

CIRCULAR ECONOMY BUSINESS CASE STUDIES IN SOUTHEAST ASIA



Saeng Charoen Grand Co. Ltd.

- Bangkok, Thailand
- Textile and apparel, home textiles, and home decoration
- www.sc-grand.com/en
- Analysis period: 2020-2023

Turning Fabric Waste into New Fabric

Business Spotlight

SC GRAND started off as a business venture to repurpose used clothes, and since 2020 has evolved progressively into a business specialising in the mechanical recycling of all types of textile wastes, including discarded fashion and workwear, to make new garment- and home-textile grade fabrics. SC GRAND diverts waste textiles from disposal in landfill or for incineration, and turns these into substitute like-new, recycled fabric. Recycled fabric replaces the virgin or primary fabric or yarn that would otherwise have been used, thus avoiding the environmental impact of producing them (thereby saving energy, water and chemicals, and preventing waste and greenhouse gas and other emissions). SC GRAND uses some of its recycled fabric in its own retail collection (such as sweaters, hoodies, shirts, and caps under its proprietary brand, Circular) and for the production of workwear and other textile items for business partners. Moreover, the company collaborates with both designers and textile and garment makers to create recycled fabric-based collections. By the end of 2023 SC GRAND was operating at rate of approximately 400 metric tonnes of textile waste per month, and on track for achieving its own roadmap 2020–2024 to become fully profitable in 2024 after substantial investments in

technology development and acquisition, business development and branding. SC GRAND employs 240 people in Thailand, and some of them have been with the family business since it was established by the grandmother of the current director.

Keywords

Recycled fabric, Textile waste recovery, Circular clothing; Circular hometextiles

Innovation

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



Analysis of SC Grand

Context and baseline

It takes an estimated 2700–3000 litres of water to grow enough cotton to produce one single T-shirt, in addition to using large quantities of chemicals like pesticides and dyes along with energy in cotton growing and processing. Using energy and producing chemicals generate significant greenhouse gas (GHG) emissions, adding to the carbon footprint of garments.

SC GRAND was established in the late 1960s by the grandmother of the current director to trade in textile waste, enabling the repurposing of rags for low-value purposes like stuffing for upholstery, cleaning cloths or paper. His parents developed the second-generation business of mechanical thread recovery from textile waste. The current third generation is pursuing the opportunity to add further value by producing fabrics and garments from textile waste to respond to high textile sector competition on low cost. Therefore, SC GRAND decided to reposition itself as a supply chain partner in repurposed waste fabrics and textiles in Southeast Asia.

With the mechanical recycling of textile waste, SC GRAND diverts the disposal of textile waste and by-passes the production of new fabrics, thus avoiding resource use and environmental impact in both textile waste disposal and production of virgin fabrics.

Innovation

SC GRAND customised and integrated technologies to achieve fabric-to-fabric mechanical recycling without the polluting dyeing and wet processing steps. The company mechanically sorts shredded fabric and yarn by their physical properties, material and colour, to produce recycled fabric that retains the original colours.

SC GRAND manufactures its circular fabrics for wholesale use by garment makers and also offers opportunity for made-to-order customer-specific fabrics and finished textile goods, for both apparel such as T-shirts, polos or hoodies, and accessories such as caps and bags. SC GRAND sources textile waste from different sources, including old and unused uniforms, cutting waste (from garment factories), excess material and product inventories and post-consumer collection of discarded fashion. To encourage post-consumer collection, it created a circular-club¹, registered members are eligible for a THB 100 discount on the purchase of circular products for every acceptable garment piece dropped off in the store.

¹ <https://circular-club.com/en/club>

The innovations cover both recovery of fibre from textile waste (end of life management of textile waste) as well as using recovered fibre to make new fabrics and products (manufacturing) and associated fabric and product design. This integration is a first for Thailand, and a leading example in Southeast Asia. SC GRAND has obtained accreditation on different international voluntary sustainability standards, including OEKO-TEX Standard 100, Global Recycled Standard (GRS) and Global Organic Textile Standard (GOTS) for exporting, especially to Japan and EU countries. Moreover, within Thailand, SC GRAND is certified by the Thailand Greenhouse Gas Management Organisation that its fabric is made from 100% sustainable materials with lower carbon footprint.

SC GRAND is working extensively with designers, manufacturers and users of garments and hometextiles to create recycled textile products, including making circular staff uniforms (Koi Thé, BMW Europa Motors and others), supplying recycled fabric to local-brand clothing factories in Southeast Asia, customising circular fabrics to meet the demands of brand designers (e.g. YOTHAKA and Carnival@Green label), and co-creating SC GRAND branded home textiles and sustainable living collections.



