

MATTRESS TAKE-BACK SYSTEMS IN EUROPE

An overview of existing mattress take-back systems in Europe

KEYWORDS: Take-back systems, end-of-life, Extended Producer Responsibility (EPR)

ABSTRACT

In Europe, there are many possible solutions for mattress collection and recycling systems. There are both national and private solutions, where in this note, we focus on the national solutions as they are considered the most relevant initiatives for inspiration. The three leading countries are France with Écomaison, the Netherlands with RetourMatras, and Belgium with Valumat. The note presents a visual overview of the solutions in Europe, along with a QR code linking to a PDF providing more detailed information behind the study.

BACKGROUND AND METHOD BEHIND INVESTIGATION

The purpose of this project is to gain a deeper understanding of the countries that have established recycling systems specifically for the collection and recycling of mattresses, as well as to identify the leading countries in this field. Additionally, we aim to create an overview of the available solutions in the market that could potentially inspire the development of a Danish recycling solution for mattresses.

We primarily focus on Europe in our overview of take-back systems, as these countries are seen as the ones most similar to Denmark and thus potentially able to provide the most relevant inspiration. For the study, two main methods were employed: desk research and expert interviews.

Sources such as 'DTU Find it' (the research library) and 'Google' were used to find articles/websites/videos related to mattress recycling systems in Europe. Based on this information, an overview was created both in Excel and in a visual format, presenting the gathered data. These were shared with Tom Mikkelsen from the company DanFoam/TempurSealy, a partner in the mattress project. Tom, with his expertise in the field, served as a quality check for this note. Following the conversation with Tom, several changes were made to the overview. Solutions and countries not found during desk research were added, and it was indicated which countries had the most significant national solutions and appeared to be leading in the field. Additionally, the discussion was used to confirm the other data from desk research to ensure the credibility of the overview.

HOW TO READ OVERVIEW

"The overview consists of two parts: a simplified visual representation and an Excel-based overview containing more in-depth information, along with source references.

The PDF file contains information about the country, the company behind the solution, the collection method, price, recycling method, and the quantity of recycled mattresses. The overview is not exhaustive but encompasses the available information. Access to the overview can be obtained by scanning the QR code below:



On the visual overview, Figure 1, countries with solutions are highlighted on a map of Europe. Nations with national solutions are marked in orange, while those with private solutions are marked in white. For all the solutions in each country, we provide a description of the collection method and the recycling method. These are represented with icons, and corresponding explanations can be found on the left side of the overview.

SHORT DESCRIPTION OF SELECTED COLLECTION SYSTEMS

There is a clear predominance of privatized solutions in Europe. Three countries have national mattress collection systems: France, Belgium, and the Netherlands. These three countries are considered leaders in mattress recycling - with the Netherlands (RetourMatras) leading the way due to new technology that enables the creation of new polyol from mattress foam.

FRANKRIG – ÉCOMAISON:

In France, there is "Écomaison" (formerly known as "Écomobilier"), responsible for the national collection of discarded furniture in France, including mattresses. They have approximately 5,500 locations across France where citizens can have furniture, including mattresses, picked up. Various partners assist in this collection process. Since 2013, a tax has been imposed on the purchase of all furniture in France, contributing to the funding of Écomaison. Once the mattresses are collected, they are sorted into different materials. These materials then undergo a recycling process to be reused as raw materials by other manufacturers.

