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A Data-Driven Circular Economy Roadmap for Second-hand Textiles in Ghana (2025-2030)

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A Data-Driven Circular Economy Roadmap for **Second-hand Textiles** in Ghana

(2025-2030)

Executive Summary

Ghana's textiles circular economy roadmap sets out a practical, justice-led pathway to transform one of the world's largest secondhand clothing hubs into a global flagship for regenerative textile systems between 2025 and 2030. It is built directly from the Ghana Circular Economy Centre (GCEC) Textiles Opportunity Map (OM), a data-driven diagnostic developed under the GCEC project. The OM combines material flow analysis, environmental sampling, market surveys and community-led research to identify where circular interventions in Ghana's virgin textile production and secondhand clothing trade can deliver the greatest social, environmental and economic returns.

Origin and evidence base

The OM was prepared by The Or Foundation in close collaboration with market traders, kayayei, upcyclers, weavers, municipal authorities and national policy actors. It uses a mixed-methods approach, drawing on:

- Long-term participatory work in Kantamanto Market since 2011
- Detailed waste audits and fibre-type analysis in the market
- Microfibre and macro-waste surveys at coastal and lagoon hotspots
- Structured surveys and consultations across Accra (Kantamanto), Kumasi, Tamale and Awutu Senya
- Site visits and interviews with textile mills such as Akosombo Industrial Company Limited and Volta Star

This analytical work confirms, for example, that Ghana imported 147,000 tonnes of secondhand clothing (HS 6309) in 2023, making it one of the world's top destinations for used garments, and that at least 57% of garments entering Kantamanto are resold or repaired for reuse. At the same time, up to 43% of garments in each bale are unable to resell for reuse and are regarded as waste by retailers. While some of these garments are repurposed, a significant portion of textile waste is accumulating in surrounding communities and along the coast.

The roadmap translates these diagnostics into a structured implementation plan with clear goals, timeframes and responsibilities, while keeping the lived realities of over 30,000 people working in the secondhand economy at its centre.

Vision and strategic direction

The vision is that by 2030 Ghana's textile sector will be a justice-led, regenerative circular economy, inclusive of workers across the value chain, low-carbon in its energy and materials, and resilient in the face of climate and market shocks. Kantamanto Market in Accra is positioned as the flagship hub: a re-designed, safe and modern circular marketplace where dangerous head-carrying has been eliminated, fires and floods are prevented, and textile waste is treated as a resource for new products rather than a burden on communities and ecosystems.

To realise this vision, the roadmap defines four strategic goals for 2025-2030:

1. **Upfit Kantamanto Market** - complete certified electrification, fire lanes, a clinic and fire post by 2028, and deliver a full market upfit with wider aisleways, green energy and integrated circular infrastructure by 2030.
2. **Eliminate dangerous head-carrying through dignified logistics and job training** - transition at least 80 kayayei per year into skilled circular roles, deliver educational campaigns in origin communities by 2026, and secure enforceable regulation on limits, ages and pay floors by 2027.
3. **Waste collection, clean-up and co-operative ownership of new pathways** - establish co-operative ownership of a textile sorting centre by 2026, expand Kanta Keepers to 100% participation in segregated textile waste collection by 2030, and sustain weekly removal of 30 tonnes of waste from Jamestown Beach and surrounding communities, with integrated decomposition trials by 2027.
4. **Policy and customs alignment for circularity** - introduce a 10% import levy on HS 6309 (offset by reduced import duty) to finance Goal 1 by 2026, and issue HS code guidance on circular textiles to the World Customs Organisation by 2027 so that upcycled exports can be properly recognised.

These goals are anchored in Ghana's national development plans, MEST's Circular Economy Roadmap, AfCFTA's textile anchor industry priorities and the Sustainable Development Goals, with a particular emphasis on gender equality, decent work and climate action.

Key baseline insights

The roadmap's baseline confirms that textiles are a major material and pollution flow in Ghana's economy:

- **Material flows:** Secondhand clothing imports are now Ghana's largest physical import stream after refined fuel. Within Kantamanto, at least 57% of garments are resold for some form of reuse or repair for reuse, yet up to 23% never sell for **reuse at all and a further share is treated as near-valueless, quickly entering waste pathways, including both circular upcycling and remanufacturing as well as waste dumping and open burning. Virgin textile production, supported by US$176 million of cotton imports (HS 5208), generates offcuts that are largely not recovered; only around 6% of surveyed stakeholders in Kumasi report recovering offcuts.**

- **Environmental burdens:** Textile waste contributes to severe coastal and lagoon pollution, including thousands of recorded "textile tentacles" along the shoreline and microfibre levels around 100 times higher than comparable urban studies in some samples based on available methodologies. Clean-ups at Jamestown already remove around 30 tonnes of waste on a weekly basis, but truck capacity is a major constraint.

- **Social realities:** Around 76% of Kantamanto's workforce are women and youth. Roughly 1300 people work as kayayei (head porters) in the market daily, carrying bales of up to 55 kg, often more than their body weight, for very low pay, with significant health impacts. Programmes have already helped 299 women transition out of head-carrying into alternative livelihoods, though without sustained infrastructural improvements to enable material transportation without headcarrying, it is likely and has already been observed that all women transitioned out will be replaced by others entering the trade.

These findings highlight both Ghana's existing circular strengths and the systemic gaps that must be addressed to avoid exporting environmental and social costs into communities and ecosystems.

Core opportunities and business models

Drawing on the OM, the roadmap focuses on three strategic opportunity areas across the virgin production and secondhand value chains:

1. **Strengthen and enable existing reuse practices** - secure and modernise the infrastructures that already underpin one of the world's most intensive secondhand reuse systems, centred on Kantamanto.

2. **Create and grow recycling pathways and domestic textile circularity** - develop viable pathways such as fibreboard ("Cassboard"), T-shirt yarn ("Tarn"), Shredder-as-a-Service, Disassembly-as-a-Service and fibre-to-fibre recycling, building on facilities and formulas already in place and on pilots with recyclers outside of Ghana.

3. **Bridge formal and informal manufacturing** - connect market-based micro-enterprises, upcyclers and weavers with formal mills, TVET institutions and policy frameworks, including new HS codes and globally accountable Extended Producer Responsibility (EPR).

Within this frame, the roadmap identifies concrete business models and co-operative structures, including Kanta Keepers in Kantamanto, Tide Turners at Jamestown, The Or Foundation's Material Technology and Transformation Lab (which has already created 16 independent jobs) and emerging women's associations.

Implementation, governance and finance

Implementation is organised through a hub-and-spoke model, with Kantamanto Market as the national flagship hub and Kumasi, Tamale and parts of the Central Region as replication spokes. The hub-and-spoke approach responds to the practical reality that thousands of enterprises are already concentrated in Kantamanto, allowing investment to achieve visible systemic change that can later be adapted and shared nationwide.

A phased action plan sets out short-, medium- and longer-term measures:

- **Short term (0-24 months):** complete a market-wide census; restore electricity to all fire-affected stalls; deliver an 80-stall demonstration site; strengthen Kanta Keepers; roll out training for retailers, tailors and upcyclers; expand skills pathways that transition 20 women per quarter out of dangerous head-carrying; commercialise fibreboard and Tarn; develop Shredder-as-a-Service; maintain weekly beach clean-ups exceeding 30 tonnes; and pilot household textile collection.

- **Medium term (3-5 years):** establish a regional Producer Responsibility Organisation to manage EPR-type funds; enforce regulation eliminating dangerous head-carrying; explore business models of Product-as-Disassembly; install fibre-to-fibre technology once business cases are confirmed; and bring a new HS code for upcycled goods into operation.

- **Longer term (5+ years):** expand construction-grade fibreboard commercialisation, complete the full Kantamanto upfit and scale fibre-to-fibre product markets, subject to successful pilots and investment.

Governance responsibilities are shared across national ministries (notably MESTI and CTVET), metropolitan assemblies (AMA, KMA, TMA), The Or Foundation as textiles value chain lead, co-operatives and women's associations. Financing is expected to blend domestic and donor funding with innovative mechanisms, including a proposed US$0.50 per-garment EPR fee floor in exporting countries, of which at least 29.5% would support tier-three reuse, repair and recycling operators in net secondhand clothing receiving countries such as Ghana and at least 10% would fund environmental remediation.

What success looks like

If delivered as planned, this roadmap will:

- Turn a currently fragile but globally significant secondhand hub into a safe, cleanly electrified, climate-resilient circular marketplace

- Replace hazardous head-carrying with dignified, skilled livelihoods for women and youth

- Lock large volumes of textile waste into value-added products and recycling pathways, while restoring coastal and urban ecosystems

- Give Ghanaian upcyclers and manufacturers a clearer route into regional and global markets through improved customs, national standards, and EPR frameworks

Above all, it positions Ghana not simply as a recipient of other countries' discarded clothing, but as a global leader in justice-led textile circularity, using robust evidence and lived expertise to guide investment, policy and innovation.

1: VISION AND STRATEGIC INTENT

1: Vision And Strategic

1: Vision and Strategic Intent

1.1 Vision

Ghana envisions a future where its textile sector becomes a global exemplar of a justice-led, regenerative circular economy, one that is inclusive, low-carbon, and resource-resilient. This vision is not merely aspirational; it is rooted in the lived realities of over 30,000 individuals working in the secondhand textile economy, particularly within Kantamanto Market, one of the world's largest hubs for used clothing. Here, micro-businesses recirculate large volumes of clothing through reuse, repair, and upcycling. Currently around 57% of the several millions of garments entering the market every week is resold for reuse in some manner. An additional 20% of the material flowing through the market that is unable to be resold for reuse may be converted into energy through burning for hot water, or, critically, is repurposed at an industrial scale through thousands of tailors and seamstresses practising circularity. This combination of repurposing, remanufacturing, upcycling, overdying and other waste transformation activities to the scale of at least two million garments weekly, makes Kantamanto Market a major manufacturing hub, producing newly upcycled products alongside the merchandising of secondhand garments. Yet still there is material leakage due in large part to the low value of garments circulating through the global fashion industry and its pervasive business model of high volume, low cost, low margin garments, which runs contradictory to circular principles of maintaining value through the supply chain.

By 2030, Ghana aims to transform its secondhand textile heartland into a zero-waste, circular system where:

- Building on circular patterns of reuse, repair and upcycling already in place, increase recirculation and utilisation rate of secondhand textiles in order to reduce the burden of textile waste on Accra's coastal environment and municipal waste management systems while increasing inclusive economic opportunities, reducing risk for stakeholders and significantly lowering greenhouse gas emissions compared to the equivalent circulation of newly produced textiles.

- The roadmap emphasises transforming items regarded as waste, including whole garments and offcuts into new, commercially viable products for both domestic and international markets (fibreboard, yarn, etc.), with machinery built locally, thereby retaining value for Ghana-based enterprises, instead of losing value through waste.

- The sector is predominantly powered by women and youth, who make up approximately 76% of Kantamanto's workforce. The vision transitions hazardous, unpaid, or loss-making work with skilled, fairly paid circular professions, such as upcycling, tailoring, and textile innovation. Such a transition requires infrastructural improvements as well as training and enforcement.

- Kantamanto Market is a global flagship for textiles circularity. Ghana's largest secondhand clothing market has suffered four major fires since 2013, including a devastating blaze in January 2025 that destroyed 60% of the market's stalls. The long-term vision sees a fully reimagined market with wider aisleways to eliminate the need for dangerous headcarrying, onsite storage, improved sanitation solutions, airflow and flood mitigation to create an overall competitive marketplace for circularity that can serve as a hub and example for reuse and remanufacturing on a global level. In the near term the roadmap supports actions underway to install up-to-standard electrical fittings in every market stall, along with solar power in select areas, fire lanes, a fire service station and clinic to ensure that the largest reuse market on earth is a safe and dignified place to work, shop and creatively recraft textiles as part of the circular economy.

- Textile waste that cannot be upcycled or otherwise remanufactured is transformed into new products such as fibreboard used for furniture, acoustic insulation and high performance speakers and construction, offsetting the use of other virgin materials and creating equity and income for supply chain cooperatives through commercialisation.

1.2 Strategic Goals (2025-2030)

To realise Ghana's vision of a regenerative, justice-led circular textile economy, four strategic goals have been defined. These are underpinned by measurable targets and grounded in robust field data, stakeholder consultations, and environmental audits. Together, they form the operational backbone of the roadmap.

Goal 1: Upfit Kantamanto Market

Targets: Complete ECG-certified electrical installation across the entire market, install firelanes, clinic, and firepost with necessary displacement stall by 2028. Building on the initial footprint created by firelanes, phase in a complete market upfit based on extensive stakeholder engagement throughout the planning process to ensure that all market members can retain their stalls with in-stall storage, wide aisleways to eliminate the need for dangerous headcarrying, green energy, and holistic upcycling and waste management infrastructure by 2030.

Rationale: Kantamanto has suffered four major fires since 2013, including a catastrophic blaze in January 2025 that destroyed 7,000 stalls overnight.[1] These fires are fuelled by flammable timber structures, the lack of fire lanes to aid in firefighting and unsafe, improvised electrical connections. While re-electrification for stalls damaged in the January fire is currently underway, along with a demonstration site for firelane displacement stalls. Around 3,000 stalls undamaged by the January fire require new electrical infrastructure. Electrification is not only a safety imperative, it is also a productivity enabler, unlocking the use of industrial sewing machines, shredders, and other equipment essential for circular textile processing. Through a comprehensive upfitting plan, the market can also benefit from clean solar electricity to provide consistent and low-cost electricity. New roofing structures are a requirement to install solar panels. Additionally, the existing conditions of the market necessitate headcarrying secondhand clothing bales and other materials throughout the market because market lanes are too narrow and uneven to allow for carts to circulate. A comprehensive market upfit delivers wider aisleways to ensure safe working conditions for all market members.

Baseline (Aug 2025): 6,913 market stalls have been re-wired through a

1 The Or Foundation. Unity Forward! Building solidarity after a supply chain disaster. 2025. Retrieved from https://theor.org/newsroom/post/193

project funded and coordinated by The Or Foundation with the approval of the Electricity Company of Ghana, the Ghana National Fire Service and the Accra Metropolitan Assembly. An 80-stall demonstration site has been fabricated on land controlled by the Accra Metropolitan Assembly, modelling the necessary multi-storey infrastructure allowing for firelanes to be installed without the displacement of any market members. A market-wide association has formed across the 13 landlords and section managers within the market in order to coordinate cohesive market planning after immediately rebuilding after the January Fire with wood structures in the same form and footprint as the stalls burnt down in order for the market to reopen and limit economic losses for market members.

Goal 2: The Elimination of Dangerous Headcarrying through Dignified Logistics and Job Training

Targets: Transition at least 80 Kayayei (female head porters) per year, into skilled, circular economy-aligned roles. Carry out an educational campaign in origin communities to share research on dangers of headcarrying by 2026. Advance enforceable regulation on limits, ages and pay floor for headcarrying in order to ensure legal grounds for the elimination of dangerous headcarrying by 2027.

Rationale: Kayayei, some as young as nine, carry secondhand clothing bales weighing 55 kg (often over 100% of their body weight) for as little as US$0.30 to US$1.00 per trip. This practice causes irreversible spinal damage within two months and violates international labour standards. The roadmap sets the goal of eliminating this dangerous form of labour within the circular textiles economy in Ghana. This goal is advanced with a multifaceted approach through regulation, education and job transitioning.

Baseline: Estimates establish that roughly 1300 people working as kayayei operate daily in Kantamanto, as infrastructure requires headcarrying (see Goal 1) and safe, alternative livelihoods are virtually non-existent. GCEC Textile Value Chain Lead has transitioned 299 women out of dangerous headcarrying over a three year period and created campaign materials based on chiropractic research to support community engagement efforts necessary to achieve the goal of eliminating dangerous headcarrying. Educational material, including a feature length film has been produced and piloted across originating communities and market associations to engage community members in developing alternatives to dangerous headcarrying.

Goal 3: Waste Collection, Clean-Up & Cooperative Ownership of New Pathways

Targets: Establish cooperative ownership of textile waste sorting centre with commercial offtaking capacity by the end of 2026. Expand market-based Kanta Keepers waste collection cooperative to 100% participation of segregated textile waste collection by 2030. Clean Jamestown beach through the removal of 30 metric tons of textile and other waste on a weekly basis until clean and maintainable through the Tide Turners community cooperative by 2027 and integrate removed waste with experimental decomposition.

Rationale: With ecosystems around Accra's Kantamanto Market overwhelmed by waste, community groups have begun taking action. Organized and supported by The Or Foundation in collaboration with the Accra Metropolitan Assembly, both the Kanta Keepers (36 people) and Tide Turners (60 paid members and 70 community volunteers) cooperatives are removing tons of waste each week from the market and the Jamestown beach respectively. Scaling these efforts will prevent textile waste from entering marine ecosystems and enable waste transformation into fibreboard and other circular products. This directly helps to protect the livelihoods of local fishing communities that depend on clean coastal waters and advances opportunities for community members within the circular economy, while ensuring long-term sustainability of the initiatives through community-based operations.

Baseline: Tide Turners currently operates with only one truck available weekly, supplied by The Or Foundation under license of the AMA. Upstream in the market, only one municipal waste truck is allocated on a daily basis to collect all waste emerging from Kanamanto Market. This truck is complimented by an additional truck from The Or Foundation multiple times a week targeting exclusively segregated textile waste. Still with around 30,000 people conducting daily business in the market and many thousands more customers circulating through, the waste haulage capacity is severely underresources resulting in significant leakage of waste into the surrounding environment. Waste accumulates massively leading to waste burning in public spaces and discarded garments and offcuts clogging gutters and covering beaches. Market member participation in Kanta Keepers is only on a pilot scale of less than 10%.

Goal 4: Policy and Customs Alignment for the Circular Economy

Targets: Place a 10% Import Levy on HS6309 imports offset by reduction in import duty from 20% for consumer goods to 10% for intermediate manufacturing input in order to establish a dedicated fund to finance Goal 1 by 2026. HS Code Guidance on circular textiles issued by Government of Ghana to World Customs Organization to support the establishment of additional customs codes with greater nuance for secondhand textiles and upcycled products made from secondhand textiles by 2027.

Rationale: While at least 57% of secondhand clothing opened in Kantamanto are resold, it is not without significant preparation for reuse, such as washing, de-pilling, ironing and repairing. A portion of the additional remaining garments are transformed via upcycling and remanufacturing processes, such as turning men's shirts into kid's boxers shirts. This indicates that garments imported in compressed bales are not direct consumer goods, rather inputs for continued processing in order to be merchandiseable. While implementing a levy is not the same principle as Extended Producer Responsibility, the creation of a dedicated fund for investment in textile circularity can complement EPR transfers from HS 6309 exporting countries to Ghana. Upcycling designers currently cannot export to European markets under HS codes for new clothing due to lack of traceability and fiber content information on secondhand garments.

Baseline: Secondhand garments are currently classified as a consumer good for customs processing. Stakeholders cannot show value addition in Ghana when exporting upcycled goods due to maintaining the same customs code.

Cross-Cutting Indicators and Lead Actions

To track progress across all four goals, the following indicators will be monitored:

- **Infrastructure & Safety:** Kilometres of certified electrical cable laid, fire-lane and aisle width compliance, solar kilowatts installed, patients served in clinic, market members trained in fire safety response and prevention.

- **Labour Transition:** Number of women working as kayayei retrained, average earnings, incidence of injury or health complaints, observations of headcarrying secondhand clothing bales.

- **Waste Recovery:** Tonnes of textile waste collected weekly, percentage diverted to fibreboard, yarn, or compost.

- **Customs Policy:** Import duty, levy rates and policy submission with WCO.

1.3 Alignment with Policy and Global Frameworks

To ensure coherence, legitimacy, and scalability, the roadmap is strategically aligned with national development priorities, regional trade frameworks, and global sustainability agendas. This alignment not only reinforces the roadmap's relevance but also unlocks pathways for investment, policy support, and international collaboration.

