HEROPAK

Operationalising Reuse in Roll Container Logistics: Replacing Single-Use Load Stabilisation Packaging.

Food and non-food retail logistics rely heavily on single-use stretch film for load stabilisation, creating recurring waste, high labour demand and regulatory compliance complexity. There are however, reusable, data-driven stabilisation system that reduces cost, increases packing and unpacking efficiency and supports future regulatory requirements.

Stretch film remains the default stabilisation method for users or roll-container logistics. It is familiar, requires no specialised tools or training and has historically been considered inexpensive. However, the European regulatory environment is beginning to change significantly. Logistics operators today manage higher shipment volumes, tighter labour markets, stricter sustainability targets and increasing reporting requirements. In this new context, single-use wraps, straps and film introduces layers or inefficiencies, waste and data gaps that hinder performance and compliance.

As supplychain demands increased, single-use load stabilisation grew proportionally. Rising load complexity required more wrapping, while expanded store networks multiplied consumption. Labour shortages made manual wrapping slower and less consistent. Regulatory frameworks such as the PPWR 2025/40 have introduced new obligations that single-use systems can no longer fulfil, particularly around reuse, traceability and verified reuse and environmental performance. Combined, these factors have pushed single-use stabilisation materials to a metaphorical breaking point.

Modern retailers must ensure logistics efficiency, reduce operational waste, protection of worker health and safety and provide reliable, auditable sustainability data. Single-use solutions undermine each of these goals. They create large volumes of unrecyclable waste, introduces labour-intensive workflows, account for product damage from inconsistent wrapping and provides no datasets which can support compliance or operational performance monitoring. As a result, retailers using film to stabilize loaded roll containers face rising operational costs, reduced throughput speed, and limited ability to meet upcoming regulatory expectations. A zero-waste, circular and trackable stabilisation model is now essential for long-term competitiveness and compliance..

Why Single-Use Load Stabilisation Has Become A Liability

A standard roll container wrapped with stretch film requires anywhere between 100 and 600 grams of plastic. Across a supermarket chain moving 50,000 containers per week, annual consumption can easily exceed tonnes of single-use material and CO2 emissions. Because used film becomes contaminated during handling, more than 85% of this material is unrecyclable and must be incinerated or landfilled. The process to stabilize roll containers is labour-intensive, requiring between 20 and 45 seconds per container depending on load size and operator skill. Inconsistent wrapping leads to load shifting, product damage and shrinkage. Stores also face increased waste-handling costs and housekeeping issues, as materials accumulate around receiving bays and docks. These operational inefficiencies compound across thousands of shipments each week, contributing to measurable costs and safety burdens.

PPWR and related regulations require retailers to measure and report on packaging reuse cycles, waste reduction, CO_2 consumption and overall environmental performance. Single-use stabilisation materials provide no traceability and cannot be readily counted or audited. Retailers resort to estimates or incomplete records, increasing compliance risk. As mandatory disclosure expands across Europe, organisations dependent on single-use load stabilising material face significant challenges in demonstrating progress toward long-term sustainability and circularity goals. Without verifiable data, sustainability claims lose validity and operators may incur penalties or fail to meet certification benchmarks. This gap between regulatory expectations and single-use capabilities highlight an urgent need for a measurable, transparent reusable load securing system.

Why 'Eco-Friendly' Single-Use Alternatives Still Fail Operationally

Fibre wraps, straps and corrugated stabilisers as well as bio-based and compostable films are promoted as sustainable alternatives to fossil-fuel based solutions. They are intended to reduce plastic use by substituting renewable materials. These products offer familiarity and do not require major workflow changes, making them superficially attractive to retailers seeking low- friction environmental improvements.

Paper-based stabilisation does not meet the performance requirements of supermarket logistics. It tears easily, absorbs moisture, and fails consistently in cold-chain environments. These materials still create single-use waste and provide no operational or compliance advantages. Without additional waste collection infrastructure and adequate sorting in an already high-paced environment, these solutions fail to meet the needs of retailers and regulatory bodies.

Recycled-content stretch film replaces virgin resin with recycled material, reducing upstream plastic demand. However, it remains fully single-use and continues to require manual labour, waste handling, and disposal. Operational inefficiencies remain unchanged.

Recycled-content films reduce material origin impacts but do not address systemic inefficiencies. They retain the same labour waste, and safety burdens and cannot provide traceable reuse data for compliance.

The Reusable Stabilisation System

HeroPAK develops and provides reusable load stabilisation systems delivered through a Packaging-as-a-Service (PaaS) model. It replaces stretch film entirely through durable ClickLOK panels that provide consistent stabilisation for roll containers. The PaaS model includes lifecycle management, repairs, maintenance, and end-of-life recovery, while also coming standard with digital visibility and roll container fleet tracking.

