SEA circular
solving plastic pollution at source

Giving old clothes new life

Empowering inclusivity, and reusing plastic

This case study demonstrates market-based solutions towards **"less plastic wasted"**, exemplary solutions for transformational changes in the way plastic is managed in the value supply chain. Circular Economy approaches, including business incentives for plastic reduction and recycling, are used, leading to increases in plastic re-use and recycling, and to the reduction of single-use plastic packaging.

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COBSEA
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Sweden Sverige

Background

Woven into the clothes that we wear, the towels, blankets and bed sheets, the cushions, curtains, and even the carpets that we use in our homes and places of work, plastic-based textiles are part and parcel of how we live. **Mass production of synthetic fibres** from petroleum-derived chemicals has led to low production cost for modern clothes, meaning that they are produced and consumed in large quantities (from 28 million tons in 2002 to 61.4 million tons in 2017, according to the Korea Chemical Fibers Association, Korea (2020)). With strong demand enabled by the allure of fast fashion, equally large volumes of discarded clothes and textiles currently end up in landfill, which is a big source of plastic leakage that poses a challenge in the quest for circularity.

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The problem

The financial crisis of 2008 made it harder for millions of parents to provide for their families. For young Pamela Mejia, however, this provided the **inspiration** to finally expand a T-shirt printing business she started when she was 17 years old, into an online clothing store on Facebook. Managing the business meant constant exposure to the world of **clothing, shoes and accessories** – and yes, the inevitable question of where **old clothes ended up**, given the fast turnover of fashion and trends.

Address the growing bulk of
hand-me-down, donated,
or even discarded clothing:

A textile recycling business!

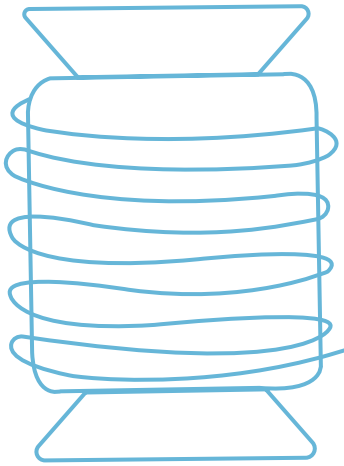
This reflection led the young entrepreneur to create a social enterprise that could help address the growing bulk of hand-me-down, donated, or even discarded clothing: a textile recycling business.
Phinix Textile Recycling, or simply Phinix, is a play on words indicating where Pam's business is located (Philippines), and phoenix, which aptly conveys something rising from the ashes, or a thing of beauty and **renewed use from something old or that had already been discarded.**

The process

Phinix is a textile recycling centre that collects textile wastes and transforms them into **higher-value products** such as footwear, fashion accessories and lifestyle pieces. The whole process for this transformation takes an average of three to four months (collecting and conceptualization, prototyping and quality assurance (QA), and production) from the time where enough material is available to produce a line.

1. Through word of mouth, donors bring **old clothes** from households and schools, as well as textile wastes such as **fabric scraps and fabric rejects** from clothing factories and fashion companies. Where distance is not an issue, requests for pick-up can be arranged with private households, small businesses (furniture companies that give their leather straps, or offcuts from carpets), and hotels or department stores (linen and bedsheet brands, test products, etc.).

2. The materials are stored and aggregated in a warehouse, which is currently Pamela's family's garage. The textiles are grouped primarily according to colour. Storage is a critical component as items of old clothes/scraps of material of one colour in small amounts may need to be stored for longer periods, or until there is a quantity that could support sufficient production volumes.



Haley Owens on unsplash

fabric scraps and fabric rejects

from clothing factories and fashion companies

3. Even then, the process is highly bespoke. Upon reviewing the available materials, Pamela creates the design theme for the products. The materials are then laundered or washed by hand, and then handed over to either the shoemakers or the weavers:

• Old velvet for example is good for turning into footwear. Phinix works with shoemakers or zapateros from Marikina (a city once known as the 'Shoe Capital of the Philippines', but whose industry has been slowly dying due to the import of cheap shoes from China), who produce lovely pieces.