National Policy Alignment

The roadmap directly supports Ghana's national development and sectoral policy frameworks:

- **Ghana's Coordinated Programme of Economic and Social Development Policies (2021-2025):** The roadmap advances goals on industrial transformation, job creation, and environmental sustainability, particularly through infrastructure upgrades (Goal 1) and inclusive employment (Goal 2).

- **Medium-Term National Development Policy Framework (2022-2025):** Emphasises green industrialisation and youth employment. Upfitting Kantamanto (Goal 1) and the transition of women working as Kayayei into skilled roles, a necessary component of eliminating (Goal 2) are direct contributions.

- **National Plastic Management Policy (2019):** Originally focused on plastics, its zero-leakage ambition is now extended to textiles through Goal 3, reinforcing the waste hierarchy and environmental protection.

- **MEST Circular Economy Roadmap and Action Plan (2023, draft):** The textile roadmap operationalises key priorities such as reuse, remanufacturing, and infrastructure modernisation, aligning with MESTI's broader circular economy vision.

- **Exemptions Act (2022) and Excise Stamp Act (2013):** Inform fiscal incentives for local textile production and upcycling, supporting the roadmap's emphasis on domestic value retention and provide framework for import and levy changes.

- **24 Hour Economy and 24 Hour Market Initiative (2025):** The Government of Ghana aims to improve efficiency of job creation initiatives and market infrastructure to promote healthy working environments for around the clock commerce underlying economic growth. Upfitting Kantamanto Market and circular skills training, including alternative, dignified employment pathways for women working as kayayei fit within this framework.

Regional and Continental Trade Frameworks

- **AfCFTA Textile Anchor Industry Plan:** The roadmap supports Ghana's strategic positioning under AfCFTA by advocating for a new HS code to distinguish upcycled goods (Goal 4). This enables Ghanaian circular textile products to access continental trade preferences, particularly those manufactured as a result of Goal 3.

- **Free Zones and AGOA (African Growth and Opportunity Act):** The roadmap's emphasis on remanufacturing and upcycling aligns with Ghana's eligibility for duty-free exports to the US, provided value addition is demonstrated. Policy advocacy under Goal 4 aims to clarify and expand these trade pathways.

Global Sustainability Commitments

The roadmap is fully aligned with the United Nations Sustainable Development Goals (SDGs):

- **SDG 1 - No Poverty:** By generating income for informal workers through circular jobs and cooperatives.
- **SDG 5 - Gender Equality:** Through the empowerment of women, particularly Kayayei, who comprise 75% of Kantamanto's workforce.
- **SDG 6 - Clean Water & Sanitation:** By strengthening waste management practices to remove waste from waterways and prevent pollution from entering waterways, and by improving sanitation systems within Kantamanto Market.
- **SDG 8 - Decent Work and Economic Growth:** By supporting cooperative formation, local business ownership, training within circular roles and eliminating hazardous labour practices.
- **SDG 9 - Industry, Innovation and Infrastructure:** Via clean technology deployment (e.g., shredders, solar power) and market electrification.
- **SDG12-Responsible Consumption and Production:** Through the promotion of the reuse and recirculation of clothing, thereby reducing the production and consumption of new clothes, and through 100% capture and recirculation of textile materials.
- **SDG 13 - Climate Action:** By reducing emissions from open burning and promoting low-carbon infrastructure.
- **SDG 14 - Life Below Water:** By preventing textile waste and microfibre pollution from entering marine ecosystems.

Just Transition Principles

The roadmap is grounded in the principles of a just and inclusive transition, ensuring that no community is left behind as Ghana decarbonises its material economy:

- **Participatory governance:** Through cooperatives like the Kanta Keepers, Tide Turners, market-wide associations, and inclusive stakeholder consultations.
- **Health and safety reforms:** Addressing dangerous head-carrying and fire risks in informal markets.
- **Bridging formal-informal divides:** By advocating for policy reforms that enable informal actors to access formal markets, finance, and protections.

Strategic Rationale for Prioritising the Four Goals

Kantamanto Market processes more clothing daily than typical large fulfilment centres in countries exporting secondhand clothing to Ghana, yet operates without fire exits, forklifts, or formal waste collection. This paradox makes it both a hotspot of risk and a lighthouse of opportunity. The four strategic goals were selected to address foundational barriers and unlock downstream innovations:

1. **Infrastructure (Goal 1):** Establishes the physical backbone for circular operations.

2. **Labour Justice (Goal 2):** Centres the human dimension of circularity.

3. **Ecosystem Transformation toward Circularity(Goal 3):** Tackles pollution and ecosystem degradation, while developing new economic opportunities and jobs.

4. **Policy Alignment (Goal 4):** Creates funding mechanisms and supports the growth engine of a circular textile economy.

Together, these goals lay the groundwork for scalable, inclusive, and climate-resilient circular transformation.

Summary Table

Component	Details
Vision	Ghana envisions a justice-led, regenerative circular textile economy that is inclusive, low-carbon, and resource-resilient. By 2030, the secondhand textile sector will be a zero-waste system where every kilogram of cloth is recirculated, resources remain sovereign, livelihoods are dignified, infrastructure is climate-resilient, and the system regenerates the environment.
Strategic Goal 1: Upfit Kantamanto Market	**Targets:** Complete ECG-certified electrical installation across the entire market, install firelanes, clinic, and firepost with necessary displacement stalls by 2028. Complete market-wide upfit, with wider aisleways, green energy, and holistic upcycling and waste management infrastructure by 2030. **Justification:** Fires have destroyed thousands of stalls, damaging livelihoods and taking at least two lives. Electrification enables safe use of sewing machines and shredders essential for circular operations. Wider aisleways support the elimination of dangerous headcarrying. **Baseline (August 2025):** 6913 stalls have new certified electrical wiring. 1000 fire extinguishers have been installed, however, firelanes and other safety features are yet to be installed.

Component	Details
Strategic Goal 2: Dignified Logistics	**Target:** Transition at least 80 Kayayei (female head porters) per year, into skilled, circular economy-aligned roles. Educate origin communities on dangers of headcarrying by 2026. Regulations on limits, minimum ages and pay floor in support of elimination of dangerous headcarrying by 2027. **Justification:** Women and girls working as Kayayei, some as young as 9, carry up to 55 kg (100% or more of body weight) for US$0.30-1.00 per load, risking irreversible spinal damage. Aligns with SDG 5 (Gender Equality) and SDG 8 (Decent Work). **Baseline:** ~1300 Kayayei operate daily; safe alternatives are nearly non-existent. Textile Value Chain Lead has transitioned 299 women out of dangerous headcarrying.
Strategic Goal 3: Ecosystem Clean-Up	**Target:** Establish cooperative ownership of textile waste sorting centre with commercial offtaking capacity by the end of 2026. Expand market-based Kanta Keepers waste collection cooperative to 100% participation of segregated textile waste collection by 2030. Clean Jamestown beach through the removal of 30 metric tons of textile and other waste on a weekly basis and integrate removed waste with experimental decomposition by 2027. **Justification:** Kanta Keepers (36 people) and Tide Turners (60 paid members and 70 community volunteers) cooperatives are removing 30 tons of waste each week from the market and the Jamestown beach respectively, but lack necessary trucking capacity to remove all material. Scaling these efforts can lock textile waste into fibreboard and keeps beaches usable for 2,000+ fishers. **Baseline:** Inconsistent and low (<2) availability of municipal trucks; The Or Foundation operates a private waste truck under license from the AMA. Waste piles are burnt in the open and continue to wash up on the beach with a 30% improvement measured since 2024.
Strategic Goal 4: Align customs and trade practices with tangible circular practices	**Target:** 10% Import Levy on HS6309 imports offset by reduction in import duty from 20% for consumer goods to 10% for intermediate manufacturing input by 2026. HS Code Guidance on circular textiles issued to World Customs Organization to support circularity by 2027. **Justification:** Garments require preparation for reuse, repair, upcycling and remanufacturing to be recirculated, thus should be considered manufacturing input and not consumer good. Customs codes not presently designed for circularity. **Baseline:** Despite previous sorting for rewearability up to 43% of garments in secondhand clothing bales are deemed unsellable for reuse and are thus regarded as waste by retailers opening the bales. At least 20% of the average bale is sent for upcycling or remanufacturing. Remanufactured goods cannot comply with export and import regulations.

Component	Details
Policy Alignment	**National:** Supports Ghana's Coordinated Programme (2021-2025), Medium-Term Plan (2022-2025), and MESTI's Circular Economy Roadmap. **Sectoral:** Reinforces the National Plastic Management Policy (2019), Exemptions Act (2022), and Excise Stamp Act (2013). **Regional:** Aligns with AfCFTA's Textile Anchor Industry Plan; supports development of a new HS code for upcycled goods. **Global:** Advances SDGs 1, 5, 6, 8, 9, 12, 13, and 14. Just Transition: Prioritises marginalised groups (e.g. Kayayei), promotes safe working conditions, and bridges formal-informal divides.

2: BASELINE ASSESSMENT

2: Baseline Assessment

2.1 Material Flow and Loss Patterns (MFA Insights)

Understanding how textiles enter, circulate within, and exit Ghana's economy is central to designing a circular roadmap that is grounded in real flows rather than assumptions. Here, the focus is on two interconnected streams: the large-scale secondhand clothing trade, centred on Kantamanto Market, and the dispersed but significant primary textile and garment production sector. The insights below draw directly on trade data, waste audits and stakeholder surveys; no additional illustrative numbers have been introduced.

Imports and primary material flows

Ghana's textile system is fed by two major inflows:

- **Secondhand clothing and textiles (HS 6309).** In 2023, Ghana imported roughly 147,000 tonnes of secondhand clothing and other worn articles under HS Code 6309, with a declared value of about USD 172.5 million (≈ GHS 2 billion). These volumes made Ghana the second largest net importer of secondhand clothing in the world, behind Kenya.

  Nearly all garments arrive compressed in 55 kg or 100 kg bales, with around 400 bales packed into a 40-foot container. Bales are presorted by garment type before export (e.g., children's wear, ladies' tops, men's shirts), but the exact quality mix is unknown to retailers until the bales are opened.

  The trade is highly asymmetric, with re-export values of HS6309 recorded at less than 1% of import values. In 2023, import origins were led by the United Kingdom (38.42%), followed by the EU27 (21.01%), China (20.49%), Canada (7.06%), and the United States (2.73%), with the remaining 10.29% from other countries.

- **Virgin textile inputs (HS 5208 and related codes).** In parallel, Ghana imported about USD 176 million of light woven cotton cloth (HS 5208) in 2023, primarily for local dyeing, printing and garmenting.

  This imported fabric underpins a sizable domestic craft and tailoring economy: the Ghana National Tailors & Dressmakers Association reports around 50,000 master craftspeople training 75,000 apprentices, together accounting for just under 1% of the national workforce when combined with related activities.

These two inflows set up a system where Ghana is heavily reliant on imported textiles, both as secondhand garments and as virgin fabric, while local labour provides the bulk of the value addition.

Bale opening, selection and waste generation in Kantamanto

Once inside Ghana, the critical turning point for material fate is the bale opening and selection process in Kantamanto Market:

- Retailers typically open between one and twelve bales per week, with a mean of 2.3 bales.

- Every bale is manually "selected" into value tiers. While bales are sold as Grade A and pre-sorted abroad, retailers repeatedly describe bale purchase as a "gamble" because true quality is only revealed on opening.

Survey data from 2024-2025 show:

- Nearly 100% of material entering Kantamanto Market claims to be pre-sorted for "wearability", however, wearability does not determine sellability.

- Between 9% and 23% of garments in a bale are never sold in any form and are regarded as waste within two weeks of opening.

- Around 20% of the remaining material is sold for such low value (e.g. to rag makers, upcyclers, recycling collectors, water heaters or street hawkers who will dump unsold goods) that retailers themselves treat these sales as waste management pathways rather than real recovery of value.

- Combining these categories, around 29-43% of material entering the secondhand trade at Kantamanto leaves retailers as waste from their perspective.

- Nearly 84% of retailers report that any item not sold within two weeks is treated as waste.

Despite intensive effort to recirculate garments, retailers' margins are extremely thin:

- 78% of retailers report that an average 53% of the garments in their bales are priced below the per-garment bale cost (≈ GHS 20.2 per item as of November 2024).

- On average, retailers experience a loss of around GHS 105 per bale, with a large share reporting indebtedness during their time working in Kantamanto.

Taken together, these figures imply that at least 57% of garments are recirculated in some form, but this high circularity at the product level is achieved at significant economic risk and through pathways that still generate substantial residual waste.

Upcycling flows and "circularity at the end of a linear economy"

Waste from retailers does not simply disappear. A substantial share of garments regarded as waste by retailers becomes the raw material for upcycling and remanufacturing:

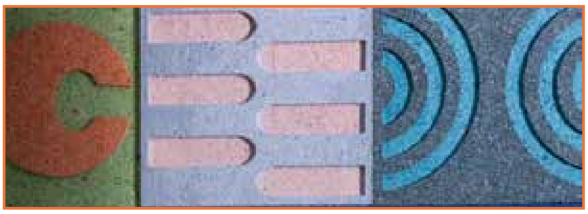
- Upcycling operations in Kantamanto transform roughly two million unwanted garments into new products every week.

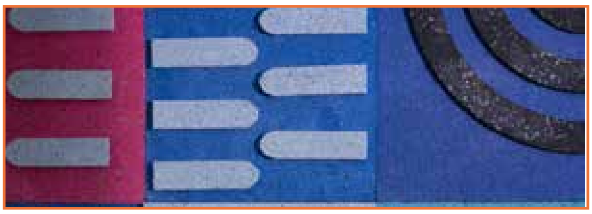
- A typical upcycling micro-enterprise, run by a single person, reports producing around 669 new products per week from about 662 original items.

- In total, about 3,000 people are engaged in upcycling activities in the market.

Upcycled items include boxer shorts made from men's shirts, patchwork dresses, bags, hats and split-panel T-shirts. These processes demonstrate circularity in action at scale, but they do not fully resolve the surplus of low-value garments entering the system each week.

Material leaving Kantamanto does so through multiple channels:





- Within Ghana and the wider region, garments and upcycled products are re-baled and moved to other markets in bales or in smaller consignments. Ghana officially re-exported around USD 1.485 million of secondhand clothing to other African countries in 2023, though porous borders mean this is almost certainly an under-estimate.

In this sense, Kantamanto sits at the end of a global linear system: it performs extraordinary levels of reuse and upcycling, but the upstream over-supply of low-quality garments still generates persistent waste and environmental damage.

Primary textile production and offcuts

Alongside secondhand flows, Ghana's primary textile and garment production sector generates its own, less visible, waste streams:

- Only 17 of 51 primary production stakeholders surveyed keep any record of textile offcuts. Among those who do, the mean offcut generation is 33 kg per month.

- Many dressmakers and tailors acknowledged that they do not track offcuts at all, so true offcut volumes are likely to be higher than recorded.

- In Kumasi, only about 6% of stakeholders reported actively recovering textile offcuts for reuse or recycling, indicating that the vast majority of offcuts are currently burned, dumped or otherwise unmanaged.

At the same time, there is evidence of latent circular potential in this primary production system:

- In Tamale and Kumasi, 34% of business owners expressed interest in providing on-demand repair or alteration services, and another 34% in offering upcycling workshops, signalling market appetite for circular practices even where offcut systems are not yet established.

Leakage pathways and environmental hotspots

Where waste is not captured by municipal services or emerging cooperatives, it follows predictable leakage routes:

- With limited municipal truck and disposal capacity, waste management practices for uncollected textiles include open burning, dumping in informal settlements such as Old Fadama, and sweeping into gutters.

- These gutters and informal dumpsites connect to the Korle Lagoon and the sea, contributing to severe pollution at Jamestown Fishing Beach and other coastal communities.

Long-term citizen science along Accra's coastline makes this leakage visible:

- Between October 2021 and mid-2025, over 4,275 discrete "textile tentacles", tangled masses of clothing and other waste, were documented along seven kilometres of coastline.

- Water samples from the Korle Lagoon and adjacent areas have recorded microfibre concentrations up to 100 times higher than global urban reference points, directly linking textile waste leakage to microplastic pollution.

Stakeholder feedback from outside Accra reinforces this picture, consistently identifying centralised markets and trading hubs as the main hotspots where textile waste and offcuts accumulate, further underlining Kantamanto's role as a strategic node for piloting replicable circular solutions.

System pinch-points

Across these flows, several structural pinch-points emerge:

- **Bale opening and selection**
    - High proportion (29-43%) of bale content becomes waste from retailers' perspective, often within two weeks.
- **Retail time horizon**
    - Items not sold within two weeks are almost universally regarded as waste, despite many being technically wearable.
- **Municipal collection and logistics**
    - Only a small number of municipal trucks are available to service Kantamanto and associated community clean-up efforts, and no engineered landfill is available, leaving a large collection gap and pushing material into informal dumpsites, gutters and coastal ecosystems, while also creating an opportunity to solve waste challenges through a circular approach rather than further investment in linear landfilling.
- **Primary production offcuts**
    - Very limited tracking and recovery of offcuts in tailoring and garment production means an avoidable, but currently unquantified, waste stream is entering pollution pathways.

These pinch-points indicate where circular interventions, such as improved selection and sorting infrastructure, cooperative waste collection, offcut recovery schemes and enhanced municipal support, can deliver the greatest reduction in leakage while building on the already high levels of reuse and upcycling in Ghana's textile economy. Differentiating between re-wearability and re-sellability, is a core operation of Kantamanto Market and a service necessary to maintain material in its highest and best use of the waste hierarchy, as such a determination is often highly contextual within a subjective fashion landscape.

Table - Material flow snapshot (Secondhand vs Virgin/Primary)

Flow Stage	Secondhand Trade (HS 6309)	Virgin / Primary Production (HS 5208 and related)
Annual inflow	≈ 147,000 tonnes of secondhand clothing and textiles imported in 2023, totalling approximately 15,000,000 clothing items weekly.	≈ USD 176 million in imported light woven cotton (HS 5208) for dyeing/printing/garmenting.
Reuse / recirculation	At least 57% of garments are recirculated through resale, repair, upcycling or remanufacturing.	Not yet quantified; evidence of long-lived custom garments but limited systematic tracking.
Value unrecovered	Despite nearly all items pre-sorted for 're-wearability', around 29-43% of garments leave retailers regarded as waste; 53% of items fall below per-garment bale cost.	Only 6% of surveyed stakeholders in Kumasi report recovering offcuts; most offcuts are untracked and unmanaged.
Main waste types	Cotton and polyester dominate, with blended synthetic fabrics making up nearly half of waste by fibre type.	Cotton-rich fabrics, synthetics and accessories (buttons, zips, notions) in offcuts and unsold items.
Leakage pathways	Open burning, dumping in informal settlements, gutters and beaches; 4,275 tentacles and extreme microfibre pollution recorded along Accra's coastline.	Offcuts and unsold fabric often burned or dumped due to lack of collection schemes and offcut-to-recycling linkages.
Circular recovery	Large-scale upcycling by ~3,000 individuals and small businesses producing around two million upcycled items per week in Kantamanto.	Circular initiatives are mostly ad hoc; 34% of businesses express interest in repair/alteration and 34% in upcycling workshops, suggesting strong potential for future schemes.

2.2 Life Cycle Emissions and Environmental Burdens (LCA Insights)

This subsection summarises what is currently known about environmental burdens across Ghana's textile system, and makes clear where there are data gaps. At present, there is no full cradle-to-grave life cycle assessment (LCA) for Ghana's textile value chains by stage or product, and no stakeholders have calculated greenhouse gas emissions for their operations. Any future stage-level or product-level LCA metrics will therefore need to be constructed from partial baselines (energy, water, wastewater and pollution indicators) and additional, PP-specific data collection, rather than from a complete LCA already in place.

