



Unlocking Cost Efficiency

The Critical Role of Total Landed Cost in Pharma Logistics

As the pharmaceutical industry advances, the pressure to efficiently and reliably deliver temperature-sensitive products, such as vaccines and biologics, is intensifying. Pharmaceutical companies face the challenge of maintaining product integrity and complying with stringent regulatory requirements, while also striving for cost-efficiency and sustainability.

In the face of these challenges, understanding and calculating the Total Landed Cost (TLC) of shipping has become a critical strategic focus.

Why Total Landed Cost Matters

Total Landed Cost (TLC) is a comprehensive measure that includes all expenses associated with the shipping and delivery of goods. This includes packaging, air freight costs, auxiliary costs (such as handling, storage, and preparation), and the potential cost of product loss due to damage or temperature excursions.

By considering TLC, pharmaceutical companies can make informed decisions that optimize both cost and quality, ensuring the safe and efficient delivery of their products. Ignoring TLC can lead to hidden costs, compromised product quality, regulatory non-compliance, and significant financial impacts.

Therefore, taking some time to understand and calculate TLC is not just beneficial—it is essential for the success and sustainability of pharmaceutical logistics.



Breaking down Total Landed Cost

Air Freight Costs

Air freight costs are determined by a combination of weight and volume, often referred to as the chargeable weight. This metric accounts for both the actual weight of a shipment and its dimensional weight, which reflects the amount of space the cargo occupies.

Post-pandemic, the rise in e-commerce, supply chain disruptions, and reduced cargo capacity have driven air freight rates to record levels, making it essential for pharmaceutical manufacturers to adopt packaging solutions that maximize efficiency. By using lightweight, durable packaging that maximizes available space, companies can reduce chargeable weight, optimize cargo efficiency, and lower overall shipping costs.

In addition to this, efficient packaging reduces the likelihood of delays caused by capacity constraints or the need for multiple shipments, protecting timelines and ensuring temperature-sensitive medicines reach patients on schedule.

Auxiliary Costs

Different packaging solutions have different needs when it comes to manual handling, preparation, and storage – all important factors that make up your auxiliary costs.

Beyond this, auxiliary costs can also include insurance and customs duties, as well as additional costs that may arise from delays, rerouting, or penalties associated with non-compliance in international shipping.

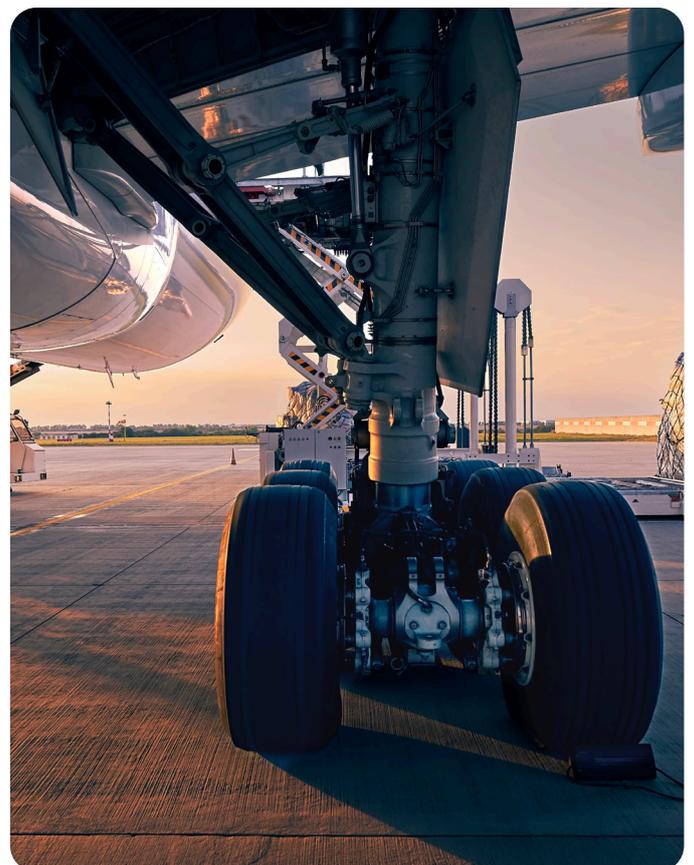
Understanding and managing these hidden costs is vital for pharmaceutical manufacturers aiming to optimize their supply chains while maintaining product quality and ensuring timely delivery to patients worldwide.