Circular Economy impact

The innovations developed and implemented by SC GRAND contribute to resource circularity by recycling fabric waste into recycled fabric, and resource substitution by using renewable energy.

SC Grand produces yarns, fabrics, and clothing from textile wastes and mechanically recycles these back into fabric for home textiles and garments, including uniforms and fashion items. The company uses 400 metric tons of fabric waste monthly, composed of 60% textile factory offcuts (cotton, polyester, and others), 30% used uniforms and 10% other post-

consumer items. Finished products are made with customer-specific blends of yarns, and the company is able to manufacture products composed of up to 100% recycled fabrics.

Fabric recycling directly diverts textile waste from landfill or incineration and avoids the environmental impact that would otherwise be created with virgin textile production. In 2022 SC GRAND commissioned a third-party expert consultancy to conduct a Life Cycle Assessment (LCA) on its recycled fabric. The LCA confirmed the environmental benefits from textile recycling: per 1 kg substitution of non-circular with circular non-dyed and non-printed fabric, 440 litres of water are saved (equal to 231 days of water requirement for one person), energy use is reduced by 6.50 kWh (equal to 500 hours of lightbulb energy saved), and 3.8 kg of CO₂ emissions are avoided (about 15 km of driving emissions). With monthly recycling reaching 400 metric tonnes, water use and waste water reduction amounts to about 2.1 million m³ annually, and GHG emissions are reduced by over 18,000 tons CO₂ annually, compared to using virgin yarn and fabric.

Moreover, SC GRAND is recycling smaller quantities of other materials, including some 30 ton of bags during 2021–2023.

To achieve substitution of fossil energy with renewable energy, SC GRAND installed 1 megawatt capacity of rooftop solar panels.



Business and market impact

SC GRAND decided to expand its textile recovery business into full fabric-to-fabric circularity in 2020, starting with R&D in 2020–2021 and developed partnerships with leading local and international brands and producers during 2022–2023.

SC GRAND is still on track as planned in its 5 years roadmap 2020–2024, and expects to be profitable in 2024 and have recovered its intensive investment in development and acquisition of equipment, establishment of business processes and development of market, certifications, and branding. In 2024, recycled material products are equivalent to 20% of total sales. The company set up to increase

recycled material products to 40% of total sales in 2025 and to 70% of total sales in 2028.

SC GRAND plans to expand to become a leading hub for textile waste recycling by 2028, with the possibility of getting a listing on the stock exchange of Thailand, or enter a merger and acquisition (M&A) with 2–3 textile recycling companies or joint venture such as with a company specialised in finished products. However, current priority of SC GRAND remains to ground-truth its business and operations to enable sustainable growth that can last over time and delivers positive environmental impact.

Stakeholders

SC GRAND employs 240 staff in its operations in Thailand, some of whom have been with the family business since it was established by the grandmother of the current director.

At regional level, SC GRAND is working closely with garment factories around Southeast Asia to acquire their respective textile wastes for recycling into new textiles. The company is also working closely with global fashion and sport brands who source garments and other textile items in Southeast Asia to ensure their fabric waste is recycled in a transparent and accountable manner by SC GRAND. Additionally, SC GRAND is seeking to empower Thai local weavers by utilising their textile waste and – where available – some of their other wastes for mechanical recycling by SC GRAND.

Implementation

SC GRAND plays the role of hub and focal point for service providers to link the supply chains of repurposed waste fabric and textiles with multi-stakeholder collaboration. Waste segregation of, e.g. used uniforms from corporate and customer sources, has been implemented. Several designers, manufacturers and end-users of garments and hometextiles have created new and value-added products from recycled waste fabric and textile. SC GRAND is thus expanding to the regional level within Southeast Asia.

SC GRAND successfully turns textile offcuts (cotton, polyester, and others), and used uniforms into recycled fabric. The material can be used in every colour except white, so SC GRAND informs its customers about this condition in advance.

New opportunities are customers' requirement on traceability and transparency in their ecosystem, especially in Japan and Europe. New biotechnology, and new recycling technology will be developed with SC GRAND's strengths and experiences, and strategic partnership around the world every year.

Takeaways

SC GRAND inspires the fashion and textile industries along with others, as well as consumers to believe that everyone can be part of the solution for our common future. SC GRAND believes that all parties are in this together and that the circular economy is a key solution for a healthier planet and the brighter future of its people. SC GRAND feels encouraged by the positive responses it is receiving from leading brands, garment manufacturers and institutions for its fabric-to-fabric recycling business venture.



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