Primary production and processing: energy, water and offcuts

Surveyed primary producers (tailors, dressmakers, printers and related enterprises) use very different technologies and energy sources, ranging from hand- or foot-powered sewing machines to grid electricity, hydropower-based processes and biofuel boilers. This variation makes it statistically implausible to calculate a single representative mean for energy demand, water use or carbon emissions across the sector.

Out of 51 primary production stakeholders surveyed:

- Only 17 track their offcut waste; among these, the mean offcut volume is 33 kg per month.
- Just 7 of 51 (≈13%) report attempting any form of LCA, all limited to energy and/or water footprints, with no greenhouse gas calculations.
- Three further stakeholders shared energy or water numbers independently.
- For the small subset with usable data (8-9 enterprises), monthly energy and water use fall within the ranges shown below.

These figures are process-level snapshots, not sector-wide averages, and should be treated as indicative rather than definitive.

Metric (per month)	Valid entries	Minimum	Maximum	Mean	Median
Energy used (kWh)	8	55	300	142	113
Energy spend (GHS)	3	200	7,500	3,900	3,900
Water use (m^3)	9	20	930	201	100
Water use (drums/ barrels)	3	3	6	5	5
Water spend (GHS)	4	100	200	162	175

Given the small sample sizes and the diversity of activities (from micro-scale dressmaking to larger printing operations), it would be misleading to convert these monthly figures into per-garment emission factors or to extrapolate to national totals. The most robust inference at this stage is that energy and water use are highly heterogeneous, and that formal LCA practice is still very limited in Ghana's primary textile production.

Wastewater, dyes and localised pollution

The environmental burden from dyeing and printing also varies sharply between industrial and small-scale operations:

- At Akosombo Industrial Company Limited, which prints millions of yards of textiles annually, wastewater passes through sand filters and dilution tanks and is discharged only when it meets limits set and occasionally monitored by the Environmental Protection Agency (EPA).
- In contrast, many small batik and dyeing operations, which may process only a few thousand yards per year, dump dye-laden water directly onto the ground or into gutters, with no on-site treatment or recirculation.

The report does not quantify:

- The chemical composition of effluents (e.g. specific dye or heavy metal concentrations), or
- The share of national textile output produced under each type of wastewater management regime.

The justified inference is that point-source water pollution risks are highest around small, untreated dyeing sites and around combined textile/solid waste dumps feeding into drainage systems, while larger industrial plants like Akosombo demonstrate that compliance-oriented treatment is technically feasible but not yet widely replicated.

Global impact framing

At the global level, the report notes that the fashion industry is responsible for up to 8% of global greenhouse gas emissions and around 9% of global microplastic pollution, with overproduction estimated at 30-40% of garments per season. These figures come from international studies and UN-convened working groups; they frame the scale of environmental risk associated with business-as-usual in textiles but do not quantify Ghana's specific share of those totals.

The appropriate, evidence-based interpretation for this roadmap is:

- Ghana's textile system (both virgin production and secondhand trade) operates within a global industry that is already breaching multiple planetary boundaries, especially climate and microplastic pollution;
- Ghana's high volumes of imported secondhand clothing and imported cotton place it in a critical position for downstream impact and upstream leverage, but a numerical allocation of global emissions to Ghana's flows cannot be made without a dedicated LCA study.

Waste, microfibre pollution and end-of-life burdens

Downstream, the end-of-life phase of textiles in Ghana generates environmental burdens that are unusually well-documented, even though they have not yet been translated into formal LCA indicators.

Key empirical findings include:

- Between October 2021 and July 2025, citizen science monitoring along seven kilometres of Accra's coastline recorded 4,275 "textile tentacles" - large, tangled masses of discarded garments and other waste.
- Pre-publication research by The Or Foundation (GCEC Sector Lead) reports microfibre levels "100× greater" than comparable urban studies in water samples taken along a gradient downstream of textile dumpsites, including a site managed by a formal waste company along the Korle Lagoon.
- A clear gradient was observed: global brand and fibre types identified in market waste and dumpsites match those found in beach and lagoon samples, with a Pearson correlation of 0.59, indicating a strong link between market/dumpsite waste and microfibre pollution in adjacent water bodies.

These data justify the following inferences:

- Macro-scale textile accumulation at coastal and lagoon-side dumpsites is actively leaching microfibres into water courses in and around Accra.
- The combination of unmanaged solid textile waste (from markets and informal dumps) and untreated or poorly managed wastewater is a major driver of local microplastic burdens.
- From a life-cycle perspective, Ghana's end-of-life phase for textiles carries substantial localised ecological impacts, even though its contribution to global totals has not been quantified.

Table - Summary of available LCA-relevant evidence and gaps

Aspect / life-cycle dimension	Available evidence	What it robustly indicates	Key gaps for a full cradle-to-grave LCA
Energy use in primary production	Monthly energy use for 8 respondents (55-300 kWh; mean 142 kWh); 7/51 have attempted energy/water LCAs.	Energy demands vary widely across enterprises; LCA practice is nascent and piecemeal.	No sector-level energy profile; no per-garment factors; no GHG emission calculations.
Water use in production	Monthly water use for 9 respondents (20-930 m^3; mean 201 m^3).	Water use is highly heterogeneous; some operations are relatively water-intensive.	No linked effluent quality data; no water stress or impact characterisation.
Wastewater and dyeing	Akosombo uses filters and dilution tanks; small batik operations often discharge directly to ground/gutters.	Industrial-scale treatment exists; small-scale operations are key pollution hotspots.	No quantified loads of contaminants or treated vs untreated volumes by facility type.
Solid waste and offcuts	17/51 producers track offcuts (mean 33 kg/month); most do not record; only ~6% in Kumasi recover offcuts.	Substantial, poorly quantified post-production waste; very low structured recovery.	No mass-balance for offcuts; no fate breakdown (reused vs landfilled vs burnt).
Macro textile pollution	4,275 textile tentacles counted on 7 km of coastline (2021-2025).	Persistent accumulation of textile waste in coastal ecosystems linked to market flows.	No conversion of these observations into standard LCA impact indicators.
Microfibre pollution	Microfibre levels ≈100× higher than other urban studies; strong brand/fibre correlation (r = 0.59).	Textile waste at dumpsites is a major local microplastic source.	No quantified annual mass of microplastics attributable to textile flows.
Global climate and plastic context	Fashion industry up to 8% of global GHG emissions and 9% of global microplastic pollution.	Business-as-usual textiles are a significant driver of climate change and microplastics.	No Ghana-specific share or product-level carbon footprint yet established.

Overall, the current evidence base is strongest on end-of-life pollution (macro and microplastics) and on qualitative variation in energy, water and wastewater practices in primary production. It is weakest on quantified greenhouse gas emissions and stage-by-stage life-cycle profiles. For this roadmap, it is therefore accurate to state that a full cradle-to-grave LCA for Ghana's textile sector does not yet exist. Any future LCA-style metrics included in the roadmap will be clearly labelled as modelled estimates, built by combining these documented baselines with new, PP-specific data on energy, water, materials and waste at each life-cycle stage.

2.3 Social Baseline and Inclusion Gaps

National estimates cited in the OM work indicate that around 89% of employment is informal, and Kantamanto Market sits firmly within this reality. Survey data shows that 100% of secondhand textile retailers do not issue VAT receipts, only 34% report any registration with a government agency or municipality, and 98% report having no access to health services while at work.

This means most workers operate without formal social protection, limited visibility in official statistics, and weak eligibility for public support programmes.

Gendered participation and outcomes are central features of the social baseline. Women are estimated to make up up to 66% of the labour force in Kantamanto, yet they remain under-represented in market leadership structures and in key decision-making spaces.

Income data from retailer surveys indicates that male-identifying retailers report a median net income of GHS 500 per bale, whereas female-identifying retailers report a median net loss of GHS 250 per bale, with 87% of all retailers reporting that they have experienced debt during their time working in the market.

This points to a clear gendered inequality in who carries the financial risk of the secondhand trade and who benefits from it. However, the data does not provide a full gender-disaggregated income profile at household level or across all textile subsectors, so wage and income gaps can only be described at bale-level, not as comprehensive earnings statistics.

Labour conditions for a significant group of workers are hazardous and precarious. Dangerous head-carrying (kayayei) has become a core service within Kantamanto due to narrow walkways and lack of mechanical handling options. Women and girls, many of whom have migrated from northern Ghana, carry bales of around 55 kg, often exceeding their body weight, for piece rates between US$0.30 and US$1.00 per trip.

Chiropractic research with over 100 study participants kayayei shows that the physiological impacts of this work can become irreversible after as little as two months, and stakeholder testimony records cases of death and widespread concern about sexual abuse.

Girls as young as nine years old are observed working as kayayei, in tension with Ghana's legal minimum working age of 15 and ILO conventions on child labour, and carrying limits.

The mapping, however, does not quantify the total number of kayayei by age group, nor does it provide systematic data on working hours or accident rates, so the scale of risk can be described qualitatively, but not expressed as precise incidence rates. Continued studies and engagement are underway to fill this gap, such as a comprehensive needs assessment for the Kantamanto Kayayei population conducted by the GCEC Textile Sector Lead.

There are also early but important pathways out of dangerous work. The Mabilgu Training Programme, run by The Or Foundation, has so far supported 299 women to transition from head-carrying into alternative livelihoods in areas such as solar technology, IT, photography and textile recycling, and in some cases back into formal education.

While significant in impact for those individuals, this still represents a small fraction of the total kayayei population; the OM does not provide a denominator that would allow calculation of the proportion of kayayei reached.

On skills and education, the OM highlights the beginnings of a circular skills ecosystem rather than a fully quantified education profile. Over 100 Kantamanto-based participants have taken part in circular curriculum modules covering topics such as sustainability basics, textile science, and circular design and production. These curricular elements build on existing practices commonly found within Ghana's textile re-use trade with the aim of increasing value for businesses.

These experiences indicate a strong appetite for skills upgrading and a practical entry point for just transition strategies. However, the report does not provide systematic data on formal educational attainment (e.g. proportion with primary, secondary, or tertiary education) across the wider workforce, nor does it track how training translates into sustained income changes over time. Additional data on education levels may be gathered through a market-wide census.

Forms of collective organisation are emerging but currently reach a limited share of workers. New and evolving groups - including the Kanta Keepers waste co-operative, Tide Turners, the Kantamanto Women's Association, and broader market associations such as KOBA - are beginning to provide platforms for representation, shared services and organised waste collection. In particular, Kanta Keepers and Tide Turners demonstrate the potential for community-led circular businesses and for more structured engagement with municipalities and development partners.

At the same time, membership numbers remain small compared with the total market workforce, and the OM does not offer a comprehensive, quantitative picture of co-operative membership rates or coverage outside Accra.

Taken together, the social baseline depicts a heavily informal, female- and youth-powered system, with substantial contributions to circularity but persistent exposure to economic precarity, unsafe work and limited voice in formal decision-making. The available data is richest for Kantamanto itself; there is far less systematic information on social conditions in other textile hubs (such as Kumasi, Tamale or smaller markets and dispersed boutiques and tailor and seamstress shops throughout the country), so current insights should be interpreted as Kantamanto-centred rather than fully representative of the national textiles economy.

Table - Social Baseline and Inclusion Snapshot

Dimension	Available evidence	Data gaps and limitations
Informality and social protection	Around 89% of national employment is estimated to be informal; in Kantamanto, 100% of surveyed retailers do not issue VAT receipts, only 34% report any registration with a state body, and 98% report no access to health services while at work.	No complete count of textile workers nationally; no detailed breakdown of social protection coverage (e.g. pensions, insurance) by subgroup or region.
Gender participation and economic outcomes	Women account for around 66% of the labour force in Kantamanto and are under-represented in leadership. Median net income per bale is GHS 500 for male retailers versus a median net loss of GHS 250 for female retailers; 87% of all retailers report experiencing debt.	No full gender-disaggregated income/wage dataset (monthly or annual); no quantified share of leadership positions held by women across all market sections; limited information on care burdens and unpaid work.
Youth and vulnerable workers (kayayei)	Kayayei are largely young migrant women (with girls as young as 9 observed), carrying loads of around 55 kg for US$0.30-1.00 per trip, with medical evidence of severe long-term health impacts after short exposure.	No full count of kayayei by age and origin, though a comprehensive study is underway; no systematic data on working hours, annual earnings or injury and fatality rates; youth participation elsewhere in the textiles value chain is not quantified.
Education and skills / training	299 women have transitioned from head-carrying into new livelihoods through the Mabilgu Programme, which also supports return to education. Over 100 Kantamanto-based participants have completed circular curriculum modules (sustainability, textile science, design and circular production).	No baseline on education levels across the wider workforce, though data is being gathered through a market-wide census; no longitudinal tracking of how training changes income, resilience or career progression; little quantified data on training outside Accra.
Co-operatives and collective organisation	Emerging organisations include Kanta Keepers, Tide Turners, Kantamanto Women's Association and KOBA. These provide early platforms for collective waste management, advocacy and women's voice.	Membership numbers are documented for some groups but not consistently; no sector-wide data on the proportion of workers who belong to associations; limited information on co-operative presence in primary production or in other cities.

2.4 Current Circular Practices and Systemic Gaps

Ghana's textiles system already contains a range of circular practices - reuse, repair, upcycling, community waste collection and targeted skills programmes. These are significant in scale but uneven in coverage, and most operate with limited infrastructure, finance and formal recognition.

Table - Current Circular Practices and Systemic Gaps

Practice	Status / Maturity	Observations
Secondhand clothing reuse (Kantamanto & beyond)	Large-scale, long-standing	Ghana imported ≈147,000 tonnes of secondhand clothing and other worn textiles in 2023 (HS 6309). Kantamanto is one of the world's largest secondhand hubs. At retailer level, around 29-43% of garments in a typical bale are regarded as waste — based on value, and regardless of whether material is technically rewearable – meaning at least 57% are recirculated through resale, repair and upcycling.
Repair (tailors, adɔye, on-demand services)	Established but fragmented	Stakeholders describe a strong culture of repair, with tailors and adɔye (mobile repairers) active across the country. In Kumasi and Tamale, 34% of surveyed businesses expressed readiness to offer on-demand repair or alteration services and another 34% expressed interest in upcycling workshops. Door-to-door garment repair providers are observed to offer services widely throughout Ghana, yet there is no mapped, coordinated repair network and no quantified national repair volume, without which, highly informal efforts may fall outside of formal planning frameworks.
Upcycling (Kantamanto upcyclers)	High-volume but under-resourced and attracting limited value within a continued, low value, linear textiles landscape.	Approximately 3,000 people in Kantamanto work as upcyclers, collectively transforming about two million unwanted garments per week into new products. These enterprises rely heavily on low- or no-cost infrastructure, operate with limited access to finance and are affected by declining bale quality and volatile demand.

Practice	Status / Maturity	Observations
Recycling & material transformation (e.g. fibreboards, shredder, fibre-to-fibre pilots)	Pilot / early stage	Prototypes and early products include fibreboard and sound insulation panels made from discarded textiles. A locally designed "Shredder-as-a-Service" was built by the GCEC Textile Sector Lead around 2025 to process textile waste, and fibre-to-fibre recycling pilots are underway with international partners. These are proof-of-concept activities; the report does not provide commercial throughput or installed capacity figures.
Waste collection & remediation (Kanta Keepers, Tide Turners)	Operational but under-funded	The Kanta Keepers waste co-operative collects market waste in Kantamanto, while the Tide Turners team removes over 30 tonnes of waste per week from Jamestown and surrounding beaches. The Or Foundation – GCEC Textile Value Chain Lead – has taken over waste haulage operations for beach cleanups and Kantamanto Market collection. No comprehensive data on total, nationwide textile waste collected per year are available.
Social protection & skills transitions (Mabilgu and related training)	Targeted programme, not yet sector-wide	The Mabilgu Training Programme operated by GCEC Sector Lead has supported 299 women to transition out of dangerous head-carrying (kayayei) into alternative livelihoods (including solar, IT, photography and textile recycling) and, in some cases, back into education. In addition, over 100 Kantamanto-based participants have completed circular curriculum modules (sustainability, textile science, design and production). These initiatives demonstrate strong potential but currently reach only a fraction of the total workforce; the total kayayei population and the wider training coverage across other hubs are not quantified.

The table shows that reuse and upcycling are already operating at an exceptional scale, particularly in Kantamanto, where at least 57% of garments, representing an estimated six million garments weekly, are kept in circulation through resale, repair and transformation. At the same time, roughly one third or more of garments per bale opened in Kantamanto Market are effectively written off as waste at retailer level, and the report does not provide data on how much of that residual material is ultimately recovered through recycling or remanufacturing versus burned or dumped.

Repair and skills-based interventions are clearly present but remain fragmented and under-documented. The survey evidence that roughly one in three businesses in Kumasi and Tamale are ready to provide on-demand repair and another third are interested in upcycling suggests substantial latent capacity, but there is no quantified national repair volume or mapping of repair actors beyond a handful of hubs.

Recycling and material transformation are at an early, experimental stage. Prototypes of fibreboard and insulation products, plus the development of the shredder and fibre-to-fibre pilots, show technological feasibility and local ingenuity but are not yet supported by published figures on throughput, product lifetimes or financial performance. Waste collection and remediation initiatives (Kanta Keepers and Tide Turners) are operational but rely on limited truck access and funding exclusively from GCEC Sector Lead The Or Foundation, illustrating a gap between community motivation and institutional support.

On the social side, Mabilgu and the circular curriculum modules demonstrate effective, targeted pathways out of hazardous work and into skilled circular livelihoods, but coverage is still small relative to the overall kayayei and market workforce, and no formal tracking exists yet to quantify long-term income and wellbeing outcomes for graduates.

Overall, the data support a clear conclusion: Ghana's circular practices in the textiles value chain are significant in scale where they exist but are unevenly distributed, under-capitalised and under-measured, which limits both their impact and their visibility in policy and investment decisions.

2.5 Circular Hotspots Identified

The OM process also identifies specific "hotspots" where circular practices, environmental burdens and policy constraints converge. These are locations or system nodes where targeted interventions can unlock substantial circular value or reduce harm.

Table - Circular Hotspots and Opportunities

Hotspot / Node	Description	Circular Opportunity
Kantamanto Market (Accra)	Centralised hub for secondhand clothing reuse, repair, upcycling and associated waste generation. The market has experienced multiple major fires (including a severe fire in January 2025), suffers from flooding, narrow and obstructed walkways, dangerous head-carrying, and inefficient waste collection.	Use Kantamanto as a flagship site for full market upfit (safe electrification, wider aisles, flood mitigation), co-operative waste management (Kanta Keepers), and embedded circular training and demonstration spaces, linked to national CE policy and financing.
Coastal zone (Korle Lagoon - Jamestown and adjacent beaches)	Downstream macro- and microfibre hotspot. Citizen science documented 4,275 textile "tentacles" along seven kilometres of coastline (2021-2025), and water sampling shows microfibre levels up to 100× higher than in comparable urban studies, strongly linked to nearby textile waste dumpsites and market leakage.	Scale and stabilise Tide Turners-type remediation (beach clean-ups and citizen science) and integrate these activities into EPR-funded environmental restoration and municipal waste planning.

