



COLD CHAIN SOLUTIONS THAT MATTER FOR PEOPLE AND THE PLANET



March 2024

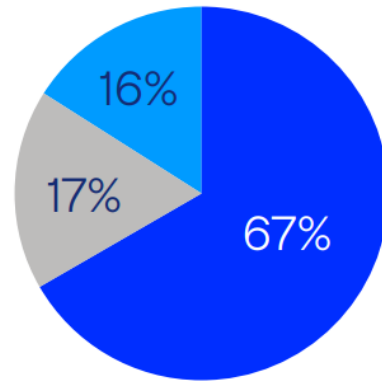
Our Business



Global Leader in
Intelligent Climate and
Energy Solutions

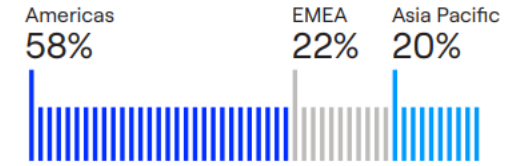
2023
Annual Report

Our Business 2023 Net sales breakdown

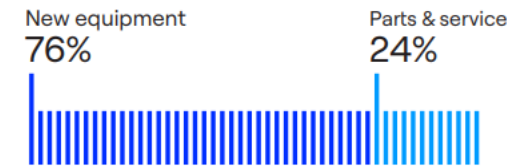


- HVAC
\$15.1B Net sales*
- Refrigeration
\$3.8B Net sales*
- Fire & Security
\$3.6B Net sales*

Net sales by region



Net sales mix




 \$22.1B
2023 Net sales

 ~53,000
Employees in 2023

 100+
New products
for the 9th
consecutive year

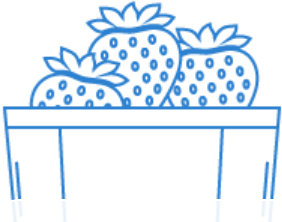
 75+
Brands

 160+
Countries

 14,000+
Active patents
and pending patent
applications worldwide

* Segment sales include intercompany sales.

Food Loss & Waste Impact in the United States



~70M tons of food
are wasted annually

Source: [Feeding America](#)

#1

The U.S. wastes more food than any other country in the world

Food waste is the No. 1 item in U.S. landfills



Source: [RTS](#)

Food waste results in an estimated

170 million MT
CO₂e GHG
emissions



Source: [USDA](#)



44 million
people, or 1 in 8
Americans, are
food insecure

Source: [Feeding America](#)

~40% of the food
produced in the U.S. is never
consumed

Source: [RTS](#)



Food waste has an approximate
value of **~\$218 billion** and
represents **1.8%** of US GDP

Source: [RTS](#); [ReFED](#)



