

CIRCULAR ECONOMY BUSINESS CASE STUDIES IN SOUTHEAST ASIA



Made New

-  Vientiane, Laos
-  Handbags, handcrafted fabric goods
-  www.itsmadenew.com
-  Analysis period: 2023-2025

Traditional Weaving Repurposes Discarded Plastic Bags into Durable Woven Products

Business Spotlight

Made New, a social enterprise founded in 2023 by two American entrepreneurs and one Lao national, collects discarded single-use plastic bags in Vientiane for processing and repurposing into recycled plastic thread. Using traditional Lao weaving practices, this thread is woven into various types of bags and totes, as well as other products. The key innovation in the manufacturing procedure involves weaving recycled plastic thread, retrieved from discarded plastic bags, with a cotton warp on a traditional Lao loom. A custom 3D-printed slicing tool and use of a natural local soap ensure quality and eco-friendly processing of the waste plastic bags, thus eliminating the purchase of virgin plastic. From June 2023 to January 2025, over 500 kg of plastic waste was repurposed; washing the plastic thread required some 110 l of water/kg – which is less than that required for washing cotton or silk; and without the use of water-intensive dyeing. Operating with a small team and free of charge discarded plastic bags, Made New is aiming to achieve profitability. The company's plans include launching a wholesale network in Laos and for tourism markets, partnering with luxury brands, expanding collection of waste plastics via waste-sorting networks, and piloting

recycling methods for waste plastic bags that are unsuitable for weaving.



Keywords

Plastic waste; Repurposing; Handicrafts



Innovation

Product/service design, Manufacturing, End-of-life management, Resource circularity, Resource efficiency



Context and baseline

In Lao PDR in 2020 the national rate of waste generation was estimated at around 910,000 tonnes per year, with waste collection tending to be limited to towns and cities.¹ The Japan International Cooperation Agency (JICA) found that in Vientiane alone, 405 metric tonnes of waste was disposed of in landfill on a daily basis in 2020, of which only 20 MT were recycled each day.² Recycling single-use plastic bags continues to be a significant challenge given their weight, which is very low. Yet they cause widespread environmental problems far out of proportion to their small mass, including littering public spaces, clogging canals, choking wildlife in the Mekong and the oceans, and posing human and animal health risks when they are burned in the open.

The idea for Made New emerged when its founders (two Americans from the USA and one Lao) recognised that traditional Lao weaving techniques could be applied to discarded plastic bags to create durable and attractive products. Early partners included local collection stations across Vientiane, informal weaver groups in Xiengkhouang province, and international backers such as Professionals International, which provided strategic and financial support for pilot production and community outreach.

Innovation

The Made New core offering is ethically crafted goods – totes, pouches, and other fabric products – whose outer shells are woven from upcycled plastic-bag thread on a cotton warp into the desired outer shape, then lined with fabric woven from locally grown Lao cotton. Made New gathers discarded single-use plastic bags at the collection stage, then transforms them into valuable recycled plastic threads to be used in various textile products. Made New believes that their innovation lies in blending the cultural expertise and heritage of weaving with the contemporary problem of plastic waste.

In terms of innovation, blending centuries-old weaving with contemporary circular-economy principles is a new approach within the Lao market, and it showcases how Lao traditions can be applied to start tackling the problem of plastic waste. By partnering with businesses, schools, and organisations to collect plastic bags, Made New is cultivating a network of recyclers in the country. By using Lao-made soaps (for cleaning with

biodegradable detergents) and traditional weaving techniques, Made New is creating a Lao-grounded circular value chain.

Circular Economy Impact

Made New contributes to a circular economy by recovering waste plastics and repurposing them into new textile items, illustrating resource circularity, and doing so with minimum use of energy and water, which is an example of resource efficiency.

During its first 18 months of operation, and with a staff of four people, Made New has diverted over 500 kg of discarded single-use bags from the waste stream via collection partners in Vientiane. How much water is required depends on the condition of the discarded plastic bags: on average roughly 110 l of water are required to wash one kg of plastic waste. No dyes are used because the colour of the fabrics produced are those of the coloured plastic bags themselves. Made New uses double-barrel washing machines that are more energy and water efficient than other washing methods to wash the discarded plastic bags.

