



INDUSTRY UPDATE

JANUARY – FEBRUARY 2023

RESINS & RAW MATERIALS

Berlin Packaging maintains a best-in-class approach to sourcing packaging materials and manufacturing platforms. We are not bound to a specific material or technology, affording us tremendous flexibility to find the most cost-effective packaging solutions for our customers.

Following a run-up in prices for much of 2022, the last quarter of the year saw flat or lower pricing for many packaging raw materials due to a better balance between supply and demand and moderating feedstock costs. Energy costs have also receded from record highs. However, producers of glass and aluminum containers have announced price increases for 2023 to keep pace with inflationary costs.

Pandemic stockpiling by both consumers and producers has given way to value purchasing amid fears of an economic downturn and persistent inflation. While consumers have cut back on purchases of furniture, appliances, electronics, sporting goods, and clothing, they are still spending considerably on food, beverage, personal care, health, and beauty products. Furthermore, away-from-home services like restaurants, entertainment venues, and travel/tourism are capturing a larger share of pocketbooks.

Inflation, which is gradually slowing from its Consumer Price Index peak of 9% in June 2022, continues to put upward pressure on raw material prices. For the year ending November 2022, the Producer Price Index (PPI) for final demand goods and services increased by 7.4% — the smallest increase since May 2021. Softening producer prices usually suggest an improving inflation environment.





PLASTIC RESINS

At the close of 2022, prices for most plastic resins were flat or declining due to weak demand, plentiful supplies and inventories, and stable feedstock costs. To maintain domestic prices, resin producers are cutting back production, reducing stockpiles, and boosting exports.

The winter season brings the possibility of severe weather, ice, snow, and arctic cold — all of which could hamper resin production and transportation (e.g., in February 2021, winter storm Uri caused massive power outages in Texas and shut down or curtailed petrochemical operations along the Gulf Coast for several weeks).

Here is a brief rundown of the current market conditions for various resins:



PET (Polyethylene Terephthalate):

High inventories of imported material and soft demand have led to decreased PET prices.



HDPE/MDPE/LDPE (Polyethylene):

Weak demand, sufficient supplies, and stable energy prices are keeping PE prices flat.



PVC (Polyvinyl Chloride):

PVC prices have dropped because of decreased demand (mostly from housing and construction).



PP (Polypropylene):

Weak demand and a surplus of inventory have led to decreased PP prices.



PS (Polystyrene):

A continual decline in demand has resulted in decreased PS prices.

Post-consumer recycled (PCR):

