

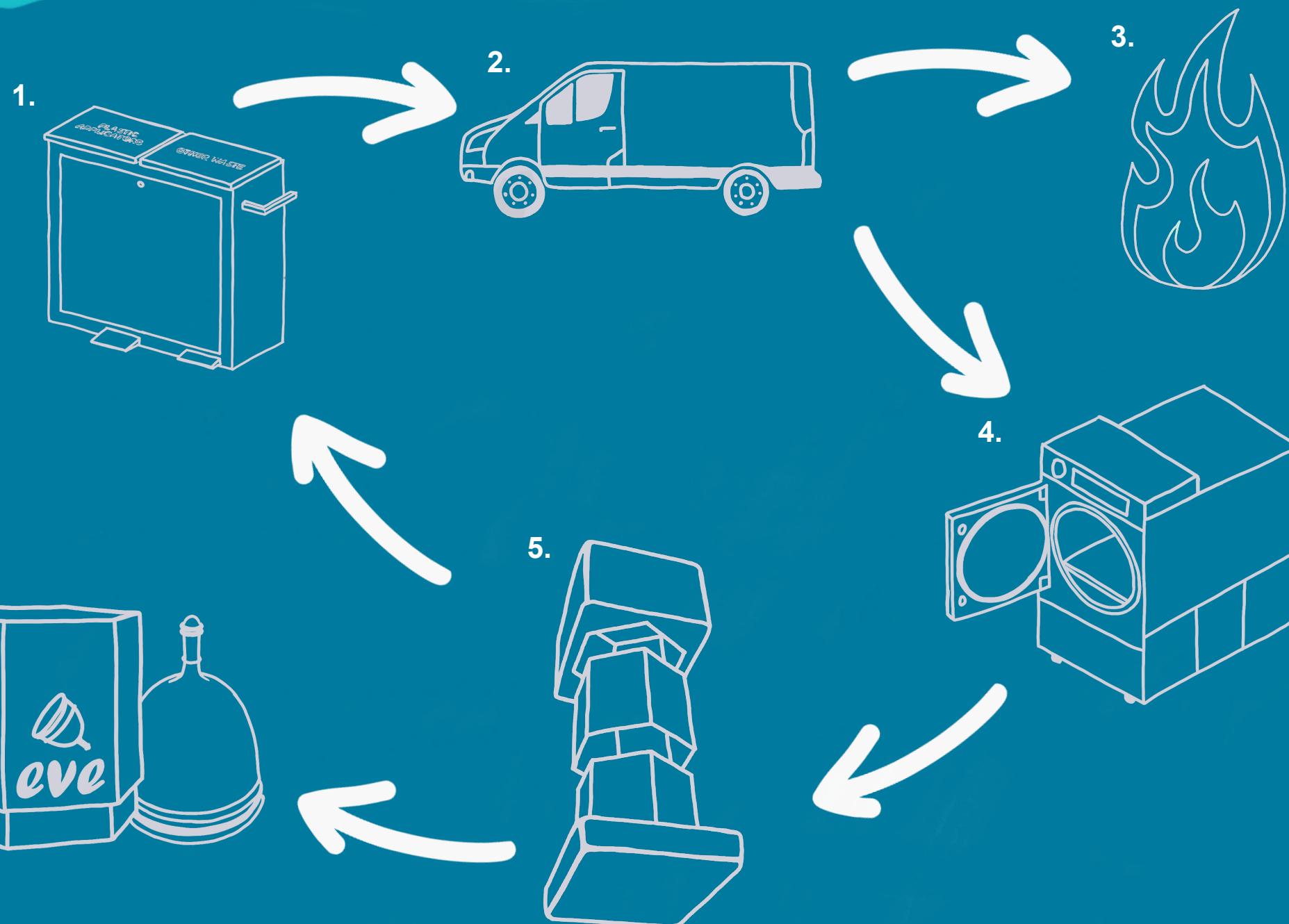
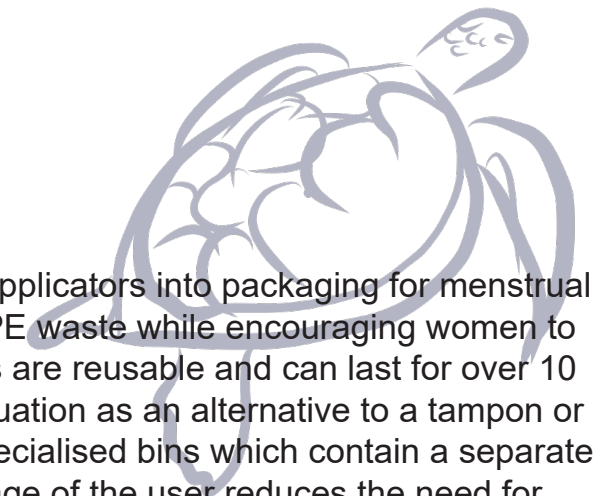
Developing a Circular Economy- Recycling Plastic Tampon Applicators

The Problem

The average woman uses 11,000 disposable sanitary products in her lifetime. This waste is increasingly being pumped into our oceans and landfills destroying the earth and putting wildlife at risk. For example, on average, 9 tampon applicators are found every kilometre of British coastline. On top of this, they also have a negative effect on women themselves as they can contain dangerous chemicals such as bleach and rayon.

The Solution

We have designed a new system which recycles single use plastic tampon applicators into packaging for menstrual cups and an improved design for sanitary bins. The system recycles the LDPE waste while encouraging women to chose a more sustainable sanitary solution; a menstrual cup. Menstrual cups are reusable and can last for over 10 years thus hugely reducing waste. They are silicon cups used during menstruation as an alternative to a tampon or a sanitary towel. The used LDPE tampon applicators are collected by our specialised bins which contain a separate compartment solely for the collection of the applicators. Separation at the stage of the user reduces the need for more people to handle the contaminated waste before sterilisation.



The Life Cycle

1. Sanitary bins made from recycled tampon applicators collect the sanitary waste in two separate compartments; applicators in one and the rest of the waste in another. This bin is an improved design as it allows waste to be disposed with ease whilst sitting on the toilet. The bin is also designed as a bathroom feature with a toilet roll holder and eye catching aesthetics with the intention to evoke discussion.
2. Just like traditional sanitary bins, a sanitary disposal company collects the bins regularly and separates the two types of waste for further processing.
3. The non-plastic waste is incinerated and used as an alternative fuel source. This regains some of the embodied energy as well as prevents it going to landfill.
4. The tampon applicators are first rinsed and then placed in an autoclave for sterilisation. Autoclaves use high temperature steam to kill bacteria or any other contaminants.
5. The sterilised plastic is now shredded before it is injection moulded into menstrual cup packaging and sanitary bins.
6. eve is a new brand of menstrual cup that we have developed featuring packaging made from the recycled tampon applicators. This not only is an excellent way to use the recycled plastic but it encourages women to change their sanitary habits and chose a more sustainable option. The box is exciting and colourful and can be used to store the cup throughout the menstrual cup's life, it also features information about the negative impact that disposable sanitary products can have on both the environment and women. Because the packaging is not contaminated with any alien materials, it can be recycled again directly at the end of the menstrual cup's life.