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Publisher Sample
COLD CHAIN MARKET

BY TYPE (REFRIGERATED STORAGE, REFRIGERATED TRANSPORT), PRODUCT TYPE (CHILLED, FROZEN) APPLICATION (FRUITS & VEGETABLES, BAKERY & CONFECTIONERY, DAIRY & FROZEN DESSERTS, MEAT, FISH & SEAFOOD) & REGION

GLOBAL TRENDS & FORECAST TO 2019
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All Rights Reserved. This document contains highly confidential information and is the sole property of MarketsandMarkets. No part of it may be circulated, copied, quoted, or otherwise reproduced without the approval of MarketsandMarkets.
The cold chain market is projected to grow at a substantial CAGR of XX% in the next five years. A cold chain involves a network of facilities and distribution options with temperature and humidity control throughout, for perishable foods such as meat, fish & seafood, fruits & vegetables, bakery & confectionery, dairy & frozen desserts, and other perishable foods such as sauces, condiments, salad dressing, and dips. Increasing demand for temperature-controlled food is on the rise, across the globe. The primary growth of these perishable foods comes from emerging markets such as China, India, and Latin American countries. This has enabled the cold chain market to expand. The growth of the cold chain market is also fuelled by external factors such as trade liberalization, expansion of retail chains by multinationals, government initiatives, support from various organizations, and technological advancements.

**FIGURE 1 NORTH AMERICA – LARGEST MARKET FOR COLD CHAIN (2013)**

North America accounted for the largest share of XX% of the global cold chain market in 2013. This region is one of the largest exporters of perishable foods across the globe, making it the major market for cold chain, followed by Europe. The Asia-Pacific cold chain market has shown a tremendous increase in growth opportunities for leading service providers to invest in the cold chain market, and is estimated to continue to grow at a significant rate in the next five years.
The cold chain constitutes two main infrastructures: refrigerated storage and refrigerated transport. The cold chain market is dominated by refrigerated storage and is projected to grow at a CAGR of XX% from 2014 to 2019. In 2013, the refrigerated storage segment accounted for a value of $XX million and is estimated to reach $XX million by 2019. Refrigerated storage capacities are growing in the Asia-Pacific countries due to the increased need to reduce loss of perishable foods. In North America and Europe, in the refrigerated transport industry, refrigerated road and sea transport are booming, mainly due to the advancement of technology in refrigerated trucks, vans, trailers, and maritime reefer containers.

Source: Secondary Literature, Expert Interviews, and MarketsandMarkets Analysis
In the cold chain market, meat, fish & seafood dominate the application segment in terms of value. The dairy & frozen desserts segment is projected to grow at the highest CAGR of XX%. The dairy & frozen desserts segment was valued at $XX million in 2013 and is expected to reach $XX million by 2019. The consumer demand for dairy & frozen desserts is increasing in Europe, the Asia-Pacific and RoW regions, whereas, in North America the demand for fish, meat & seafood is on the rise. In developed markets, the increase in consumer demand for dairy, fish, meat & seafood is on the rise as consumers are becoming more health-conscious. In developing economies, there is a shift from staple carbohydrate diets to protein-rich foods due to rapid urbanization, increased spending power, and the rising number of working women and single households.
2.1 ATTRACTIVE MARKET OPPORTUNITIES IN COLD CHAIN MARKET

**FIGURE 4** ATTRACTIVE MARKET OPPORTUNITIES IN COLD CHAIN MARKET

ATTRACTION MARKET OPPORTUNITY

- Global Cold Chain Market Size - $XX million in 2013, and estimated to reach $XX million by 2019, at a XX% increase from 2014 to 2019
- Market growth is driven by increase in international trade for perishable foods, technological advancements, and increase in consumer demand for perishable foods
- Emerging economies such as India, China and Latin American countries are paving new opportunities for the cold chain market

Source: Government Reports, FAO, UN COMTRADE, Expert Interviews, and MarketsandMarkets Analysis

2.2 COLD CHAIN MARKET - BY TYPE

**FIGURE 5** REFRIGERATED STORAGE CAPACITY EXPANDING (2014-2019)

Source: Government Reports, FAO, UN COMTRADE, Expert Interviews, and MarketsandMarkets Analysis
The cold chain market in North America and Europe are matured and developed, and are primarily operated by XX PL service providers. The leading cold chain service providers are AmeriCold Logistics (U.S.) and Preferred Freezer Services (U.S.) in North America. These service providers have highly advanced infrastructure and technological systems which enable organized distribution of perishable foods.