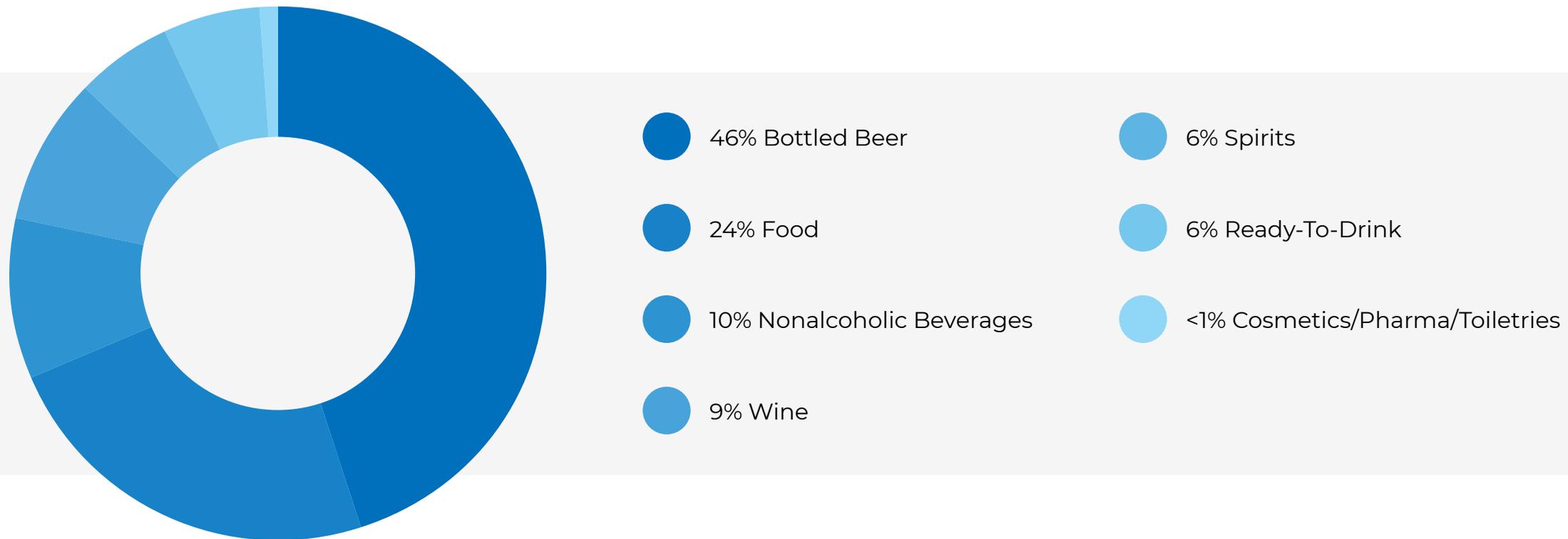
Bale prices for natural HDPE have risen due to demand from consumer packaged goods brands looking to meet their sustainability goals and PCR content targets. Pricing for mixed-colored HDPE bales has remained flat since September 2022. Following a steep decline in PET bottle bale prices in the summer of 2022 due to low demand, the market has leveled off since September because of increased export demand. Some analysts don't foresee a substantial increase in r-PET demand until beverage production ramps up for the summer drinking season.

GLASS

According to the Glass Packaging Institute, bottled beer accounts for 46% of glass container shipments in the U.S. The next biggest glass user is food (24%), followed by nonalcoholic beverages (10%), wine (9%), spirits (6%), ready-to-drink (6%), and cosmetics/pharma/toiletries (<1%).

While glass availability is improving in North America, prices are set to climb in 2023 because of increases in the costs of raw materials, transportation, labor, and energy.

Largest Glass Container Shipments in the United States:



ALUMINUM

Aluminum demand in the U.S. and Canada (shipments by domestic producers plus imports) totaled an estimated 21 billion pounds through the third quarter of 2022, increasing 6.3% over the same period in 2021. Aluminum demand, which fell during the pandemic, is now on par with tonnage for 2019 and 2018, according to the Aluminum Association.

Prices for aluminum beverage cans and ends have seen small increases in early 2023 due to higher costs for transportation, labor, and energy.



TINPLATE STEEL

Spot prices for tinfoil steel in China — a major producer and user of tinfoil steel — fell in the last three quarters of 2022. The country's zero-COVID policies and lockdowns have reduced steel production and demand. However, steel supplies are high, suppressing new orders and putting downward pressure on prices.

China's recent lifting of COVID restrictions may spur economic activity, which is favorable to steel production and demand. Globally, demand should remain weak due to the economic slowdown.



PULP & PAPER

The pulp and paper market experienced tremendous volatility in 2022. The beginning of the year saw strong demand and limited supplies of corrugated paper and containers, resulting in price increases. In the second half of the year, demand waned, supplies and inventories grew, and prices flattened before declining in November and December.

In the recycling markets, the average price for old corrugated containers (OCC) continues to fall and may reach all-time lows due to oversupply and weak demand.

Although Berlin Packaging cannot control the price of raw materials, we do offer multiple value-added services and income-boosting solutions to help our customers Package More Profit[®]. Over the past few years, Berlin Packaging has added more than \$200 million in profit to our customers as a unique benefit of doing business with us.

