

How do you calculate the total cost of ownership of your logistics packaging in 2025?

Calculating the total cost of ownership (TCO) of your logistics packaging goes beyond just the purchase price. It includes all costs incurred during the life cycle: from purchase to disposal. In 2025, these calculations will become even more important due to stricter sustainability requirements and rising material costs. By including hidden costs such as transport damage, return logistics and waste processing, you get a realistic picture of your actual packaging costs and can make better-informed investment decisions.

What are the hidden costs in your logistics packaging strategy?

When determining packaging costs, many companies only look at the purchase price, but hidden costs often have a much greater impact on your total expenditure. These invisible cost items can increase your TCO by 40-60% if you do not include them in your calculations.

The most underestimated cost item is **transport damage**. When products arrive damaged, this not only leads to direct replacement costs, but also to administrative processing, additional transport, and possibly even production delays. For high-quality technical or medical equipment, these costs can quickly run into thousands of pounds per incident.

Another hidden cost is inefficient use of space. Packaging that is not optimally designed for your products takes up unnecessary volume. This translates directly into higher transport costs, more storage space, and a larger carbon footprint. This can be a significant cost, especially for international shipments.

Return logistics are also often overlooked. With single-use packaging, the investment disappears after one use. With reusable packaging, you have to take into account collection costs, cleaning, inspection and possible repairs. These costs can amount to 15-25% of the total packaging costs.

Finally, **waste disposal costs** are becoming increasingly important. With rising environmental taxes and stricter regulations, the costs of processing packaging waste are increasing. By 2025, these costs are expected to be 30% higher than in 2023, which will have a significant impact on your TCO calculation.

How does DOA reduction affect the total cost of ownership of packaging?

Dead On Arrival (DOA) refers to products that arrive damaged at the customer's premises. DOA reduction has a direct and measurable impact on your packaging TCO. Every percentage point reduction in DOA translates into substantial cost savings and improved customer satisfaction.

The **direct costs of DOA** are considerable. When products arrive damaged, you not only have to replace the product, but you also incur costs for returns, additional administration and new shipping. For high-quality technical equipment, these costs can amount to 3-5 times the value of the product itself.

Even more significant are the **indirect costs** of DOA. A damaged product leads to dissatisfied customers, potential reputational damage and even the loss of future orders. These costs are more difficult to quantify, but have a major impact on your operating results. Research shows that a customer who has had a DOA experience tells an average of 2.3 potential customers about this negative experience.

Investing in protective packaging that minimises DOA can significantly reduce your warranty claims. This has a direct positive effect on your operating costs and customer satisfaction. Especially in sectors such as defence, medical technology and high-tech, reliable delivery is crucial to your reputation and customer relationships.

Well-designed packaging that prevents DOA also improves **operational efficiency**. Less time spent handling claims and returns means more time for core activities. This leads to lower TCO and higher productivity within your organisation.

Which financial parameters are crucial for an accurate TCO calculation?

An accurate TCO calculation requires you to include all relevant financial parameters. The most crucial parameters are purchase costs, useful life, maintenance costs, operational expenses, residual value and circular potential.

The **purchase costs** form the starting point of your TCO calculation. This includes not only the direct purchase price of the packaging, but also additional costs such as design, engineering and any tooling costs. For customised packaging, these initial costs may be higher, but they often lead to lower costs over the life cycle.

The **service life** is an essential parameter that determines the period over which you spread the costs. Sustainable packaging with a longer service life may be more expensive initially, but results in a lower TCO when depreciated over several years. Example: a premium transport case costing £500 with a service life of 5 years effectively costs £100 per year, while a cheaper option costing £200 that only lasts 1 year ultimately works out more expensive.