Asia-Pacific countries such as India and China are developing in the cold chain market as they have a weak cold chain infrastructure. The Asia-Pacific market is projected to grow at the highest rate in the next five years. In the RoW segment, sub-Saharan Africa, and Tanzania are markets which have a nascent cold chain infrastructure.
3  MARKET OVERVIEW

3.1  INTRODUCTION

Every year global food losses have been documented to the extent of XX% to XX% of production volumes. The use of "cold" handling and storage systems to prevent loss of perishable food is widely used in different countries. It is a highly cost-effective method to increase the shelf-life of perishable products. In the last XX years, the concept of cold chain services has evolved to a great extent. Initially a cold chain was used to store only few perishable agricultural commodities for commercial purposes, and to prolong the shelf-life of fruits & vegetable for domestic use. However, with the rise in trade of perishable foods such as meat, fish & seafood, dairy & frozen desserts, and fruits & vegetables the demand for cold chain is increasing.

A cold chain is a temperature-controlled supply chain used to extend the shelf-life of perishable products such as fresh agricultural produce, seafood, and frozen foods. A cold chain is a series of storage and distribution activities that maintain a particular temperature range. Common temperature ranges for a cold chain in the food industry are XX°C to XX°C and -XX°C to -XX°C. Specific temperature tolerances depend on the product being stored and transported. A cold chain is important in the supply of perishable foods to distant places with different temperatures and climates.

3.2  EVOLUTION

The technique of preserving fish stock piles using natural ice was first used by British fishermen in 1797. The movement of food using mechanical refrigeration started back in the year 1851. The methods of refrigeration have been evolving since then, due to increasing use, particularly in the food industry.

Source: Press Releases, Magazines, Industry Journals, and MarketsandMarkets Analysis
3.3 MARKET SEGMENTATION

The global cold chain market is segmented on the basis of type, product type, application, and region. The types include refrigerated storage and refrigerated transport. Product types include chilled and frozen. Applications include fruits & vegetables, bakery & confectionery, dairy & frozen desserts, meat, fish & seafood, and others (sauces, condiments, salad dressings, and dips). The market has been segmented based on regions such as North America, Europe, Asia-Pacific, and Rest of the World (RoW).

**FIGURE 7** MARKET SEGMENTATION: BY TYPE

![Diagram showing market segmentation by type: Refrigerated Storage and Refrigerated Transport.](source)

**FIGURE 8** MARKET SEGMENTATION: BY PRODUCT TYPE

![Diagram showing market segmentation by product type: Chilled and Frozen.](source)

3.4 MARKET DYNAMICS

The global cold chain market is expanding, and has considerable growth potential, (at a CAGR of XX%) for the next five years. The growth of this market is attributed to the growth of international trade of perishable foods, technological advancements in refrigerated storage and refrigerated transport, and increase in consumer demand for perishable foods. However, rising energy, infrastructure, & maintenance costs and lack of infrastructure support in emerging markets and skilled labor in developed markets are inhibiting the growth of the cold chain market.
3.4.1 DRIVERS

3.4.1.1 GROWTH OF INTERNATIONAL TRADE FOR PERISHABLE FOODS

Globalization has led to an increase in trading opportunities of perishable foods such as dairy & frozen desserts, fruits & vegetables, meat, fish & seafood, and bakery & confectionery across the world.