80% of “surplus” food
comes from perishable items

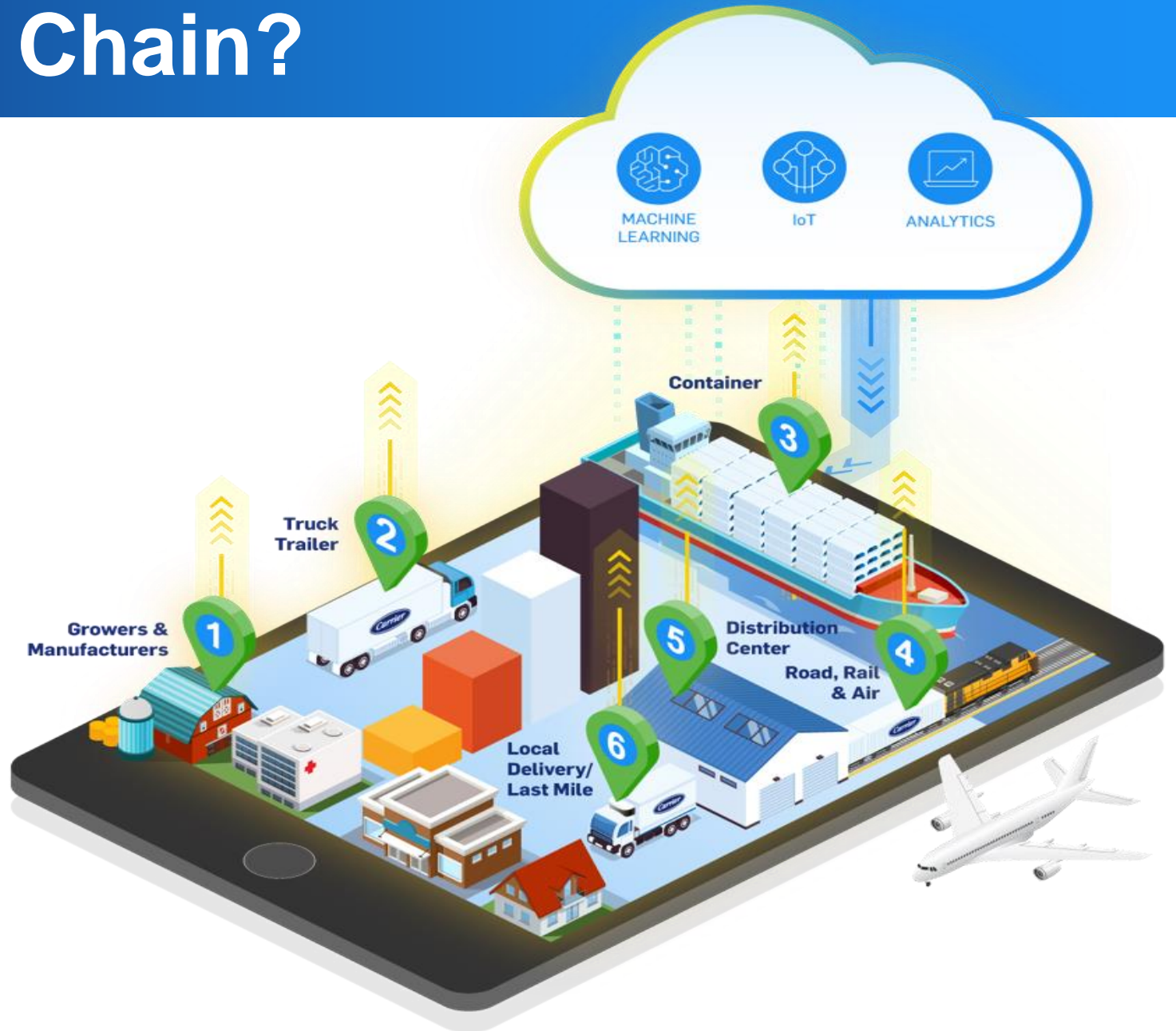


Source: [ReFED](#)



What is the Cold Chain?

The cold chain is the **management of temperature for perishable products** in order to maintain **quality and safety** from the **point of origin** through the **distribution chain** to the **final consumer**.*



*Source: Global Cold Chain Alliance, <https://www.gcca.org/about/cold-chain/>

Risks of an Interrupted Cold Chain

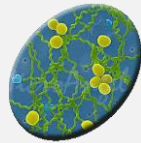
3 Main Types of Risks



Microbial



Chemical



Physical

Chemical Risk

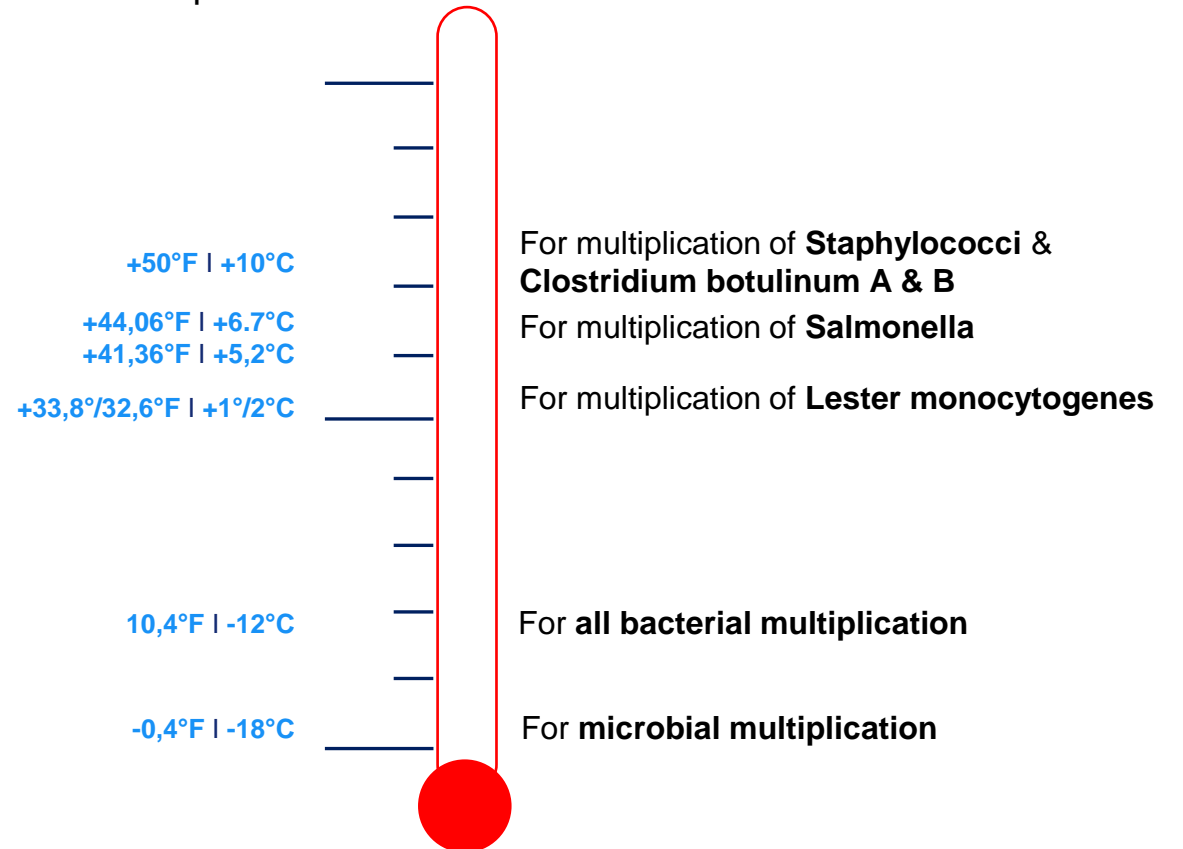
Caused by accidental contact with a non-food substance, such as cleaning products, disinfectants, lubricating oil or toxic chemicals

