Developing a Circular Textiles System for Ireland

an EPA Green Enterprise innovation & demonstration project

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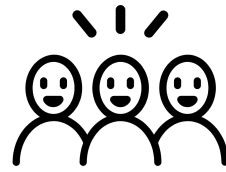**23 May 2023**

Key stakeholders

DONATE DON'T WASTE

CRM Reuse Repair Recycle
Project Lead

Innovation for a Circular Economy
GREEN ENTERPRISE epa
Funder

epa Environmental Protection Agency
An Ghníomhaireacht um Chaomhnú Comhshaoil

An Roinn Comhshaoil, Aeráide agus Cumarsáide
Department of the Environment, Climate and Communications

southern waste region

rreuse

Steering Group

CTC CLEAN TECHNOLOGY CENTRE
Technical Partner

REDISCOVERY CENTRE
Closing the Loop & Innovation Showcase Partner

CHARITY RETAIL IRELAND
Charity Retail Insights

VINCENT'S
SUPPORTING THE WORK OF SVP THE SOCIETY OF ST. VINCENT DE PAUL
Charity Retail Partner

BALLYHOURA DEVELOPMENT CLG
Transportation Infrastructure, Local Knowledge

WICKLOW ENDLESS OPPORTUNITIES

Comhairle Contae Dhún na nGall
Donegal County Council

Comhairle Contae Chorcaí
Cork County Council

Collection Infrastructure and/or Local Knowledge

Context for research project

Policy

Article 11.1 of the revised EU Waste Framework Directive (WFD) obliges Member States to set up separate collection for textiles from 1 January 2025

Environment

110,000 tonnes of post-consumer textiles are collected as waste in Ireland annually

Economic & social

By keeping collected textiles within Ireland, value is maximized and new business & employment opportunities are created

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Post-consumer textiles in Ireland

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110,000 t — Total tonnes collected as waste across all sectors annually

64,000 t — Portion of total collected from households

60,000 t — Additional tonnes resold, reused or recycled through a variety of entities

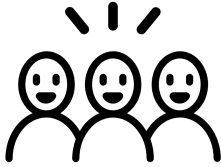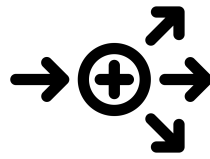**17,500 t** — Tonnes handled by charities, majority through in-store donations and textile banks

40,000 t — Estimated tonnes collected by commercial textile recyclers and commercial retailer take-back schemes*

Source: *The Nature and Extent of Post Consumer Textiles in Ireland,* O'Leary et al., 2021

*significant uncertainty re. volumes of textiles handled by commercial textile recyclers due to lack of data availability
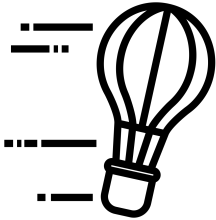
Project aims

➔ run pilot to compare three different textile collection systems, communications to support
Arklow (Co Wicklow), Buncrana (Co Donegal), Charleville (Co Cork)

➔ model textile quality, quantity and impact of each collection method

➔ determine how to maximize value of post-consumer textiles in Ireland
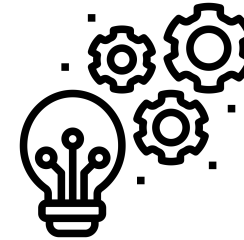
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Activities/outputs

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stakeholder engagement

review of post-consumer textile initiatives and initial project design

pilot design and redesign

pilot implementation and data collection

behaviours and attitudes survey

data modelling
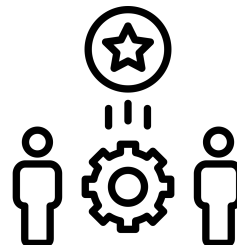
identification of post-consumer textile solutions

Separate collection methods

Donate Don't Waste event-based / public collection at secondary school,, kerbside collection with support from Ballyhoura Development CLG

➜ **Process**: identified 32 potential collection systems, narrowed with criteria, ranked with stakeholders

➜ **Preferred**: fixed private, public collections + kerbside - layered, six months
Redesign: event-based private / public collections + kerbside + comms - no layers, four months

➜ **Challenges**: Human resources, logistics, health & safety, impact of Covid-19, project budget constraints, delay due to redesign

➜ **Findings:** Fixed collection points prohibitively cost / resource intensive, low appetite to host. If want to prioritise local reuse, coordinated infrastructure, collaboration & additional resources are required