Product Loss Costs

The financial impact of product loss in pharmaceutical logistics extends far beyond the direct cost of scrapping and replacing damaged goods. When products are compromised due to temperature excursions, manufacturers face additional costs associated with conducting root cause analyses, regulatory reporting, and compliance investigations.

These processes can take up significant time and resources, diverting attention from core business operations. In addition to this, temperature deviations can trigger product recalls, which not only incur substantial logistical expenses but also risk damaging a company's reputation and undermining customer trust.

Maintaining precise temperature control throughout the supply chain ensures product integrity, minimizes waste, and reduces the likelihood of downstream consequences such as delayed treatments, financial penalties, or reputational harm.



The Risks of Ignoring Total Landed Cost

Ignoring Total Landed Cost can lead to several significant risks, particularly for procurement professionals responsible for making cost-effective and strategic decisions:

Hidden Costs

Focusing solely on the upfront cost of packaging can obscure hidden costs such as higher air freight rates, increased handling fees, and potential product loss. These hidden costs can accumulate, leading to higher overall expenses.

Operational Inefficiencies

Without a comprehensive understanding of TLC, procurement decisions may lead to operational inefficiencies. This includes increased manual handling, longer preparation times, and higher storage costs.

Product Quality and Safety

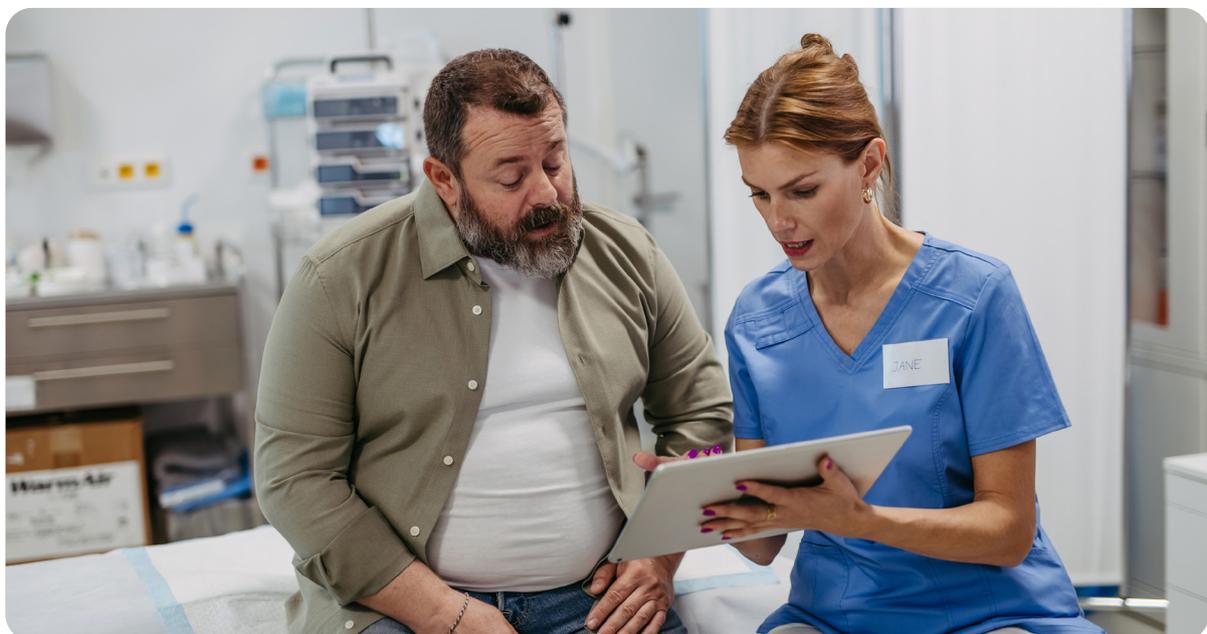
Inadequate temperature control can compromise the quality and efficacy of pharmaceutical products. This not only results in financial losses but also poses serious risks to patient safety and company reputation.

