



REFRAME

**Circular Economy strategy FRAMEwork
for sustainable SMEs**

IO3: Circular Economy Implementation Framework (CE Framework)

Disclaimer:

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SIGMA



5.5 Crafts Sector

Craft products are considered the ones that require a high degree of handmade input during their production and, many times, are culturally tied to the country of their origin. Historically, crafts used to rely on the local community for a customer base, but today's digital technology enables craft products to reach broader customer networks. Contemporary craft firms may employ traditional or modern materials and technology in their production and typically their products are produced as a one-off or at a limited number (Fillis, 2004). Crafts encompass a wide range of disciplines and craft products can be anything from home furniture and jewellery to art woodware and metalware, pottery and beer.

The craft industry plays an important role in international trade. According to the Trends in International Trade in Creative industries of the United Nations Conference on Trade and Development (UNTACD), the international trade in arts and crafts has increased from \$19.9 billion in 2002 to \$35 billion in 2015, having an annual average growth rate of 4.42% (UN, 2018). The size of the creative market in the E.U., in 2017, was \$35 billion, according to the Association for Creative Industries' (AFCI) UK branch. That includes traditional arts and crafts hobbies as well as floral and food-based creativity.

Circular economy business models aim to transform crafts in a way that tackles global challenges such as climate change and biodiversity loss through waste elimination, keeping resources in a closed loop and natural systems regeneration (Figure 6). Crafts intending to implement such models should understand that this transformation requires a re-designing of the entire value chain in which craft products are made.

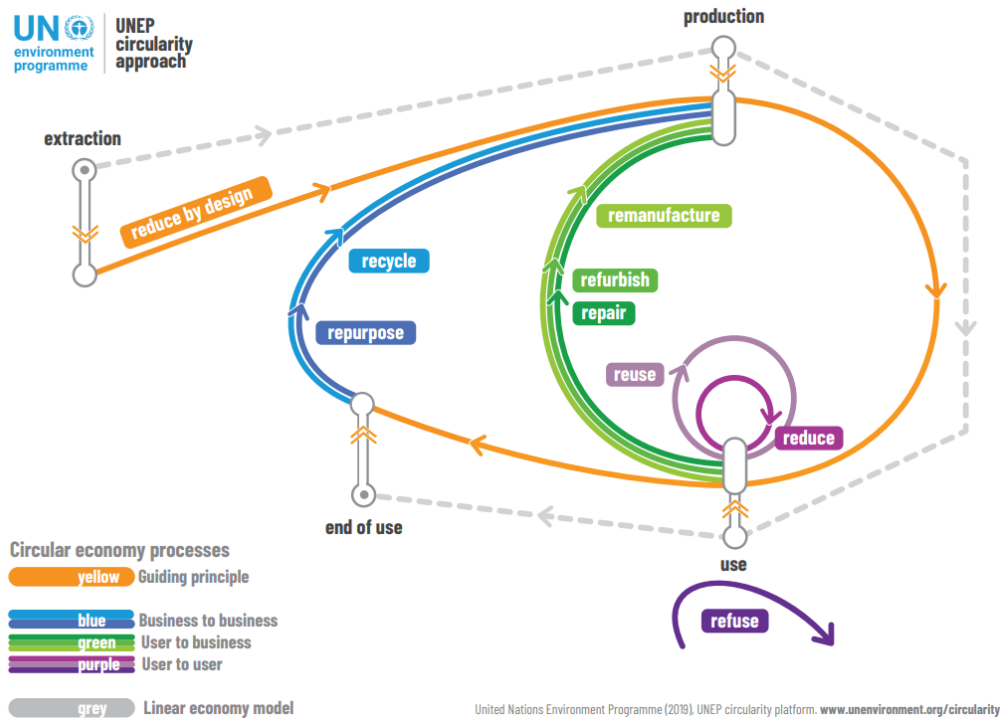


Figure 1. Overview of the circular economy model (Source: <https://www.unep.org/circularity>)

Five circular business models have been implemented successfully not only in large corporations but also in the craft industry which can help pave the way toward sustainable production and consumption.

5.5.1 Circular Business Model 1. Circular supplies

Recycled, biodegradable, renewable and nontoxic inputs ensure circularity and reduce the ecological footprint. Choosing to employ these kinds of materials means that circularity is applied right from the start of the value chain. Crafts interested in transforming their operations from linear to circular need to address the potential of introducing circular supplies into their operations. This requires that, first, craft producers evaluate the current level of sustainability in their materials and components and explore the feasibility of substituting linear raw materials with circular ones. Crafts following this business model can benefit from the decoupling of linear raw materials with lower prices of supplies and smaller exposure to price volatility. Even though, many crafts process preindustrial materials such as wood, bamboo, clay, cotton etc. - well complying with sustainability - and may only require human labour to be produced and not external sources of energy (e.g. electric energy) (Zhan et al., 2017) there can be still room for improvement. Denou marble jewellery and Toast Ale are good examples of crafts that have successfully incorporated circular supplies in their products.