GLOBAL SOURCING

Unlike many packaging suppliers, Berlin Packaging is not bound by a material type, manufacturing process, or country of origin. With our global network of 900+ qualified manufacturing partners, access to over 50,000 packaging components, and immense purchasing power, we manage time differences, language barriers, quality expectations, compliance issues, production scheduling, customs clearance, logistics management, and more — so you don't have to.

GLOBAL SOURCING

The ability to source packaging components globally is a competitive advantage.

Global sourcing offers tremendous flexibility in product selection and cost-saving opportunities. But it does come with risks and greater complexities due to longer and multifaceted supply chains.

Here, we showcase the benefits of global sourcing, discuss ways to minimize the risks and demonstrate how Berlin Packaging can help our customers find cost-effective packaging solutions from around the world.

BENEFITS

Sourcing products globally affords multiple options in material substrates, manufacturing platforms, and tooling and mold development. This flexibility to choose from a vast array of packaging suppliers typically results in reduced product costs, lower tooling costs, smaller minimum order quantities, and shorter lead times.

Certain global regions possess a better labor market, offering reduced operational costs and greater production capacity.



MINIMIZING RISKS

The complexities of global supply chains introduce risks. Here are some risks to consider: language barriers, time zone differences, tariffs and geopolitics, and quality.

Language Barriers

While many overseas companies have English-speaking managers, English will likely not be their native language. This may lead to differences in the meaning of words and misunderstandings.

To ensure accurate communication, respectfully ask for clarification when unsure and check periodically for understanding during a telephone conversation or virtual meeting. After the meeting, send a follow-up email with summary notes of the discussion and action items. Be specific and avoid idioms and jargon.

Time Zone Differences

In the U.S., the difference in time zones between the West Coast and East Coast shortens the business day for bicoastal folks to communicate in real-time with each other. But this is a minor inconvenience compared to working with someone on the other side of the globe with a 12-hour or greater time difference.

They are awake when you are sleeping and vice versa. It may already be tomorrow there. Meetings typically have to take place before or after regular working hours to accommodate this big time difference. Responses to emails may take a day or two.

Tariffs and Geopolitics

Companies facing increasing import tariffs usually have three options:

1. Absorb the added costs.
2. Pass the costs onto consumers through price increases.
3. Rework their supply chain to find an alternate source with no tariff.

If the product you are seeking to import has a tariff or will likely be subjected to a tariff, it is probably best to source from a country without a tariff.

Berlin Packaging employs a multi-country, multi-region sourcing strategy with production volumes split between countries to ensure product availability in the event of economic, political, or social turmoil.



Quality

Finding a manufacturer with a rock-bottom price is fairly easy. Finding a manufacturer to produce products to your specifications nearly every time and get them to you on time is a lot harder but not impossible.

Work with a packaging supplier who adheres to global quality standards and documents their manufacturing and resolution practices. Berlin Packaging certifies our 900+ global manufacturing partners with on-site quality audits. We also proactively track supplier on-time delivery, product quality, and service performance to mitigate any disruptions or nonconforming products for our customers.

The COVID-19 pandemic highlighted the fragility of global supply chains and exposed the risks. Disruption became the norm with lockdowns and stay-at-home mandates hindering manufacturing.

Unprecedented consumer demand in the U.S. drove enormous import volumes, leading to record spikes in ocean freight rates, blank sailings and poor schedule reliability, and congested ports. Historic inflation boosted production expenses and domestic freight transportation costs.

Demand outstripped production capacity, creating product shortfalls. Berlin mitigated these risks through our established multi-country, multi-region sourcing strategy, which gained greater importance during the pandemic. To guard against blank sailings, we joined the three ocean shipping alliances with multiple carriers (representing 90% of ocean freight capacity) serving key global trade lanes.

Berlin Packaging continues to invest in our people and processes to increasingly handle the majority of our drayage (final mile delivery) associated with international freight costs. This improves our ability to achieve on-time shipments and avoid destination charges, such as demurrage and detention costs.

