

Recycling Mattresses in Asia

Introduction

With the technology development for recycling mattresses and its various components, it is time to geographically expand this business. Given the amount of mattresses being produced and sold in Asia (APAC) it makes sense to look into this market to make that expansion. Taken the learnings from European countries, a quick start-up is possible.

What is needed?

The components of making this business a success are:

1. Financial sound business model
2. Adequate technology, process and people
3. Market availability and readiness

Business Model

The business model is based on creating a sustainable, circular mattress manufacturing process.





The mattresses are gathered from the consumers dumping them in the garbage. To secure these a gathering service, dump location and general knowledge to the public needs to be in place or put in place. The collection can be financed through the disposal fee which needs to be added or reserved by the mattress manufacturers. Learnings from Europe tell is this can be as low as around 5-6 Euro per mattress. In addition the second main revenue stream will be the sales of recycled materials.

In addition foam waste material (trimfoam) from foam manufacturers or converters can be added to the volume. Right now most of this material is ending up as landfill.

The recycling of mattresses requires the following technologies:

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|---------------------------------|--------------------------------------|
| 1. Shredding of steel | Existing in Asia |
| 2.textile | Existing in Asia |
| 3. Generating repolyol | Not yet existing in Asia |
| 4. Rebonding foam | Existing in Asia (but for own usage) |
| 5. Shredding of foam as filling | Existing in Asia on a small scale |

To facilitate the business model, the company must actively engage with the customers to support the usage of recycled materials in their production process. Especially for the usage of repolyol as this would require additional technology for the customers to implement.

Supply Chain Collaboration

The integration of the different companies into a integrated collaborating supply chain will be the main unique selling point of this concept. Working together with the various links in the value chain will enable the circular process and therefore create a sustainable mattress supply chain in Asia.

The amount of mattresses now going into landfill or garbage to be burned for all of South East Asia is as follows:

Mattress discarded SEA

Country	Population (Millions)	Household (Millions)	Discarded annually (8 years lifespan)	Discarded annually (10 years lifespan)
Netherlands	17	7,95	0,99	0,80
Indonesia	270	90,00	11,25	9,00
Philippines	110	36,67	4,58	3,67
Vietnam	97	32,33	4,04	3,23
Thailand	70	23,33	2,92	2,33
Myanmar	54	18,00	2,25	1,80
Malaysia	32	10,67	1,33	1,07
Cambodia	17	5,67	0,71	0,57
Laos	7	2,33	0,29	0,23
Singapore	5	1,67	0,21	0,17
TOTAL	1683		70,13	56,1

Even if the lifespan is around 10 years, the total amount is huge and more than enough to facilitate the business model. As a reference I have mentioned the Netherlands where at least 2 companies are operating on this business model for the last 10-15 years already.