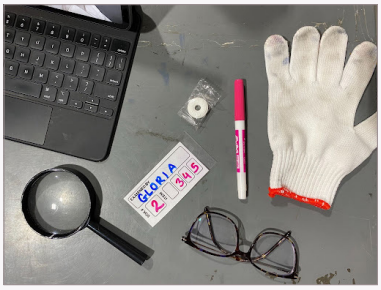
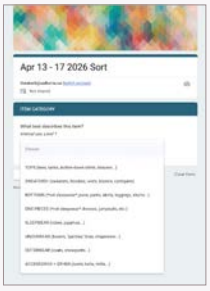
Item Examined By: *

- ◯ Charlotte
- ◉ Claire
- ◯ Gloria
- ◯ John
- ◯ Kalliope
- ◯ Lana
- ◯ Mel
- ◯ Michelle
- ◯ Shawn
- ◯ TEST

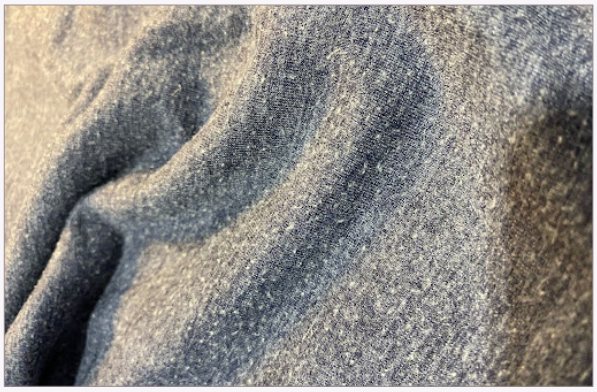
Box # *

- ◯ 1
- ◯ 2
- ◯ 3
- ◯ 4
- ◯ 5
- ◯ 6

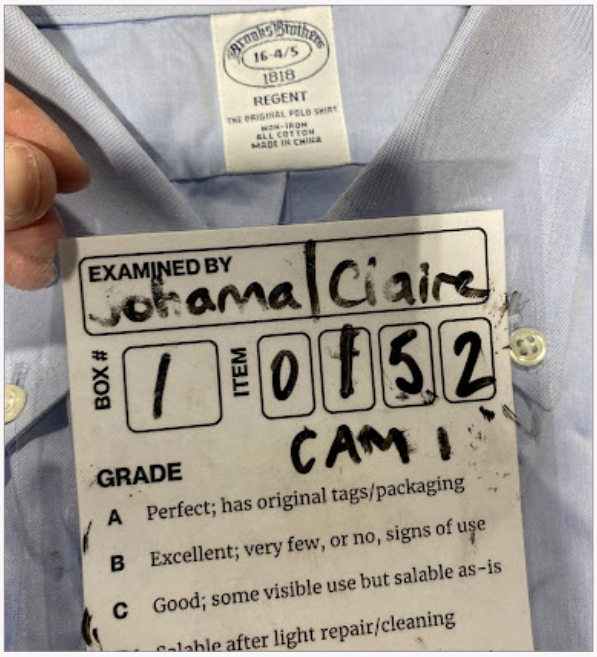
## A4 **Sorting Process**

| Process | Image |
|---|---|
| **Pallet Boxes**<br>Sorts 1 and 2A were conducted from a centralized collection warehouse in Dartmouth, Nova Scotia. Pallet boxes were shipped from each of Nova Scotia's seven regions, where they had been filled at thrift retail locations with a random sample of donated goods. During the sort, approximately 300 items were drawn from each box and analyzed. |   |
| **Sorting Station**<br>Each researcher was equipped with a camera (not shown), phone or laptop for data entry, gloves, dry erase marker, dry erase item ID card, and a magnifying glass for difficult-to-read tags. Researchers brought personal items like reading glasses and breath mints. |  |
| **Fibre Scanner**<br>Items without fibre tags were scanned using a Matoha Near Infrared Scanning device. |  |
| **Sort 1:** Manual Data Entry<br>A comprehensive dry-erase form was used to capture researcher name, box (region) number, item ID number, and other details. Individual tags were created for each type of damage or defect; these tags were placed on the item before a photograph was taken. Data was later manually entered into a database. |  |
| **Sort 2A, 2B:** Digital Data Entry<br>A Google Form was created to eliminate the need for post-sort data entry, and to expand data collection to include the new Value-Adds/Detracts scale |   |

## A5 **Common Damage and Defects**

| Damage / Defect Examples | |
|---|---|
| **Dust / Lint / Hair / Fur**<br>that could be removed at pre-donation stage | **Pilling** |
|  |  |
| **Missing Component**<br>this bra came without straps | **Snag** |
|  |  |
| **Staining + Fraying + Misshapenness / Stretching** | **Hole**<br>single / minor vs. multiple / major |
|  |   |

## A6 **Value Scale Examples**

| Value-Add Examples | |
|---|---|
| **Premium/Luxury Brand**<br>Lululemon is an established Canadian brand with high resale value | **Premium/Luxury Brand**<br>Brooks Brothers is a heritage brand of premium dress shirts |
|  |  |
| **Fan/Teamware** | **Holiday-Specific** |
|  |  |

**Value-Detract Examples**

### Promotional Goods




### Missing Matching Item



### Remarkably Low-Quality Materials / Construction

From a distance (eg., from an e-commerce product photo), the print on front appears intentionally distressed. In reality, the "distressed" effect is actually a very low-resolution photo that appears low-quality in person; note the pixelated edges.






### Remarkably Low-Quality Materials / Construction

This fleece jacket is a low-density microfibre with a texture similar to disposable dusting tools. While it exhibited almost no signs of wear, it attracted surface dust that would likely limit its resale value.



### Remarkably Low-Quality Materials / Construction

This fleece button-down shirt was made of low-quality lightweight material with several loose and untrimmed threads.