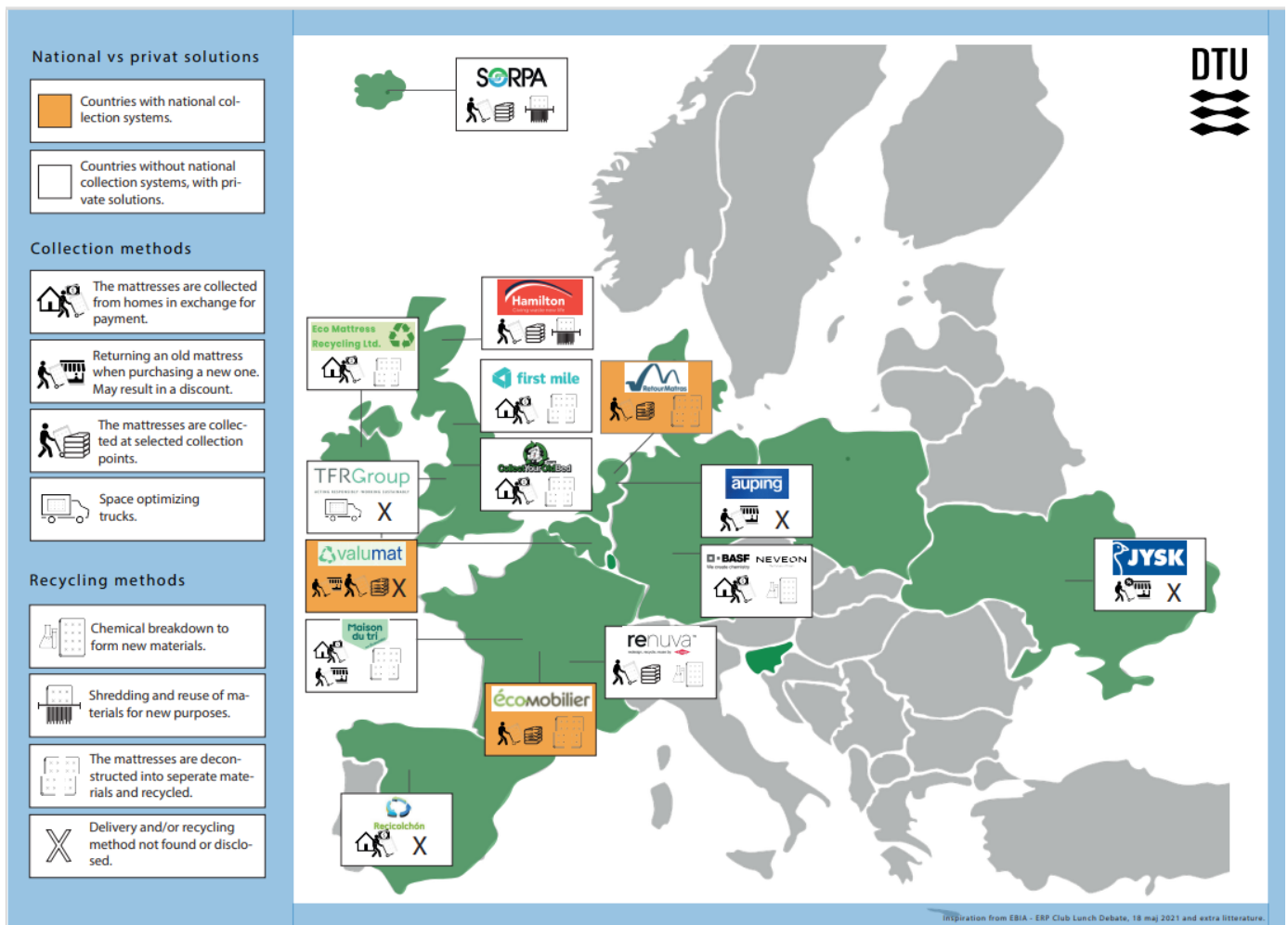


Figure 1: Overview of mattress take-back systems in Europe. For each country, the collection solution and recycling method are indicated by icons.

NETHERLANDS – RETOURMATRAS:

In the Netherlands, one can dispose their mattresses through "RetourMatras," a company specifically dedicated to mattress recycling. RetourMatras has four factories in the Netherlands for this purpose. You can dispose of your used mattress in two ways: 1) Dropping it off at a collection point or 2) arranging for it to be picked up from your home. The collected mattresses are then divided into different types, shredded, and the materials sorted for various types of recycling.

BELGIEN – VALUMAT:

In Belgium, "Valumat" is responsible for the national collection of furniture. Similar to France, citizens in Belgium are required to pay an additional fee when purchasing new furniture. There are two options for collecting mattresses: 1) The store where the new mattress is purchased is obligated to take back the old one, with the customer responsible for transport costs, 2) The mattress can be dropped off at a collection point. Once collected, the mattresses are transported to a facility where they undergo a process of separating materials into foam, textile, and metal for better recycling.

KEY FINDINGS:

VARIATION IN TAKE-BACK SOLUTIONS

This study has clarified that there is a wide range of different solutions available. This was also our expectation. In Europe, there are both national and private solutions for recycling mattresses. While the note mentions three, the table in the QR code shows that 17 different mattress take-back systems have been studied. The descriptions offer inspiration for a future take-back system for mattresses in Denmark. The diversity of systems in Europe suggests that a Danish solution could incorporate national collection, private solutions, or a combination for handling mattresses at the end of their lifecycle. It is noteworthy that despite the different take-back systems, approximately 35 million mattresses are discarded in Europe every year. Around 60% are incinerated, while the remaining 40% end up in landfills. Thus, there is still a significant need for systems and new solutions to ensure better and more efficient recycling of these mattresses. Different solutions, both local country-specific solutions and multinational large-scale solutions, should be considered to ensure the optimal utilization of these mattresses.

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Literature:

European Bed Association, internettet, DTUs forskningsbibliotek, diverse chatfora med producenter, Tom Mikkelsen ved Danfoam/TempurSealy

