

An aerial photograph of a shipping yard. The yard is filled with rows of shipping containers, primarily yellow and white. The containers are arranged in neat rows, with some yellow containers interspersed with white ones. The ground is paved, and there are some markings on the left side, including a red circle with a white 'S' and some directional arrows. The overall scene is industrial and organized.

Cold Chain Shipping Feels the Heat from Rising Demand

5 Tips to Make Your Cold Chain Shipping Operations More Sustainable

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The cold chain logistics market is seeing significant growth. The global cold chain logistics market was worth almost 248.4 billion U.S. dollars in 2020 and is expected to exceed 410 billion U.S. dollars by 2028.¹

Today, additional cost pressures such as high inflation and energy costs, continuing high consumer demand for chilled and frozen food products and pharmaceuticals, and carrier capacity limitations make it even harder for shippers with temperature-controlled products to ship cost-effectively.

It is also growing more expensive to ship temperature-controlled products. In 2020, 80% of cold chain logistic professionals predicted an increase in costs, with the most common estimate being about a 1% to 5% increase. They noted that the impact on revenue was already being felt, with 54% of respondents reporting a decrease in revenue from Q1/Q2 2020.²

To maintain a cost-effective and eco-friendly business for cold-temperature shipped products, shippers must ensure that their operations are extremely efficient across the board. In this guide, we'll cover every area of your shipping operations you need to examine and what you can do to bring costs down to ensure the greatest profitability and sustainability of your business.

Let's dive in.

¹ "Size of the cold chain logistics market worldwide from 2020 to 2028," Statista, accessed April 26, 2022.

² Jaclyn Ix, "Cold Changes," Inbound Logistics, August 17, 2020.

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1 Evaluate your total landed costs



Data you need to optimize

To calculate your total landed costs, you will need to know:



Total manufacturing cost of product



Cost of shipping, including additional handling and surcharges



Cost of shipping based on zip code



Historical data on percentage of returns and replacement product and shipping costs

Understanding your total landed costs is critical to your business's overall profitability. Total landed costs include the total price of a product once it has arrived at a customer's door. To calculate this total cost, include the original price of the product to manufacture, all shipping fees, assessorial fees, taxes, tariffs, packaging, etc.

You will also want to conduct a deep dive into your total landed costs by different shipping zones and services to help you understand what it costs you in total to ship to a customer who is 150 miles away versus one who is 300 or 600 miles away. This will give you added visibility into whether your product pricing profitably supports various shipping destinations and services.

It's also important to include the cost of product failure in your total landed costs. For cold-shipped products the risk of spoilage increases significantly and the cost of having a failed shipment or shipments can be extremely expensive. Only by understanding the true costs of shipping, including the percentage of failed shipments historically and the cost of those failed deliveries, the impact of price increases—whether that's in raw materials, shipping costs, or packaging, and other taxes and fees—can you assess whether your overall business model continues to make sense.

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2 Diversify your cold-temperature supply chain



Data you need to optimize

To optimize your cold storage network and delivery chain, you will need the following:



Visibility into where your customers are located



Visibility into where your current storage warehouses are located. In colder climates, you'll use less energy to cool products, which is also better for the environment



Ability to model different scenarios and the impact on delivery service requirements of adding or relocating your cold storage warehouses



Ability to model different cost scenarios using a local vs. a regional carrier

One of the biggest challenges for cold-chain shippers is diversification of cold chain distribution. The longer a shipment has to travel, the more insulated or protected it needs to be and the more expedited the service required to get the product to a customer's door on a viable timeline. As a result, packaging and shipping costs increase with the distance shipped.

Diversifying your cold storage warehouses and storage space so that you can position your product closer to your customer base will allow you to reduce the need to overnight or two-day ship products. Instead, you can use a ground network that can still reach customers within two days.

The closer your products are to your customers when shipping, the less cooling is required, which adds to the sustainability of your operations since you will need less energy to cool and transport your products. You can also reduce packaging costs by using less packaging overall or less costly or hazardous materials, such as ice packs instead of dry ice. Lighter or smaller packages can also reduce shipping costs by lowering a package's DIM weight and eliminating hazardous material fees.

Another key to diversifying your cold-temperature supply chain is diversifying your carrier network. With your products in regional cold storage warehouses, you can use local carriers, which will be more cost-effective than using a national carrier, to pick up and deliver shipments in a given metro area.

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3 Know the routes your shipments travel

National carriers have their own regional shipping routes that are optimized for efficiency and cost effectiveness. Often, a package may travel from California to Texas, and then back to Arizona. The risk for cold-temperature shippers is that their products are being handled more frequently, are traveling longer, and may be traversing unanticipated regions that could have different climates and weather. All of these factors can increase the risk of product spoilage.



Data you need to optimize

To optimize your cold storage network and delivery chain, you will need the following:

-  Distance your shipping products from your warehouse to customers
-  Seasonal weather data
-  Visibility into general shipping routes your carrier uses.
-  Ability to model different packaging and shipping scenarios based on routes and weather

Visibility into delivery routes essential to optimize shipping costs

Many retailers with products that only need to be kept at room temperature or slightly cooled can optimize their shipping operations by considering the average temperatures in different seasons. From November to March, a retailer may know it can use standard packaging when shipping to northern U.S. destinations. In southern states, such as Georgia or Florida, winter temperatures may not be cold enough, so shipping to these locations still requires insulated packaging.

However, route visibility is essential. If a carrier routes a package through a warmer region that is not properly insulated for that climate, the product may spoil. Optimizing shipping in this way can have a significant impact on reducing costs, making it critical to understand the general route your product will travel.

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4 Assess failure rates and carrier performance



Data you need to optimize

To determine how carrier performance impacts your failure rates, you need to evaluate:



Historic data on carrier on-time delivery performance



Historic data on delivery times for different zip codes

When it comes to cold chain shipping, time in transit is critical. The longer it takes for a product to reach a customer's door, the greater the risk of spoilage. While carriers are no longer guaranteeing service levels, it's still critical to know how your carrier is performing and how that is impacting your failure rates. If you identify that carrier performance is impacting your failure rates—and have the data to prove it—you are in a much stronger negotiating position.

You can also use your data insights to bring down shipping costs by understanding how carrier performance impacts what services you can use. If carrier on-time rates are high for 2-day ground shipping in a certain region or metro area, you can reduce your shipping costs by moving to ground instead of paying a premium for two-day shipping. You also want to evaluate your carrier to make sure they're a good match for the urgency and sensitivity of your shipping requirements. You may want to explore regional carriers. They may not move packages in a temperature-controlled environment, but if you can ship locally and stay within a smaller geographical location, the chances for faster delivery increase.

“Evaluate your carrier to make sure they're a good match for the urgency and sensitivity of your shipping requirements”

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5 Understand your data and increase your visibility

The key to creating the most sustainable and profitable cold-chain shipping operations is having the data you need for visibility into your shipping operations.

Data you need to optimize

Sifted can help you optimize your operations by providing visibility through data insights such as:



Historical data on shipping costs by zip code



Historical data on shipping returns



Historical data on shipping costs based on package weight, size or other additional surcharges and handling fees



Sifted also gives you the ability to quickly and easily model different shipping scenarios based on packaging, type of shipping service or location of warehouses to optimize your shipping operations.

Data and visibility are key to effective cold-chain shipping risk management and long-term sustainability. Learn how Sifted can help you use your shipping data to gain the visibility you need to optimize your shipping operations.

Schedule your demo