The growth of international trade of perishable foods is affected by the following factors:

Trade Liberalization

Trade liberalization or removing barriers to trade between countries and encouraging free trade has expanded trade opportunities for exporters of perishable foods across the world. The WTO (World Trade Organization) and the Bilateral Free Trade Agreement such as NAFTA and European Union Free Trade Agreement create opportunities for exporters in the U.S. and Europe by lowering tariffs and non-tariff barriers, or trade perishable foods free of import duties. In emerging countries such as China, the Chinese Free Trade Agreement with countries such as New Zealand and Australia has strengthened their business relationship.
Expansion of Food Retail Chains by Multinationals

Large food retail chains such as Wal-Mart, Tesco, SPAR, XX-Eleven are expanding their outlets in developed countries such as the U.K., Germany, and the U.S. and emerging markets such as China, Brazil, and Argentina. These retail chains serve as a catalyst to shape the international trade of perishable foods. For instance, Wal-Mart is the largest American multinational retail corporation, with over XX stores in XX countries. Wal-Mart has an effective distribution network and a large number of fleets for transportation of perishable foods. Wal-Mart also hires XXPL cold chain service providers for the efficient transport of perishable foods to their retail chains. Thus, the expansion of retail chains will result in growth of international trade and indirectly impact the growth of the cold chain market.

Financial Efficiency

The financial sector provides capital investment and credit for international transactions. For instance, an exporter receives a letter of credit from a bank until the customer receives the delivery. Monetary policies such as permission to convert currencies according to exchange rates also influence the effective international trade of food. As the international trade of perishable foods increases, the cold chain industry around the world will continue to be a flourishing business.

3.4.1.2 TECHNOLOGICAL ADVANCEMENTS IN REFRIGERATED STORAGE & REFRIGERATED TRANSPORT

Perishable foods such as dairy & frozen desserts, meat, fish, & seafood, and fruits & vegetables begin to deteriorate the moment they are harvested or slaughtered. A cold chain infrastructure ensures that these foods are kept in optimum storage conditions in order to retain their high quality and nutritious content. They are handled under controlled temperature, humidity, and light exposure.

Advances in cold chain technology have resulted in improved food safety, reducing food waste and costs. The right combination of telecommunication, science, and information technology systems has enabled efficient monitoring of the temperature, environment, and management of the cold chain.

Perishable food transport, which was once feasible only through air, has evolved to different modes such as road and sea as a result of development of advanced technologies. Some of these technologies being adopted in refrigerated transport are RFID (Radio Frequency Identification) and wireless sensors, which help track the location history, condition, and quality of perishable foods. Various temperature monitoring tools such as chart recorders, temperature indicators (TI) and time temperature integrators (TTI) sense whether the temperature is above or below the standard temperature of specified products and indicate quality problems using color codes.

Refrigerated transport infrastructure is dependent on the burning of fossil fuels, which involves high energy consumption and higher costs. Fuel cells are the future technology which will drive refrigerated transport infrastructure. These cells utilize the chemical energy of the fuel to generate electricity with combustion. They are more energy-efficient and more environmentally cleaner than fossil fuels.

In the refrigerated storage industry, the technology to innovate involves around energy-efficient lighting (such as LED fixtures) which radiate less heat, save energy, have longer life span, and reduce costs. Technologies such as Automated Storage and Retrieval System (ASRS or AS/RS) are being adopted on a large scale to reduce labor costs. The renovation of refrigerated warehouse into modern facilities which provide efficient packaging, storage, and distribution of perishable foods is an upcoming trend among service providers.
The key element for refrigerated storage in the future is projected to be the Warehouse Positioning System (WPS) which will track inventory and material handling equipment. Modern facilities are also being designed to reuse and recycle waste water and by-products such as methane gas to address sustainability issues.

As the need for high quality of food, food safety, sustainability with respect to fossil fuels and the demand for efficiency increase in the cold chain market, current technologies will evolve and newer technologies will be introduced to give the cold chain business a competitive edge.

3.4.1.3 INCREASE IN CONSUMER DEMAND FOR PERISHABLE FOODS

The consumption pattern for perishable foods such as fruits & vegetables, meat, fish, & seafood, and dairy foods among consumers (globally) is increasing. Substantial growth of these perishable foods is witnessed in emerging markets such as China, India, and Latin American countries. Here, strong growth will also be exhibited in the consumption of processed and frozen ready-to-eat meals such as frozen pizzas, desserts, snacks, and entrees.

Since the demand for perishable foods is rising, the trading volume capacity of perishable foods has also increased.