## A7 Top 50 Brands by Item Frequency

| | Brand | Frequency | Immediate Parent | Ultimate Parent |
|---|---|---|---|---|
| 1 | George | 195 | Walmart Inc. | Walmart Inc. |
| 2 | Old Navy | 156 | Gap Inc. | Gap Inc. |
| 3 | Joe Fresh | 119 | Loblaw Companies Limited | George Weston Limited |
| 4 | H&M | 78 | H&M Group | Ramsbury Invest AB - Persson Family |
| 5 | Gap | 64 | Gap Inc. | Gap Inc. |
| 6 | Carter's | 59 | Carter's, Inc. | Carter's, Inc. |
| 7 | Shein | 48 | Roadget Business Pte. Ltd. | Elite Depot Limited |
| 8 | Under Armour | 48 | Under Armour, Inc. | Under Armour, Inc. |
| 9 | Nike | 44 | NIKE, Inc. | NIKE, Inc. |
| 10 | Reitmans | 40 | Reitmans (Canada) Limited | Reitmans (Canada) Limited |
| 11 | Denver Hayes | 36 | Canadian Tire Corporation | Canadian Tire Corporation |
| 12 | American Eagle | 34 | American Eagle Outfitters, Inc. | American Eagle Outfitters, Inc. |
| 13 | Gildan | 34 | Gildan Activewear Inc | Gildan Activewear Inc |
| 14 | Levi's | 34 | Levi Strauss & Co | Levi Strauss & Co |
| 15 | Calvin Klein | 32 | PVH Corp. | PVH Corp. |
| 16 | Banana Republic | 31 | Gap Inc. | Gap Inc. |
| 17 | Lululemon | 31 | Lululemon Athletica Inc | Lululemon Athletica Inc |
| 18 | Fruit of the Loom | 25 | Berkshire Hathaway | Berkshire Hathaway |
| 19 | Adidas | 24 | Adidas AG | Adidas AG |
| 20 | Aerie | 24 | American Eagle Outfitters, Inc. | American Eagle Outfitters, Inc. |
| 21 | Dynamite | 24 | Groupe Dynamite Inc. | 4370368 Canada Inc. |
| 22 | Disney | 22 | The Walt Disney Company | The Walt Disney Company |
| 23 | Puma | 22 | Puma | Groupe Artémis |
| 24 | Lily Morgan | 21 | Giant Tiger Stores Limited | Giant Tiger Stores Limited |
| 25 | mySTYLE | 21 | Giant Tiger Stores Limited | Giant Tiger Stores Limited |
| 26 | Zara | 21 | Inditex | Inditex |
| 27 | Champion | 20 | Authentic Brands Group | Authentic Brands Group |
| 28 | Tommy Hilfiger | 20 | PVH Corp. | PVH Corp. |
| 29 | Alia | 19 | Nygård International | Nygård Enterprises Ltd |
| 30 | Children's Place (The) | 19 | Mithaq Capital SPC | Mithaq Holding |
| 31 | Garage | 19 | Groupe Dynamite Inc. | 4370368 Canada Inc. |
| 32 | Ricki's | 19 | Putman Investments Inc. | Franklin Resources, Inc. |
| 33 | Hanes | 18 | Gildan Activewear | Gildan Activewear |
| 34 | Carisma | 17 | Giant Tiger Stores Limited | Giant Tiger Stores Limited |
| 35 | Eclipse | 17 | Eclipse Stores Inc. | Eclipse Stores Inc. |
| 36 | Athletic Works | 16 | Walmart Inc. | Walmart Inc. |
| 37 | Ralph Lauren | 15 | Ralph Lauren Corporation | Ralph Lauren Corporation |
| 38 | Ardene | 14 | Arden Holdings Inc. | Arden Holdings Inc. |
| 39 | Columbia | 14 | Columbia Sportswear | Columbia Sportswear |
| 40 | Forever 21 | 14 | Catalyst Brands | Authentic Brands Group |
| 41 | La Vie En Rose | 14 | Boutique La Vie en Rose Inc | Boutique La Vie en Rose Inc |
| 42 | Roots | 14 | Searchlight Capital Partners | Searchlight Capital Partners |
| 43 | Suzy Shier | 14 | YM Inc. | YM Inc. |
| 44 | Bluenotes | 13 | YM Inc. | YM Inc. |
| 45 | Eddie Bauer | 13 | Catalyst Brands | Authentic Brands Group |
| 46 | Ikea | 13 | Inter IKEA Group | Ingka Group |
| 47 | Kirkland | 13 | Costco Wholesale Corporation | Costco Wholesale Corporation |
| 48 | Tuff Athletics | 13 | C&O Apparel Inc. | C&O Apparel Inc. |
| 49 | Bench | 12 | Bench Global Ltd. | Emeram Capital GmbH |
| 50 | Penmans | 12 | Penmans | Walmart Inc. |
| 51 | RW&CO. | 12 | Reitmans (Canada) Limited | Reitmans (Canada) Limited |
| | Total Frequency: | 1671 | | |

## A8 Top 29 Parent Companies

The same item frequency as the Top 50 Brands can be reached by isolating the top 29 parent companies.

| | Ultimate Parent | Number of Brands | Total Frequency |
|---|---|---|---|
| 1 | Gap Inc. | 3 | 251 |
| 2 | Walmart Inc. | 9 | 246 |
| 3 | Loblaw Companies Limited | 1 | 119 |
| 4 | H&M Group | 2 | 85 |
| 5 | Giant Tiger Stores Limited | 7 | 79 |
| 6 | Carter's, Inc. | 1 | 59 |
| 7 | American Eagle Outfitters, Inc. | 2 | 58 |
| 8 | Authentic Brands Group | 8 | 57 |
| 9 | Reitmans (Canada) Limited | 4 | 57 |
| 10 | PVH Corp. | 2 | 52 |
| 11 | Roadget Business Pte. Ltd. | 1 | 48 |
| 12 | Under Armour, Inc. | 1 | 48 |
| 13 | NIKE, Inc. | 1 | 44 |
| 14 | Catalyst Brands | 5 | 43 |
| 15 | Groupe Dynamite Inc. | 2 | 43 |
| 16 | Gildan Activewear Inc | 2 | 38 |
| 17 | Canadian Tire Corporation | 1 | 36 |
| 18 | YM Inc. | 4 | 35 |
| 19 | Levi Strauss & Co | 1 | 34 |
| 20 | Lululemon Athletica Inc | 1 | 31 |
| 21 | The Walt Disney Company | 2 | 29 |
| 22 | Sears, Transformco (Transform SR Brands LLC) | 4 | 26 |
| 23 | Berkshire Hathaway | 1 | 25 |
| 24 | Adidas AG | 1 | 24 |
| 25 | Bluestar Alliance | 4 | 23 |
| 26 | Puma | 1 | 22 |
| 27 | Inditex | 1 | 21 |
| 28 | Iconix International | 4 | 20 |
| 29 | VF Corporation | 3 | 20 |
| | **Total Frequency:** | | **1673** |