Hotspot / Node	Description	Circular Opportunity
Tailor offcuts & dyeing effluents	Dispersed but significant sources of waste and pollution. Among surveyed producers, only 17 of 51 track offcuts (mean 33 kg/month) and only about 6% of stakeholders in Kumasi report recovering them. Small batik and dyeing operations commonly discharge wastewater directly onto the ground or into gutters; only large facilities such as Akosombo Industrial Company Limited use treatment systems (sand filters, dilution tanks) checked by the EPA.	Develop targeted offcut logistics and recovery schemes, promote zero-waste pattern design and repair/extender services, and introduce basic circular water treatment options for small dyeing operations. The report does not provide national volumes for offcuts or untreated effluents, so hotspot magnitude is evidenced through case studies rather than full mass balances.
Policy & trade ambiguity (HS 6309, GA-EPR and related measures)	All secondhand textiles currently fall under a single HS code (6309), making no distinction between garments destined for reuse, those that will require substantial repair/upcycling, and those likely to be waste on arrival. Upcycled and remanufactured products also sit under codes that do not clearly recognise added value, limiting access to preferential trade regimes. There is currently no established, mandated cross-border flow of Extended Producer Responsibility (EPR) funds from exporting countries to Ghana, despite proposals such as Globally Accountable EPR (GA-EPR).	Advocate for new or more granular HS codes that differentiate upcycled and value-added products, support adoption of GA-EPR-type mechanisms that channel part of fees to Ghana, and work towards harmonised circular tariffs that treat many secondhand imports as manufacturing inputs rather than purely consumer goods. The report clearly sets out these proposals but does not model their fiscal impact, so the opportunity is currently framed in directional, not quantitative, terms.

Kantamanto Market and the coastal corridor from the Korle Lagoon to Jamestown stand out as physically concentrated hotspots where very large flows of textiles, people and pollution intersect. Kantamanto combines high circular activity (reuse, repair, upcycling) with high risk and high leakage, due to repeated fires, unsafe logistics and limited waste infrastructure for what cannot be revalorised. The coastal zone then receives much of the material that escapes collection, as evidenced by thousands of recorded textile tentacles and extreme microfibre levels.

Tailor offcuts and dyeing effluents are more dispersed hotspots, without a single visible accumulation point, but the survey data on offcuts and the qualitative evidence on wastewater management indicate that they are important sources of avoidable waste and local water pollution. Since there is no nationwide offcut mass-balance or effluent inventory, these hotspots are currently defined through partial but concrete evidence rather than comprehensive quantification.

The policy and trade node is a systemic hotspot rather than a geographical one. The way HS 6309 and related codes are currently applied, and the absence of operational EPR transfers from major exporting regions, shape the entire economic context in which Ghanaian circular actors operate. Here, the opportunity is to use Ghana's documented experience and the analytical work behind GA-EPR proposals to influence international classification and funding flows. The report clearly outlines these mechanisms but does not yet attach numeric estimates of revenue or cost impacts, so the roadmap must treat them as high-potential strategic levers that still require formal economic analysis.

Across all four hotspots, the evidence base is strong enough to point to where interventions should focus and what type of circular response is needed, but not yet sufficient to model exact emission reductions, income gains or cost-benefit ratios. Those will require additional, targeted data collection and analysis in subsequent phases of the roadmap.

STEP 3: PRIORITISATION AND SCOPE DEFINITION

Step 3: Prioritisation and Scope Definition

3.1 Geographic Scope

The geographic scope for the roadmap follows a hub-and-spoke model, anchored in the places where circular textile activity and empirical research are already most advanced. This scope reflects where detailed surveys, fact-finding missions and stakeholder workshops have taken place; a formal national prioritisation matrix has not yet been developed, and no full cradle-to-grave LCA is currently available for Ghana's textile value chain or for any of these regions. Existing environmental data are partial (energy, water and pollution indicators for selected sites) and do not yet allow a region-by-region comparison of total life-cycle impacts.

Primary Hub: Kantamanto Market, Accra

Kantamanto Market in central Accra is designated as the primary hub. It is a globally significant concentration of reuse, repair and remanufacturing activity, where thousands of small businesses handle millions of secondhand garments each week. Surveys indicate that around 75% of market members are women or youth, making Kantamanto a critical site for advancing gender-responsive circularity and just transition.

Kantamanto already hosts or links to multiple ongoing initiatives:

- Market upfit and safety work, including rewiring of stalls and planning for wider aisles, flood mitigation and fire-risk reduction, in collaboration with the Accra Metropolitan Assembly (AMA) and market associations.
- Waste collection and recycling pilots, including the Kanta Keepers co-operative and adjacent sorting and material transformation facilities (e.g. fibreboard production, shredder-as-a-service).
- Skills and livelihood programmes, such as the Mabilgu Training Programme and circular curriculum modules that have already reached over 100 Kantamanto-based participants.

Because of this combination of scale, concentration and active programming, Kantamanto is treated as the core implementation hub from which models, tools and training content can be developed, tested and then disseminated nationally.

Table - Spokes / Replication Regions

Three additional regions are identified as priority spokes for replication and adaptation. These locations were selected because they have already been the focus of structured surveys, fact-finding missions and stakeholder workshops, not because a quantitative national ranking has been completed.

Location / Region	Role in the roadmap	Basis for inclusion	Existing engagement and evidence	Key data gaps
Kantamanto Market, Accra (Greater Accra Region)	Primary hub for design, testing and demonstration of circular models.	Centralised, globally unique secondhand hub; strong baseline data; existing initiatives on infrastructure, waste, co-operatives and training; majority women workforce.	Long-term research, detailed surveys of retailers and upcyclers, post-fire recovery programmes, Kanta Keepers waste co-operative, Tide Turners beach clean-ups and circular training modules.	No full cradle-to-grave LCA for flows through Kantamanto; limited quantified time-series data on emissions, water use and long-term income changes.
Kumasi, Ashanti Region	Replication and co-ordination node for inland markets and primary production.	Kumasi Metropolitan Assembly (KMA) has established a circular economy centre (Kanko Hub) and is actively engaged in CE mapping and business development.	CE mapping stakeholder meeting at Kanko Hub (Feb 2025); mixed-methods surveys and workshop (May 2025) involving ~90 stakeholders across design, tailoring, waste management and institutions.	No quantified regional LCA; incomplete data on total textile waste generated, offcut volumes and repair/upcycling throughput across the metropolitan area.

Location / Region	Role in the roadmap	Basis for inclusion	Existing engagement and evidence	Key data gaps
Tamale, Northern Region	Spoke for circularity in northern value chains and association-based replication.	Hosts multiple waste and circularity champions, including textile and textile-adjacent associations, an innovation hub and municipal waste authorities.	Three days of fact-finding meetings with leaders of 13 different associations and municipal actors, focusing on circular awareness, opportunities and waste practices; participation in Kumasi multi-stakeholder workshop.	No detailed quantification of textile flows or pollution loads; no region-specific LCA; limited data on income, gender and youth participation across the wider textile economy.
Awutu Senya, Central Region	Spoke for women-led upcycling and community-based innovation.	Hosts two women-led groups involved in textile upcycling that have participated in research engagements.	Day-trip fact-finding mission with guided discussions on activities, circular opportunities and waste practices among the women's groups.	Engagement to date is exploratory only; no survey-based baseline of volumes, employment or environmental impact; no LCA data.

Geographically, the roadmap therefore anchors implementation in Kantamanto while building structured pathways to replicate and adapt successful approaches in Kumasi, Tamale and Awutu Senya. Kantamanto offers the most complete combination of quantitative data, active programmes and institutional partnerships, making it a logical starting point for piloting market upfits, waste co-operatives, training and product innovation at scale.

Kumasi, via KMA and the Kanko Hub, provides a ready platform to extend circular models into a major inland metropolis with strong links to tailors, designers and TVET institutions. Tamale brings a network of organised associations and an innovation hub that can help embed circular practices within northern textile and smock-weaving economies. Awutu Senya offers a starting point for supporting women-led upcycling groups outside Accra and testing how hub-developed tools and training can be localised in smaller communities.

At this stage, none of these locations has a full cradle-to-grave LCA, and there is no completed national multi-criteria prioritisation matrix that ranks all regions by environmental, social and economic impact. The choice of hub and spokes is therefore justified by documented engagement and baseline evidence, not by modelled life-cycle emission savings per region. As LCA work and broader data systems mature, this geographic scope can be revisited and expanded using more formal quantitative criteria.

3.2 Value Chain Focus

The roadmap concentrates on two interconnected parts of Ghana's textile system: virgin textile production and the secondhand clothing trade. This focus reflects where material flows, social impacts and circular practices are already well documented. At this stage, no full cradle-to-grave LCA exists for either stream, so the focus is based on empirical material flow, pollution and social data rather than on complete life-cycle emission profiles.

Virgin production of local textiles covers activities that add value to imported or locally sourced fibres and fabrics through:

- handweaving (including kente and smock weaving),
- small-scale batik and tie-dye,
- industrial wax print and roller screen-printing at Akosombo Industrial Company Limited, and
- cut-and-sew garmenting by tailors, dressmakers and small brands.

In 2023, Ghana imported around USD 176 million of light woven cotton cloth (HS 5208), much of which is processed locally via these methods.

Wastewater treatment and offcut management vary significantly between operators: large industrial sites such as Akosombo operate sand filters and dilution tanks under EPA oversight, while many small batik and dyeing enterprises discharge dye-laden water directly to soil and drains, and offcuts from tailors are often unmanaged. These differences are well documented qualitatively, but there is no complete LCA calculating energy use, water footprints or greenhouse gas emissions per product or per stage across this whole production system.

The secondhand clothing trade forms the other main focus. Ghana imported approximately 148,894 tonnes of secondhand clothing and textiles in 2023 under HS 6309, making it one of the world's largest importers for reuse. Kantamanto Market in Accra is the central hub, with regional spill-overs through other markets and re-export flows. Surveys show that this system delivers very high levels of reuse and upcycling, but 29-43% of garments per bale are treated as waste at retailer level, and a significant share ultimately enters unmanaged dumping and coastal pollution pathways.

Together, these two value chain segments represent the main points where Ghana both absorbs global textile flows (via imports) and adds value locally (via handweaving, printing, garmenting, reuse and upcycling). The roadmap therefore positions them as the core focus for interventions, while recognising that comparable, stage-by-stage LCAs for virgin and secondhand streams will need to be developed in future if detailed emission comparisons are required.

3.3 Prioritised Opportunities

The OM work identifies three overarching strategic avenues, explicitly named in the report as the primary directions for catalysing a circular textile economy in Ghana:

1. **Strengthen and enable existing reuse practices to catalyse circularity.**

2. **Create and grow recycling pathways and domestic textile circularity.**

3. **Bridge formal and informal manufacturing as the foundation for inclusive innovation and cohesive momentum.**

These are not generic categories; they are grounded in concrete challenges and action areas described in the analysis.

Opportunity 1 - Strengthen and enable existing reuse practices

This avenue focuses on the secondhand trade centred in Kantamanto and the wider ecosystem of reuse, repair and upcycling. It responds to issues such as:

- dangerous and uncompetitive infrastructure (fires, flooding, narrow walkways requiring head-carrying, lack of safe electrification),
- fragmented market organisation (no complete registry, limited cohesion),
- inefficient waste collection, and
- gaps in coordinated training and skills development.

Key action areas include upfitting Kantamanto's infrastructure, completing a market-wide census, delivering a demonstration site for upgraded stalls, establishing and strengthening co-operatives such as Kanta Keepers, and rolling out circular training (including job training pathways to transition women out of dangerous head-carrying).

Opportunity 2 - Create and grow recycling pathways and domestic textile circularity

This avenue targets the large volumes of textiles that cannot be viably reused or upcycled under current conditions, including the 29-43% of bale contents regarded as waste, and the dominance of cotton and blended fibres in the waste stream.

Action areas under this opportunity include:

- commercialising textile-derived fibreboard and insulation,
- developing a shredder-as-a-service model,
- supporting products such as T-Shirt Yarn,
- piloting household secondhand clothing collection, and
- developing fibre-to-fibre recycling pilots and business cases.

These initiatives aim to retain material value within Ghana, reduce dumping and burning, and potentially substitute a portion of imported virgin materials in the medium term. At present, throughput and emission reduction estimates are not fully quantified; environmental impact is inferred from the clear link between unmanaged textile waste and pollution documented elsewhere in the report.

Opportunity 3 - Bridge formal and informal manufacturing

The third avenue recognises that micro and informal enterprises are central to Ghana's circular economy, yet face structural barriers in accessing finance, recognition and international markets. It addresses challenges such as:

- a single HS code (6309) for all secondhand textiles, which fails to distinguish upcycled, value-added goods from ordinary secondhand items,

- gender disparities, where women dominate market labour but operate at net losses, and
- limited institutional recognition and investment in informal manufacturing.

Key actions include policy advocacy for new HS codes that recognise upcycled and remanufactured goods, the development of Globally Accountable Extended Producer Responsibility (GA-EPR) to direct a share of EPR funds paid in primary markets to Ghana accompanying secondhand clothing imports, and the strengthening of associations and co-operatives such as the Kantamanto Women's Association.

In combination, these three opportunities frame a coherent strategic agenda: protect and improve the reuse engine that already exists; build missing recycling and remediation pathways; and align formal policy and trade frameworks with the realities and contributions of informal and community-led circular actors.

3.4 Feasibility and Impact Assessment (Qualitative, Inferred)

The table below therefore presents qualitative feasibility and impact ratings inferred from the documented evidence, such as whether actions are already underway, the presence of implementation partners, and the severity of the environmental or social hotspot addressed. In some cases, such as measuring greenhouse gas emissions from textile waste dumping, there are limited methodologies available globally, thus further research and methodological development is necessary to develop quantifiable data points, not only in Ghana but globally. These ratings therefore, are not explicitly scored in the report and should be treated as a structured interpretation, not as official metrics.

Table - Indicative Feasibility and Impact of Selected Priority Actions

Opportunity / Action	Feasibility (qualitative)*	Potential Impact (qualitative)*	Evidence-based justification
Kantamanto Market Upfit (infrastructure, census, demo stalls, electrification)	**High**	**High**	A market-wide electrification project has already rewired 6,913 stalls with ECG- and GNFS-approved installations; an 80-stall demonstration site has been built on AMA land; a market-wide association has formed across 13 landlords; and detailed plans for fire lanes, displacement stalls and wider aisles are in development. These concrete steps, partners and sunk investments support a high feasibility classification. Given Kantamanto's role as the largest reuse hub and the documented risks (fires, flood, unsafe logistics), improving its infrastructure is likely to have major safety, livelihood and circularity benefits, justifying a high impact classification.

Opportunity / Action	Feasibility (qualitative)*	Potential Impact (qualitative)*	Evidence-based justification
Waste Co-operatives & Tide Turners Remediation (Kanta Keepers, Tide Turners)	**Medium-High**	**High**	The Kanta Keepers team (36 members) is already operating as a market-level waste collection group in collaboration with AMA, and is in the process of formal co-operative registration. The Tide Turners beach-clean-up team removes over 30 tonnes of waste per week from Jamestown beaches, supported by paid staff and regular volunteers, with plans for a dedicated truck. Both programmes face constraints mainly in truck availability and finance, not in community participation, hence a medium-high feasibility rating. They address documented waste and microfibre hotspots (4,275 textile "tentacles"; microfibre levels up to 100× urban benchmarks), supporting a high impact assessment, even though precise emission or pollution reductions are not yet quantified.

Opportunity / Action	Feasibility (qualitative)*	Potential Impact (qualitative)*	Evidence-based justification
Digitised Circular Training & Mabilgu-style Programmes	**High**	**High**	The Or Foundation has developed circular curriculum modules that have already reached over 100 Kantamanto-based participants and is actively digitising them for wider dissemination as of this report The Mabilgu Programme has supported 299 women to transition out of dangerous head-carrying into alternative livelihoods and, in some cases, back into formal education. These programmes exist, have demonstrated outcomes and rely on scaling partnerships (e.g. TVET institutions, CTVET, municipalities), rather than on untested concepts, justifying a high feasibility rating. Their potential impact is high because they directly tackle hazardous labour, skills gaps and inclusion, core social hotspots identified in the mapping, even though long-term income and emission impacts are not yet tracked quantitatively.

Opportunity / Action	Feasibility (qualitative)*	Potential Impact (qualitative)*	Evidence-based justification
Fibre-to-Fibre Recycling at Akosombo & Disassembly-as-a-Service	**Medium**	**High**	Fibre-to-fibre pilots are already underway with European partners, aiming to test material outputs and build a business case for industrial-scale machinery; Akosombo's hydropower-based facility is identified as the most promising site for future installation if the business case is positive. Disassembly-as-a-Service is described as a defined business model concept to supply pattern-ready components (e.g. shirt collars, sleeves) for remanufacturing. However, the business case, capital investment and stable power requirements are not yet fully resolved, supporting a medium feasibility rating. Impact is potentially high because these interventions directly address large volumes of "waste" garments and could substitute some imported virgin materials, but no LCA quantification of these benefits is currently available.

Opportunity / Action	Feasibility (qualitative)*	Potential Impact (qualitative)*	Evidence-based justification
Policy Advocacy (GA-EPR, new HS code)	**Medium**	**High**	Policy advocacy is well advanced: seven delegation trips to Europe and the UK, a GA-EPR policy position paper endorsed by over 10,000 signatories, and proposals for a new HS code to distinguish upcycled, value-added goods from ordinary secondhand clothing. These activities demonstrate strong momentum, but final adoption of EPR transfers and HS code changes depends on external governments and multilateral processes, which introduces uncertainty and supports a medium feasibility rating. The potential impact is high because globally accountable EPR and improved HS coding could unlock significant finance for circular infrastructure and remove trade barriers for Ghana-based upcyclers and remanufacturers; the report, however, does not yet provide quantified revenue or emissions savings estimates.

*Feasibility and impact labels here are interpretive summaries based on the documented status and context; they are not formal scores provided in the OM report, and they are not derived from a full cradle-to-grave LCA.

Step 3 - Summary Table

Focus Area	Scope Summary (based on current evidence)
Geography	Hub-and-spoke model: Kantamanto Market as the national flagship site; Kumasi, Tamale and Awutu Senya (Central Region) as replication spokes where surveys, workshops and fact-finding missions have already taken place.
Value Chain	Dual focus on virgin production (handweaving, batik, wax print, industrial printing, cut-and-sew) and the secondhand clothing trade, with cross-cutting attention to waste, pollution and policy barriers.
Core Opportunities	Three strategic avenues explicitly named in the report: (1) strengthen and enable existing reuse practices; (2) create and grow recycling pathways and domestic circularity; (3) bridge formal and informal manufacturing.
High-Priority Pilots / Actions	Kantamanto market upfit; Kanta Keepers and Tide Turners co-operatives and remediation; digitised circular training and Mabilgu-style programmes; fibre-to-fibre pilots and disassembly-as-a-service; and GA-EPR / HS-code policy advocacy.

As the roadmap progresses, these qualitative assessments and scopes can be complemented by formal LCAs and cost-benefit analyses, enabling more precise, quantitative prioritisation of interventions across Ghana's textile value chains.

STEP 4: STAKEHOLDER MAPPING AND ENGAGEMENT DESIGN

Step 4: Stakeholder Mapping and Engagement Design

This step sets out who needs to be involved in the circular textiles roadmap and how they are already engaging. The prioritisation of stakeholders and platforms is based on the evidence from the OM work, surveys and workshops, rather than on a full cradle-to-grave LCA. A complete LCA of Ghana's textile value chain does not yet exist, so stakeholders are not ranked by quantified life-cycle emissions, but by their documented mandates, activities and influence.

4.1 Key Stakeholders and Institutional Roles

The circular textiles roadmap depends on coordinated action across national policy bodies, local government, civil society, market actors, education and training institutions, and finance and media. The table below summarises the core stakeholder categories and their documented roles.

Table - Stakeholder Categories and Roles

Stakeholder category	Examples	Role in the roadmap
National government and policy bodies	Ministry of Environment, Science and Technology (MEST); Council for Technical and Vocational Education and Training (CTVET); Department of Cooperatives	MEST leads the national Circular Economy Roadmap and Action Plan, including textiles; the OM explicitly states that this roadmap builds on pathways identified in MEST's CE Action Plan. CTVET oversees TVET curricula, certification and competency-based training and is identified as central to integrating circular skills into vocational programmes, especially textiles and fashion. The Department of Cooperatives regulates and supports co-operatives (waste pickers, traders, tailors, recyclers), providing legal recognition and business development support, which is crucial for formalising circular co-ops such as Kanta Keepers.