Given below are charts depicting the import value data of perishable foods in developed economies and developing economies. Developed economies comprise the U.S., the U.K., Germany, the Netherlands, Spain, and France. Developing economies comprise China, India, Malaysia, Thailand, Brazil, Argentina, Chile, and Peru.
4 INDUSTRY TRENDS

4.1 INTRODUCTION

The global cold chain market is fairly competitive and sparsely concentrated, with existing players entering key markets such as China. At present, competition in the industry is driven by few major PL players such as AmeriCold Logistics (U.S.), Preferred Freezer Services (U.S.), Swire Cold Storage Pty Ltd. (Australia), Lineage Logistics Holding LLC (U.S.), and Nichirei Logistics Group Inc. (Japan).

Service providers in this market are investing in expanding their refrigerated storage facilities and exploring new opportunities to penetrate further into the market. These players are also focusing on upgrading their technology to improve the energy efficiency and sustainability of refrigerated warehouses and maintain cold chain integrity.

4.2 SUPPLY CHAIN

The principle aim of the cold chain is optimization of product quality & safety using controlled-temperature, minimization of wastage, and reduction of unnecessary costs. The segments of the cold chain supply include procurement, value addition, pre-cooling & storage, refrigerated transport, refrigerated storage, and retailing of perishable foods.

The cold chain supply flow of meat has been taken as an example to explain the process. The cold chain supply process of meat begins at the production zone, and progresses to the processing zone, and to the distribution zone (which includes supermarkets and wholesalers). From supermarkets and wholesalers it reaches to the end consumer.

Production Zone
On production farms (slaughter houses) meat is stored under refrigeration before delivery to the processing zone. Refrigerated trucks are used to deliver the meat as they maintain the temperature and freshness.

Processing Zone
In the processing zone, the meat is cut, processed, and packaged. Refrigerated containers are used to maintain the meat’s temperature and freshness.

Distribution Zone
The product is distributed by refrigerated trucks, trailers, reefer containers, or refrigerated rail container trucks powered by a refrigeration system, to supermarkets and wholesalers.

These modes of transport are backed by information management and traceability & tracking systems to track the location and temperature history of the processed meat.

Retailers and Consumers
Retailers use refrigerated display cases and cold storage to display and store the meat. The consumers buy the meat from retailers or from supermarkets.
4.2.1 KEY INFLUENCERS

Key influencers in the cold chain market include:

- Regulatory Authorities
- Intermediary Providers
- Infrastructure Providers
5 COLD CHAIN MARKET, BY TYPE

5.1 INTRODUCTION

The cold chain for perishable foods is a complicated and complex process. Perishable foods such as meat, fish, & seafood, bakery & confectionery, dairy & frozen desserts, and fruits & vegetables are sensitive to even minute temperature fluctuations, which can have an unfavorable impact on the taste and even lead to disease. A cold chain infrastructure plays a significant role in preventing this effect with advanced technologies for temperature management and traceability.

A cold chain includes packing and cooling of fresh food products, food processing (freezing), refrigerated storage, refrigerated transport, and marketing (refrigerated or freezer storage displays at retail markets). The two main infrastructure types of cold chain are refrigerated transport and refrigerated storage.

Refrigerated Storage

Refrigerated storage facilities include various refrigerated rooms suitable for storing perishable foods at different temperature ranges. Refrigerated rooms include the following:

<table>
<thead>
<tr>
<th>Refrigerated Room</th>
<th>Temperature Range</th>
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<tbody>
<tr>
<td>Cold storage rooms</td>
<td>XX° to −XX° C</td>
</tr>
<tr>
<td>Frozen food storage rooms</td>
<td>−XX° to −XX° C</td>
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<tr>
<td>Cooling room</td>
<td>−XX° C</td>
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<tr>
<td>Freezer rooms</td>
<td>−XX° to −XX° C</td>
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</table>

Refrigerated storage expansion remains a brisk business, as the inter-trading of perishable foods is on the rise, globally. According to the IARW (International Association of Refrigerated Warehouse), the total global capacity of refrigerated warehouses was estimated at XX million cubic meters in 2012; an increase of roughly XX million cubic meters (mXX) over 2010. Also, according to a survey by the IARW, operators in the U.S. and Canada expected revenue for the refrigerated warehouse business to grow by more than XX% in 2013.