Pilot & comms design
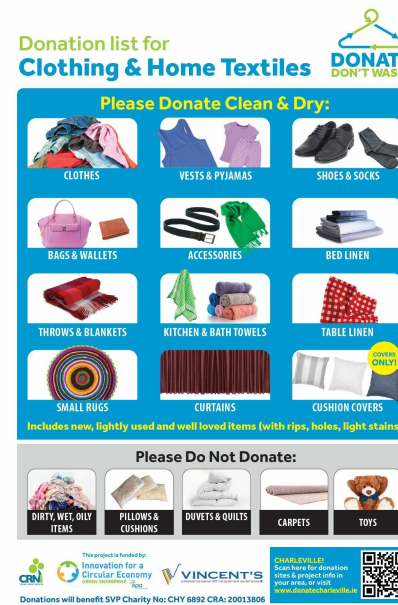
Make donations easier

Desktop research & stakeholder consultation

7 categories / 32 examples identified

Three locations selected three different methodologies

Data collection protocols

Local communications: where & what to donate

Desktop research & stakeholder consultation

Maximise convenience, align with other business models, leave screening to experts, maximise diversion from waste

www.donatedontwaste.ie

Understand attitudes and behaviours around unwanted clothing and home textiles

Survey

Pilot separate collections

Charleville: monthly (Mar, Apr, May) door-to-door in different locations across Charleville / 900 houses
➔ 70 bags total = 0.4kg/hh (based on no. households serviced)
➔ Avg ⅓ resaleable

Arklow: two time-limited drop-off events @ local secondary school and Arklow Recycling Centre / 4,874 houses
➔ 262 bags total = 0.27kg/hh (based on no. households in Arklow)
➔ Very poor quality - contamination due to human waste / wet
    25 inspected - only 5% resaleable

Buncrana: Communications only + textile bank
➔ Limited data on impact of communication
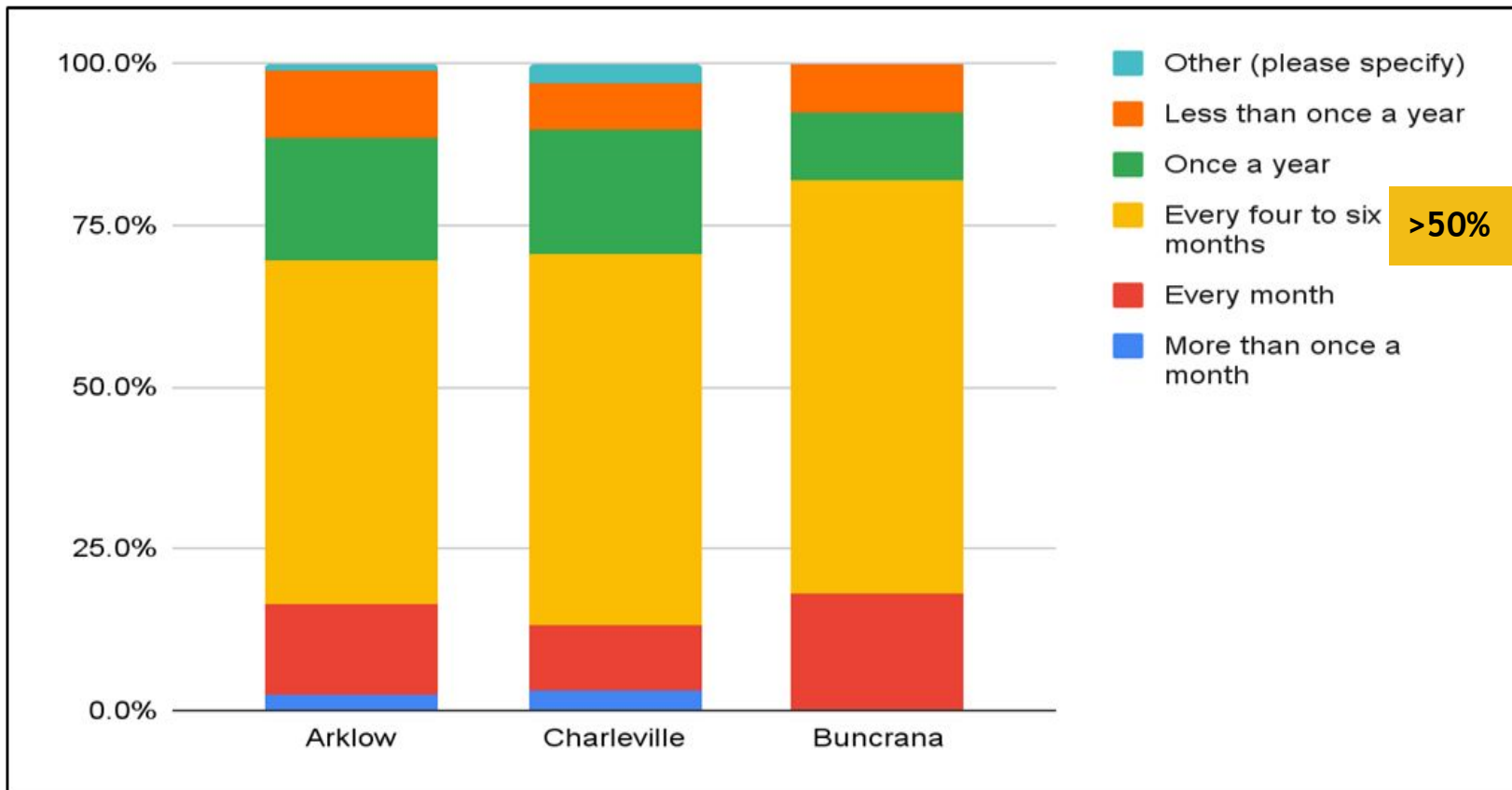➔ Data not available on impact of textile bank