Financial Impact

The cumulative effect of hidden costs, product loss, and regulatory penalties can significantly impact the company's bottom line. Ignoring TLC can result in higher overall costs and reduced profitability.

Regulatory Non-Compliance

Failure to maintain proper temperature control and traceability can result in non-compliance with regulatory standards. This can lead to costly fines, legal issues, and damage to the company's reputation.



Using Total Landed Cost to Guide Decision-Making

Understanding and calculating TLC is essential for making informed and strategic decisions. Here's how TLC can guide decision-making:

Risk Mitigation

Understanding TLC helps in identifying and mitigating risks associated with product loss, regulatory non-compliance, and operational inefficiencies. This proactive approach ensures the safety and quality of pharmaceutical products and the patients who receive them.

Supplier Evaluation

TLC provides a framework for evaluating suppliers based on the total cost of their solutions, rather than just the upfront price. This helps in selecting suppliers that offer the best value in terms of cost, quality, reliability and value added services.

Cost Management

By considering all components of TLC, you can perform a holistic cost analysis. This ensures that all hidden costs are accounted for, leading to more accurate budgeting and cost management.

Strategic Planning

Incorporating TLC into procurement strategies allows for better long-term planning. This includes optimizing shipping routes, selecting appropriate packaging solutions, and ensuring you are receiving the best value from your suppliers.

Sustainability Goals

By factoring in environmental impact as part of TLC, you can align your decisions with your company's sustainability goals. This includes choosing eco-friendly packaging and potentially reducing carbon emissions during transportation.