The largest cold storage facilities are located in the U.S., India, and China. Some countries such as Azerbaijan, Moldova, Nicaragua, Panama, and Serbia are also contributing towards increasing the warehouse capacity across the globe.

Refrigerated Transport

Cold transportation or temperature-controlled transportation plays a vital role in case of perishable food. Using specialized temperature-controlled techniques, service providers offer seamless cold transportation through refrigerated vans, trucks & trailers, air cargo, reefer ships, reefer containers for perishables, and food items in order to maintain product quality, shelf-life, and reduce dehydration.

Temperature-controlled transportation is carried out through air, sea, rail, and road. Developed markets such as the U.S. and the U.K. are showing strong growth and opportunities in the road & sea refrigerated transport segment. Refrigerated road transport & maritime reefer trade is also witnessing an increase in transport of perishable foods.
Due to technological improvements of maritime reefer transportation, perishable foods transported by air are now transferred by sea. A latest study in 2013 by a transportation research firm, confirmed that XX teu (twenty foot equivalent unit) per year of freight has moved from air to sea transport in the last XX years, due to advancements in refrigerated container technology.

Developments in sea transport are on the rise in the trade of seaborne perishable foods, growth in trading of exotic fruits such as avocados and Kiwi fruit, and the growth of containerized reefer capacity and box fleets. Long distance trade routes, such as South America to North East Asia, West Europe to North East Asia or South America to Russia and the Persian Gulf are growing very rapidly and offer real opportunities in the reefer business.

Supplementing air and sea transport, temperature-controlled road transport is rapidly growing as a mode of domestic transportation through cold chain for perishes in the U.S. and the U.K. Most refrigerated vehicles, on road, are well-equipped with tracking and fleet management systems, which tracks their precise location as well as the speed of the vehicle, thereby improving efficiency and productivity of the service provided. Through integration of Global Positioning System (GPS) technology with Code Division Multiple Access (CDMA)/Global System for Mobile Communication (GSM) communication networks, location-relevant and time-sensitive information of each vehicle can be known on a real-time basis. Information such as vehicle location, speed, and time of arrival/departure at pre-defined intervals or on-demand through mobile phones and the Internet can be achieved.

The increase of business networking relations between countries, consumer demand for perishable foods through online shopping, flexibility to transport perishable foods at the right time, and excellent road infrastructure in developed economies further fuels the growth of refrigeration transport by road.

Rail transportation is one of the cost-effective, environment-friendly, and efficient modes of transport, opted for by several manufacturers and service providers. Various governments across the globe are inviting private parties to run refrigerated container trains to transport agricultural products within the country. Satellite tracking and temperature monitoring devices are fitted in order to ensure proper maintenance and timely arrival of goods.

**TABLE 1 COLD CHAIN MARKET SIZE, BY TYPE, 2012-2019 ($MILLION)**

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*e - Estimated; p - Projected*


The cold chain market was valued at $XX million in 2013, and is projected to reach $XX million by 2019. In 2013, the refrigerated storage segment led the market. It was valued at $XX million in 2013, and is projected to grow at a CAGR of XX% to reach $XX million by 2019.
5.2 NORTH AMERICA

In the North American cold chain market, the refrigerated transport segment saw an impressive growth, in terms of value, in 2013. Temperature-controlled trucking in the U.S. has been witnessing a boom due to regionalized distribution patterns, strong harvests, and tight freight capacity.

Maritime shipping refrigerated cargo in North America is also increasing due to demand for perishable foods, which is driven by the increasing intake of health foods. Factors such as advanced technologies (XX to XX ft. reefer containers with preservation techniques) for maintaining the shelf-life of perishable foods is increasing the growth of the reefer container segment in North America.

According to the IARW, the refrigerated warehouse capacity in public and private warehouses is also expanding in the U.S. The average growth rate for public warehouses is XX% and private warehouses is XX% from (1991-2011).