Pilot data modelling

➜ data generated through the pilots were not sufficient for carrying out a national scaling up exercise due to financial and human resource constraints, project timeframe, # of samples, data reporting differences in pilot locations

➜ conducted second analytic task: gathered data from non-pilot sources to provide a broader indication of textile qualities that may be generated through separate textile collection systems

➜ supplementary data indicated:
1. the vast majority of post-consumer textiles have value either through local resale or export, and
2. there is significant variation in the results from each data set in terms of textiles gathered through each collection method

Donate Don't Waste event-based/public collection and kerbside collection bags

Surveys

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Online surveys to assess behaviour & attitudes of citizens in Charleville, Arklow and Buncrana towards unwanted clothing and home textiles (n = 216 of 438 valid)

Legend:
- Other (please specify)
- Less than once a year
- Once a year
- Every four to six months → **>50%**
- Every month
- More than once a month

How often do you have clothing / home textiles available for donation?

Motivators for donating were knowledge of:
- what happens
- what kinds
- who benefits
- environmental benefits

Post-consumer textile solutions

Identify best practice post-consumer textile solutions

Database with 74 options under 6 headings

Assess scalability, end markets, quality, contamination, regulatory barriers, carbon footprint, hierarchy, reuse

Based on modelling, identify solutions most needed in Ireland

Medium value export - explore repair solutions

Low value shred / recycling - explore applications for shred

Eco Business Model Canvas for top two solutions
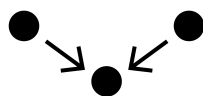
Arnotts Circular Fix model

UsedFULLY road base

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A showcase of innovative solutions for post-consumer clothing and home textiles

→ Focus on moving textiles upwards from lower to higher value applications

Key findings

The project found strong indications that Ireland is unprepared to meet the requirements of the WFD

Separate collection of textiles is very resource intensive.

Sector does not currently have the infrastructure, capacity or resources to expand its role in collecting textiles or associated qualitative and quantitative data.

Existing public data on post-consumer textile collections is limited.

Post-consumer textile sector is currently underdeveloped, with the activities of different stakeholders relatively fragmented and siloed.

Stakeholder engagement revealed strong support for public communications that emphasise simplicity and post-collection sorting of textiles into different quality streams.

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Recommended actions for policymakers
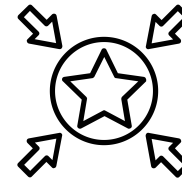
1. Scope, develop, and support infrastructure, human capacity, and collaboration between current and future stakeholders in the post-consumer textile sector to support a national separate textile collection system.

2. Establish a national standardised database of quantities and categories of textiles currently gathered through different collection methods.

3. A national separate collection system for textiles should be as simple as possible at the point of donation/collection.

4. Explore avenues to 1) mainstream reuse and repair and 2) implement industrial scale remanufacturing and reuse of low quality textiles.

5. Adequate funding must be quantified and targeted to support the other four recommendations and maximise impact.

Q & A

Thank you

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