• Cotton or polyester is cut into long threads/strips, which are then used as raw material to loom and interweave with other natural materials (e.g. abaca, or Manila hemp) into new bulk material. To make these, Phinix works with a community of women with disabilities who not only earn money from the process but, more importantly, benefit from the meditative and relaxed state that can be induced by a handweaving style inspired by saori, or weaving in a manner to express oneself freely.

• Phinix has lately been given almost 200 old and authentic Japanese kimonos which were destined for landfill. These were recycled and given new life in the latest line, Hinotori, which literally means bird of fire

The materials are laundered or washed by hand, and then handed over to either

the shoemakers or the weavers

Marika Sartori on unsplash

4. Marketing for the finished clothes and accessories is done using social media (Facebook and Instagram). Until COVID-19, Phinix was also selling in pop-up stores in Manila and in Kuala Lumpur, Malaysia.

Challenges

• Storage

Sourcing raw materials and old clothes is not a problem. However, **storage space is limited** and will have to be scaled up with a larger warehouse to accommodate the higher volumes of donations and clothes that are being given to Phinix. Due to space limitations, Phinix has had to turn down many donations.

• Volume

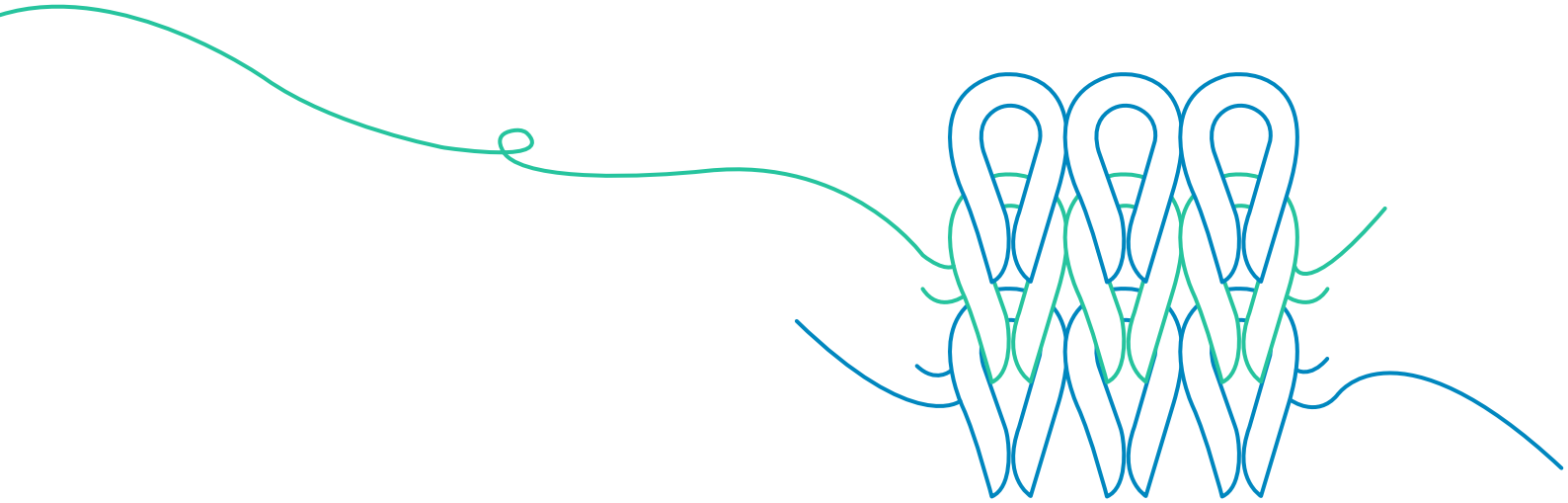
The lead time from **collection to upcycling** the actual output (either cut directly from the fabric or cut into strips) can be longer (meaning the stay in storage is longer) than ideal. It would be shorter if the minimum volume requirements were easily met with adequate volumes of homogeneous colours.