## A9 **Supplementary Defect Categories** (Sort 2 Only)

Six defect categories were added to the data collection protocol beginning with **Sort 2** and were not tracked during **Sort 1**: **dirty/needs a wash**, **hair or fur**, **wrinkling**, **snag or run**, **misshapen or stretched**, and **cracked or degraded print**.

Because no **Sort 1** data exist for these categories, they are not directly comparable to the defect categories reported in **Section 5.2** and are presented separately here for reference. Prevalence reflects the proportion of **Sort 2** items (n=2,616) exhibiting each condition, combining major and minor occurrences.

| Defect | Major | Minor | Total | % of Sort 2 Items |
|---|---|---|---|---|
| **Dirty** | 119 | 279 | **398** | **15.2%** |
| **Hair or Fur** | 115 | 290 | **405** | **15.5%** |
| **Wrinkling** | 88 | 117 | **205** | **7.8%** |
| **Snag or Run** | 40 | 68 | **108** | **4.1%** |
| **Misshapen or Stretched** | 40 | 69 | **109** | **4.2%** |
| **Cracked or Degraded Print** | 42 | 41 | **83** | **3.2%** |

**Hair or fur** (15.5%) and **dirty/needs a wash** (15.2%) were the most frequently observed of these supplementary categories. Like dust/lint and minor staining discussed in **Section 5.2**, both conditions are generally preventable through simple pre-donation care such as laundering or lint removal, reinforcing the case for donor education raised earlier in this section.

# 3.2 Appendix B – Donation Etiquette Analysis

## B1 Survey Questions – Link to the survey PDF



**Intro**

*Si vous souhaitez répondre au sondage en français, veuillez cliquer ici.*

**Textile Donation Behaviour Survey**

**Researchers:**


- Dr Rachel McQueen, Professor, Department of Human Ecology, University of Alberta. Email: rhmcquee@ualberta.ca
- Charlotte Genge, Senior Project Manager, The National Association for Charitable Textile Recycling. Email: charlotte@nactr.ca
- Claire Theaker-Brown, Graduate student, Department of Human Ecology, University of Alberta. Email: theakerb@ualberta.ca


**Invitation to participate:** We invite you to take part in our research study about donation behaviour of clothing and textiles to second-hand organisations.

**Purpose of the study:** We want to learn about the donation behaviours of people who live in Canada. Specifically, we are interested in learning more about how people manage unwanted textiles in their communities and whether they donate them to charities.

For the purpose of this survey, textiles include clothing, footwear, home linens (such as bedding & curtains), accessories (such as scarves & mittens), bags, soft toys and related items.

**Participation:** If you would like to participate in this study, then we invite you to complete this online survey. The survey should take 10-15 minutes to complete. Once you have completed the survey, select the "forward arrow" on the final page.

**Benefits:** There are no direct benefits to you for participating in this study.

**Risks:** There are no risks associated with participating in this study.

**Incentives:** After you have completed and submitted the survey, you have the option to enter a prize draw for a $100 gift card for a thrift store of your choice. There is a 1/1000 chance of winning the prize draw.

**Confidentiality and anonymity:** The information you share will remain strictly confidential and will be used solely for the purposes of this research. The only people who will have access to the research data are the researchers named above. Your anonymity is

guaranteed, as we do not ask you to provide your name or any personal information that could identify you. If you choose to be entered into the prize draw for the $100 thrift store gift card, you will be redirected to another survey where you can leave your email address. There will be no way of identifying your survey response with your email address. This ensures that your survey responses will remain anonymous.

**Data storage:** Survey data will be collected and stored in Qualtrics. Once downloaded, electronic copies of the survey will be encrypted and stored on a password-protected computer of the University of Alberta researcher, Dr Rachel McQueen.

**Voluntary participation:** You are not obligated to take part in this study. If you begin the survey and change your mind, you can withdraw during the survey. If you choose to withdraw midway through the survey, simply close the survey link. Incomplete responses will be discarded. Given the anonymous nature of the survey, once you have submitted your responses, it will no longer be possible to withdraw them from the study.

**Contact information:** If you have any questions or require more information about the study, you may contact the University of Alberta researcher by email at rhmcquee@ualberta.ca.

The plan for this study (Pro00163587) has been reviewed by the relevant Research Ethics Board at the University of Alberta. If you have any questions regarding your rights as a research participant or how the research is being conducted, you may contact the Research Ethics Office at reoffice@ualberta.ca. This office is independent of the study investigators.

You can access a copy of this consent form by clicking on this link here. Please keep a copy for your own records. Consent is provided by submitting your responses at the end of the survey.

By proceeding to the next page, you are indicating that you understand this consent form, are at least 18 years of age, and reside in Canada.