**TABLE 2 NORTH AMERICA: COLD CHAIN MARKET SIZE, BY TYPE, 2012-2019 ($MILLION)**

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<td>Refrigerated Storage</td>
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North America’s cold chain market was dominated by the refrigerated transport segment, which was valued at $XX million in 2013 and is projected to reach $XX million by 2019, at a CAGR of XX%. The refrigerated storage segment is estimated to grow at a CAGR of XX% and is projected to reach $XX million by 2019.
6 COLD CHAIN MARKET, BY PRODUCT TYPE

6.1 INTRODUCTION
Cold chain products are broadly classified into two: chilled and frozen. Chilled products include fruits & vegetables and liquid dairy, which need to be stored at temperatures ranging below XX°C to XX°C. Frozen products such as ice-cream, meat, and seafood are stored at temperatures between -XX°C to -XX°C. Throughout the chilled and frozen food cold chain, assurance of food safety and quality is imperative. Inconsistent standards in different sections of the cold chain could lead to damage of food, either by shock or by temperature variations.

6.1.1 CHILLED
Chilling implies reducing the food temperature below the ambient temperature, but keeping it above –XX°C. Effective short-term preservation of food products is possible by this method, by retarding numerous microbial, physical, chemical, and bio-chemical reactions associated with food spoilage and deterioration. Generally, between XX°C and XX°C, the growth of microorganisms occurs slowly, and food spoilage & deterioration reactions are inhibited. Food preservation at chilled temperatures offers food safety and quality for extended periods, often for a few days or few weeks. However, chilled foods are perishable and they deteriorate progressively throughout their life. Chilled products include crustaceans and shellfish (excluding live ones), cooked dishes & prepared foods, pastry creams, fresh pastries, sweet dishes, egg products, meat & cooked meats, milk, fresh cream, cottage cheese, and curd.

Deterioration of food is mainly caused due to the growth and activity of microorganisms, which may be present in food ingredients or may be introduced during handing and processing of the food. Safe and high-quality chilled foods should be devoid of contamination during manufacture, rapid chilling, and low temperatures at the time of storage, handling, distribution, retail display, and consumer storage.

6.1.2 FROZEN
Fish & seafood, meat, and dairy (excluding liquid dairy) are generally stored at frozen temperatures ranging from -XX°C to -XX°C. A slight increase in the temperature can have an adverse effect on the quality of the products. Freezing preserves the taste, texture, and nutritional value of foods better than other preservation methods. However, these qualities depend upon the type of food materials, use of appropriate pre-treatments, the choice of freezer & frozen storage options, and the use of appropriate packaging.

Over freezing may damage the product and result in loss of quality after thawing. Freezer burns and discoloration are some of the losses caused by over freezing and are checked only when the food is thawed or cooked. Most quality loss is determined by storage temperature changes, accelerated with time spent above recommended values, and promoted by temperature fluctuations.

Cold chain for chilled and frozen foods provides uninterrupted handling of the product within a low temperature environment during the steps of the value chain, which include harvest, collection, packing, processing, storage, transport, and marketing until it reaches the final consumer. There is a wide range of options and technologies for producing cold conditions for food handling, processing, storage, and transport: Chillers, blast freezers, IQF, freeze dryers, and others.
TABLE 3 COLD CHAIN MARKET SIZE, BY PRODUCT TYPE, 2012-2019 ($MILLION)

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The global cold chain market was valued at $XX million in 2013, and is projected to reach $XX million by 2019. In 2013, the chilled products segment dominated the market, was valued at $XX million, and is projected to grow at a CAGR of XX% during the review period. This segment constituted a large proportion—about XX%—of the cold chain market in 2013. With the growing demand for fruits & vegetables and dairy products, the market for chilled products will increase.

TABLE 4 NORTH AMERICA: COLD CHAIN MARKET SIZE, BY PRODUCT TYPE, 2012-2019 ($MILLION)

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<td>Frozen</td>
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<td>Total</td>
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The cold chain market in North America was valued at $XX million in 2013. The market was dominated by the chilled products segment, was valued at $XX million in 2013, and is projected to reach $XX million by 2019. Chilled products are driving the cold chain market in North America, as the import and export of fruits & vegetables and dairy products are increasing. The market for frozen products is projected to grow at the highest CAGR of XX% to reach $XX million by 2019.
7 COLD CHAIN MARKET, BY APPLICATION

7.1 ASIA-PACIFIC

Asian countries are witnessing a revolution in consumer eating habits and retail shopping for perishable foods. The growth of fast food chains has led to a shift in preferences and consumers are willing to try different cuisines.

