Analyzing the viability of a product recovery system for used mattresses

Project sponsors:
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Used mattress disposal is a growing problem. From the perspective of high-volume users such as the Army Installation Management Agency, increasing landfill fees and the lack of recycling options are proving costly. From the perspective of mattress manufacturers, third-party “renovators” who collect used mattresses and misleadingly resell them to unsuspecting consumers as “new” product create consumer deception, health, product safety and image issues. Consumer difficulty in some areas in disposing of used mattresses can also be an impediment to them buying new replacement products. For some of the challenges and industry dynamics, see http://www.sleepproducts.org/Content/ContentGroups/BEDtimes1/20031/May/Two_new_recycling_ventures_underway.htm

One option that manufacturers in other industries have considered in order to reclaim value from their own used products and to help facilitate responsible end-of-product-life disposal is leasing, whereby they maintain ownership of the product. Leasing builds into the commercial transaction "up front" the used product recovery service that would be triggered when the mattress is discarded. Industries where this commercial model has been successful include autos and other vehicles, copiers and other office machines, and computers. Interface has experimented with leasing carpet. While no mattress producer leases its product today in either the residential consumer or the large institutional (government purchases, hotels, hospitals, dormitories, etc.) markets, it is possible that leasing might be relevant in the institutional market. This and related concepts (such as the concept of collecting a return deposit or recycling fee at point of sale, discussed more below, which might be relevant in the residential consumer market) would be worthwhile to investigate.

Some issues that the students should consider would include:

A. What capabilities do mattress manufacturers (or a designated third party, such as a retailer network or a recycling operator) need to lease and recover their product?
B. How would you recommend structuring lease terms?
C. Under what conditions is leasing desirable for purchasing institutions?

Some issues to consider in this analysis are logistics, market prices for recoverable scrap, the cost and attractiveness of “alternatives” such as landfill costs and structural incentives such as depreciation.

The second option for the industry is to ensure that used mattresses are recycled. According to Mr. Trainer of International Sleep Products Association (ISPA), since there is no established collection and disposal system, the question is whether some type of "return deposit" or product recovery fee collected at sale work would for mattresses. This
is a complex concept that the industry has considered on occasion, but hasn't had the resources or ability to do the policy analysis necessary to make an informed decision of whether such an approach is good or bad. There are several good working models that could be considered: bottles and cans, batteries, tires to name a few.

Some issues that the students should consider would include:

A. How would the process work? That is, would the funds be deposited in a trust account with a government agency for dispersal when the product is recovered? What documentation would be required to prove sales on which the deposit or fee is due? Who would pay or collect that money in the first place? The manufacturer? The retailer? What would be the appropriate administering authority? How would a recycler document mattress recovery to qualify for funds?

B. A cost estimate of what to charge, how much to pass on to the recycler, estimated administrative fees.

C. What are the pros and cons of a voluntary system vs. a mandatory system? State vs. local? What legal authority would be required for a mandatory program?

D. To balance out the costs, what would the benefits be?

An understanding of each of the existing deposit/disposal fee examples would be useful as benchmarks, as they vary widely in scope and details, and should provide insights on a number of these issues.

Deliverable: A final report detailing an analysis of the above elements and providing recommendations.

Anticipated Learnings: Understanding the stake that manufacturers have in the after-use market and the impact of after-use competition. Understanding the lease versus sell decision from the perspective of the lessor and the lessee. Ability to price a lease contract. Understanding the structure and management of collection systems.