This project was undertaken in partnership with:

**Default Question Block**

**In the past 12 months, have you donated, sold, repurposed, repaired, or disposed of textiles (e.g., clothing, footwear, linens, accessories, bags, and/or soft toys) that you no longer need, use, wear, or want?**

- ○ Yes
- ○ No

**Select the number of times you have carried out each of the following actions with respect to textiles in the past 12 months:**

| | Never | Once | 2-3 times | 4-5 times | 6-7 times | 8-9 times | More than 10 times |
|---|---|---|---|---|---|---|---|
| Donated to a thrift store by handing it to an attendant or store staff. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Donated by leaving them at a thrift store donation centre. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Donated by putting them in a donation bin. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Donated by mail. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Donated to a community event or drive. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

**Select the number of times you have carried out each of the following actions with respect to textiles in the past 12 months:**

| | Never | Once | 2-3 times | 4-5 times | 6-7 times | 8-9 times | More than 10 times |
|---|---|---|---|---|---|---|---|
| Given items to someone else (e.g., family member, friend, someone in need). | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Resold items at a consignment shop, through an online platform, or at a market. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Mended/repaired items or had an item repaired (e.g., patch holes, sew on a button). | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

| | Never | Once | 2-3 times | 4-5 times | 6-7 times | 8-9 times | More than 10 times |
|---|---|---|---|---|---|---|---|
| Repurposed items (e.g., turn an item into a rag, upcycled items into something new). | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Discarded items in the trash. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

**In the past year, what type of clothing and textiles have you donated? (check all that apply)**

- ☐ Athletic/sports clothing
- ☐ Bags
- ☐ Dresses or skirts
- ☐ Footwear (e.g., shoes, slippers, boots)
- ☐ Hat/toques
- ☐ Household textiles (e.g., sheets, pillowcases, towels, drapes)
- ☐ Jackets/coats (outerwear)
- ☐ Pants or shorts
- ☐ Scarves
- ☐ Shirts/blouses
- ☐ Sleepwear
- ☐ Socks
- ☐ Soft toys/stuffies
- ☐ Sweaters/cardigans
- ☐ T-shirts/casual tops
- ☐ Underwear (bottoms)
- ☐ Underwear (bras)
- ☐ _____ Other (please specify)

**People donate textiles for different reasons.**

**Please indicate how much you agree or disagree with the following reasons for donating unwanted textiles.**

**"I donate...."**

| | Strongly disagree | Disagree | Slightly disagree | Neither agree nor disagree | Slightly agree | Agree | Strongly agree |
|---|---|---|---|---|---|---|---|
| …to declutter my home. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

| | Strongly disagree | Disagree | Slightly disagree | Neither agree nor disagree | Slightly agree | Agree | Strongly agree |
|---|---|---|---|---|---|---|---|
| …because donating is socially expected or encouraged. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| … because I want to support charitable causes. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

| | Strongly disagree | Disagree | Slightly disagree | Neither agree nor disagree | Slightly agree | Agree | Strongly agree |
|---|---|---|---|---|---|---|---|
| …to help people in need. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| …because I believe it is the right thing to do. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| …to reduce environmental impact (e.g., keeping items in use and out of landfills). | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

**To what extent do you agree or disagree with the following statements?**

| | Strongly disagree | Disagree | Slightly disagree | Neither agree nor disagree | Slightly agree | Agree | Strongly agree |
|---|---|---|---|---|---|---|---|
| I donate because it is the easiest or most convenient way to get rid of unwanted items. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| I only donate items that I believe are in acceptable condition to be reused. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| I tend to donate when I am already visiting a thrift store to shop. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

| | Strongly disagree | Disagree | Slightly disagree | Neither agree nor disagree | Slightly agree | Agree | Strongly agree |
|---|---|---|---|---|---|---|---|
| I donate items because of incentives such as coupons, discounts, or tax benefits. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| I donate because I feel guilty putting items in the trash. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

| | Strongly disagree | Disagree | Slightly disagree | Neither agree nor disagree | Slightly agree | Agree | Strongly agree |
|---|---|---|---|---|---|---|---|
| I donate at locations that are close to my home or workplace. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

**Based on the idea of *donation etiquette*, which we define as a set of socially acceptable practices that define behaviour in the context of textile donation, what are the most important things to keep in mind when donating clothing and other textiles?**

**When donating unwanted textiles, how often do you engage in the following practices?**

| | Never | Rarely | Occasionally | Sometimes | Frequently | Usually | Always |
|---|---|---|---|---|---|---|---|
| I contact donation centres or look on websites to confirm they can accept my items. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| I only donate items that are appropriate for the current season. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| I donate items with stains, odours, or animal hair. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| I am intentional about where I donate unwanted textiles. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| I donate to different organizations based on the types of items I am giving. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

| | Never | Rarely | Occasionally | Sometimes | Frequently | Usually | Always |
|---|---|---|---|---|---|---|---|
| I leave donated items unattended outside when donation bins are full or when donation centres are closed. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

| | Never | Rarely | Occasionally | Sometimes | Frequently | Usually | Always |
|---|---|---|---|---|---|---|---|
| I donate items with rips, tears, pilling, or stretching. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| I donate high-end and brand name items. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| I care about which organization my donations go to. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

**When donating unwanted textiles, how often do you engage in the following practices?**

| | Never | Rarely | Occasionally | Sometimes | Frequently | Usually | Always |
|---|---|---|---|---|---|---|---|
| I check that items are functional before donating (e.g., zippers work, buttons are intact). | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| I encourage and support others (family members, friends) in donating textiles. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| I launder or clean items before donating them. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| I separate clothing that is no longer wearable from items that can be reused. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

| | Never | Rarely | Occasionally | Sometimes | Frequently | Usually | Always |
|---|---|---|---|---|---|---|---|
| I ensure that bags of donations are not overloaded. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| I check pockets and remove personal items before donating. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| I verify what organization or cause a donation bin or centre supports. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| I fold items before donating them. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

**To what extent do you agree or disagree with the following statements?**

| | Strongly disagree | Disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Agree | Strongly agree |
|---|---|---|---|---|---|---|---|
| I will recommend donating to a charity. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| I am likely to donate to a charity in the future. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Charitable organizations have been quite successful in helping the needy. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Charitable organizations perform a useful function for society. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| I will donate to a charity next time. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

| | Strongly disagree | Disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Agree | Strongly agree |
|---|---|---|---|---|---|---|---|
| Much of the money donated to charity is wasted. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| My image of charitable organizations is positive. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| The money given to charities goes towards good causes. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| I will definitely donate to a charity. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