Stakeholder category	Examples	Role in the roadmap
Local government (Metropolitan Assemblies and related authorities)	Accra Metropolitan Assembly (AMA); Kumasi Metropolitan Assembly (KMA); Tamale Metropolitan Assembly (TMA); Ghana National Fire Service (GNFS)	AMA is responsible for business permitting, stall allocation and waste collection in Accra and is a core partner for the Kantamanto Market Upfit, circular waste pilots and the Youth Climate Action Fund. KMA administers markets in Greater Kumasi and has established the Kanko Hub as a circular economy centre, partnering with The Or Foundation on CE mapping and business development. TMA carries similar mandates for Tamale and is described as an advocate for circularity wherever economic value can be demonstrated (e.g. plastics and metals segregation). GNFS supports market upfit via fire safety training and oversight of electrical installations.
Civil society and value chain lead	The Or Foundation	The Or Foundation is the textiles value chain lead for the GCEC. It conducts long-term research in Kantamanto, leads the circular OM, and operates programmes on market upfit, waste co-operatives (Kanta Keepers), beach remediation (Tide Turners), Mabilgu skills transitions, curriculum development, environmental monitoring, textile-based waste transformation product development and policy advocacy (including GA-EPR and new HS codes).

Stakeholder category	Examples	Role in the roadmap
Market-based groups and co-operatives	Kantamanto retailers and wholesalers; upcyclers; kayayei; Kanta Keepers Waste Co-operative; Tide Turners beach clean-up team; Kantamanto Women's Association; KOBA (Kantamanto Obroni Wawu Businesses Association)	These actors are the day-to-day operators of circularity. Retailers and wholesalers manage bale opening and resale; upcyclers (≈3,000 in Kantamanto) remake garments; kayayei provide logistics under hazardous conditions; Kanta Keepers collect and segregate market waste; Tide Turners remove ≈30 tonnes per week from Jamestown beaches; the Kantamanto Women's Association and KOBA provide emerging platforms for women's representation and market-wide coordination. The Department of Cooperatives and The Or Foundation are working to formalise Kanta Keepers and Tide Turners as registered co-operatives.
Education and training institutions	TVET institutions such as Kumasi Technical University (KsTU), AAMUSTED, AFDOM; other training providers	TVET institutions are identified as vital for Ghana's circular transition. They already train in garment production, textile design, recycling technologies and entrepreneurship. Through partnership with CTVET and The Or Foundation, they can host circular curriculum modules, support lecturers' capacity building and act as regional training hubs.

Stakeholder category	Examples	Role in the roadmap
Financial vehicles	Banks; microfinance institutions; savings and loans companies	Financial institutions are recognised as essential enablers of circular enterprises. The report notes that many small fashion and waste businesses struggle to scale due to lack of affordable finance. Banks and MFIs can provide tailored loan products, green financing schemes and financial literacy programmes, particularly for women, youth and co-operatives in the informal sector. Quantitative financing gaps are discussed qualitatively but not fully costed.
Media houses and communications actors	Radio, television, print and digital media outlets	Media houses are described as critical for public education, behaviour change and marketing of circular products. They shape narratives around waste, fashion and sustainability and can amplify initiatives such as Obroni Wawu October and community-led solutions. The report does not provide a mapped list of specific outlets, but highlights their role in campaigns and awareness.

In practice, these stakeholders form a multi-level governance and delivery system: MEST, CTVET and the Department of Cooperatives set enabling policy, curriculum and co-operative frameworks; AMA, KMA and TMA shape how markets operate and how waste is managed; The Or Foundation and market actors implement pilots, training and advocacy; TVET institutions provide skills infrastructure; and finance and media actors help translate successful pilots into scalable, visible models.

Because a full cradle-to-grave LCA is not yet available, these roles are not weighted by modelled emission reductions. Instead, they are prioritised based on documented mandates, existing programmes and evidence from surveys and workshops in Accra, Kumasi, Tamale and Awutu Senya.

4.2 Stakeholder Engagement Platforms

The OM describes several existing platforms through which stakeholders are already engaged. These can be built on and formalised as part of the roadmap's engagement design.

(a) Regional design / circular economy labs (inferred from practice)

Kanko Hub in Kumasi, a circular economy centre established by KMA, used for mapping, training and business development, will serve the purpose of a regional CE lab - a space where local government, designers, tailors, waste managers, media and financial actors meet to explore circular opportunities and co-create solutions.

Similar lab-like functions are emerging in Tamale (through association-led engagements and an innovation hub) and in Awutu Senya (through women-led upcycling groups), but these are at earlier stages and not yet described in the report as dedicated physical labs.

(b) Value chain forums and multi-stakeholder workshops

Multi-stakeholder forums are a central mechanism in the OM:

- In Kumasi and Tamale, approximately 90 stakeholders were surveyed and consulted across three groups: waste management and government officials; capacity-building, finance, development partners and media; and B2C/B2B actors such as designers, tailors, seamstresses, traders, upcyclers and weavers.
- On 16 June 2025, a multi-stakeholder engagement and data validation workshop was held in Kumasi with 60 participants from Tamale, Kumasi and Accra, including designers, upcyclers, tailors, kayayei, waste managers, educators, municipal leaders, entrepreneurs and journalists.
- In Accra, stakeholder dialogue with Kantamanto leadership and UNEP informed survey instruments and policy discussions under the "Circularity and Used Textiles Trade" project (October-December 2024).

These forums provide tested formats for presenting data, validating findings and co-designing interventions across the value chain. While the report does not quantify their environmental impacts, they clearly underpin the social and institutional legitimacy of the roadmap.

(c) Listening sessions, festivals and demonstrations

The mapping also highlights engagement platforms embedded in cultural and market practice:

- Obroni Wawu October is described as "the largest" fashion promotion platform focusing on upcycling and reuse businesses in Kantamanto, attracting over 3,000 attendees at the culminating event of the 2025 edition. It functions as a listening and demonstration space where customers, designers and market actors interact, and where circular products are made visible and aspirational.
- The Kantamanto Market Upfit includes 80-stall demonstration sites and mock-up areas for safer infrastructure, which double as demonstration and consultation spaces for market members and authorities (AMA, GNFS, ECG).
- Smaller-scale listening sessions are also embedded in research processes, such as the Kantamanto socioeconomic health workshop (27 stakeholders, July 2024) and ongoing community meetings linked to waste management, training and policy advocacy.

These platforms are crucial for capturing lived experience, building trust and testing how circular innovations are received by traders, kayayei, customers and local residents.

Table - Stakeholder Engagement Platforms

Platform type	Examples	Purpose in the roadmap	Evidence and limitations
Regional CE / design labs	Kanko Hub (Kumasi)	Serve as regional spaces for CE mapping, business development, skills training and co-creation, bridging municipal government, TVETs, designers, waste actors and finance.	Explicitly described as a circular economy centre run by KMA and used for mapping and workshops. Other regions (Tamale, Awutu Senya) have strong engagement but no formally named "lab" yet; treating them as emerging labs is an informed interpretation, not a direct label from the report.
Value chain forums and workshops	Kumasi & Tamale mixed-methods surveys (~90 stakeholders) and June 2025 consultation (60 participants); Kantamanto-UNEP survey design and validation workshops	Provide structured spaces to share data, validate findings and co-develop actions across the value chain (producers, traders, waste managers, policy, media, finance).	Participation numbers, stakeholder types and methods are documented. The report does not quantify environmental benefits arising from these forums, so their impact is currently understood qualitatively.
Listening sessions and demonstrations	Obroni Wawu October festival; Kantamanto demo stalls and mock-up areas; smaller consultation workshops in Accra and Jamestown	Showcase upcycling and reuse businesses, engage customers and communities, and test circular products and messages in real-world settings.	Attendance figures and qualitative outcomes (e.g. visibility of circular products) are documented for Obroni Wawu; detailed emission or waste-reduction metrics linked to these events are not yet available.

Step 4 - Summary Table

Stakeholder category	Examples	Role in the roadmap (based on documented mandates and activities)

National policy	MEST, CTVET, Department of Cooperatives, Ghana Standards Authority and Ministry of Trade	Set national CE direction, standards and curricula; regulate and support co-operatives; align sector actions with the national CE Roadmap and Action Plan; develop national standards to synchronize with training programs and the issuance of guidance on HS Codes for circularity.
Local government	AMA, KMA, TMA, GNFS	Manage markets, permits and waste systems; host CE hubs (e.g. Kanko Hub); enforce safety and infrastructure upgrades (e.g. fires, electrification); support scaling of pilots.
Civil society / value chain lead	The Or Foundation	Lead textiles OM and programme design; implement market upfit, co-ops, remediation, training and policy advocacy; co-ordinate with GCEC and international partners (e.g. UNEP).
Market actors and co-operatives	Retailers, upcyclers, kayayei, Kanta Keepers, Tide Turners, Kantamanto Women's Association, KOBA	Operate core reuse, repair, upcycling and logistics functions; participate in pilots and co-ops; provide lived-experience input on feasibility and social impacts.
Education and TVET	KsTU, AAMUSTED, AFDOM and other TVETs; guided by CTVET	Embed circular skills in curricula; host training and incubation activities; upskill trainers and students for circular roles in textiles.
Finance and media	Banks, MFIs, savings and loans; media houses	Provide tailored finance and green products for circular enterprises; run campaigns, awareness and marketing to create demand for circular goods and behaviour change.

STEP 5: PILLARS, LEVERS AND ENABLERS

Step 5: Pillars, Levers and Enablers

This step organises the roadmap into a small set of strategic pillars and the policy and system "levers" that make them workable.

5.1 Strategic Pillars

Pillar 1 - Clean Energy Transition (industrial circularity)

Akosombo already prints millions of yards of cloth using hydropower-based electricity, and is identified as the most viable location for any future large-scale fibre-to-fibre machinery and disassembly operations.

The strategic implication is that industrial circularity in Ghana's textile sector should be anchored in low-carbon infrastructure where it already exists, rather than duplicating high-energy processes elsewhere. The roadmap therefore treats clean, reliable energy at Akosombo as the backbone for future:

- fibre-to-fibre recycling plants,
- "disassembly-as-a-service" operations supplying pattern-ready components, and
- other circular industrial processes that can substitute for imported virgin materials.

This is not presented as a new power investment plan, but as a strategic use of an existing low-carbon industrial platform.

Pillar 2 - Waste Valorisation

This pillar is directly supported by the OM. Large volumes of textiles that cannot be resold or upcycled under current market conditions are already being tested as inputs for new products. Examples include:

- Fibreboard, sound insulation, and speakers made from shredded textiles;
- T-shirt yarn (Tarn) and other semi-finished materials and full garments derived from unwanted garments;
- Recycled furniture and interior products using textile-based panels;
- Early-stage fibre-to-fibre recycling pilots in partnership with international recycling technology providers;
- A locally developed shredder-as-a-service concept to process waste textiles for multiple downstream users.

These activities convert what is currently treated as "waste" at retailer level (29-43% of bale contents) into inputs for a domestic circular manufacturing base. The pillar therefore focuses on:

- scaling existing pilots that have proven technically feasible;
- building stable off-take markets for textile-derived products; and
- ensuring that market and coastal cleanup operations have reliable pathways to send collected textiles into valorisation, rather than back into low-value dumping.

Pillar 3 - Social Capital Strengthening

The report repeatedly shows that circular textiles in Ghana are built on dense social networks and informal institutions, not just technology. This pillar focuses on

Key elements include:

- **Co-operatives and organised groups:**
  - Kanta Keepers (market waste co-operative in Kantamanto);
  - Tide Turners (beach cleanup and citizen science team);
  - Kantamanto Women's Association and KOBA, representing landlord, market manager and trader associations that now collaborate on upfit planning, waste management and other market improvement initiatives.
- **Training and transition pathways:**
  - The Mabilgu Training Programme, which has supported 299 women to move from dangerous head-carrying into alternative livelihoods (e.g. solar, IT, photography, textile recycling) and, in some cases, back into education;
  - Circular economy curriculum modules piloted with over 100 participants in Kantamanto, covering sustainability, textile science and circular design/production.

co-operatives, associations and training pathways that convert that social capital into secure, dignified livelihoods.
This pillar recognises that without strong co-ops, women's groups and training systems, circular investments risk reinforcing existing inequalities. It therefore gives equal weight to social organisation and skills as to machinery and infrastructure.

Pillar 4 - Inclusive Innovation

The final pillar focuses on supporting the people and enterprises already innovating around circular textiles, and on connecting their work to formal policy and trade frameworks. This is explicitly reflected in the report's third strategic avenue on bridging formal and informal manufacturing.

Priority groups include:

- Upcyclers in Kantamanto who turn approximately two million unwanted garments per week into new products;
- Smock and kente weavers, tailors and small designers in Kumasi, Tamale and other hubs who are experimenting with repair, upcycling and low-waste design;
- Emerging enterprises around disassembly, component-based remanufacturing and textile-based materials.

On the policy side, this pillar links directly to:

- advocacy for new HS codes that recognise upcycled and remanufactured goods as value-added products rather than generic secondhand items;
- proposals for Globally Accountable EPR (GA-EPR) to channel a portion of producer responsibility fees to Ghana;
- efforts to ensure that Ghanaian circular products can qualify for preferential trade agreements, rather than being locked into "waste" or "used goods" categories.

In combination, this pillar makes the case that circular innovation is already happening in informal and community settings, and that policy and trade rules must catch up with and enable these innovators, not sideline them.

5.2 Policy Instruments

The roadmap relies on a mix of policy tools.

Table - Policy Instruments and Their Basis

Instrument	Basis in current practice	Roadmap use (what it does)
Incentives for circular technology adoption	The report documents: (a) proposals for GA-EPR to direct part of producer responsibility fees to Ghana; (b) national CE programmes led by MEST; and (c) local funds such as the Youth Climate Action Fund used to support elements of Kantamanto upfit and community climate action.	Using these funding channels, the roadmap can create targeted incentives (grants, co-financing, concessional loans) for investments in shredders, fibre-to-fibre machinery, disassembly operations and basic wastewater treatment. The inference is that existing funds and proposed GA-EPR flows can be explicitly earmarked for circular tech, rather than creating entirely new mechanisms from scratch.
Certification and standards for circular textiles	The OM discusses the need for new HS codes for upcycled and remanufactured goods, so they can be distinguished from generic secondhand clothing and qualify for preferential trade regimes. It also emphasises the importance of evidence and traceability in gaining recognition for circular products.	Building on this, the roadmap can support the development of certification schemes and traceability standards (even if at pilot level) for upcycled and remanufactured textiles. These would help Ghanaian products access better markets and back policy advocacy for HS code changes. The inference is that standards and certification are the practical tools needed to operationalise the HS and trade reforms already being sought. Both Ministry of Trade (MoTAI) and under GSA, operating under MoTAI have roles to play in the development of certifications for circular textiles and trade frameworks around those certifications.

Instrument	Basis in current practice	Roadmap use (what it does)
Innovation challenge funds	The report records support from EU, UNEP, Global Affairs Canada and others for circular textiles research, pilots and policy work. While it does not explicitly mention "challenge funds", it shows that donors are willing to finance experimentation and innovation in this space.	On that basis, the roadmap proposes organising future donor and GCEC support into structured challenge calls for circular textile solutions (e.g. business models for waste valorisation, tools for safe logistics, new materials). This is an inferred instrument: it formalises a pattern of existing funding into a transparent mechanism for selecting and scaling high-potential innovations.

5.3 System Enablers

System enablers are the practical tools and infrastructures that allow the pillars and policy instruments to work together in a coherent way. They are grounded in methodologies and initiatives already used in the OM and related programmes.

Table - System Enablers

Enabler	Current basis	Roadmap role
Circular economy toolkits for local governments	The mapping relied on a set of practical methods: waste audits, microfibre sampling, market census, stakeholder surveys and workshops, and baseline interviews across Accra, Kumasi, Tamale and Awutu Senya. Local authorities (AMA, KMA, TMA) participated in and benefited from these exercises.	These methods can be compiled into clear toolkits and guidance for municipal use, allowing AMA, KMA, TMA and other assemblies to repeat waste audits, textile flow mapping and hotspot identification without always relying on external technical partners. The inference is simply that what has already worked once should be shared for replication and continual engagement.
Modular circular training in local languages	The Or Foundation has developed circular curriculum modules and delivered them to over 100 participants, and is in the process of digitising this content. The Mabilgu programme demonstrates the value of structured training for livelihood transitions.	The roadmap can support turning this curriculum into modular training packages, translated into major local languages and delivered through TVET institutions and online platforms. Occasional in-person intensive sprints can be used for advanced participants (e.g. trainers, business owners). This is a direct extension of existing curriculum work, combined with a justified inference that language and accessibility are key to scale.

Enabler	Current basis	Roadmap role
Mobile and data-tracking tools	The OM used mobile-friendly survey tools (e.g. Google Forms), WhatsApp communication and basic digital logs to track retailers, upcyclers and waste actors.	The roadmap can expand this into a simple digital data system for tracking: waste flows (market and coastal), training participation, co-op membership and business performance of circular enterprises. This builds directly on current practice, with the inference that consistent use of these tools will improve monitoring, reporting and adaptation of interventions.

Step 5 - Summary Table

Element	Key points for the roadmap
Strategic pillars	1) Clean energy transition for industrial circularity (centred on Akosombo); 2) Waste valorisation (turning surplus textiles into materials and products); 3) Social capital strengthening (co-ops, women's organisations, training pathways); 4) Inclusive innovation (supporting upcyclers, weavers and other artisans and aligning policy and trade frameworks with their work).
Policy levers	GA-EPR and related EPR reforms; new HS codes for upcycled and remanufactured products; national CE policies and roadmaps; local climate and CE funds; emerging municipal instruments linked to market upfit and waste management.
System enablers	Practical CE toolkits for local governments; modular circular training in partnership with TVETs and in local languages; mobile and digital tools for data collection, monitoring and learning.

STEP 6: PILOT DESIGN AND EXECUTION

Step 6: Pilot Design and Execution

This step organises the roadmap into three flagship pilots that translate the analysis and strategic goals into concrete activity on the ground. Each pilot builds on programmes and actions already underway and is designed to be scaled and replicated once tested.

Pilot 1: Kantamanto Market Upfit and Co-operative Infrastructure

Context and rationale

Kantamanto has experienced repeated fires since 2013, including a catastrophic blaze in January 2025 that destroyed around 7,000 stalls and left much of the market operating with unsafe temporary structures. Narrow, uneven walkways still force traders and kayayei to move 55 kg bales by head, while the absence of fire lanes, clinics and safe storage amplifies risk.

At the same time, the market is one of the most important circular hubs in the world, processing millions of garments each week for reuse, repair and upcycling. Improving its infrastructure and governance is therefore both a safety imperative and a core enabler of circular operations. The upfit pilot focuses on turning Kantamanto into a safe, dignified and climate-resilient flagship for circularity.

Key activities

Current and planned actions under this pilot include:

- Completing a market-wide census to create, for the first time, a reliable registry of stalls, traders and activities, which is already "in progress" as of this Report.

- Restoring electricity to fire-affected stalls and extending safe wiring to additional areas: 6,913 stalls have already been rewired with ECG- and GNFS-approved installations, with remaining undamaged stalls still requiring new infrastructure.

- Constructing an 80-stall demonstration site on AMA-controlled land, using upcycled containers to model two-storey displacement stalls, fire lanes, wide aisleways and potential solar installations. The full Kantamanto Market current counts on over 8000 stalls, so the demonstration site does not substantially change market operations.This structure is being fabricated as a tangible example for community sensitisation and design review. After fabrication, installation of the 80-stall demonstration in a functional area of the market will be the next step toward scaling the design across at least 10% of market stalls (>800) by 2028.

- Scaling and formalising the Kanta Keepers waste co-operative, which already has 36 members collecting segregated textile waste, and linking their work to upfit planning so that collection routes, storage and processing points are integrated into the new market layout.