Unlike fiber and bio-based alternatives, ClickLOK functions reliably across temperature zones and high- paced environments. Compared to recycled-content film, HeroPAK eliminates single-use waste entirely. It reduces stabilisation time by up to 90%, increases load stability consistency and reduces product related damage and theft. It also provides automated reuse metrics and CO_2 calculations, eliminating compliance reporting burdens. Operational output increases while labour strain decreases, benefiting both workforce and company profitability.

Reusable stabilisation systems offer measurable environmental and operational improvements unmatched by any single-use material.

Retailers fear increased costs or capital requirements when transitioning to new stabilisation systems.

HeroPAK removes capital expenditure (CapEx) entirely. Retailers pay only per use, with stabilisation hardware, refurbishment and loss management included in the PaaS service. Costs stabilise as film procurement, storage, waste fees and labour time decrease.

Retailers worry that changing load stabilisation methods will slow operations.

ClickLOK attaches in 5–8 seconds, compared to 20–45 seconds for film. Although ClickLOK panels can be removed, they do not require specialized tools or additional storage space when not in use. This reduces dispatch bottlenecks, improves efficiency and provides consistent stabilisation regardless of operator experience. Faster workflows increase output without additional staffing.

Retailers need reliable sustainability and reuse metrics for compliance.

HeroTRAK automatically tracks asset movements, reuse cycles and CO_2 savings as well as other important metrics. This eliminates manual reporting and provides audit-ready data for PPWR-aligned disclosures. Retailers gain full visibility into stabilisation performance across their network and can set alerts to idle and lost containers helping overall efficiency of the roll container fleet.

A regional supermarket chain implemented a pilot project at a distribution centre to test stabilisation performance under real distribution conditions. Roll container loading time decreased from 32 seconds to 7 seconds per container. Load stability improved, resulting in fewer damaged goods and reduced shrinkage. Store associates reported improved workflow at delivery, with less waste to collect and fewer collapsed loads. HeroTRAK automated the retailer's sustainability reporting, reducing administrative workload and improving ESG accuracy. The pilot produced measurable operational gains and supported the business case for network-wide adoption.

HeroPAK improves load consistency by eliminating operator variability. Whether a container is prepared by a new hire or an experienced picker, ClickLOK provides consistent stabilisation each time. This reduces downstream product damage, prevents collapse incidents, lowers labour needs for re-picking and improves the reliability of store replenishment cycles. As a result, retailers experience more predictable delivery quality across their entire distribution network.

HeroPAK directly contributes to sustainability performance by removing an entire category of single-use waste. Unlike bio-based solutions that introduce new waste streams, ClickLOK is reused thousands of times. Retailers can demonstrate verifiable environmental improvement, supported by HeroTRAK-generated data. This provides a stronger basis for ESG reporting and compliance reporting.

HeroPAK improves supply-chain resilience by eliminating dependence on volatile plastic markets. Stretch-film prices fluctuate with resin availability, transportation demand and supplychain disruptions. Reusable stabilisation provides predictable, stable costs, enabling more accurate budgeting for high-volume logistics networks. HeroTRAK further strengthens resilience by tracking asset utilisation, loss rates and location data, supporting more efficient asset management and reducing network blind spots. This ensures retailers maintain stable operational costs even in periods of commodity price and availability volatility.

Single-use wraps, straps and film have become an operational and regulatory liability, creating waste, additional labour and increasing compliance complexity. HeroPAK replaces this outdated approach with a reusable, zero-waste stabilisation system that reduces cost, improves load security and delivers automated, audit-ready sustainability data. For retailers seeking a more efficient, future-proof logistics model, HeroPAK provides a scalable solution that aligns with upcoming regulations, enhances operational performance and strengthens long-term supply-chain resilience. For organisations considering a move away from single-use stabilisation, or aiming to help create a better, more sustainable world for future generations, a brief operational assessment can be arranged to quantify potential cost savings, productivity improvements and compliance benefits specific to your logistics network.

About the Author

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Benjamin is a circular packaging specialist focused on replacing single-use transport packaging with reusable, service-based systems. He holds a Bachelor of Engineering from RMIT University in Melbourne and a Master's degree in Packaging Technology and Sustainability from FH Campus Wien. He has authored white papers on zero-waste load stabilization and reusable load-securing solutions and is developing the Packaging-as-a-Service model for returnable transportation packaging.

About HeroPAK

HeroPAK is an Austria-based circular logistics company helping retailers, 3PLs and distribution networks eliminate single-use transport packaging. We replace disposable stretch film, straps and wraps with reusable, trackable load-stabilization systems delivered through a Packaging-as-a-Service (PaaS) model. Customers achieve measurable waste reduction and operational efficiency without heavy investment in upfront capital. Our mission is simple: Move What Matters—with safer handling, lower total cost per trip and verified progress toward zero-waste logistics.

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