**The following set of statements describes a person and their values/beliefs.**

**Please read each statement carefully and indicate <u>how much the portrayed person is like you</u>.**

Please vary your response to what is more important (1 = Not like me at all; 7 = Very much like me).

| | 1 Not like me at all | 2 | 3 | 4 | 5 | 6 | 7 Very much like me |
|---|---|---|---|---|---|---|---|
| It is important to them that there's no war or conflict | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| It is important to them that every person have equal opportunities | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

| | 1 Not like me at all | 2 | 3 | 4 | 5 | 6 | 7 Very much like me |
|---|---|---|---|---|---|---|---|
| It is important to them to have money and possessions | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| It is important to them to protect the environment | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| It is important to them to be influential | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| It is important to them to respect nature | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

| | 1 Not like me at all | 2 | 3 | 4 | 5 | 6 | 7 Very much like me |
|---|---|---|---|---|---|---|---|
| It is important to them to have fun | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| It is important to them to enjoy the life's pleasures | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| It is important to them to be helpful to others | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| It is important to them to have control over others' actions | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| It is important to them to be in a unity with nature | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| It is important to them to do things they enjoy | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

| | 1 Not like me at all | 2 | 3 | 4 | 5 | 6 | 7 Very much like me |
|---|---|---|---|---|---|---|---|
| It is important to them to prevent environmental pollution | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| It is important to them to take care of those who are worse off | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| It is important to them to have authority over others | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| It is important to them that every person is treated justly | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

**Rate how effective or ineffective you feel the methods listed below would be in helping to spread awareness about acceptable textile donation practices in your community.**

| | Extremely ineffective | Ineffective | Somewhat ineffective | Neither effective or ineffective | Somewhat effective | Effective | Extremely effective |
|---|---|---|---|---|---|---|---|
| Word of mouth | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Clear instructions on donation bins | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Schools, libraries, or community centres sharing information | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Marketing and communications campaign | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| | Extremely ineffective | Ineffective | Somewhat ineffective | Neither effective | Somewhat effective | Effective | Extremely effective |

| | Extremely ineffective | Ineffective | Somewhat ineffective | Neither effective or ineffective or ineffective | Somewhat effective | Effective | Extremely effective |
|---|---|---|---|---|---|---|---|
| Donation incentives | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Municipal or charity websites with clear donation guidelines | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Information provided at checkout counters in thrift stores | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Signage or posters at donation centres | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

**Over the past 12 months, what is the approximate number of times that you have shopped at thrift stores (e.g., The Salvation Army Thrift Store, Goodwill, Value Village)?**

- ○ Never
- ○ 1-5 times
- ○ 6-10 times
- ○ 11-15 times
- ○ 16-20 times
- ○ More than 20 times

**Rate the degree to which you agree with the following statements:**

| | Strongly disagree | Disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Agree | Strongly agree |
|---|---|---|---|---|---|---|---|
| I have a clear understanding of what the charities I donate to can and cannot accept. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| I understand what happens to textiles after donation. | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

**What donation methods are you aware of in your community for managing unwanted textiles? (select all that apply)**

- ☐ Thrift retail stores with in-person donation
- ☐ Dedicated drop-off centres accepting textile donations
- ☐ Textile donation bins (e.g., outdoor or unattended bins)
- ☐ Community donation events or drives
- ☐ Mail-in or courier-based textile donation programs
- ☐ Community shelter or drop-in centre
- ☐ Not sure
- ☐ [ ] Other (please specify
- ☐ None of the above

**What is the distance from your home to your nearest textile donation location (store or bin)?**

- ○ 0-5 KMs
- ○ 6-10 KMs
- ○ 11-15 KMs
- ○ 16-20 KMs
- ○ More than 20+ KMs

**What is the maximum distance that you are willing to travel to drop off a textile donation? (In Kilometers)**

- ○ 0-5 KMs
- ○ 6-10 KMs
- ○ 11-15 KMs
- ○ 16-20 KMs
- ○ More than 20+ KMs

**In which province or territory do you live?**

[ ▾ ]

**What are the first 3 digits of your postal code?**

**What is your gender?**

- ○ Man
- ○ Woman
- ○ Non-binary / third gender
- ○ Prefer not to say

**What is your age (in years)?**

- ○ 18-24
- ○ 25-34
- ○ 35-44
- ○ 45-54
- ○ 55-64
- ○ 65+
- ○ Prefer not to say

**Including yourself what is the total number of people living in your household? (Adults 18+ years; Children 17 and younger)**

Adults
Children

**What is your total annual household income?**

- ○ $0-$30,000
- ○ $31,000-$60,000
- ○ $61,000-$90,000
- ○ $91,000-$120,000
- ○ $121,000-$150,000
- ○ $151,000-175,000
- ○ $176,000+
- ○ Prefer not to say

**What is the highest level of education you have completed?**

- ○ Some high school, no diploma
- ○ High school graduate (or equivalent, e.g. GED)
- ○ Some college credit, no degree
- ○ Trade/technical/vocational training
- ○ Associate degree
- ○ Bachelor's degree
- ○ Master's degree
- ○ Professional degree
- ○ Doctorate degree
- ○ Prefer not to say

**Do you have any additional comments, suggestions, or feedback related to textile donation, reuse practices, or the topic of this survey?**

You have now reached the end of the survey.

Following submission of the survey, you will be given the option to be redirected to a separate URL where you can enter our prize draw for a $100 thrift gift card. You will be asked to leave your email address to enter the draw. Your email address will not be linked to your survey responses in any way; therefore, your survey responses will remain anonymous.

By submitting the survey, you are giving consent to be part of this study. Once you submit the survey, you can no longer withdraw your responses.

Please click the forward arrow to submit your survey and have the opportunity to enter the prize draw.

