

ReWrap – Executive Summary

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ReWrap is a reusable pallet-wrapping concept designed to reduce waste, cut expenses, and improve efficiency in warehouse and retail logistics. Today, U.S. operations wrap an estimated 20 million pallets per day in single-use plastic stretch film, contributing to a \$4.4 billion consumables industry. Nearly all of this material is discarded immediately after unpacking, and plastic pallet wrap accounts for roughly 12% of plastic waste in U.S. landfills.

The current process is inefficient and costly. Workers often spend more than a minute per pallet walking circles to apply film, and the result varies in terms of tightness, stability, and material use. On the receiving end, the film is cut off and thrown away within seconds. This cycle repeats across millions of pallets daily, creating significant recurring expenses in both labor and materials.

ReWrap introduces a durable, breathable mesh wrap that can be placed over a pallet and secured using an integrated tightening mechanism. The design allows the wrap to be reused hundreds of times, offering a practical alternative to disposable film without disrupting existing workflows. Because pallet dimensions are generally standard industry-wide, ReWrap has strong feasibility as a drop-in replacement for current wrapping practices.

The value proposition is clear. Financially, ReWrap reduces spending on single-use plastic while lowering labor time per pallet. Even small-scale adoption offers meaningful savings for retailers, distribution centers, and warehouse operations. Environmentally, it significantly reduces the volume of plastic waste generated by logistics operations, supporting sustainability goals without sacrificing performance or safety.

The next steps for ReWrap include testing potential materials, building an initial prototype, and conducting discovery interviews with warehouse managers and distribution teams. Funding from the Iowa Innovation Challenge would support early prototyping, durability testing, and validation of manufacturing approaches.

ReWrap offers a practical, scalable solution to a long-standing operational challenge. By reducing waste and improving efficiency, it provides a strong foundation for continued development and future commercialization.

With further validation and prototyping, ReWrap has the potential to become a new operational standard for pallet security across retail and logistics.