Berlin Packaging's global account management team provides best-in-class service to multinational accounts — treating our global customers' operations as one integrated account and offering the best terms for product options, pricing, and service.





OCEAN FREIGHT

As volatility persists in many global trade lanes and port delays and congestion linger in North America, Berlin Packaging continues to proactively search for alternate routings and provide real-time visibility of the global freight market to help our customers minimize any disruptions to their supply chains.

OCEAN FREIGHT

Ocean freight spot rates in nearly all global trade lanes continue to decline as capacity exceeds cargo demand and fuel prices begin to ease. Rates from Asia to the West Coast are near or below pre-pandemic levels, while trans-Pacific rates to the Gulf and East Coasts are slightly elevated compared to 2019. Trans-Atlantic rates from Europe to North America continue to command a premium.

To counter the freight demand slowdown and maintain rates, ocean carriers have reduced capacity by increasing the number of blank sailings, idling some older ships, and taking longer and slower return (empty) routes. However, schedule reliability continues to improve as freight volumes subside from their peaks in early 2022 and port congestion eases.

Two different schools of thought cloud the economic outlook for 2023. One viewpoint sees a soft landing from inflation with steady consumer demand, retail inventory replenishment, typical shipping volumes, and stable interest and inflation rates. The other perspective foresees a recession, weak demand, and declining volumes.

Following protests in China over its zero-COVID policy and mass lockdowns, the Chinese government reversed its policy in December — lifting travel restrictions, relaxing rules for testing and quarantining, and in some cases allowing people testing positive for the virus to go to work.

While this loosening of COVID rules may benefit manufacturing, trucking, and shipping in China, the Chinese New Year celebration — January 21 (New Year's Eve) through Sunday, February 5 (Lantern Festival) — will suspend commercial activities for several weeks. Many businesses are closed before and after the official holiday to allow their workers to travel home and return. With weak demand from North America and Europe, many Chinese factories plan to lengthen their shutdowns this year.



PORT ACTIVITY

Imports at the ports of Los Angeles (LA) and Long Beach (LB) have seen a downward trend over the past few months. In November, import volumes dropped 24% year-over-year (YOY) at LA and 28% YOY at LB. More telling is the fact that LA/LB import volumes were less than in November 2019 (pre-pandemic).

Some of the attrition relates to concerns about the lack of a West Coast dockworkers' labor contract, which expired on July 1, 2022. The anxiety over a possible work stoppage has prompted many carriers to bypass the West Coast in favor of Gulf and East Coast ports.