Using waste plastic as a substitute for virgin plastic eliminates the need to manufacture new textile yarn, and the environmental impacts associated with the production of virgin plastics. In addition, the problem of plastic waste disposal, which negatively affects the environment when it is dumped, landfilled or burned, is eliminated. The Made New model aligns with resource-circularity strategies by transforming zero-value plastic waste into durable goods, efficiently reclaiming materials, and substituting repurposed waste inputs for virgin plastic.



1 World Bank (2023). <https://documents1.worldbank.org/curated/en/099100002182296296/pdf/P17101101230c40bc096bf0a757bd16eb65.pdf>

2 JICA (2021). Data Collection Survey on Waste Management Sector in The Lao PDR, Japan International Cooperation Agency, <https://openjicare-port.jica.go.jp/pdf/12345914.pdf>

Business and market impact

The initial investment of Made New included business registration, facilities, washing station, administration staff, sewing stations, and a 3-wheeler electric cargo truck to collect plastic bags. Ongoing expenses include training for new weavers, bag slicing tool development, and all of the inputs required for product fabrication. It should be noted that Made New has never purchased any discarded plastic bags. Although the business runs economically, and waste plastic feedstock is acquired for free, scaling up has thus far remained a challenge. In early 2025, Made New rented a larger plant facility and hired new staff to meet increasing customer demand. The company expects a pay-back period of 2–4 years.

Since its 2023 inception, Made New has increased slowly to produce everyday products like pen pouches, zipper sleeves, crossbody purses, and market totes, adapting the company's products and quantities in response to customer feedback. Plans to introduce a wholesale network across Laos and internationally are underway, to target the hospitality and tourism sectors already interested in eco-branded merchandise. Made New is also seeking collaborations with luxury brands to increase their exposure and income.

Stakeholders

Made New provides detailed monthly impact statements to partner schools, businesses, and organisations, quantifying the number of plastic bags collected, kilograms of material diverted, and estimated safe hours of work created. These reports help institutions track their environmental contributions and set targets for the coming months.

The Made New team has also delivered interactive presentations at international schools, engaging students with hands-on demonstrations of how discarded plastic bags are transformed into threads, inspiring and educating them to better manage plastic waste.

Traditional weavers gain access to flexible work, weaving on their own schedule in their own home. They earn fair, above-market wages, along with access to materials and an outlet for their woven products.

Implementation

Key barriers have included the need to convince traditional weavers not to purchase and use new plastic bags for thread production, but that it is necessary to produce plastic thread from discarded and recovered plastic bags and weave the into quality fabrics, so that traceability and accountability in the recycling stream is achieved. To address this difficulty, Made New limits plastic bag collection to within the Vientiane city boundaries, where the chain of custody of the supplied waste plastic bags can be followed. The company rigorously tracks inputs versus outputs, comparing the total weight of waste plastic waste bags delivered to their artisans against the weight of fabric they produce.

Maintaining uniform fabric quality across multiple weavers posed another challenge. In response, Made New developed a custom 3D-printed slicing tool: a rack of razor blades is precision-run over the plastic bag, cutting it into identical-width strips. This innovation guarantees that all weavers use identical 'thread' dimensions, which streamlines the weaving and contributes to the consistent quality of woven fabrics.

For scaling up, Made New sees strong potential in partnering with existing waste-sorting networks to tap into existing as well as new and often largely informal collection networks. One challenge is handling ripped or torn plastic bags, which cannot easily be converted into weavable thread. The company is exploring other recycling methods for torn bags.



Takeaways

Made New demonstrates that combining traditional crafts with contemporary circular-economy principles can create marketable products from previously discarded plastic waste. The company's journey highlights the power of local partnerships to synergise among decentralised artisans, waste collector networks, and community engagement.



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Disclaimer

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