- Deepening fire safety capacity, including installation of over 1000 fire extinguishers, fire safety training and formal approval from GNFS for the proposed fire lane design.

Table - Pilot 1 Overview

Dimension	Current position
Primary objectives	Make Kantamanto a safe, electrified and climate-resilient circular hub, with infrastructure that supports reuse, upcycling and waste management.
Core activities	Market census; full re-electrification; 80-stall demo site; integration of Kanta Keepers; fire safety upgrades (lanes, extinguishers, training).
Status	Census - in progress; electrification of fire-affected stalls - on track; 80-stall demo - in fabrication; Kanta Keepers - established and operating since 2024.
Key stakeholders	AMA, GNFS, Electricity Company of Ghana, The Or Foundation, Kanta Keepers, Kantamanto Women's Association, KOBA, retailers and upcyclers.

Indicative success signals

While the OM set out formal targets and baselines for the broader Kantamanto upfit, specific pilot "success criteria" are not listed as a separate grid. Based on those goals, progress for this pilot will be evidenced by:

- A decline in the frequency and severity of fires and flood-related losses, relative to the four major fires recorded since 2013 and the extensive damage in January 2025.
- Universal safe electrical wiring in the zones covered by the upfit, moving towards the roadmap target of ECG-certified installation across the entire market by 2027.
- Higher rates of segregated waste collection from stalls into Kanta Keepers systems, compared with the current pilot participation estimated at less than 10% of market members.
- Stronger representation of women and co-operatives in market planning, aligning with the establishment of the Kantamanto Women's Association and the formation of a market-wide association across 13 landlords.

These indicators follow directly from the roadmap's Strategic Goal 1 (Upfit Kantamanto Market) and the associated cooperative and gender-justice actions.

Pilot 2: Justice-Led Textile Waste Recovery and Coastal Remediation

Context and rationale

Textile waste that is not captured within markets or formal dumpsites is accumulating in Accra's drainage systems, lagoons and beaches. The coastline from the Korle Lagoon to Jamestown has been documented as a severe hotspot, with over 4,275 "textile tentacles" recorded and microfibre concentrations up to 100 times higher than in comparable urban studies.

In response, two community-led initiatives supported by The Or Foundation and AMA - Kanta Keepers and Tide Turners - have begun to clear waste both at source (Kantamanto) and at the receiving environment (Jamestown beaches). Tide Turners currently removes over 30 tonnes of waste per week, while Kanta Keepers provide structured collection inside the market. Both groups, however, face logistical and financial constraints, particularly limited access to waste trucks.

Key activities

This pilot consolidates and scales the existing waste and remediation work through:

- Regular Tide Turners clean-ups, maintaining weekly removal of around 30 tonnes of mixed waste from Jamestown beaches while engaging more than 50 community volunteers.

- Structured collection and sorting via Kanta Keepers, ensuring that textile waste from Kantamanto is segregated at source and directed either to sanctioned dumpsites or to the nearby sorting and recycling centre as feedstock for fibreboard, yarn and other products.

- Microfibre sampling and citizen science, building on pre-publication research around microfibre pollution and deploying simple methods to generate locally grounded evidence for policy and funding decisions.

- Transitioning both teams into fully registered co-operatives, supported by the Department of Cooperatives, alongside business training, governance strengthening and the acquisition and operation of dedicated waste trucks.

Table - Pilot 2 Overview

Dimension	Current position
Primary objectives	Prevent textile waste from entering marine and urban ecosystems; create dignified livelihoods through community-owned remediation enterprises.
Core activities	Weekly beach clean-ups; market waste collection and segregation; microfibre monitoring; co-operative formalisation and access to trucks.
Status	Tide Turners active since 2022, removing >30 t/week; Kanta Keepers established in 2024 and operating at pilot scale; both constrained by truck access and finance.
Key stakeholders	The Or Foundation, AMA, Department of Cooperatives, Kanta Keepers, Tide Turners, Jamestown communities and fishers.

Indicative success signals

The roadmap's Strategic Goal 3 (Waste Collection, Clean-Up and Cooperative Ownership of New Pathways) sets clear targets for waste sorting centres, Kanta Keepers coverage and Jamestown clean-up. Within that frame, this pilot's progress will be reflected in:

- Stable or gradually declining volumes of waste removed per week, interpreted in relation to upstream interventions (e.g. better market collection and policy changes). A sustained 30 tonnes/week at Jamestown initially signals effective clean-up; decreasing volumes over time would indicate successful prevention.

- A fall in visible textile "tentacles" and measured microfibre concentrations at key hotspot sites compared with current baselines.

- Formal registration and operational autonomy of Kanta Keepers and Tide Turners as co-operatives, with functioning governance structures, access to at least one dedicated truck each, and diversified income sources linked to waste valorisation.

These signals translate the documented activities and targets into observable outcomes without adding new numerical targets.

Pilot 3: Circular Skills and Business Model Transition for Informal Actors

Context and rationale

The mapping shows that most enterprises in Ghana's textile economy are informal microbusinesses, many of which lack technical knowledge on zero-waste patterning, upcycling, recycling and business planning. Stakeholder surveys highlight lack of technical know-how as the single largest barrier to adopting circular practices.

At the same time, women working as kayayei in Kantamanto face dangerous working conditions with almost no alternative livelihoods, despite the roadmap's clear goal to eliminate dangerous head-carrying by 2027 and transition at least 80 women per year into skilled roles. The pilot responds to both the skills gap and the need for just transitions.

- Digitising, accrediting and scaling a circular curriculum that has already reached over 100 Kantamanto-based participants through in-person delivery, covering sustainability and circularity, textile science, and design and production. The curriculum is being digitised as of this Report to enable broader dissemination and translation.

- Expanding Mabilgu-style transition programmes for kayayei, which have already helped 299 women move out of head-carrying into new livelihoods in sectors such as solar, IT, photography and textile recycling, with additional support for health and education.

- Partnering with TVETs, CTVET and regional hubs such as Kanko Hub to deliver blended training - combining online modules, local language content and in-person "sprint" workshops - across Kumasi, Tamale, Central Region and other locations.

Table - Pilot 3 Overview

Dimension	Current position
Primary objectives	Equip informal and small-scale actors with circular technical and business skills; support safe livelihood transitions for women and youth, particularly kayayei.
Core activities	Digitised circular curriculum; Mabilgu-style transition programmes; regional delivery through TVETs and hubs.
Status	Curriculum has reached >100 participants and is being digitised (Aug 2025); Mabilgu has supported 299 women; stakeholder demand for training and business support clearly documented.
Key stakeholders	The Or Foundation, TVET institutions (e.g. KsTU, AAMUSTED), CTVET, metropolitan and municipal assemblies, women's groups (including Kantamanto Women's Association), and financial institutions for follow-on business support.

Indicative success signals

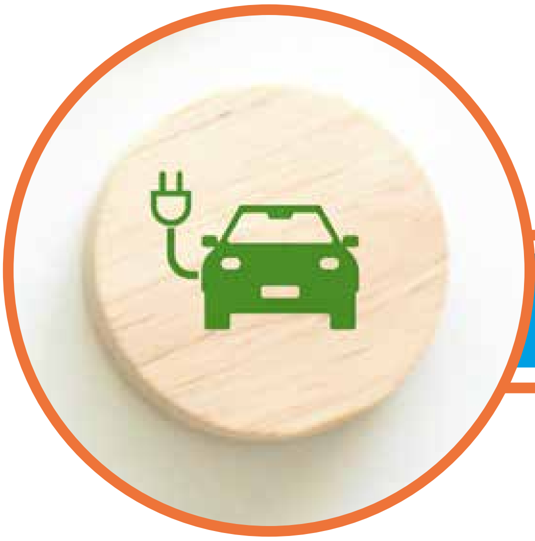
Drawing directly on existing baselines and strategic goals, progress for this pilot will be visible through:

- Growing numbers of trained participants, building on the current 100+ and disaggregated by role (retailers, upcyclers, tailors, kayayei, TVET students).
- TVET Accreditation for Circular Textiles Curriculum.
- Increased numbers of women transitioning out of dangerous head-carrying, complementing the 299 transitions already achieved and contributing towards the roadmap's target of at least 80 kayayei per year.
- More circular enterprises reporting improved income stability or formal registration, consistent with stakeholder feedback that business skills and finance access are currently major gaps.

These indicators map directly onto Strategic Goal 2 (Dignified Logistics) and the wider ambition to strengthen the informal sector as a core driver of domestic circularity.

Step 6 - Summary Table

Pilot	Focus	Status
Kantamanto Market Upfit and Co-operative Infrastructure	Infrastructure, safety, electrification, waste systems and governance in Kantamanto, including Kanta Keepers integration.	Multiple actions already in progress or on track: market census underway; 6,913 stalls rewired; 80-stall demo site fabricated; Kanta Keepers established and operating.
Justice-Led Textile Waste Recovery and Coastal Remediation	Kanta Keepers and Tide Turners as waste and remediation co-operatives addressing market and coastal hotspots.	Operational, with Tide Turners removing >30 t/week from Jamestown beaches and Kanta Keepers active in Kantamanto; both constrained by limited truck access and finance; roadmap sets clear clean-up and cooperative ownership targets.
Circular Skills and Business Model Transition for Informal Actors	Circular skills development, Mabilgu transitions, TVET/CTVET integration and business model support.	Curriculum digitisation in progress; more than 100 participants trained to date; Mabilgu programme running and has supported 299 women; strong documented demand for further training and support.



STEP 7: ACTION PLAN AND IMPLEMENTATION PATHWAYS

Step 7: Action Plan and Implementation Pathways

The action plan is structured in three overlapping phases. The short- and medium-term actions are taken directly from the 0-24 month and 3-5 year phases in the OM.

Short-term actions (0-24 months)

In the first two years, the focus is on stabilising and upgrading Kantamanto, consolidating co-operatives, and proving early circular business models:

- Complete a market-wide census of Kantamanto and provide certified electricity to all stalls destroyed in the January 2025 fire, alongside the delivery of an 80-stall demonstration site to model safer, circular-ready infrastructure.
- Establish and strengthen community-led waste co-operative functions (Kanta Keepers), including regular collection and disposal of market waste, and run a local campaign to set safe limits for head-carrying, coupled with training pathways designed to transition approximately 20 women per quarter away from dangerous head-carrying into circular jobs.
- Develop and roll out training programmes for retailers, tailors and upcyclers, using the emerging circular curriculum to support better quality, repair and upcycling services.
- Commercialise fibreboards for speakers, sound insulation, furniture and hangers, develop a Shredder-as-a-Service offer, and commercialise T-shirt yarn, using Kanta Keepers' segregated waste streams as feedstock.
- Maintain and strengthen Tide Turners' weekly beach clean-ups, which are already removing more than 30 tonnes of textile and other waste per week, and continue R&D on decomposition and bioremediation to remediate coastal ecosystems.
- Develop the business case for fibre-to-fibre recycling, based on current pilots with international technology providers, and pilot household secondhand clothing collection with community partners.
- Develop a proposal for a new HS code that can distinguish upcycled, value-added products from generic secondhand clothing under HS 6309, laying the groundwork for preferential trade access and better data.

Medium-term actions (3-5 years)

In the 3-5 year window, the emphasis shifts towards institutionalising financing flows, regulation, and industrial-scale circular infrastructure:

- Establish a regional Producer Responsibility Organisation (PRO) to manage distribution of funds from levies and globally accountable EPR transfers, once regulatory frameworks allow.
- Strengthen collaboration across African circular economies through delegation trips and knowledge exchange between Ghana, Uganda, Kenya, Nigeria and others, ensuring Ghana's experience informs regional practice.

- Enforce a regulatory framework to eliminate dangerous head-carrying, using the research, campaigns and policy tools already being developed (feature film, policy paper, chiropractic evidence).

- Explore and test business models for Product-as-Disassembly, providing disassembled components as inputs for upcycling and remanufacturing at scale.

- Commercialise fibreboard for certified construction use and bring fibre-to-fibre outputs fully to market, turning pilot products into established, standards-compliant materials and revenue streams

- Install fibre-to-fibre recycling technology, contingent on a viable business case and sufficient, reliable power supply, with Akosombo's hydro-powered facility identified as a leading candidate site.

- Introduce a new HS code to distinguish upcycled, value-added goods from secondhand garments, building on the proposal developed in the short-term phase.

Longer-term actions (later phase)

The OM places a set of larger "5+ year" investments in a longer-term phase. Within this four-year roadmap, they represent activities that will begin in the later years and continue beyond the initial horizon:.

- Complete the full upfit of Kantamanto's infrastructure (beyond the initial demonstration areas), including wider aisleways, flood-resilient and fire-safe structures, and integrated green energy and waste systems.

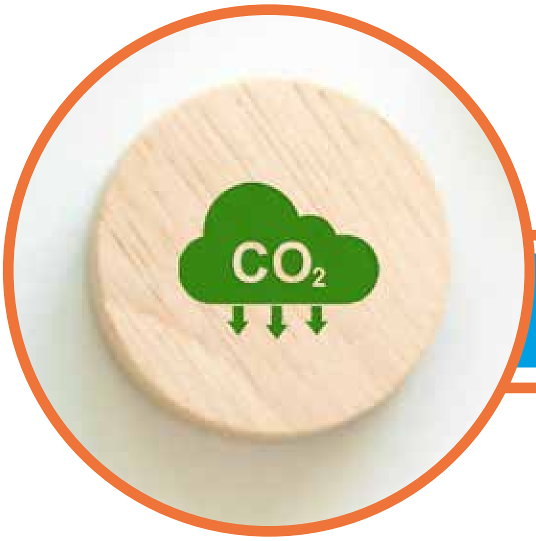
- Use Kantamanto as a proven flagship to replicate co-operative waste systems, training models and circular business pilots in other engaged regions such as Kumasi (via Kanko Hub), Tamale and Central Region, where CE mapping and women-led upcycling groups are already active. This inference is grounded in the hub-and-spoke engagement pattern documented for these regions, even though replication is not listed as a separate action item in the phasing table.

- Embed circular textiles indicators and targets into national planning instruments (e.g. Coordinated Programme, Medium-Term Plan, MESTI Circular Economy Roadmap), moving from current "alignment" to formal integration as evidence from pilots accumulates. This follows directly from the policy alignment section, which already positions the roadmap as a delivery mechanism for these frameworks.

- Scale successful circular business models towards the opportunity of capturing around 1% of the global circular textiles market by 2030, as quantified in the OM's market sizing. In the context of this roadmap, this means using Kantamanto-based models and regional spokes as the platform for growth, rather than inventing new business concepts.

Phased summary table

Phase	Approx. timeline	Key outputs
Short-term	0-24 months	Market census; electrification of fire-affected stalls; 80-stall demo site; consolidated Kanta Keepers; training programmes and head-carrying transition pathways; early commercialisation of fibreboards, Shredder-as-a-Service and T-shirt yarn; weekly beach clean-ups >30 t/week and ecosystem R&D; fibre-to-fibre business case; pilot household collection; HS code proposal.
Medium-term	3-5 years	Regional PRO managing funds; strengthened African CE collaboration; enforced regulation on dangerous head-carrying; Product-as-Disassembly pilots; installed fibre-to-fibre technology (if business case proven); new HS code operational for upcycled goods.
Long-term	Later phase (5+ years in OM; later years of this roadmap and beyond)	Full Kantamanto upfit and regional replication through hub and spoke.



STEP 8: MONITORING, REPORTING, AND VERIFICATION (MRV)

Step 8: Monitoring, Reporting, and Verification (MRV)

The OM work does not set out a standalone MRV framework, but it does provide clear baselines, methods and data collection tools that can be translated into KPIs.

8.1 Environmental KPIs

Indicator	Baseline	Indicative target	Source / method
Tonnes of textile waste removed from beaches per week	Tide Turners currently remove more than 30 tonnes of mixed waste per week from Jamestown beaches.	Maintain this removal rate in the short term and aim to stabilise or reduce tonnage over time as upstream prevention (better market collection and policy changes) reduces the amount reaching the coast.	Standardised beach clean-up logs, truck/boat manifests, weighbridge readings.
Number of textile "tentacles" recorded per year	4,275 textile tentacles were recorded cumulatively along seven kilometres of coastline between 2021 and mid-2025.	Work towards a substantial reduction by 2028 (for example, a 50% drop in average annual counts) as waste capture and remediation improve.	Citizen science surveys, geotagged photos, repeat transect monitoring along the same shoreline.
Offcut waste tracked per primary producer	17 of 51 surveyed producers record offcuts, with a mean of 33 kg per month among those who track.	Ensure all supported producers systematically track offcuts, and then reduce offcuts per unit of output over time. The direction of travel comes directly from the OM; specific reduction percentages must be co-defined with producers once proper tracking is in place.	Producer self-reporting, periodic audits of cutting rooms, checks of offcut storage and onward flows.
Microfibre concentrations in lagoon and coastal samples	Pre-publication research finds microfibre levels around 100 times higher than comparable urban studies along a gradient from dumpsites to the coast.	Aim for a progressive reduction relative to the 2022-2025 baseline, with the exact factor (e.g. halving concentrations) to be set once more time-series data and PP-specific pollution modelling are available.	Standardised water sampling and filtration, microscopy or spectroscopy analysis, repeated at fixed locations and intervals.

8.2 Economic KPIs

Indicator	Baseline	Indicative target	Source / method
Median retailer net loss per bale	Across retailers, the median net result per bale is a loss of about GHS 105, with female retailers experiencing larger median losses than male retailers.	Move the median result per bale from a loss towards a positive margin, through improved bale quality, better pricing, training and potential EPR support.	Periodic retailer income and cost surveys, disaggregated by gender and bale grade.
Number of women transitioned from kayayei work	299 women have already been supported through the Mabilgu programme into alternative livelihoods and/or education.	Significantly scale up transitions over the roadmap period (for example, several hundred additional women by 2030), in line with the stated objective to eliminate dangerous head-carrying.	Programme records (enrolment, completion, post-transition status), follow-up surveys of former kayayei.
Value of circular textile exports	Primary textile exports are valued at about USD 49 million.	Increase the share of exports that are clearly circular (upcycled, remanufactured or made from recovered materials) once new HS codes and product classifications are in place.	Customs and trade statistics, using updated HS codes and classification guidance distinguishing circular products.

8.3 Social KPIs

Indicator	Baseline	Indicative target	Source / method
Share of women in market leadership and associations	The Kantamanto Women's Association has been formed only recently; women currently have limited representation in landlord and market-wide leadership structures despite being the majority of workers.	Increase the proportion of leadership roles held by women in market and co-operative governance over the roadmap period. The direction of change is explicit in the OM; specific percentage targets should be negotiated with associations.	Association constitutions, leadership lists, AGM minutes, gender-disaggregated membership records.
Number of active co-operatives in textiles circular economy	Kanta Keepers and Tide Turners are operating and in the process of formal registration; other potential groups (e.g. women's associations) are emerging as organised entities.	Achieve multiple registered, functioning co-operatives across key hubs (Kantamanto, Jamestown, Kumasi, Tamale), each with basic governance and business plans.	Department of Cooperatives registry, co-operative by-laws, monitoring of meeting frequency and member participation.
Participation in circular skills training	More than 100 Kantamanto-based participants have completed early circular curriculum modules.	Expand to national reach via TVET partners, with participant numbers and regional coverage targets to be set once the digitisation and roll-out plan is agreed. The expansion is explicitly planned.	Training enrolment and completion records, TVET reporting, participant feedback surveys.

8.4 Data Collection Tools

The OM work has already tested a set of practical tools that can form the backbone of MRV:

- Mobile-based surveys (e.g. Google Forms) administered by trained enumerators in Twi and English to retailers, upcyclers, kayayei, producers and other actors.
- Waste audits at Kantamanto, including fibre-type analysis of retailers' waste and composition of "waste" bales.
- Microfibre sampling and citizen science along rivers, lagoons and beaches, using standardised sampling and lab analysis.
- Workshop and consultation records, tracking attendance, stakeholder categories, priorities and feedback from engagements in Accra, Kumasi, Tamale and Awutu Senya.