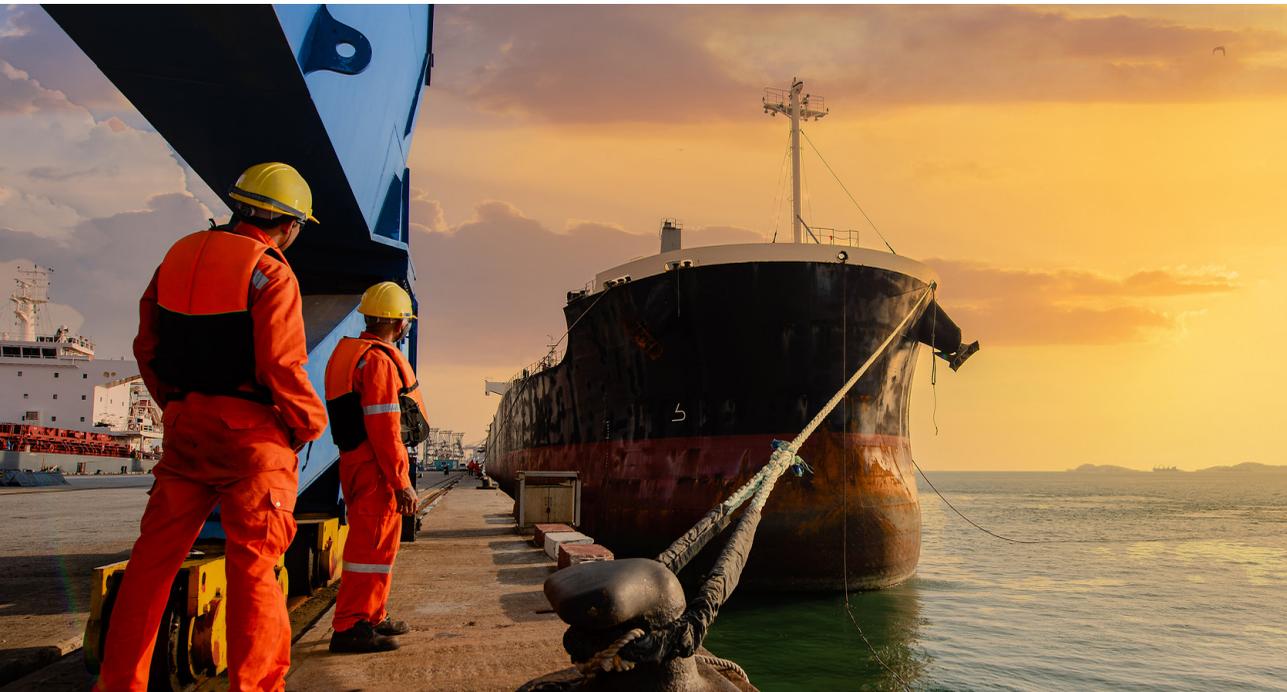
Recently, the ports of New York and New Jersey overtook the ports of LA/LB as the busiest container ports in the U.S. LA/LB had held the title for the past 22 years.

The shift from the West Coast to Gulf and East Coast ports has impacted terminal operations. In November, the average wait times for ships at the top five West Coast ports averaged nearly 7 days, while the wait times at the top five East Coast ports averaged close to 10 days.

In November, exports from China to the U.S. fell 25% YOY, following a 12% YOY drop in October. The declines are likely a combination of reduced import demand from the U.S. and China's zero-COVID policy, which ended in December. Even with the change in COVID policy, it's unlikely that Chinese exports to North America will increase in the first quarter due to a lack of demand and the Chinese New Year holiday.

In addition to China, November imports to the U.S. were down year-over-year from India, South Korea, Vietnam, Thailand, Germany, Taiwan, Hong Kong, and Italy.

As a Customs Trade Partnership Against Terrorism (CTPAT) Certified importer, Berlin Packaging and our customers reap multiple benefits, such as reductions in customs freight examinations, “front of the line” status during inspections/exams, shorter wait times at the border, and more.





DOMESTIC TRANSPORT

With a dedicated team of logistics specialists, Berlin Packaging has expertise in all modes of transportation — truckload, LTL, intermodal, and parcel — to ensure our customers receive competitive rates.

DOMESTIC TRANSPORT

Transportation costs in North America have declined gradually in the fourth quarter due to slowing freight demand, sufficient capacity, and falling diesel fuel prices and fuel surcharges. The forecast for the first quarter of 2023 anticipates a continued loosening of capacity and further erosion of fuel surcharges.

At the start of the new year, the economic outlook is mixed. Some analysts foresee a soft landing from inflation with shipping volumes reflecting a more normal pattern of orders and inventories, while others predict an economic recession and decreasing volumes.

In early December, a rail strike was averted when President Joe Biden signed a law requiring the unions and railroad employers to adopt the labor contract negotiated in September. Four unions had rejected the tentative contract and could have gone on strike as early as December 9. The sticking point for the unions was their demand for an additional seven days of paid sick leave, which was not included in the new law.



TRUCKLOAD

Line-haul costs per mile for dry van spot market shipments have followed the seasonal pattern of declines in November with increases after Thanksgiving. In mid-December, dry van spot rates per mile averaged \$2.06 and were down from \$3.14 in late 2021. Spot rates are about 60 cents per mile less than contracted rates.