Denou marble jewellery

Denou marble jewellery is a craft located on the small island of Tinos that employs alternative materials for its jewellery production. They make use of materials such as marble, silver, semi-precious stones, metals, recycled textiles, used coffee capsules and old CDs, that comply with the principles of sustainability, and reduce the demand for virgin resources. The creators saw a source of inspiration in used materials that otherwise would be considered waste.

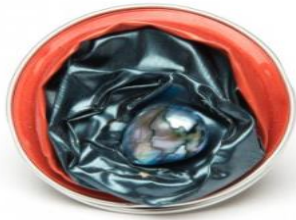


Figure 2. Ring made of used coffee capsule and cultured pearl



Figure 3. Bracelet made of used can tabs

Toast Ale

Toast Ale is a beer brewing craft located in the United Kingdom that uses surplus bread to produce beer. Recognizing that a third of the food produced globally (approximately 1.3 billion tons) is wasted and bread is one of the main contributors because of its short shelf life, their founders had the idea to use the excess bread from bakeries and sandwiches makers to produce their beer. The founder of the brewery calls his product 'planet-saving beer' since bread usage leads to 30% less malted barley compared to other beers, reduces water demand and prevents carbon emissions leading to a smaller ecological footprint. Moreover, their spent grain becomes animal feed and spent hops are composted to return nutrients to the soil. Toast Ale donates all of its profits to charity, mainly to the Feedback campaign group that aims to transform the global food system.



Figure 4. Bread used for beer brewing in the UK.
(source: Bloomberg)



Figure 5. Toast Ale

5.5.2 Circular Business Model 2. Resource recovery

Resource recovery focuses on the final stages of the utilization of the product. It addresses the recovery of resources from products that no longer serve their purpose. In essence, what determines the feasibility of the resources of a product to be recovered after its usage period is the way the products have been designed initially. Crafts moving from linear to circular business models should consider designing their products in a way that incorporates circular supplies (durable, renewable, recyclable, biodegradable etc.), allows for repairment and facilitates the disassembly and recovery of product constituents. This approach can help crafts take back and re-use valuable components in a new product and decouple from the dependence on virgin raw materials. Resource recovery can be enhanced through customer engagement; thus, crafts should provide incentives to customers willing to return products at the end of their life for re-manufacturing. Salty Bag and Shitsugeisya are two crafts that apply the resource recovery model in their business.

Salty Bag

Salty Bag is a Greek craft located in Corfu, which designs and manufactures travel bags and accessories made of decommissioned sails, kites and parachutes. Sailcloth is a strong hard-wearing material making it suitable to be used in other applications after reaching its end of life at sea. The company uses only plant-based leathers, recycled polyester linings and straps made of seat belts taken from car recycling plants in Greece. All products are handicrafts, meaning that no product is the same as another one, yet all materials used to make the bags can be recovered after the end of their life. Salty bag actively supports upcycling, by offering discounts both to customers willing to return their used salty bags and to sailors that provide them with sailcloth.



Figure 6. Salty Bags made with decommissioned sails

Shitsugeisya

Shitsugeisya is one of the pottery studios, located in Kyoto, Japan, that specializes in the restoration of broken pottery, lacquerware and other historical objects using a traditional technique called Kintsugi. The core of Kintsugi's philosophy is to highlight the cracks and repairs in the life of an object and not disguise them since they represent part of its history. Pottery is recovered and restored to be used again and wear marks are beautifully highlighted. The materials used are all-natural; Japan-sourced tree-extracted lacquer and brushes made of animal or human hair to repair the pottery and gold powder to decorate the cracks.



Figure 7. Pottery restored with the Kintsugi technique

5.5.3 Circular Business Model 3. Product Life extension

The product life extension business model increases the usage lifecycle of products and yields revenue through longevity instead of volume. This model gives value to product characteristics like durability, reparability, quality, and functionality. That means that the longer the product is used, the greater the value it provides to its customers. Product life extension starts by designing a product that conforms to the aforementioned characteristics, continues by providing consumables, spare parts, and technical support during the usage period- either for repair or upgrade of the existing product - and ends by promoting alternative uses when products stop serving their original purpose. The product life extension business model can have a long-term benefit for crafts since customers will increase their contact with the craft either to repair or upgrade the products and deepen their relationship. Many crafts companies already apply this strategy and prioritise functionality, quality and tradition over fashion trends. Meublowski is presented below is one of them.