• Growth

As a sole proprietorship, Phinix is faced with issues related to Pamela's schedule and all the tasks that have to be managed directly by her. Nevertheless, there is the possibility to grow with business partners at the right time in the future, if only to expand impact and "save" more textiles destined to be burned or thrown into landfill.

• Funds

Availability of funds and capital for Phinix would allow for more permanent storage space to be acquired, as well as for machinery to support future plans. Pamela remains very active participating in challenges and incentive programmes to increase visibility of her work and possibly even access impact funding that could support the enterprise's vision and reach.



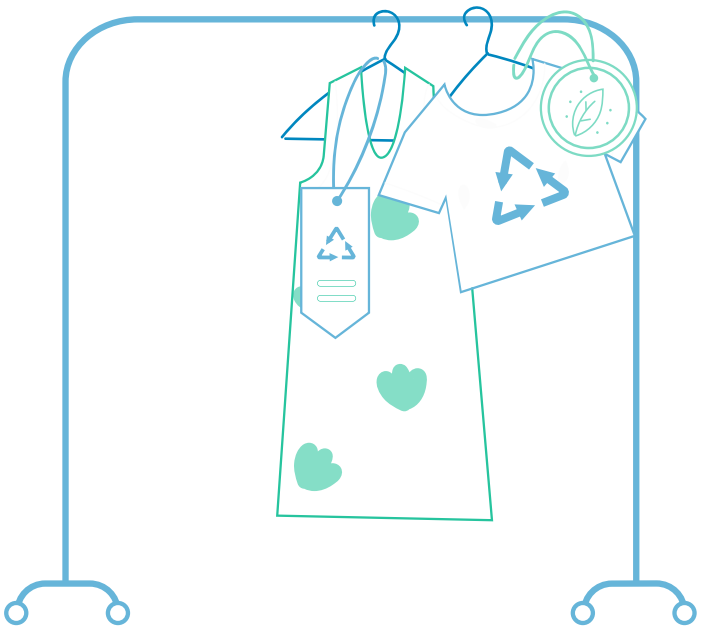
Results - the impacts

• Less wastage:

(Avoided waste) Since starting in 2015, Phinix has facilitated the re-use of almost 4,000 kilos of textiles, saving it from being sent to landfill.

• Community support:

Employment for five zapatero families in Marikina and support for the livelihood programmes led by the VSA Philippines Textile Weaving Community – a grass-roots organization composed of persons with disabilities who produce the saori weaving for Phinix's clothes.



Re-use of almost

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Moving forward

This year, Pamela is looking at ways to **improve storage.** A real warehouse would be useful, especially to receive and organize the textiles. This would allow for **bigger volumes**, which would have a knock-on effect of more raw materials for shoes and woven clothing and, therefore, **more employment for shoemakers and weavers.** Since it is still highly bespoke, there is a limit to the quantities that can be produced – which will continue to attract an online clientele that is looking for more **meaningful and sustainable clothing choices.**

Furthermore, in order to address the minimum volume requirement for recycling collected materials, Phinix has made plans to use new applications that do not separate by colour. Pamela has already determined that using the **textiles as materials for making bricks** would be the next step towards making her production processes more efficient, and is looking to acquire a mechanical textile shredder and moulding press. The upcycled products are to be sold online as well as in home improvement centres, where it will be possible to distribution to a wider public.

PHINIX

We thank Phinix for sharing details of their exemplary innovations in the SEA Circular project's series on the plastic value chain.

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The SEA circular project – Reducing marine litter by addressing the management of the plastic value chain in Southeast Asia is implemented by the UNEP Regional Office for Asia and the Pacific and the Coordinating Body on the Seas of East Asia (COBSEA), with funding support from the Government of Sweden. SEA circular aims to reduce and prevent plastic pollution and its impact by working with governments, businesses, civil society, academia, and international partners. The initiative promotes market-based solutions and enabling policies to transform plastic value-chain management, strengthens the science base for informed decision making, creates outreach and awareness. The project leverages COBSEA's regional mechanism to tackle the transboundary challenge of marine litter in a harmonized manner.

www.sea-circular.org