



THE POWER OF PACKAGING

Changing World, Changing Needs: Folding Cartons Grow Up

From the challenges of plastic waste to the explosive growth of ecommerce, folding cartons are evolving beyond traditional forms to offer the best solution to meet the market's changing needs.

\$1.43T

Projected market size in USD, 2030, up from \$1.18T in 2025¹

Superior sustainability, versatility and possibility are the main reasons why paperboard is outpacing the growth of other packaging materials and methods.

+31.5%

Projected growth rate of paperboard by 2028, the fastest-growing segment in packaging materials²

In addition to being unsightly, unsanitary and a threat to wildlife, plastic waste eventually breaks down into tiny particles called microplastics and nano-plastics, which are increasingly present in the world's water, soil and air. These particles are finding their way into the human body through inhalation, consumption of contaminated food and water, and even absorbed into the skin through cosmetics and clothing.⁵

Scientists say bioaccumulation of plastics particles in the human body can potentially lead to a wide range of very serious health issues, including cancer, asthma, neurological and bowel disorders.⁶

Consumers are increasingly aware of packaging's impact on the planet, with 60% saying it's important to purchase products packaged in environmentally friendly materials.⁷ Meanwhile, a number of U.S. state legislatures are introducing Extended Producer Responsibility (EPR) laws to require packaging producers to design for recycling and help fund post-use recovery.⁸

Folding cartons are everywhere.

Always have been, as long as most people can remember. But as global trends like the massive accumulation of plastics waste and the game-changing increase in ecommerce present challenges and opportunities, folding-carton packaging is evolving to address them. In other words, this highly versatile packaging type, particularly in paperboard, is growing up.

THE PROBLEM WITH PLASTIC

The world produces 350 million tons of new plastic material each year, 82 million tons eventually becoming litter and 1.7 million tons ending up in the ocean.³ Studies now indicate that there is no longer a single square mile of the Earth's oceans that is free of plastics pollution.⁴

With its sustainability, versatility and increasing sophistication, folding carton packaging is an ideal choice for brand success in the modern marketplace.

THE WORLD LOVES TO SHOP ONLINE

In 2024, 2.71 billion people did their shopping online. That's one-third of the world's population, and their transactions represented more than 20% of all retail purchases.⁹ Global online sales are projected to reach more than \$8 trillion by 2027, an increase of 39% over 2023 levels.¹⁰

But this more than a volume story. The branding opportunities inherent in direct-to-door delivery have changed the dynamics of packaging beyond simply a means to contain and protect merchandise being transported to the consumer.

Marketers have discovered the value of “unboxing”—opening the shipping package to reveal the product—which makes the inner packaging a big part of the consumer experience. This is where visual aesthetics and tactile elements can enhance the excitement of a new purchase, increase consumer loyalty and build a stronger brand.¹¹

THE CASE FOR PAPERBOARD FOLDING CARTONS

The need to reduce single-use plastics in packaging and the branding opportunities of ecommerce both contribute to the appeal—and advancing sophistication—of folding cartons and paperboard.

Greater sustainability. Paperboard folding cartons are made from virgin and/or recycled pulp, both renewable resources, and are far easier to recycle than many other forms of packaging.¹² According to the EPA, approximately two-thirds of U.S. domestic paper and paperboard waste is recycled,¹³ and folding carton recycling processes generally have a lower carbon footprint than plastic.¹⁴

Greater versatility. In addition to supporting a simplified and more reliable supply chain,¹⁵ advancements in printing and converting technologies have led to more and more sophisticated and customizable folding carton designs.¹⁶ Virtually any size or shape is now possible, with a wide variety of printing techniques that can elevate the brand experience and impression of quality, including foil, embossing, windowing and more, produced on offset, flexographic and, increasingly, digital presses.¹⁷

Greater possibility. Paperboard folding cartons offer almost limitless possibilities for creative package design. The Frugalpac® Frugal Bottle,[™] constructed out of 94% recycled paperboard,



is a stunning example. This bottle-shaped paper carton is five times lighter and has a carbon footprint that's six times lower than a glass wine bottle,¹⁸ with the same graceful curves.

In more traditional folding carton formats, digital printing technology continues to advance, opening the door to smaller, less costly production runs, hyper-customized variable data options and other benefits. Experts expect the digital market for packaging to grow from US\$30 billion in 2024 to US\$46.2 billion in 2029.¹⁹

New paperboard products also represent the increased potential to simplify packaging, eliminating single-use plastic components and improving strength-to-weight ratio for better performance at lower cost.²⁰

FOLDING CARTONS GROW UP

These are not your father's folding cartons. With increasing levels of technological, engineering and branding sophistication, paperboard folding cartons have grown up, representing exciting new opportunities to build brands and lead markets, sustainably.

— Source 1: "Packaging Market Size & Share Analysis—Growth Trends & Forecasts (2025 - 2030)," Mordor Intelligence, 2025

— Source 2: "The Future of Global Packaging to 2028," Smithers, 2023

— Source 3: "How Much Plastic Waste Ends Up in the Ocean?," Our World in Data, 2023

— Source 4: "Ocean Plastics Pollution: A Global Tragedy for Our Oceans and Sea Life," Center for Biological Diversity

— Source 5, 6: "The Potential Impact of Nano- and Microplastics on Human Health: Understanding Human Health Risks," ScienceDirect, June, 2024

— Source 7, 11–17: "Unboxing the Folding Carton Market," WhatTheyThink, October 2024

— Source 8: "A 2025 Sustainability Outlook for Textiles and Packaging," WhatTheyThink, January 27, 2025

— Source 9: "How Many People Shop Online?," Oberlo, 2024

— Source 10: "Trends in Labels and Packaging: A New Year is Coming," WhatTheyThink, December 2024

— Source 18: "Meet the Frugal Bottle," Frugalpac, 2020; "Frugal Bottles Launch in Target in U.S.," Frugalpac, 2025

— Source 19: "Digital Printing Packaging Market worth \$46.2 billion by 2029, at a CAGR of 8.9%, says MarketsandMarkets™," Global Newswire, May 24, 2024

— Source 20: "Reduced Plastic, Reduced Costs: A Win-Win for Food Packaging," Billerud Case Study, 2024



billerud.com