Powered by Qualtrics

## B2 Sample Survey Advertisement & Messaging

| Text | Image |
|---|---|
| 👚 Take part in our study on clothing donation behaviour in Nova Scotia and you can enter to win a $100 thrift store gift card!<br><br>We're inviting Nova Scotians to take a short survey to help improve how clothing and textiles are reused and kept out of landfill.<br><br>Whether you donate often, rarely, or never, your perspective matters. It takes 10-12 minutes and it completely anonymous.<br><br>You are eligible if you:<br>✔ Are a resident of Canada<br>✔ Are 18 years of age or older<br>✔ Understand English or French<br><br>👉 Click/Tap the image to get started.<br><br>Your input will help shape better systems for textile reuse across Canada.<br><br>Have questions? Contact us: info@nactr.ca<br>This study (Pro00163587) has been reviewed and approved by a Research Ethics Board at the University of Alberta. This office is independent of the research team. |  |

## B3 Full List of Interview Participants

| Organization | Value Chain Stage |
|---|---|
| Bank & Vogue / Beyond Retro | Textile Sorting, Retail, Wholesale, Export, Innovation |
| Cornerstone to Recovery | Textile Collection, Wholesale |
| Encore Thrift Store (Hospice Halifax) | Textile Collection, Sorting, Retail |
| Goodwill Industries (ON, AB) | Textile Collection, Sorting, Retail, Wholesale, Product Development |
| Hand in Hand (Society of Saint Vincent de Paul) | Textile Collection, Sorting, Retail |
| Mission Mart (Soul's Harbour Rescue Mission) | Textile Collection, Sorting, Retail |
| Mission Thrift Canada | Textile Collection, Sorting, Retail |
| National Diabetes Trust | Textile Collection, Wholesale |
| ReNew Crew (Big Brothers Big Sisters) | Textile Collection, Wholesale |
| Savers Value Village | Textile Collection, Sorting, Retail, Reuse, Wholesale, Export |
| Society of Saint Vincent de Paul | Textile Collection, Sorting, Retail |
| The Salvation Army National Recycling Operations | Textile Collection, Sorting, Retail, Wholesale |

## B4 Donation Etiquette Codes

Codes discovered through analysis of an open ended question asking *"Based on the idea of donation etiquette, which we define as a set of socially acceptable practices that define behaviour in the context of textile donation, what do you think people should keep in mind when donating clothing and other textiles?"*

| Code Name | Second Order Code | Description | Total | % (n=1,592) |
|---|---|---|---|---|
| Physical Condition | **Ensuring that donated items are suitable for reuse** | Covers the absence of defects such as holes, tears, and stains. | 944 | 59% |
| Cleanliness | **Ensuring that donated items are suitable for reuse** | Refers specifically to laundering and cleanliness. | 923 | 58% |
| (Re)Usability | **Ensuring that donated items are suitable for reuse** | Focuses on whether the item retains functional value. | 583 | 37% |
| Donor Intentionality | **Exercising responsible donor judgment** | Reflects thoughtful decision-making about where, how, and why items are donated. | 258 | 16% |
| Appropriate Donation Selection | **Exercising responsible donor judgment** | Focuses on excluding unsuitable items from donation streams. | 210 | 13% |
| Market Value | **Considering recipient needs and preference** | Captures desirability, fibre quality, brand value, and resale potential. | 163 | 10% |
| Recipient-Centred Giving – "Golden Rule" | **Considering recipient needs and preference** | Reflects consideration for the recipient and treating donations as gifts rather than disposal. | 161 | 10% |
| Contamination Prevention | **Ensuring that donated items are suitable for reuse** | Broader than cleanliness; includes moisture, odours, pests, biohazards, and protecting donations from environmental damage. | 127 | 8% |
| Guideline Adherence | **Exercising responsible donor judgment** | Refers to donors electing to follow organizational or charity rules or policies around accepted donation practices. | 85 | 5% |
| Donation Sorting | **Facilitating efficient donation processing.** | Encompasses separating reusable from non-reusable items and organizing different categories of goods. | 72 | 5% |
| Donation Preparation | **Facilitating efficient donation processing.** | Covers bagging, folding, checking pockets, and protecting items during transport. | 67 | 4% |
| Repair Potential | **Ensuring that donated items are suitable for reuse** | Covers the evaluation of damaged items prior to donation, including completing simple repairs and determining whether items with minor defects remain appropriate for donation based on their usability, desirability, or overall quality. | 63 | 4% |
| Style and Seasonality | **Considering recipient needs and preferences** | Covers the extent to which donated items align with current fashion trends and seasonal demand. | 42 | 3% |

## B5 Self-Reported Donation Behaviour Alignment of Open-Ended Question with Likert-Scale results

Alignment of self-reported donation behaviour reported using Likert-scale (1-7) statements with the donation codes discovered through analysis of open-ended question about donation etiquette:

| Question | Ensuring that Donated Items are Suitable for Reuse | Exercising Responsible Donor Judgment | Considering Recipient Needs and Preferences | Facilitating Efficient Donation Processing |
|---|---|---|---|---|
| I do not leave donated items unattended outside when donation bins are full or donation centres are closed. | 6.69 (.80) | | | |
| I do not donate items with stains, odours, or animal hair. | 6.58 (.91) | | | |
| I do not donate items with rips, tears, pilling, or stretching. | 6.17 (1.15) | | | |
| I launder or clean items before donating them. | 6.11 (1.33) | | | |
| I check that items are functional before donating (e.g., zippers work, buttons are intact). | 6.04 (1.29) | | | |
| I separate clothing that is no longer wearable from items that can be reused. | | 5.87 (51.74) | | |
| I encourage and support others (e.g., family members, friends) in donating textiles. | | 5.48 (1.68) | | |
| I care about which organization my donations go to. | | 5.47 (1.62) | | |
| I am intentional about where I donate textiles. | | 5.31 (1.66) | | |
| I verify what organization or cause a donation bin or centre supports. | | 5.03 (1.91) | | |
| I donate to different organizations based on the types of items I am giving. | | 3.89 (1.82) | | |
| I contact donation centres or check websites to confirm they can accept my items. | | 3.41 (2.06) | | |
| I donate high-end or brand-name items. | | | 3.78 (1.41) | |
| I only donate items that are appropriate for the current season. | | | 3.30 (1.67) | |
| I check pockets and remove personal items before donating. | | | | 6.43 (1.04) |
| I ensure that bags of donations are not overloaded. | | | | 5.48 (1.54) |
| I fold items before donating them. | | | | 5.45 (1.82) |

# 3.3 Appendix C – End-Use Pathways Brief

## C1 Semi-Structured Interview Guide

**1. Background & Context**

1. Can you briefly describe your organization and your role in relation to textile recovery or recycling?
2. Are you currently working with post-consumer textiles? If so, in what capacity?

