



REFRAME

**Circular Economy strategy FRAMEwork
for sustainable SMEs**

IO3: Circular Economy Implementation Framework (CE Framework)

Disclaimer:

Project Agreement No. 2020-1-EL01-KA202-078870



Co-funded by the
Erasmus+ Programme
of the European Union

The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.



SIGMA



Dimension of CE Implementation

A. Operations

Crafts that just start implementing circular economy initiatives, normally focus on their in-house procedures. Common approaches to introducing circularity in a craft would be to reduce energy consumption and mitigate the waste that is produced during the production phase.

Subsequently, crafts may replace linear raw materials with circular ones and start managing waste sustainably. That means either reusing waste in their operations or donating (or even better selling) what cannot be reprocessed to other firms. Three areas are highlighted that craft makers should focus on to progress in the first dimension of circular transformation.

- Circular supplies
- Energy demand reduction
- Waste elimination

Circular Supplies

The production of linear raw materials leads to natural resources depletion and environmental degradation. On the other hand, the procurement of recycled, biodegradable, renewable and nontoxic materials not only limits virgin resource demand but also ensures that whatever goes into the final craft product will retain its value even after the end of the product's life. Renewable resources, mitigate what is wasted after the usage period and are the foundation of the circular supplies business model. Take for example Zylo, a Greek craft that creatively uses sustainable materials to create sunglasses. The main materials used are wood and bee/soy wax, which are both natural and biodegraded. But Zylo hasn't stopped there, since they have also incorporated upcycled materials in their products. Zylo has two special collections of sunglasses, one made of wood coming from recycled fishing boats and the other made of patented seagrass material.



Figure 1. Sunglasses made of wood recycled from shipping boat (left) and seagrass (right)

Energy Demand Reduction

A major source of energy consumption -and cost- for crafts comes from heating or cooling needs in the workplace. There are different levels for preventing energy consumption for cooling/heating purposes in terms of investment costs. Crafts can start with the ones that are straightforward and free, like not using heaters/coolers when there is no need, ensuring that heaters/coolers won't work when people leave the premises, and heat coming from the radiators is not blocked, etc. Additional measures that may involve higher investment costs can be the sealing of doors and windows or even overall workplace insulation.

Another common energy-intensive source is the lighting of the workplace. Again, there are zero-cost solutions to reduce the energy needed for lighting such as ensuring that lights are off when there is no need to be on, rearranging workspace layout to facilitate natural light getting into the workplace, etc. Higher cost solutions that have an impact on the energy consumption would be to replace incandescent light bulbs with LED or CLFs, upgrade old energy-intensive equipment with new ones etc.

Waste Elimination

Crafts need to examine their waste flow and evaluate the potential of reducing waste or using it in an alternative way. A good way to assess the current level of waste generation and reveal its major sources can be a waste audit. Typically, firms do not generate large volumes of waste and many times the waste they produce are recyclable or biodegradable. However, there is still room for improvement. For instance, printing less, avoiding single-use materials, setting up recycling bins, and removing excess packaging are all minimum-cost waste reduction strategies that promote circularity and reduce what ends up in the landfill.

In addition, many of the by-products a craft company may generate can retain value and can be used creatively in other ways. Therefore, it is important for people in charge of sourcing the materials to first find alternative uses of by-products in their production and if this is not feasible collaborate with other firms that may be interested for this kind of materials.

Business processes involved in operations are the following (Lacy et al., 2020):

- Procurement to source renewable and recycled inputs
- Operations to implement initiatives across physical production, distribution, and retail sites
- Marketing to communicate the initiatives and their impact