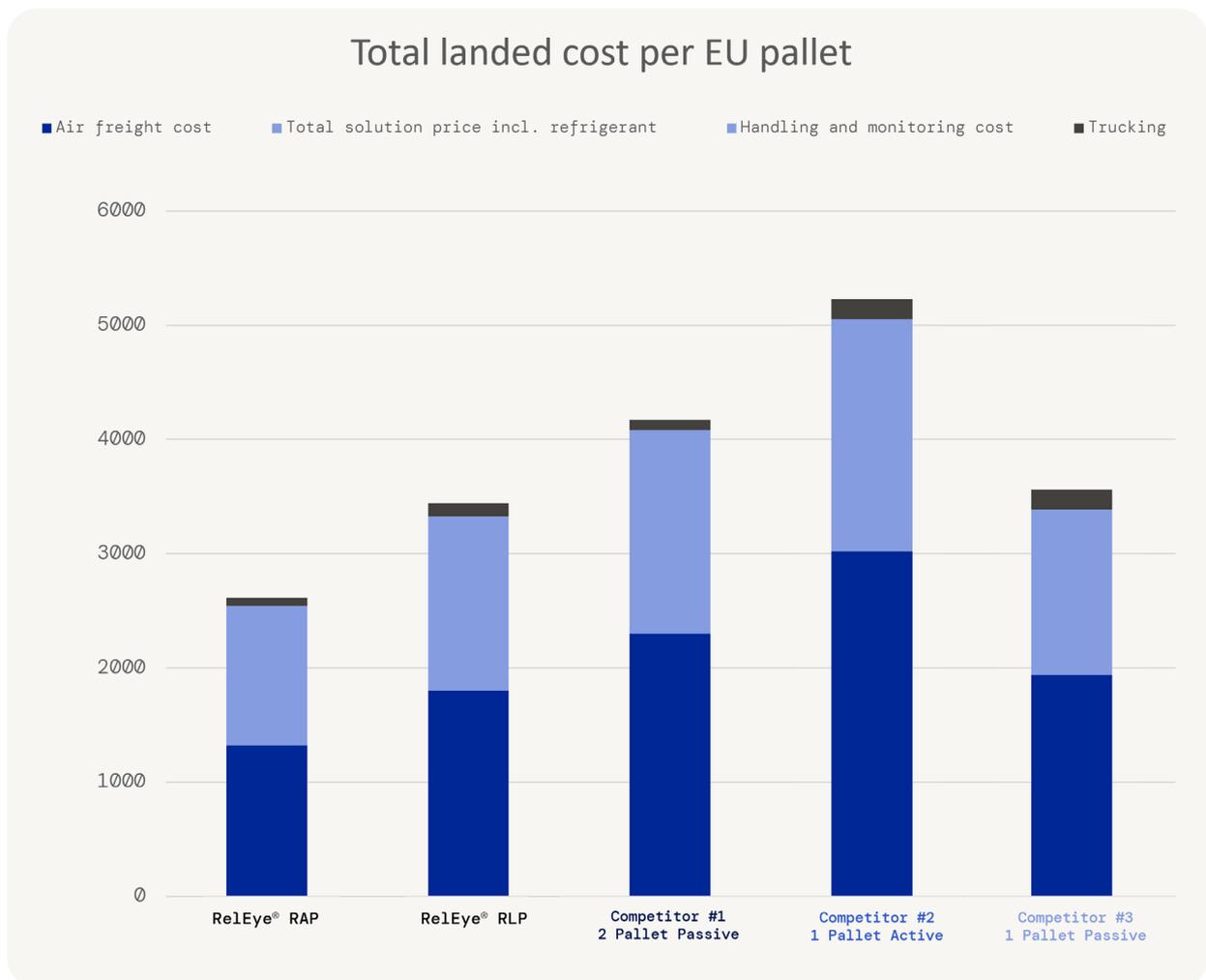
A Total Landed Cost Case Study

Now that we've seen all of the elements that make up your Total Landed Cost and why it is important, we will now review a short case study to see how a TLC calculation works for a specific shipment.

For this case study, we have used the below information for our calculation:

- The product is being shipped using EU pallets
- We have used standard lease prices for each solution cost
- We have added the additional €380 EUR damage waiver for the Envirotainer RAP and RLP solutions

When we add all of the components together to calculate the TLC, this is the result per pallet.



In very general terms, we can see that the TLC per pallet is lowest for the RelEye® RAP solution, highest for a Competitor #2 - one pallet active solution, and quite similar for the RelEye® RAP and Competitor #3 - passive two pallet solution.

This calculation highlights that air freight costs in particular can vary greatly between different solutions, in some cases more than double. This contrast emphasizes the importance of selecting solutions that effectively utilize the space in an aircraft, have a high inner-volume for cargo, and, when feasible, consider consolidating shipments to maximise the space used - all key factors to help to reduce costs.

Value Added Services

For this whitepaper we have only explored the 'hard' costs of a shipment. Based on this, it may be easy to think "why wouldn't I just choose the cheapest option?"

However, it is important to also consider the additional value added services that you would get with a solution or supplier such as:

- Live shipment monitoring
- Ease of handling
- Sustainability/CO2 emissions
- How easy the supplier is to do business with
- Critical factors such as availability of solutions

These additional services can provide increased peace of mind, reduce risk, and simplify procedures. While their monetary value may be difficult to quantify, they can be invaluable for the success of your shipment.

Conclusion

Mastering Total Landed Cost (TLC) is a game-changer for pharmaceutical companies striving to optimize logistics, enhance reliability, and maximize cost efficiency. By taking a strategic, data-driven approach to TLC, you can improve operational performance, reduce waste, and ensure the safe, timely delivery of temperature-sensitive medicines to patients worldwide.

In a highly competitive and regulated industry, even small improvements in shipping efficiency can lead to significant long-term benefits. Understanding and optimizing your TLC not only strengthens your supply chain but also gives you a critical edge in ensuring quality, compliance, and financial sustainability.

How can we help?

Total Landed Cost (TLC) involves many factors, making it challenging to calculate on your own.

With 40 years of industry expertise, we can simplify the process—helping you assess costs, compare packaging solutions, and determine the best option for your needs.

Let's optimize your logistics together - contact us today to discuss your needs.

www.envirotainer.com/contact