For reusable packaging, **maintenance costs** are an important factor. This includes cleaning costs, inspections, repairs and replacement of parts. A practical formula for this is:

Annual maintenance costs = (Number of usage cycles per year × Cost per maintenance) + Annual inspection costs

Operating expenses include all costs incurred during the use of the packaging. These include labour costs for packing and unpacking, transport costs, storage costs and administrative costs. These can be calculated using the formula:

Annual operating costs = (Labour costs + Transport costs + Storage costs) × Number of usage cycles per year

Finally, **residual value and circular potential** are playing an increasingly important role. Packaging that still has value or can be recycled at the end of its life cycle reduces your TCO. This parameter is becoming increasingly relevant due to the growing focus on sustainability and the circular economy.

When is investing in premium packaging solutions financially justified?

Investing in premium packaging solutions is financially justified when the total costs over the product's lifetime are lower than those of cheaper alternatives. The break-even point determines when the higher initial investment is recouped through savings on other cost items.

The **risk-value ratio** is an important consideration. The more valuable or fragile your product, the sooner premium packaging becomes financially viable. For high-value products, even a small percentage reduction

in transport damage can justify the investment. Suppose you ship £500,000 worth of products annually with an average damage rate of 3%. If a premium packaging solution can halve this percentage, you will save £7,500 annually in direct damage costs.

The **frequency of use** largely determines whether premium packaging is profitable. For reusable packaging, the more often it is used, the faster the return on investment. A practical calculation for this is:

Break-even point (in number of usage cycles) = (Cost of premium packaging – Cost of standard packaging) ÷ (Cost per cycle standard – Cost per cycle premium)

Operational efficiency also plays a role. Premium packaging is often more user-friendly, which saves time when packing and unpacking. This time saving translates directly into lower labour costs. If premium packaging saves 2 minutes per cycle at an hourly rate of £40, this already results in a saving of £133 per 100 cycles.

Finally, **customer retention** is a factor that is often underestimated. Premium packaging contributes to a professional image and reliable delivery, which leads to higher customer satisfaction and retention. If an investment in better packaging results in the retention of just one major customer, this can already justify the additional costs.

At Faes, we see that companies that invest in high-quality industrial packaging solutions often recoup their investment within 12-18 months through lower damage rates, improved operational efficiency and longer packaging life.

By taking all aspects of the TCO into account in your decision-making, you can make informed choices that not only reduce your direct costs, but also contribute to a more sustainable and efficient supply chain.

Frequently Asked Questions

How do I start implementing a TCO calculation for our logistics packaging?

Start by collecting all cost data: purchase costs, transport costs, damage rates, return logistics and waste disposal costs. Then create a simple spreadsheet model in which you can enter this data. Involve different departments such as logistics, finance and quality control in the process to get a complete picture. Start with one product line as a pilot and later expand this to your entire packaging range.

What are the most common mistakes when calculating the TCO for packaging?

The most common mistakes are underestimating hidden costs such as transport damage and reverse logistics, not including labour costs for handling, and ignoring the actual lifespan of packaging. People also often forget to factor in future cost increases (such as environmental levies). Another common mistake is not quantifying indirect costs such as customer satisfaction and brand image, which can have a significant impact on your operating results.

How do I measure the ROI of an investment in premium packaging solutions?

Measure the ROI by first conducting a baseline measurement of your current situation: document damage rates, handling times, transport costs and customer satisfaction. Then implement the premium packaging solution and monitor the same parameters for at least 6-12 months. Calculate the total savings (reduced damage, lower labour costs, etc.) and divide this by your investment to determine your ROI. Don't forget to include qualitative improvements such as increased customer satisfaction in your evaluation.

What role does sustainability play in the TCO calculation and how do I anticipate future regulations?

Sustainability affects your TCO through waste disposal costs, environmental taxes and future regulations. Anticipate this by following Extended Producer Responsibility (EPR) legislation and including CO2 taxes in your long-term calculations. Consider adding a “sustainability premium” to your TCO model for non-sustainable options, based on expected future costs. Invest in circular packaging solutions that are reusable or fully recyclable to minimise future costs.