Physical Risk

Caused by solid particles of various types and sizes, such as dust or dirt

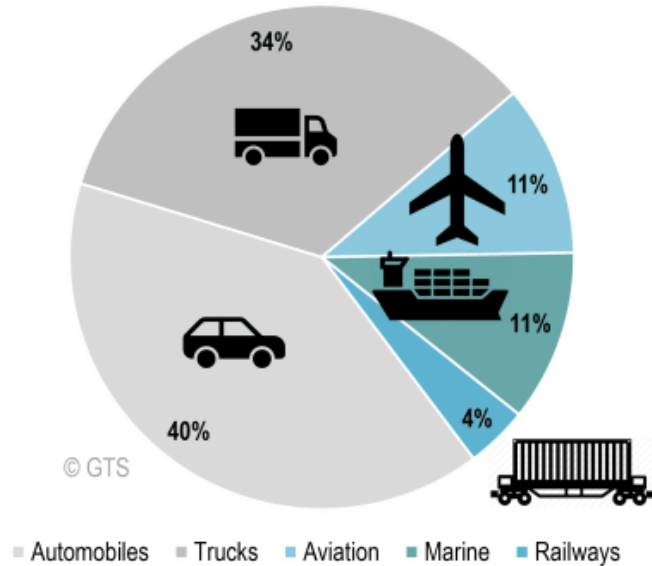
Microbial Risks

Temperatures of the principal pathogens where multiplication stops



Transport & Food System Carbon Footprint

CO₂ Emissions by the Transport Sector

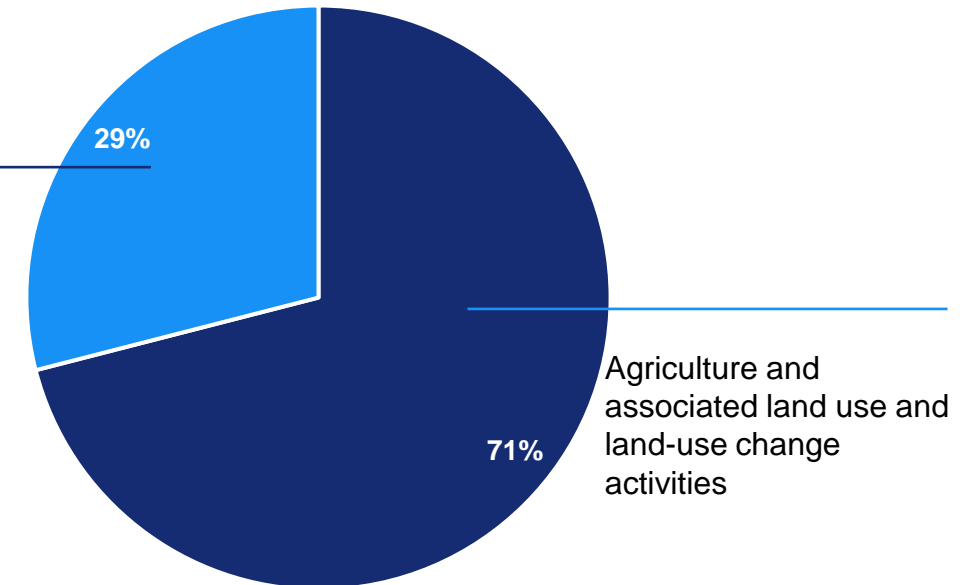


Transportation accounts for about **20%** of greenhouse gas emissions, with logistics accounting for about **34%** of this share.