The increase in disposable income has further led to an increase in sales of consumer-ready frozen foods such as ice-creams & frozen desserts, frozen fruits & vegetables, seafood, and meats. According to the United Nations Food and Agriculture Organization, as a continent, Asia sees the highest consumption of seafood. The consumption of dairy products in the Asia-Pacific region, particularly in China, is on the rise. This is due to the increasing awareness of the health benefits associated with the consumption of dairy products.

China’s robust economic growth in the last decade has resulted in an expansion of the urbanized middle class who no longer consider perishable foods a luxury. In the meat sector, due to barriers such as risk of disease and environmental regulations, the production capacity of livestock has reduced. Due to the shortage of meat production there is an increase in import of meat from countries such as Germany and the U.K.

**TABLE 5 ASIA-PACIFIC: COLD CHAIN MARKET SIZE, BY APPLICATION, 2012-2019 ($MILLION)**

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<tbody>
<tr>
<td>Fruits &amp; Vegetables</td>
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<tr>
<td>Bakery &amp; Confectionery</td>
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<tr>
<td>Dairy &amp; Frozen Desserts</td>
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</tr>
<tr>
<td>Fish, Meat, &amp; Seafood</td>
<td>XX</td>
<td>XX</td>
<td>XX</td>
<td>XX</td>
<td>XX</td>
</tr>
<tr>
<td>*Others</td>
<td>XX</td>
<td>XX</td>
<td>XX</td>
<td>XX</td>
<td>XX</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>XX</td>
<td>XX</td>
<td>XX</td>
<td>XX</td>
<td>XX</td>
</tr>
</tbody>
</table>

* Estimated; p - Projected

*Others include sauces, condiments, salad dressings, and dips


The Asia-Pacific cold chain market, in terms of value, was $XX million in 2013 and is expected to reach $XX million by 2019 at a CAGR of XX%. In 2013, the dairy & frozen desserts segment, in terms of value, stood at $XX million and is expected to reach $XX million by 2019, at a CAGR of XX% from 2014 to 2019.
8 COMPANY PROFILES

8.1 AMERICOLD LOGISTICS

8.1.1 BUSINESS OVERVIEW
AmeriCold Logistics operates as a subsidiary of Yucaipa Companies LLC (U.S.). AmeriCold is the global leader in temperature-controlled warehousing and logistics, and offers the most comprehensive warehousing, transportation, and logistics solutions in the world. The company operates its cold chain business with advanced temperature-controlled warehouses. The company operates globally through its subsidiaries and has XX temperature-controlled warehouses and XX facilities. It has a strong presence in North America and an active presence in Australia, New Zealand, China, Argentina, and Canada. The company competes with Burris Logistics (U.S.), Millard (U.S.), Preferred Freezer Services (U.S.), and Nordic Cold Storage LLC (U.S.).

8.1.2 SERVICES

<table>
<thead>
<tr>
<th>Category</th>
<th>Services</th>
</tr>
</thead>
</table>
| Warehousing    | • Four types of warehouse facilities: consolidation, public, production, and dedicated distribution  
                 | • Manage facilities owned by customers                                     |
| Transportation | • A full range of cost-effective transportation services, including expedited services, consolidation programs, shipment management, multi-vendor consolidation, and national LTL (less than truckload) transportation |
| Business Solutions | • Leading iXXPL technology to deliver real-time information over the Internet, allowing customers to keep inventories as lean as possible |

Source: Company Website and Press Releases

8.1.3 KEY STRATEGY

EXPANSION:
AmeriCold continues to expand its cold chain business globally by establishing new facilities in various regions. Acquisition of cold chain companies across the globe has helped the company to expand its network in new markets, thereby increasing its global market share. AmeriCold has well-established businesses in North America and is now focusing on the European and Asia-Pacific regions for expansion.