These tools can be standardised, repeated over time and integrated into municipal and national data systems.

Step 8 - Summary Table

MRV dimension	Existing strengths	Gaps and needs
Environmental	Strong citizen science on beach waste and microfibres; detailed waste audits for Kantamanto; early tracking of offcuts and effluents at selected sites.	Need to standardise indicators, set agreed targets, and establish a regular reporting schedule across regions and institutions.
Economic	Rich qualitative and quantitative data on bale economics, debt, kayayei earnings and export values.	Need to translate these into standard KPIs (margins, transition numbers, circular export shares) and to track them consistently over time.
Social	Detailed insights on gender, hazardous work, informality and emerging co-operatives.	Need consistent, comparable metrics on inclusion, leadership, co-operative strength and training outcomes across all priority hubs.

STEP 9: FINANCING STRATEGY AND INVESTMENT MOBILISATION

Step 9: Financing Strategy and Investment Mobilisation

Financing for the circular textiles roadmap draws on existing donor support, proposed extended producer responsibility mechanisms, and the wider financial system, alongside indicative cost estimates for priority interventions.

9.1 Cost Information for Priority Interventions

Available cost information highlights the scale of investment already committed and the order of magnitude required for full implementation at Kantamanto:

Intervention / Item	Amount stated	Description
Post-fire rebuilding materials for Kantamanto stalls at common process	Over GHS 3 million	Lumber and other materials purchased to allow traders to rebuild quickly after the 2 January 2025 fire.
Electrification of rebuilt stalls in Kantamanto	Around USD 1 million	Installation of safe, certified electrical wiring in every rebuilt stall, plus more than 1000 fire extinguishers, under a plan approved by ECG, GNFS and AMA.
80-stall Demonstration Site	USD 500,000	Design and fabrication of an 80-stall demonstration site as a model for upfitting plans. The site does not include sewerage and water infrastructure.
Full upfit of Kantamanto Market	Upwards of USD 70 million	Estimated cost to upfit the market, including new structures, wider aisleways, flood and fire safety, and integrated services.
Circular textiles funding mobilised to date	Over USD 17 million	Total funding mobilised by The Or Foundation for circular textile initiatives in Ghana since 2011.

No detailed budgets are yet provided for other elements such as fibre-to-fibre installation, national curriculum roll-out or long-term logistics for waste recovery, beyond these indicative figures.

9.2 Funding Sources

Financing and investment for circular textiles currently come from, or are expected to come from, the following sources:

- **Global Affairs Canada (GAC)** - funding for the GCEC project, which supports circular-economy-based inclusive prosperity through a low-carbon strategy, including outcomes on finance and clean technology for women- and youth-led enterprises.

- **European Union support** - funding for the UNEP "Circularity and Used Textile Trade" work and for the national Circular Economy Roadmap and Action Plan led by MESTI, both of which underpin circular textiles interventions.

- **Philanthropic and voluntary EPR funding channelled by The Or Foundation** - more than USD 17 million mobilised for circular textile work, including market upfit, electrification, remediation, training and awareness through philanthropic and pre-compliance voluntary EPR Funding.

- **National and municipal public funds** - including instruments such as the Youth Climate Action Fund used to support elements of market-level climate and resilience work.

- **Financial institutions** - banks, microfinance institutions and savings and loans companies identified as key financial vehicles for providing loans and other financial services to circular SMEs and co-operatives, particularly those led by women and youth.

9.3 Extended Producer Responsibility and Producer Responsibility Organisation

A central proposed mechanism for long-term financing is Globally Accountable Extended Producer Responsibility (GA-EPR) for textiles:

- A floor EPR fee of USD 0.50 per garment is proposed.

- At least 29.5% of the fee is designated for tier-three reuse, repair, upcycling and recycling operators.

- At least 10% of the fee is designated for environmental remediation in ecosystems impacted by textile waste.

Existing and emerging EPR schemes in France, the Netherlands, California and the European Union are recognised as potential channels to operationalise this approach, moving funds collected in primary markets to secondhand clothing receiving markets. A medium-term action is to manage fund transfer to Ghana from primary markets and subsequent distribution through a regional Producer Responsibility Organisation (PRO) once the required regulatory frameworks are in place.

At present, no mandatory EPR funds are yet flowing to Ghana under this model, however, a voluntary pre-compliance program has been established by The Or Foundation. GA-EPR and the PRO concept set out the intended structure for future transfers and governance of both international transfers accompanying secondhand clothing as well as domestic collection and distribution of potential EPR fees for new garments imported into the Ghanaian domestic market as first-hand items. Ensuring EPR Fees are modulated and applied so as to encourage circular practices and sustainable material choices is a key element of program design.

9.4 Investment Channels

Investment is currently channelled through:

- Donor grants and project funding, including GCEC (Global Affairs Canada) and EU-supported programmes.
- Direct programme spending by The Or Foundation on infrastructure, electrification, apprenticeships, remediation and material transformation.
- Conventional financial products provided by banks, microfinance institutions and savings and loans companies, which are positioned to offer loans and other services to circular enterprises where interest rates and product design are aligned with circular practices.

Step 9 - Summary

Financing for the roadmap combines substantial up-front infrastructure investment at Kantamanto (electrification and full upfit), ongoing donor and philanthropic support, proposed GA-EPR transfers channelled through a regional PRO, and expanded access to credit and financial services for circular enterprises, especially those led by women and youth

STEP 10: CAPACITY DEVELOPMENT AND INSTITUTIONAL STRENGTHENING

Step 10: Capacity Development and Institutional Strengthening

10.1 Modular Circular Economy Training Curriculum

A modular circular textiles curriculum has been developed and delivered by The Or Foundation in person at Kantamanto Market, reaching over 100 participants from the secondhand and upcycling community. The curriculum is being actively digitised so that it can be shared more widely across the country through a "digital first" approach, with translation into local languages and follow-up workshop sprints in strategic locations.

The curriculum is structured around three introductory core subjects:

- **Sustainability and Circularity** - introduces the basics of upcycling and recycling and core circular economy models. It is designed to support participants to move away from purely linear trading and towards value-adding circular practices.
- **Textile Science and Technology** - covers fabric knowledge (natural versus synthetic fibres) and practical testing techniques such as burn tests and SPI analysis. This helps participants understand material properties, durability, and suitability for reuse or recycling.
- **Design and Production** - focuses on pattern making and production planning (including Kaizen-style approaches), alongside quality assurance and production and quality control. This supports more efficient, low-waste production and higher-quality circular products.

These core subjects are delivered at beginner, semi-professional and advanced levels. Learning progresses from basic sewing skills and introductory upcycling, through advanced upcycling and finishing, to identifying viable market opportunities for upcycled products and applying robust quality control and production management. The Or Foundation as GCEC textiles value chain lead is currently accrediting the program so as to be able to offer TVET certificates for program participants.

A complementary strand of capacity development is provided through the Mabilgu Training Programme, which supports women formerly working as kayayei in Kantamanto. The programme has enabled 299 women to transition out of dangerous head-carrying into alternative livelihoods through skills training in sectors such as solar installation, photography, IT and textile recycling, including through job placement at The Or Foundation's Material Technology and Transformation Lab. In addition to technical skills, Mabilgu offers scholarships for those returning to formal education and medical support to begin physical and mental recovery from the harms associated with head-carrying.

Core curriculum subjects and example topics

Core subject	Example topics
Sustainability and Circularity	Basics of upcycling and recycling; introduction to circular economy models
Textile Science and Technology	Natural vs synthetic fibres; testing techniques (e.g. burn test, SPI analysis)
Design and Production	Intro to pattern making; production planning (Kaizen); quality and process control

These curriculum elements, together with Mabilgu's applied training, form the backbone of skills development for reuse, repair, upcycling and recycling actors within the textiles circular economy.

10.2 Trainer and Facilitator Upskilling

Technical and vocational education and training (TVET) institutions such as Kumasi Technical University (KsTU), AAMUSTED and others play a central role in building the skills base for Ghana's circular textiles economy. They already offer training in garment production, textile design, manufacturing technologies and entrepreneurship, which are directly relevant to circular textile innovation.

The Council for Technical and Vocational Education and Training (CTVET) is responsible for coordinating, regulating and promoting TVET nationally. Its mandate covers curriculum development, curriculum adoption, certification and competency-based training. Within this remit, lecturers' capacity building is a specific focus area, enabling teaching staff in TVET institutions to integrate circular economy content and practices, especially in textiles and fashion, into their courses.

Alongside this, the Department of Cooperatives provides legal recognition, training and business development support for co-operative societies across Ghana, including waste pickers, traders, tailors and recyclers. Its work strengthens co-operative structures that are central to inclusive circular business models, particularly for informal workers.

10.3 Vocational and Institutional Partnerships

A wide set of vocational and institutional partners contribute to capacity development around circular textiles. TVET institutions (including KsTU, AAMUSTED and similar colleges) provide practical training in garment production, textile design and technologies, as well as entrepreneurship support.

Local government bodies such as the Accra Metropolitan Assembly (AMA), Kumasi Metropolitan Assembly (KMA) and Tamale Metropolitan Assembly (TMA) are engaged in business development and skills training activities linked to circular economy initiatives and hubs such as Kanko Hub in Kumasi. These assemblies host and support stakeholder meetings, business development sessions and skills programmes connected to waste management, textiles and circularity.

Smock weavers and kente weavers are recognised as key participants in business development and skills training. Their practices embody low-waste, slow fashion rooted in indigenous techniques, and they are positioned as important actors for high-value circular fashion linked to cultural heritage. Tailors, seamstresses and dressmakers, numbering around

50,000 master craftspeople with 75,000 apprentices, are also identified as critical partners for business development and skills training, since their everyday work in custom garment production, alteration and repair is already strongly aligned with circular principles.

Financial institutions (banks, microfinance institutions, savings and loans companies) and media houses are included among the "business development and skill training participants" for circular textiles. Financial actors are important for investment tools and financial literacy support, while media houses contribute to campaigns, awareness and marketing of circular products and practices.

10.4 Institutional Integration

Capacity development and institutional strengthening are anchored within a broader ecosystem. The GCEC, funded by Global Affairs Canada, is structured as a hub-and-spoke model that combines central resources with value chain experts, such as the textiles value chain lead, to support a justice-led circular economy. One of its core outcomes is to increase the use of financial, business and clean technology development services by women- and youth-led enterprises, and to support the adoption of circular, clean and energy-efficient solutions by private and informal sector businesses.

CTVET's mandate to align vocational skills with circular economy needs, the Department of Cooperatives' role in formalising and strengthening co-operatives, and the engagement of TVET institutions, local assemblies and civil society actors such as The Or Foundation together provide the institutional channels through which circular textiles skills, business models and co-operative structures are being embedded into Ghana's evolving circular economy landscape.

Step 10 - Summary Table

Dimension	Main actions and actors
Curriculum	Core introductory modules on sustainability and circularity, textile science and design/production; in-person delivery to over 100 Kantamanto participants; digitisation for wider dissemination; Mabilgu skills training for 299 women.
Upskilling	Lecturers' capacity building and curriculum development/adoption coordinated by CTVET; training and business support for co-operatives through the Department of Cooperatives.
Partnerships	TVET institutions (KsTU, AAMUSTED, others including GCEC Textile Value Chain Lead), Kanko Hub, local assemblies, tailors and dressmakers, smock and kente weavers, financial institutions and media houses engaged in skills and business development.
Integration	GCEC hub-and-spoke model, TVET and co-operative systems, and local government engagement used to embed circular textiles skills and co-operative models within Ghana's wider circular economy transition.

STEP 11: GOVERNANCE AND INTEGRATION FRAMEWORK

Step 11: Governance and Integration Framework

11.1 Multi-level governance structure

At national level, the Ministry of Environment, Science and Technology (MEST) leads the development of circular economy policy, including the National Plastic Management Policy (2019) and the Circular Economy Roadmap and Action Plan, which covers textiles alongside plastics and agriculture. The Environmental Protection Agency (EPA), established under the Environmental Protection Agency Act of 1994, is mandated to issue environmental permits and pollution abatement notices and to prescribe standards and guidelines on pollution of air, water, land and other environmental media.

The GCEC Project, funded by Global Affairs Canada, is designed as a hub and spoke structure of central resources and value chain experts that support the circular economy across Ghana. Its stated overall outcome is to enhance circular economy based, low carbon, inclusive economic prosperity with a particular focus on women and youth, delivered through two intermediate outputs: increased use of financial, business and clean technology development services by small scale women and youth entrepreneurs, and increased adoption of circular economy based clean energy and energy efficient solutions by private and informal sector organisations. The Council for Technical and Vocational Education and Training (CTVET) coordinates and regulates TVET nationally, oversees curriculum development and certification, and is positioned to align vocational skills with circular economy requirements, including in textiles and fashion.
The Department of Cooperatives regulates and supports cooperative societies across Ghana, formalising groups in activities such as waste picking, trading, tailoring and recycling, and providing legal recognition, training and business development support for cooperative based circular models.

At regional and metropolitan level, the Accra Metropolitan Assembly (AMA) is responsible for business permitting and market stall allocation, as well as waste collection within its jurisdiction. It has actively promoted circular solutions for textile waste, including household level source separation, and collaborates with The Or Foundation on planning and development for the Kantamanto Market upfit. The AMA also manages the Youth Climate Action Fund in Accra.

The Kumasi Metropolitan Assembly (KMA) carries similar mandates for market administration and waste management and has established the Kanko Hub as a circular economy centre, where circular economy mapping meetings and business development and skills training activities have been held. The Tamale Metropolitan Assembly (TMA) shares the same statutory responsibilities and is described as a primary advocate for circularity in areas such as plastics and metals collection and segregation where there is demonstrable economic value, with metropolitan, municipal and district assemblies recognised as key partners for scaling circular initiatives and navigating regulatory requirements.

The Ghana National Fire Service (GNFS) is responsible for fire prevention and management and participates in market upfit and fire safety training related to Kantamanto.

At community and market level, a range

of associations and cooperatives operate within the governance landscape. Kantamanto Market hosts thousands of reuse, repair, remanufacturing and upcycling businesses and has seen the emergence of several market wide organisations, including a landlords' association across thirteen landlords to coordinate market planning after the January 2025 fire, and the Kantamanto Women's Association, established by women traders and upcyclers to strengthen women's representation and advocacy. The Kanta Keepers waste collection cooperative, formed with the support of The Or Foundation in collaboration with AMA, comprises 36 members who collect and segregate market waste, with ambitions to reach full participation and cooperative ownership of a textile sorting centre. The Tide Turners team, originally organised by The Or Foundation with 60 paid members and 70 volunteers, carries out weekly beach clean ups at Jamestown, removing approximately 30 tonnes of textile and other waste per week and contributing to experimental decomposition and bioremediation initiatives. Community level actors also include smock weavers, kente weavers and informal workers such as kayayei, whose roles and transitions are explicitly addressed within the circular textiles goals.

11.2 Integration into national planning and policy systems

Circular textiles activities are positioned within a broader national policy framework. The circular textiles roadmap is aligned with Ghana's Coordinated Programme of Economic and Social Development Policies (2021-2025) and the Medium Term National Development Policy Framework (2022-2025), as well as the Circular Economy Roadmap led by MESTI. At sector level, it reinforces the National Plastic Management Policy (2019), the Exemptions Act (2022) and the Excise Stamp Act (2013).

Regionally, the work connects to Ghana's National AfCFTA Policy Framework and Action Plan, which identifies textiles, garments and apparel manufacturing as one of ten strategic anchor industries, and to AfCFTA decisions on the movement of secondhand clothing between member states.

Global policy connections are articulated through engagement with international extended producer responsibility (EPR) developments and harmonised system (HS) codes for textiles, including advocacy around a new HS code to distinguish upcycled, value added products from secondhand clothing and the proposal for Globally Accountable Extended Producer Responsibility with a per garment fee and defined allocations for circular operators and environmental remediation. The pathways associated with the circular textiles work are stated to contribute to multiple Sustainable Development Goals, including poverty reduction, gender equality, clean water and sanitation, clean energy, decent work and economic growth, reduced inequalities, sustainable cities and communities, responsible consumption and production and climate action.

11.3 Institutional structures and oversight

The GCEC Project functions as the central institutional mechanism for coordinating circular economy activities, using its hub and spoke design and value chain leads, including The Or Foundation as Textile Value Chain Lead, to link policy frameworks, research and on the ground implementation. The Or Foundation fulfils the role of project facilitator in the textiles value chain, describing itself as an Accra based NGO working at the intersection of education, fashion innovation and environmental justice, with a mission to catalyse a justice led circular economy for textiles and fashion. It has mobilised over seventeen million US dollars for circular textile initiatives, operates programmes in apprenticeships, business incubation, material science, product development and environmental remediation, and has developed extensive stakeholder relationships and data systems that underpin implementation and continuous improvement. In addition to circular initiatives, The Or Foundation presently operates waste haulage from Kantamanto Market under a license from the AMA.

Risk management measures are described across political and regulatory risks, internal capacity constraints, community crises and stakeholder and supply chain risks, with corresponding mitigation actions such as ongoing policy engagement, team expansion, installation of fire extinguishers in Kantamanto, and strengthening community resilience through market associations, the market census and cooperatives.

Community based governance is reinforced through registered or emerging cooperatives and associations that own and manage waste collection, beach clean ups and representation of women and other marginalised groups, in coordination with metropolitan assemblies, national ministries and international partners.

Step 11 - Summary table

Level	Main institutions and groups	Primary functions in circular textiles governance
National	MEST/MESTI, EPA, GCEC, CTVET, Department of Cooperatives	Policy and roadmap development, environmental regulation, CE coordination, TVET and curriculum oversight, co op regulation and support
Regional / metropolitan	AMA, KMA, TMA, Kanko Hub, Ghana National Fire Service	Market regulation, stall allocation, waste management, circular economy centres, climate funds, fire safety and infrastructure support
Community / market	The Or Foundation, secondhand retailers, tailors and dressmakers, upcyclers, kayayei, Kanta Keepers, Tide Turners, market and women's associations, smock and kente weavers	Day to day circular operations, waste and beach clean ups, cooperative ownership, skills programmes and community representation

STEP 12: COMMUNICATIONS, BEHAVIOURAL CHANGE AND CULTURAL SHIFTS

Step 12: Communications, Behavioural Change and Cultural Shifts

12.1 Storytelling and Recognition

Public storytelling around circular textiles and textile waste already uses several concrete platforms and tools.

The Obroni Wawu October festival is described as the largest of a number of fashion promotion pathways in Ghana. It is organised by The Or Foundation to promote upcycling and reuse-based businesses in Kantamanto Market. Founded in 2022, the festival drew over 3,500 attendees, customers and participants at the culminating event of its 2025 edition with a marketing budget and targeted social media engagement, with the explicit aim of making upcycling and reuse culturally "fashionable" topics in Ghana.

Visual and research-led storytelling is being developed around dangerous head-carrying. Campaign materials based on chiropractic research with kayayei are used to communicate the health impacts of carrying 55 kg bales, and an educational campaign is planned in origin communities to share this research by 2026.

This work is complemented by a feature-length film and a detailed policy position paper on head-carrying, both scheduled for release in Ghana in early 2026, to support a holistic campaign to end dangerous head-carrying.

Citizen-science research on textile waste and microfibres also generates strong visual documentation. Air, rain and water samples are collected around Kantamanto Market, textile dumpsites and nearby beaches using PurpleAir sensors, air capture devices, rain gauges and spectroscopic analysis. These methods help to visually link textile waste "tentacles" and brand tags on beaches with fibre types detected in water and air samples, creating a clear narrative connection between global production, secondhand imports and local environmental impact.