**2. Feedstock Requirements & Technical Specifications**

3. What fibre types are most relevant to your operations (e.g., cotton, polyester, blends, wool, synthetics)?
4. What level of fibre purity is required for your processes?
5. Are blended fibres usable in your system? If so, under what conditions?
6. What are your contamination tolerances (e.g., trims, elastics, zippers, dirt, moisture)?
7. What pre-processing steps would need to occur before materials could enter your system (sorting, shredding, cleaning, detrimming, pelletizing, etc.)?
8. What minimum volume thresholds would make sourcing from Nova Scotia viable?
9. What are the biggest technical barriers to using post-consumer textiles as feedstock?

**3. Market & Commercial Considerations**

10. What end products are most promising for recycled textile feedstock in your view?
11. How does the market value of recycled textile inputs compare to virgin materials?
12. What price range would make recycled textile feedstock commercially attractive?
13. What factors influence purchasing decisions (price, quality, consistency, ESG goals, regulation)?
14. How important is supply consistency versus fibre purity?
15. What are the biggest commercial risks in developing textile recycling markets regionally?

**4. Infrastructure & Logistics**

16. What infrastructure would need to exist in Nova Scotia to make this supply chain viable?
17. Would regional processing (e.g., fibre sorting, shredding) significantly change feasibility?
18. How sensitive is your business model to transportation costs?
19. Would proximity to Atlantic Canada provide any strategic advantage?

**5. Policy & EPR Considerations**

20. How would EPR for textiles influence your operations?
21. What types of policy mechanisms would help stimulate market development?

**6. Partnership & Investment Potential**

22. Under what conditions would you consider partnering with a Nova Scotia-based initiative?
23. Would you be open to participating in a pilot project (e.g., voluntary EPR demonstration)?
24. What would make Nova Scotia an attractive jurisdiction for investment?
25. Are there examples (domestic or international) of models that you believe are working well?

**7. Future Outlook**

26. Where do you see the most promising growth areas in textile recycling over the next 5-10 years?

## C2 Full List of Interview Participants

| Organization | Value Chain Stage | Key Relevance |
|---|---|---|
| **Textile Collection, Sorting, Retail** | | |
| Cornerstone to Recovery | Textile Collection, Wholesale | Collection systems, buyer relationships, commodity market trends |
| Encore Thrift Store (Hospice Halifax) | Textile Collection, Sorting, Retail | Surplus management challenges and downstream market disruptions |
| Goodwill Industries (ON, AB) | Textile Collection, Sorting, Retail, Wholesale, Product Development | Surplus management challenges, downstream market disruptions, recycling pathways |
| Hand in Hand (Society of Saint Vincent de Paul) | Textile Collection, Sorting, Retail | Surplus management challenges and downstream market disruptions |
| Mission Mart (Soul's Harbour Rescue Mission) | Textile Collection, Sorting, Retail | Surplus management challenges, downstream market disruptions, and reuse opportunities |
| Mission Thrift Canada | Textile Collection, Sorting, Retail | Surplus management challenges, downstream market disruptions, and reuse opportunities |
| National Diabetes Trust | Textile Collection, Wholesale | Collection systems, buyer relationships, downstream markets |
| ReNew Crew (Big Brothers Big Sisters) | Textile Collection, Wholesale | Collection systems, buyer relationships, commodity market trends |
| Society of Saint Vincent de Paul | Textile Collection, Sorting, Retail | Surplus management challenges and downstream market disruptions |
| The Salvation Army National Recycling Operations | Textile Collection, Sorting, Retail, Wholesale | Surplus management challenges and downstream market disruptions |
| **Wholesale and/or Export** | | |
| Bank & Vogue / Beyond Retro | Textile Sorting, Retail, Wholesale, Export, Innovation | Global textile trade, export market dynamics |
| Garson & Shaw | Wholesale, Export | Global textile trade, export market dynamics |
| Savers Value Village | Textile Collection, Sorting, Retail, Reuse, Wholesale, Export | Global textile trade, export market dynamics |
| **Innovation and/or Product Development** | | |
| Bioproducts Institute (UBC) | Innovation | Cellulosic fibre innovation, feedstock purity requirements |
| Carolina Nonwovens | Product Development | Commercial demand for recycled fibre, insulation markets, capital requirements, feedstock specifications |
| Szolyd Concrete | Innovation | Potential use of textile fibres in concrete products, insulation systems, and building materials |
| UpCycle Fiber | Product Development | Mechanical recycling, nonwoven manufacturing, insulation production, technology requirements |
| Vestechpro | Innovation and Product Development | Pilot-scale manufacturing capabilities, nonwoven product development, commercialization support |
| **Processing and Recycling** | | |
| Earth Warrior Lifestyle | Processing and Recycling | Manual recycling, end-uses and product line for recycled materials |
| Gabriola Island Recycling Organization (GIRO) | Processing and Recycling | Mechanical recycling, end markets for shred as stuffing or fill |
| Nuria Scientific | Processing and Recycling | Modular biochemical recycling infrastructure for polyester and poly-cotton blends |
| Reju | Processing and Recycling | Scaled chemical recycling infrastructure for polyester and poly-cotton blends |
| SSI Shredding Systems | Recycling | Textile shredding technology, equipment requirements, capital costs, preprocessing infrastructure |
| Sustane Technologies | Processing and Recycling | Chemical (pyrolysis) and mechanical (shredding) opportunities and limitations for textile-derived feedstocks |
| WM Waste Management | Collection, Processing, Recycling | Collection systems, sorting infrastructure, end-market development |
| **Market and/or Policy Research** | | |
| Full Cycle Resource | Market and Policy Research | Global secondhand market dynamics, trade economics |
| **Product End-User/Purchaser** | | |
| Doing It Right This Time (DIRTT) | Product End-User | Market validation for recycled denim insulation, domestic procurement opportunity, green building demand |