The company has sponsored cold chain related events, in association with leading logistics and business organizations such as the Ukrainian Cold Chain Association (UCCA) and the European Business Association (EBA), to offer cold chain services in Europe. The company is also targeting Asian countries such as China and India and other emerging economies for expansion of its cold chain business.
8.1.4 SWOT ANALYSIS

**FIGURE 10** AMERICOLD LOGISTICS: SWOT ANALYSIS

<table>
<thead>
<tr>
<th>STRENGTHS</th>
<th>WEAKNESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>• XX</td>
<td>• XX</td>
</tr>
<tr>
<td>• XX</td>
<td>• XX</td>
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<td>• XX</td>
<td>• XX</td>
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<tr>
<td>• XX</td>
<td>• XX</td>
</tr>
<tr>
<td>OPPORTUNITIES</td>
<td>THREATS</td>
</tr>
<tr>
<td>• XX</td>
<td>• XX</td>
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<td>• XX</td>
<td>• XX</td>
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<td>• XX</td>
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<tr>
<td>• XX</td>
<td>• XX</td>
</tr>
</tbody>
</table>

Source: Company Website, Press Releases, and MarketsandMarkets Analysis
8.1.5 RECENT DEVELOPMENTS

<table>
<thead>
<tr>
<th>Date</th>
<th>Approach</th>
<th>Description</th>
<th>Importance</th>
</tr>
</thead>
<tbody>
<tr>
<td>October 2012</td>
<td>New Service Launch</td>
<td>AmeriCold added Xpedite, a XX/XX service tool that offers coordination in LTL and full truckload shipments. The Xpedite service tool helps shippers locate truck capacity for routine and urgent deliveries in the cold chain. This service helped the company expand its dry and temperature-controlled business.</td>
<td></td>
</tr>
<tr>
<td>January 2012</td>
<td>Partnership</td>
<td>China Merchants AmeriCold (Hong Kong) Holdings Co. Ltd (CMAC), a China-based subsidiary of AmeriCold, partnered with the Yum! brand in China. According to the agreement, both companies were to establish new dry and temperature-controlled logistics. This benefited AmeriCold to enhance its dry and temperature-controlled logistics chain in the Chinese market.</td>
<td></td>
</tr>
<tr>
<td>March 2011</td>
<td>Expansion</td>
<td>AmeriCold established a new temperature-controlled storage facility in Delhi, Louisiana. This new, advanced, energy-efficient cold storage facility was established to support the nearest ConAgra Foods Lamb Weston sweet potato processing facility.</td>
<td></td>
</tr>
<tr>
<td>December 2010</td>
<td>Acquisition</td>
<td>AmeriCold acquired VersaCold International Corporation’s (Canada) warehouses and operations in the U.S., Australia, New Zealand, Argentina, and Canadian subsidiary. This strategic acquisition helped AmeriCold to better serve its customers for turn-key solutions, domestically and internationally, and also to expand its cold chain business globally.</td>
<td></td>
</tr>
<tr>
<td>August 2010</td>
<td>Expansion</td>
<td>AmeriCold established a new cold storage facility with storage temperatures ranging from -XX°F to +XX°F at Salt Lake City, Utah (U.S.). This strengthened the company’s cold chain logistics facilities throughout the North American region.</td>
<td></td>
</tr>
<tr>
<td>September 2009</td>
<td>Expansion</td>
<td>AmeriCold established a new refrigerated storage and distribution center facility at the Port of Tacoma, Washington (U.S.). This new facility is located at the key Puget Sound location. This new establishment helped the company expand its North American cold storage network.</td>
<td></td>
</tr>
</tbody>
</table>

Source: Company Website and Press Releases

8.1.6 MNM VIEW

AmeriCold Logistics is actively trying to increase its global presence by adopting expansion, partnerships, and acquisitions as strategies, to fulfill the needs and demands of its customers. Having the largest cold network storage capacity of over XX billion cubic feet in various continents, these strategies will help AmeriCold to grab untapped opportunities in emerging markets, such as China. The company’s focus is on ensuring customer satisfaction, value to shareholders, and recruiting qualified personnel to enhance its business opportunities in these emerging markets. Moreover, the company also focuses on upgrading its technology by establishing new modern cold storage facilities to improve the energy efficiency and sustainability of its warehouses.
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