12.2 Local Language and Low-Literacy Messaging Channels

Multiple communication channels are identified for public education, awareness-raising and behaviour change. Media houses are highlighted as key partners for circular textiles. Their platforms - radio, television, print and digital - are noted as having the ability to shape narratives, spotlight innovation and influence consumer behaviour. Engaging media houses is described as essential for scaling circular economy campaigns, promoting behavioural change and amplifying grassroots voices, including waste pickers, upcyclers and young designers.

Planned educational work on dangerous head-carrying includes a specific commitment to "carry out an educational campaign in origin communities to share research on the dangers of headcarrying by 2026", linked to the goal of eliminating dangerous head-carrying through regulation, education and job transition. The creation of a narrative feature length film made in local languages about the causes, conditions and effects of Dangerous Headcarrying, aims to leverage the strength of media as a tool to rally community support.

Survey-based engagement around circularity also uses language accessibility. Mixed-methods OM in Kumasi, Tamale and the Central Region employed in-person questionnaires administered through Google Forms by enumerators fluent in both Twi and English, allowing participants to express views and understand questions in widely used local and national languages.

12.3 Community-Led Channels and Cultural Ambassadors

Community organisations, cooperatives and cultural practitioners are central communication and mobilisation channels in the circular textiles system.

Kanta Keepers and Tide Turners operate as community-based cooperatives. Kanta Keepers is a market-based waste collection cooperative in Kantamanto, while Tide Turners is a coastal cooperative operating at Jamestown, with 60 paid members and 70 community volunteers removing around 30 tonnes of textile and other waste from the beach each week. These initiatives are framed as community-led operations that combine waste management with local participation.

The Kantamanto Women's Association and the Kantamanto Obroniwawu Businesses Association (KOBA) are identified as key market-based associations. The Kantamanto Women's Association focuses on the representation and advancement of women working in the market and participates in business development and skills training activities. KOBA, newly formed after the New Year's fire, brings together 13 different market section managers and landlords to coordinate market-wide operations and planning, and is explicitly listed under "Community Convening, Engagement and Planning".

Smock weavers and kente weavers are presented as important cultural ambassadors for circular fashion. Smock weavers in northern Ghana preserve indigenous textile knowledge through hand-woven cotton fabrics, representing low-waste, slow-fashion practices aligned with circularity and offering opportunities to combine cultural heritage with sustainable production.

Kente weavers, as custodians of one of Ghana's most iconic textile traditions, use artisanal methods that emphasise quality, durability and zero-waste weaving techniques and are seen as well-positioned to lead in high-value circular fashion markets where traceability and cultural storytelling enhance product appeal.

Tailors, seamstresses, upcyclers and kayayei are also explicitly recognised as key actors in Ghana's fashion ecosystem. Tailors and seamstresses across cities and towns provide repair, alterations and one-off garment production, embodying reuse and mending practices that keep textiles in circulation. Upcyclers in Kantamanto - roughly 3,000 people - transform unwanted garments into new products every week, demonstrating circular practices at scale and offering visible examples of creative reuse.

Step 12 - Summary Table

Channel / Actor Group	Examples	Documented Functions
Events and festivals	Obroni Wawu October festival	Promotes upcycling and reuse businesses; attracts >2,500 attendees; uses targeted social media marketing.
Research-driven campaign media	Campaign materials on head-carrying; feature-length film; policy position paper	Communicates health impacts and policy arguments on dangerous head-carrying; supports a holistic campaign.
Citizen-science visuals	Microfibre and textile waste monitoring (air, water, rain, beach “tentacles”)	Produces visual and analytical evidence linking textile waste to global brands and pollution hotspots.
Media platforms	Radio, TV, print, digital media houses	Public education, awareness-raising, marketing circular fashion, amplifying grassroots voices, cross-promotion with the feature length film.
Community cooperatives and groups	Kanta Keepers, Tide Turners, Kantamanto Women’s Association, KOBA	Community waste collection, beach clean-ups, women’s representation, market-wide coordination and engagement.
Cultural and craft practitioners	Smock weavers, kente weavers, tailors, seamstresses, upcyclers	Low-waste slow fashion and integration of Tarn (t-shirt yarn), repair and mending, high-value cultural textiles, visible upcycling at scale.
Community-level engagement tools	Educational campaign in origin communities on head-carrying; surveys in Twi and English	Localised communication of research findings and circularity issues; accessible participation in consultations.

STEP 13: CIRCULAR BUSINESS MODEL INCUBATION AND SCALING

Step 13: Circular Business Model Incubation and Scaling

13.1 Circular business models identified

Circular business models and opportunities under development in the textiles value chain include the following:

Business model / pathway	Description
Upcycling enterprises in Kantamanto	Micro-businesses and upcyclers in Kantamanto Market recirculate several million garments every week through reuse, repair and remanufacturing. At least 56% of garments entering the market are directly reused and at least 20% are repurposed through thousands of tailors and seamstresses.
Fibreboard (“Cassboard”) commercialisation	Cotton-rich textile waste is transformed into fibreboard using discarded cotton items and a locally produced cassava-based glue. The fibreboard can be used for furniture, clothing hangers, construction applications and acoustic panels or speakers.
T-shirt yarn (“Tarn”) commercialisation	Cotton-rich but poor-quality garments are cut into yarn-like strips (“Tarn”) and then upcycled into new products such as bags and water-bottle holders. The Tarn itself is a product, as are the items made from it.
Shredder-as-a-Service	A locally built industrial textile shredder, with versions designed for different power supplies, has been developed to respond to demand for shredded material and shredding services. The next step is to develop a business model to distribute and operate shredders as a waste-management pathway for low-value garments and offcuts, while creating opportunities for local machinery ownership.
Disassembly-as-a-Service	Systematic disassembly of garments is positioned as a business opportunity to supply components (for example, 1,000 shirt collars, bodies and sleeves) as inputs for upcycling and remanufacturing. This supports remanufacturing at a patternable level and offers a route for blended fibres and synthetics that lack other clear recycling pathways.

Business model / pathway	Description
Fibre-to-fibre recycling pilots	Fibre-to-fibre pilots are being run with existing recycling operations in Europe to explore textile-to-fibre recycling for Ghana, with the aim of building a business case for industrial-scale machinery. A key operational hurdle identified is the need for consistent electricity; the strongest opportunity, if a business case is confirmed, is at the hydro-powered Akosombo Industrial Company Limited (Akosombo Textiles) facility.
Kanta Keepers waste collection co-operative	A 36-member market-based team collects and segregates textile waste in Kantamanto, moving it via truck either to a sanctioned dumpsite or to The Or Foundation's sorting and recycling centre adjacent to the market. Work is underway with the Ghana Department of Co-operatives to register Kanta Keepers as a co-operative.
Tide Turners beach clean-up and remediation team	A beach clean-up team, with 60 paid members and around 70 community volunteers, removes over 30 tonnes of waste per week from Jamestown Fishing Harbour. The initiative is moving towards becoming an independent community-based co-operative and is currently constrained by limited access to waste trucks.
Household textile collection pilot	A pilot for household textile waste segregation and collection is being developed with a community partner. Households in targeted neighbourhoods are engaged on collection needs, with logistics designed to integrate household textiles into sorting capacity at The Or Foundation's centre next to Kantamanto.

These business models sit within three strategic opportunities already defined for the textiles value chain: strengthening and enabling existing reuse practices, creating and growing recycling pathways and domestic circularity, and bridging formal and informal manufacturing.

13.2 Outcomes and benefits

The roadmap describes a range of economic, environmental and social outcomes associated with these models. Where wording such as “benefits” or “opportunities” is used, it is retained here.

Model / pathway	Economic aspects	Environmental aspects	Social aspects
Upcycling enterprises in Kantamanto	Several millions of garments circulate every week through reuse, repair and remanufacturing, supporting micro-business income generation.	Large volumes of garments are kept in circulation rather than discarded, forming the backbone of a high-intensity reuse and upcycling hub.	Approximately 75% of Kantamanto’s workforce are women and youth, and the vision is to transition hazardous or loss-making roles into skilled, fairly paid circular professions such as upcycling, tailoring and textile innovation.
Fibreboard (“Cassboard”)	Facilities and product formulas already exist to run commercially viable businesses that turn unwanted clothing into fibreboard objects, using equipment engineered and made in Ghana. These products create added-value opportunities for domestic and export markets and can generate employment.	Fibreboard production diverts textile waste from disposal and reduces consumption of virgin materials such as plywood in certain applications.	Work at the Material Technology and Transformation Lab has already created 16 independent jobs outside The Or Foundation’s internal team.
T-shirt yarn (“Tarn”)	Tarn and Tarn-based products (such as bags and bottle holders) represent revenue-generating uses for cotton-rich, low-quality items that otherwise have little value.	Converts problematic waste garments into durable products, contributing to reduced textile waste.	Provides additional livelihood opportunities linked to product making and sales.

Model / pathway	Economic aspects	Environmental aspects	Social aspects
Shredder-as-a-Service	Responds to identified demand for shredding services and shredded textile material, and is described as a product-as-a-service opportunity that can provide economic opportunities for local machinery ownership.	Creates a waste-management pathway for low-value garments and textile offcuts, preparing material for further recycling or transformation.	Local ownership of shredding equipment can strengthen economic agency among market actors.
Disassembly-as-a-Service	Supplies garment components (for example collars, sleeves and bodies) in a value-added form suitable for upcycling and remanufacturing at scale.	Provides a pathway for blended fibres and synthetics that may not fit other recycling routes, including items such as rain jackets that can become waterproof bags when taken apart safely.	Supports replication at scale of remanufactured designs, which can underpin stable work for remanufacturers.
Fibre-to-fibre pilots	Aim to build a business case for industrial-scale recycling machinery that could offset imported raw textiles with recycled materials.	Explore the technical possibilities of textile-to-fibre recycling, including material yields that vary with fibre length, with a view to operation at a hydro-powered site.	Open pathways for skilled technical roles linked to industrial recycling if machinery is installed.
Kanta Keepers	Lay the foundation for further material processing based on a dedicated, segregated textile waste stream collected from market actors.	Ensure that textile waste from Kantamanto is collected systematically rather than left to leak into the surrounding environment.	Provide work for 36 market members and are being supported towards formal co-operative registration, bridging formal and informal practices.

Model / pathway	Economic aspects	Environmental aspects	Social aspects
Tide Turners	Regularly remove large volumes of waste (over 30 tonnes per week) from Jamestown beach, with the potential to link to recycling and transformation pathways.	Help prevent textile waste from entering marine ecosystems and support the restoration of coastal environments used by more than 2,000 fishers.	Involve 60 paid members and about 70 community volunteers, strengthening community engagement and cooperative approaches to environmental remediation.
Household textile collection pilot	Seeks to integrate household textile waste into existing sorting and recycling capacity, which can underpin future business models once logistics and volumes are established.	Addresses limited collection capacity for domestic textile waste and helps reduce the contribution of household textiles to wider waste-management challenges.	Provides a structured way for households to participate in circular textile practices via targeted neighbourhood engagement.

13.3 Next steps and requirements identified

For these models to mature, a set of specific next steps and requirements is already described:

- **Fibreboard and Tarn**
    - Facilities, formulas and equipment for commercially viable fibreboard and Tarn production are already in place, and 16 independent jobs have been created. The missing element identified is sufficient revenue from sales. Circular businesses are noted as being at risk if they rely only on product innovation without active marketing, as word-of-mouth is not considered a viable strategy. Investment and coordinated strategies are therefore called for to bring these products into new markets and drive sales.
- **Shredder-as-a-Service**
    - The shredder technology has been developed with multiple power-supply options. The next step stated is to develop the business model for distributing and operating shredders as a waste-management pathway, while enabling local machinery ownership.
- **Disassembly-as-a-Service**
    - The model is presented as a business opportunity that can provide large, standardised batches of components and a route for difficult-to-recycle

materials. Further work is envisaged in exploring business models of "Product-as-Disassembly" in the medium-term action plan.

- **Fibre-to-fibre recycling**
    - Fibre-to-fibre pilots are underway with international technology providers to establish the business case for industrial machinery. Consistent electricity is named as a significant hurdle for efficient operation, and the strongest opportunity, if a viable business case exists, is at the hydro-powered Akosombo Industrial Company Limited site. Installation of fibre-to-fibre technology is listed as contingent on the outcome of these pilots and the business case.

- **Kanta Keepers and Tide Turners**
    - Both initiatives are moving towards independent, community-based co-operative status. Kanta Keepers are being supported through the Department of Co-operatives, while Tide Turners are in the process of securing a dedicated truck by the end of 2025 and require business training and capacity-building to operate as a co-operative. Constraints related to limited truck availability from the Accra Metropolitan Assembly are explicitly noted.

- **Producer Responsibility Organisation and HS code reform**
    - Management of fund distribution through a regional Producer Responsibility Organisation is included as a medium-term action, with progress described as "in development" but dependent on regulatory frameworks. A proposal for a new HS code to distinguish upcycled, value-added goods from secondhand clothing is in progress, with work on code introduction ongoing.

13.4 Incubation support mechanisms

Several structures and programmes already function as practical incubation mechanisms for these models:

- **Material Technology and Transformation Lab** - Hosts R&D and early-stage commercialisation of fibreboard and Tarn, with 16 independent jobs created and groundwork laid for spinning off material collection and sorting as an independent co-operative.

- **Kanko Hub and regional hubs** - Provide shared spaces in Kumasi and other regions for circular economy learning, co-creation and skills development linked to garmenting, design and recycling.

- **Training and digital curriculum** - Training programmes for retailers, tailors and upcyclers are in development and on track, with plans to digitise modules for national dissemination once key milestones at Kantamanto are achieved.

- **Co-operative development pathways** - Structured support is being provided to Kanta Keepers and Tide Turners to register as co-operatives, linking them to municipal authorities and the Department of Co-operatives.

- **Events and exchanges** - Activities such as Obroni Wawu October, multi-stakeholder consultations in Kumasi and Tamale, and delegation trips across African countries and to Europe and the UK serve as platforms for showcasing circular textiles work, knowledge exchange and relationship-building with potential partners.

13.5 Scaling path

The action plan sets out a phased trajectory for scaling these business models and supporting systems:

Phase	Approximate timeframe	Key business-model related actions and status
Short term	0-24 months	Commercialise fibreboards for speakers, sound insulation, furniture and hangers (in progress); develop Shredder-as-a-Service (in development, shredder built as of May 2025); commercialise T-shirt yarn (on track and ongoing); establish and operate the Kanta Keepers co-operative (established 2024, project on track); maintain weekly beach clean-ups removing around 30 tonnes of textile waste (Tide Turners currently exceeding 30 tonnes per week); conduct R&D on decomposition and bioremediation; develop the business case for fibre-to-fibre recycling (awaiting pilot trial results); pilot household secondhand clothing collection with a community partner; develop a proposal for a new HS code to distinguish upcycled, value-added goods from secondhand clothing (in progress).
Medium term	3-5 years	Manage fund distribution through a regional Producer Responsibility Organisation (in development, largely reliant on regulatory frameworks); strengthen collaboration across African circular economies through delegation trips and exchanges (work ongoing); enforce a regulatory framework eliminating dangerous head-carrying (campaign in development); explore business models of Product-as-Disassembly (not started); Commercialise fibreboard material for certified construction use (not started); install fibre-to-fibre recycling technology, contingent on business cases currently awaiting trial completion; introduce a new HS code to distinguish upcycled, value-added goods from secondhand clothing (work ongoing).
Longer term	5+ years	Complete the full upfit of Kantamanto market infrastructure, subject to demonstration site success and funding; commercialise fibre-to-fibre product output, subject to successful pilots and technology installation.

CONCLUSION

Conclusion

Ghana's textiles circular economy roadmap brings together years of community-rooted work, detailed diagnostics and policy dialogue into a single, practical pathway for action. It reframes Ghana's role in global textile flows: not as a passive endpoint for surplus clothing, but as a country with the knowledge, infrastructure and ambition to lead on justice-led circularity in textiles.

At its core, the roadmap recognises that circularity is not starting from zero. Kantamanto Market already recirculates millions of garments each week; tailors, seamstresses, upcyclers, smock and kente weavers already embody low-waste practices; and community initiatives are already removing tens of tonnes of waste from beaches and streets every week. The task now is to secure and scale these practices, reduce the harms that currently accompany them, and embed them in a governance and financing system that is fair, predictable and future-proof.

The roadmap organises this task around four strategic goals:

- Upfit Kantamanto Market into a safe, electrified, climate-resilient circular hub.
- Eliminate dangerous head-carrying by creating dignified logistics and pathways into skilled circular work.
- Scale waste collection, clean-up and co-operative ownership of new material pathways, from market sorting to coastal remediation.
- Align customs, fiscal and regulatory frameworks with circular principles, including clearer treatment of secondhand and upcycled goods and a fairer distribution of responsibility along the value chain.

These goals are supported by a hub-and-spoke implementation model that anchors early investment and learning in Kantamanto while deliberately building replication pathways through Kumasi, Tamale and the Central Region. They sit on a strong analytical base: quantified material flows and loss points, mapped pollution hotspots, detailed social baselines, and tested pilots in areas such as fibreboard, T-shirt yarn, Shredder-as-a-Service, Disassembly-as-a-Service and co-operative waste systems.

Taken together, the roadmap does five things:

- **Sets a clear direction of travel**
  - Articulates a 2030 vision of a justice-led, zero-waste textile system that is inclusive, low-carbon and resource-resilient.
  - Defines what "good" looks like across infrastructure, labour, environment and policy, rather than focusing narrowly on waste alone.
- **Prioritises where and how to act first**
  - Identifies Kantamanto as the flagship demonstration site and three core opportunity areas: strengthening reuse, growing recycling pathways, and bridging formal and informal manufacturing.
  - Phases actions into short-term (0–24 months), medium-term (3–5 years) and longer-term steps, so that foundational work, pilots and scaling are clearly sequenced.

- **Connects people, policy and finance**
    - Clarifies the roles of national ministries, metropolitan assemblies, TVET institutions, co-operatives, women's associations and financial actors.
    - Outlines financing options that can shift the burden away from workers and communities towards more balanced responsibility, including producer-side contributions, levies and targeted investment in infrastructure and enterprises.
- **Builds on what already works**
    - Treats existing practices, reuse, repair, upcycling, handweaving, citizen-science monitoring, skills programmes, as assets to be strengthened and protected, not as informal anomalies to be designed away.
    - Positions co-operatives and associations as central vehicles for participation, ownership and long-term stability.
- **Keeps justice at the centre**
    - Puts the safety, income security and representation of women and youth front and centre, especially those currently in the most hazardous roles.
    - Links local outcomes in markets and coastal communities to wider conversations on extended producer responsibility, global trade rules and fair transitions.

If delivered with consistency and genuine partnership, this roadmap offers a credible route to a different reality by the end of the decade:

- a Kantamanto that is safer, better serviced and structurally recognised as a circular hub;
- a labour force that has moved away from dangerous and loss-making roles into skilled, fairly remunerated circular professions;
- coastal and urban ecosystems where textile waste is the exception rather than the norm; and
- Ghanaian circular textile enterprises that can compete and be recognised in regional and global markets on fairer terms.

The roadmap is not a guarantee, but it is a clear invitation: to government, brands, financiers, communities and international partners to align their decisions with this pathway, invest in the people and infrastructures at its heart, and treat Ghana's textiles system not as an afterthought of global overproduction, but as a cornerstone of the world's circular future.

About Ghana Circular Economy Centre

The Ghana Circular Economy Centre (GCEC) project supports Ghana's transition to a resource-efficient and inclusive circular economy by promoting innovation, strengthening policy and institutional frameworks, and building capacity across key value chains, including plastics, agriculture and agro-processing (cassava, mango, pineapple and tilapia), and textiles.

The project is implemented by the United Nations Industrial Development Organization (UNIDO) in partnership with the Ministry of Environment, Science and Technology (MEST), with funding support from Global Affairs Canada.

The GCEC serves as a national hub for knowledge generation, stakeholder engagement, and the piloting of circular solutions to advance sustainable industrial development, improve resource efficiency, and create decent jobs.

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