Meublowski

Meublowski is a Dutch craft in Utrecht that upholsters and renovates old furniture. Customers can either bring in their old furniture or they can choose from a collection of unrenovated ones and have them renovated in a unique, custom way. The craft embraces circularity and tries to utilize recycled materials or materials that are produced circularly. The craft is located in Hof van Cartesius in Utrecht, a circular workspace that accommodates creative and sustainable entrepreneurs. The workspace is built with secondary resources and provides sustainable energy, waste management and a collective garden. It has approximately 1000 m² of green outdoor space with its water collection, edible plants and worm farms for composting waste.



Figure 8. Restored furniture by Meublowski



Figure 9. Hof van Cartesius

5.5.4 Circular Business Model 4. Sharing Platforms

The Sharing Platform business model facilitates the renting, sharing or exchanging of resources, machinery and by-products typically through digital platforms. Crafts using a sharing platform can create and share mutually profitable transactions by using assets more efficiently, with fewer resources and a smaller ecological footprint. Sharing platforms can reduce the overall cost of buying and maintaining resources and can expand the range of resources that are available to the crafts. In the end, this model helps increase their overall usage lifetime of resources and prevents the demand for new manufacturing. Shared resources can be anything from vehicle ride sharing to tools, equipment or even labour and knowledge. Reykjavik Tool Library is a good example of a sharing platform. It operates both physically and digitally to offer crafts all sorts of tools and equipment for rent.

Reykjavik Tool Library

Tool libraries work in a similar way that common libraries do for books. In Reykjavik Tool Library, customers pay a membership fee and are allowed to borrow tools, machinery and “how-to” manuals for the purpose they need. Furthermore, Reykjavik Tool Library provides a DIY Center, a space equipped with heavier duty machinery that creates access for people who want to start their career in crafts. Tool sharing can be really practical to crafts since it can be a good alternative for expensive machinery that crafts may not be able to afford. Moreover, tool borrowing can be a good option for one-off projects that require specific machinery and may not be used again. Tool libraries promote repairability, help keep resources and materials in a closed-loop and make expensive equipment accessible to everyone.

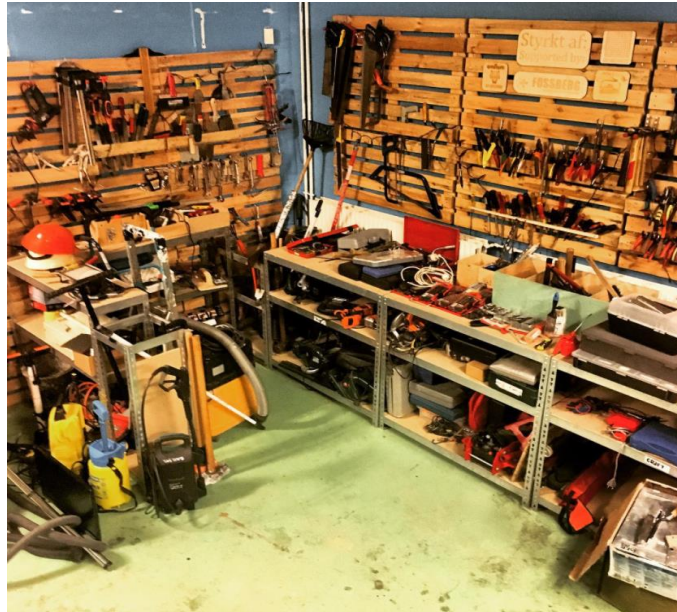


Figure 10. Reykjavik's Tool Library tool corner

5.5.5 Circular Business Model 5. Product as a service

The product as a service business model focuses on the aspect that customers are interested in buying the functionality a product offers rather than owning the product. Therefore, crafts following this business model retain the ownership of a product and provide it to a customer under a subscription fee. Customers use it for as long as it is useful for him/ and then, the product is returned to the craft ready to serve the needs of the next customer. This steady loop of renting, using, returning and re-renting amplifies customer engagement, enhances customer loyalty and increases the income potential. Trejours, a firm discussed below is a firm that benefits from this model.

Trejours

Trejours is an online marketplace where customers can rent jewellery that is made by independent jewellers and jewellery designers. The founder's idea was to offer jewellery to women for a short period through renting, unlike the linear way of owning. This way when customers are tired of it, they return the item and can rent another one. Eventually, other jewellers saw an opportunity to list their jewellery on the website, thus giving access to customers to rent expensive jewellery. There are two rental plans, the rent by the day, where customers pay for each day they keep the jewellery and the subscription box, where a monthly fee gives customers the chance to rent three items for each month, every month.



Figure 11. Jewellery made of gold and diamonds available for rent