In mid-December, the number of weekly dry van spot shipments was down 18% compared to the same time a year ago. However, the 2022 shipment numbers were on par with December 2019 (pre-pandemic).

Van load-to-truck ratios — an indicator of demand (no. of loads) and capacity (no. of trucks available to carry those loads) — have fallen since May and stood at 2.68 in November. The last time the ratio was this low was in May 2020 during the early stages of the pandemic. Lower ratios typically indicate a reduction in rates.

Core retail sales data compiled by the National Retail Federation (NRF) dropped 0.4% from October to November, while overall retail sales in November fell 0.6% from October — reports the U.S. Census Bureau.

However, the year-over-year (YOY) sales numbers for November painted a different picture with increases of more than 6% from both the NRF and the U.S. Census Bureau.

According to the NRF, store categories showing month-over-month declines in November include furniture, sporting goods, building materials/garden supplies, electronics, clothing, general merchandise, and online. Stores with month-over-month gains include grocery & beverage and health & personal care.

With well-stocked retail shelves and warehouses, the NRF expects retail imports at major U.S. container ports to fall significantly in the first quarter. On a YOY basis, import volumes are anticipated to drop 8.8% in January, 20.9% in February, 18.6% in March, and 13.8% in April.

In mid-December, the average price for diesel fuel in the U.S. was \$4.75 per gallon — about \$1.10 higher than one year ago. Diesel prices fell nearly 60 cents per gallon from November to December due to slowing demand and higher inventories.

Average price for diesel fuel (per gallon)

\$3.65

December 2021

\$5.35

November 2022

\$4.75

December 2022



LESS-THAN-TRUCKLOAD (LTL)

Less-than-truckload shipments in the fourth quarter have receded from their all-time highs. Many large LTL carriers have reported YOY volume declines in the range of 3% to 9% for October and November, with one carrier reporting a 25% decline in tonnage for November.

A major manufacturing index showed contraction in November, ending a streak of 29 months of expansion. New orders are also in contraction territory. LTL shipments, which correlate to manufacturing activity, are likely to continue to soften in the first quarter.



PARCEL

According to government data, U.S. retail e-commerce sales topped \$265 billion in the third quarter of 2022 — an increase of 3% from the second quarter and a 10.8% jump from the third quarter of 2021. Retail e-commerce sales in the third quarter of 2022 accounted for 14.1% of total retail sales. Through three quarters, online retail sales have totaled nearly \$775 billion and are expected to exceed \$1 trillion for the first time in U.S. history.

Online retail sales for Cyber Week (Thanksgiving through Cyber Monday) added up to \$35.27 billion — a 4% increase over 2021. The National Retail Federation estimated 130.2 million consumers shopped online during Cyber Week — 2% more than in 2021.

Berlin Packaging maintains strong and enduring partnerships with local carriers, resulting in best-in-class service and competitive costs that benefit our customers.



We Believe Anything Is Possible[®]

With over 100 years in the packaging industry, more than 2,000 packaging professionals and a global network of suppliers and warehouses, we offer 50,000+ SKUs of plastic, glass, and metal containers, closures, and dispensing systems across all markets for customers just like you.

Our Business Model

Berlin Packaging is not a distributor. We're not a manufacturer. And we're not a packaging consultancy. Instead, we're all three at the same time. We are best-of-breed amongst manufacturing, distribution, and value-added service providers. We are the world's largest **Hybrid Packaging Supplier[®]**.



Best Elements of a Manufacturer



Distribution & Logistics



Value-Added Specialty Services

Specialty Service Divisions

We offer value-added services specialized to best address all your packaging needs.

- Branding Strategy & Design
- Quality Advocacy
- Global Capabilities
- Warehousing & Logistics
- Financing & Consulting
- Sustainability Solutions