### C3 Interview Sample Stakeholder Groups by Value Chain Stage

| Value Chain Stage | Stakeholder Groups Represented |
|---|---|
| Textile Collection and/or Sorting | 13 |
| Retail (Charitable or For-Profit) | 9 |
| Wholesale and/or Export | 8 |
| Innovation and/or Product Development | 7 |
| Processing and Recycling | 7 |
| Market and/or Policy Research | 1 |
| Product End-User / Purchaser | 1 |
| **Total:** | **46** |

## C4 NS Value Chain Descriptions

| Value Chain Stage | What is it? | Current Practices (NS) |
|---|---|---|
| **Collection** | The capture of used textiles from households and businesses for reuse or recovery. Textiles are collected through charitable and for-profit donation bins, on-site thrift store donations, community events, scheduled household pickups, retailer take-back programs, and curbside or commercial garbage. | Most textiles are collected through charitable and for-profit organizations for potential reuse.<br>However, an estimated 58,561 tonnes (Divert NS, 2023) of textiles are still disposed of annually through residential and ICI waste streams, with limited dedicated collection for recycling.<br>TTNS Phase II also identified textile collection bins as a separate source of donated materials. |
| **Sorting for Resale** | Manual separation of donated textiles into sellable and unsellable categories, directing wearable items to retail and surplus to downstream channels. | Most thrift organizations rely on manual sorting by staff and volunteers. Saleable items are directed to thrift stores, while lower-grade items are prepared for wholesale, export, recycling, or disposal.<br>Approximately 53% of items assessed in TTNS Phase II were not immediately suitable for resale. |
| **Resale** | Wearable items are sold through thrift stores and other second-hand retail channels for continued use. | Charitable and independent thrift retailers operate across the province. It is common for unsold inventory to be progressively discounted before being removed from retail shelves. |
| **Wholesale / Export** | The sale of sorted or unsorted surplus textiles in bulk to brokers, graders, and wholesalers for redistribution into secondary markets domestically or internationally. | Most large thrift organizations rely on wholesale markets to recover value from surplus inventory.<br>Market volatility, declining prices, and tightening international regulations have increased pressure on this pathway. |
| **Sorting for Recycling** | Further sorting of unwearable textiles by fibre type, condition, or composition to create consistent feedstock streams suitable for downstream recycling or manufacturing applications. | No dedicated sorting-for-recycling infrastructure exists in Nova Scotia. Some informal separation of cotton-rich materials (towels, sheets, flannel) for sale as industrial rags occurs at the store level.<br>Fibre identification technology is absent.<br>Feedstock for any recycling pathway would need to be manually sorted from mixed donation streams without standardized protocols or equipment. This is the most significant infrastructure gap in the provincial system. |
| **Recycling / Energy Recovery** | The conversion of sorted unwearable textiles into a recycled product, commodity, or recovered energy through mechanical, chemical, or thermal processes. | No textile recycling or energy recovery infrastructure processing post-consumer textiles currently operates in Nova Scotia at commercial scale.<br>Sustane Technologies in Nova Scotia processes end-of-life plastics through pyrolysis but has not integrated textiles.<br>Ragging (sale of cotton textiles for industrial wiping) represents the only operational recovery activity.<br>All other recycling pathways identified in this report would require new investment. |
| **End-Use Markets** | The industries and applications that purchase and use recycled textile outputs, displacing virgin materials and generating demand that sustains the recovery system. | Existing and emerging markets include industrial wiping cloths, acoustic and thermal insulation, automotive and industrial nonwovens, composite materials, mechanical fibre recycling, chemical textile-to-textile recycling, and environmental applications.<br>Most current end-use markets are located outside Nova Scotia, highlighting the opportunity to develop regional processing and manufacturing capacity. |

**Note:** While presented sequentially, not all textiles pass through every stage. Depending on condition, fibre composition, market demand, and organizational capabilities, materials may exit the value chain at multiple points through resale, wholesale, recycling, energy recovery, or disposal. This figure represents the predominant pathways currently observed in Nova Scotia.

## C5 Interview Thematic Analysis

| Micro Theme | Description | Macro Theme |
|---|---|---|
| **Collapse or instability of downstream markets** | Interviewees consistently described declining commodity values, shrinking wholesale demand, buyer selectivity, export uncertainty, or loss of downstream outlets. | **Market and System Pressures** |
| **Growing pressure on charitable retailers from surplus textiles** | Interviewees described being unable to move excess inventory and increasingly facing storage or disposal challenges. | **Market and System Pressures** |
| **Fast fashion is reducing material quality** | Interviewees reported declining durability and resale value of donated garments due to the growing prevalence of low-cost fashion | **Market and System Pressures** |
| **Need for domestic end-use solutions** | Interviewees repeatedly emphasized the need for Canadian processing capacity and domestic markets. | **Domestic End-Market Development** |
| **Insulation and nonwovens are the most promising near-term end markets** | Among all the product pathways discussed, nonwoven products, particularly acoustic and thermal insulation, received the strongest support as technically feasible, commercially proven, compatible with mixed post-consumer textile feedstocks, and able to process large volumes | **Domestic End-Market Development** |
| **Reuse should remain the priority** | Many participants stressed that maintaining garments in use provides greater value than immediate recycling | **Value Retention and Material Recovery** |
| **Sorting and feedstock quality/consistency are critical for recycling** | Nearly every recycling or manufacturing stakeholder emphasized that successful recycling depends on feedstock consistency, contamination control, and material sorting | **Value Retention and Material Recovery** |
| **Policy intervention is needed** | Most stakeholders felt market forces alone are unlikely to drive textile circularity at scale, and that policy intervention will be necessary to stimulate investment and create demand | **Policy and market enablers** |

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**Textile Transformation Nova Scotia Phase II**

**0 Master Report**

1 Waste Characterization Study

2 Donation Etiquette Analysis

3 End-Use Pathways Brief

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