Source: [International Energy Association. IEA and IPCC \(2014\) Summary for Policymakers.](#)

Food system global carbon footprint repartition

Retail, transport, consumption, fuel production, waste management, industrial processes and packaging



Food-system emissions amounted to 18 Gt CO₂ equivalent per year globally, representing **34%** of total GHG emissions.

Source: A [study](#) published in 2021 and based on 2015 data.

Sustainable Cold Chain Solutions

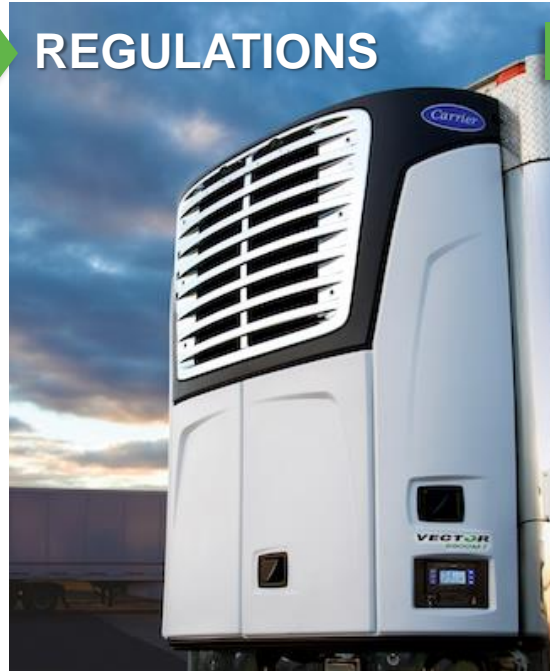
ELECTRIFICATION



Electrifying the cold chain

Carrier Transcold knows sustainability is key to optimizing resources for future generations. In the aim to Carrier's goal to reduce customers' carbon footprint by 1 gigaton while continuing to improve and innovate, we develop sustainable, electrical, high-performance refrigeration solutions to reduce environmental impact and maximize overall economic value today and tomorrow.

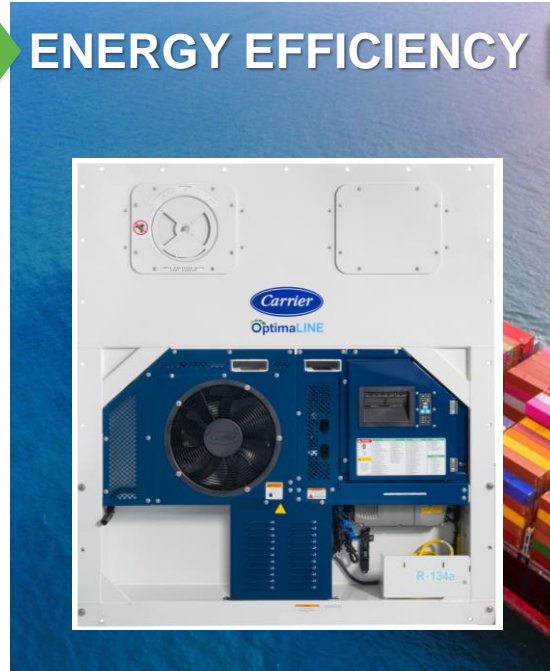
REGULATIONS



CARB compliant range model

Helping to provide increasingly sustainable choices in transport refrigeration, Carrier Transcold is introducing four new premium performance trailer refrigeration units in North America that offer double-digit fuel efficiency improvements and lifetime compliance with emissions requirements of the California Air Resources Board (CARB).

ENERGY EFFICIENCY



Efficiency of OptimaLINE™ new container refrigeration platform

Providing increasingly sustainable choices in transport refrigeration, Carrier Transcold is introducing the new OptimaLINE™ container refrigeration unit, which offers various enhancements, including up to 15% fuel efficiency improvements

RECYCLABILITY



Device Takeback Program

Our Device Takeback Program promotes the return of Sensitech time/temperature data collection instruments for renewal and reuse. Simply collect the devices and send them back to us – weekly, monthly or quarterly. We accept returns of all Sensitech products. Customers only pay the cost of returning the instruments to us.

Carrier Supports Feeding America



**More than
\$1M donated**
to Feeding America and
Feeding South Florida since 2017

How we support:

- Host food drives
- Help provide hundreds of thousands of meals
- Helped food banks across the U.S. purchase refrigeration equipment to deliver fresh food to people in need



