



# Acoustic Ticking

Creating circular products from waste mattress ticking

## What is mattress ticking?

Ticking is the outside layer of a mattress. Nowadays it mostly consists of several layers of textiles and foams.

Matras Recycling Europe (MRE) is an Utrecht based company that specialises in disassembling mattresses. Most of the pieces that are separated from these mattresses can be re-used in other applications. The ticking had no useful purpose.

In order to keep a viable business and help the mattress industry to become more circular, a useful purpose for the waste material has to be found.

## How is this product circular?

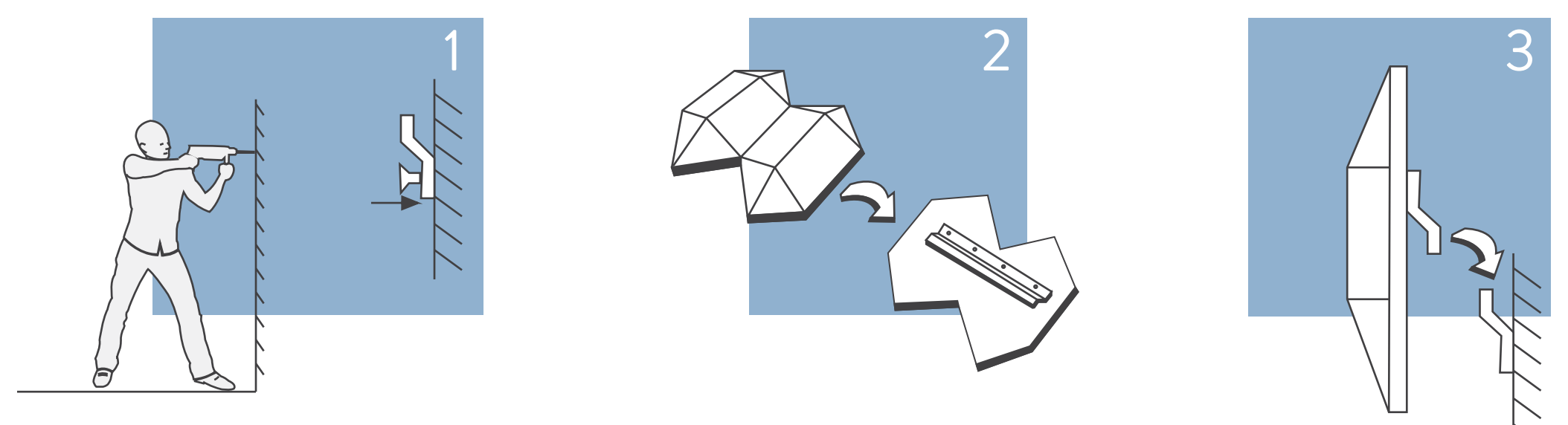
A circular economy is all about prolonging the lifespan of products or the materials they are made of. For several reasons ticking cannot be re-used as ticking. These reasons are mostly hygienic. When looking at the unique properties of recycled ticking an acoustic wall panel is designed. Keeping the principles of circular economy in mind the Acoustic Ticking can be put through the same production process a few times to prolong the lifespan of the material.

## How is it made and installed?

The selected processing technique consists of shredding, pulverizing, heating and pressing to create the panels. By pressing softer or harder the density of the panels can be changed. For the acoustic solution the density of the panels should be around  $60 \text{ kg/m}^3$ .

The panels can be hung on the wall by screwing a profile onto the wall and the panels. This can be seen at the bottom right of this poster.

When taking the panels for recycling the installation steps can be reversed so the panels can be easily separated and sorted to be sent to the production company.



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Ticking waste: creating circular products  
27 september 2018  
Integrated Product Design

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