THE FUTURE OF FLEXIBLE PACKAGING

Foresight into future opportunities for flexible packaging with the emergence of e-commerce, innovation and sustainability trends.

INNOVATING TO FIGHT FOOD WASTE

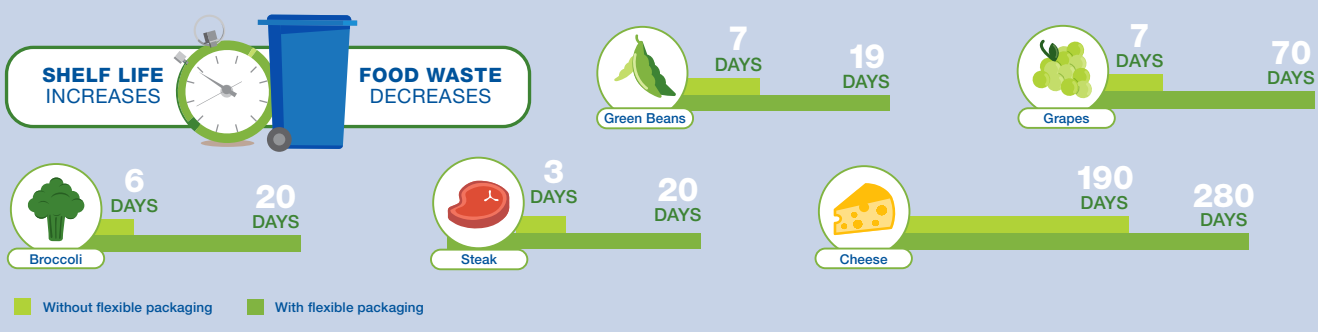
Global food waste is a persisting challenge. Flexible packaging can help decrease food spoilage and waste through use of barriers and compostable materials.

The U.S. Environmental Protection Agency has set a goal of **reducing food waste by 50% by 2030.**[1]

More food reaches landfills and incinerators than any other single material in our everyday trash, **about 21% of the waste stream.**[1]

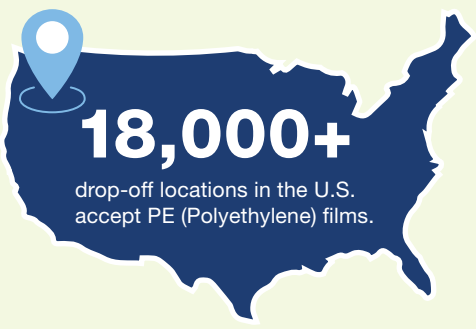
By keeping food in our communities and out of landfills, we can help address the **42 million Americans that live in food insecure households.**[1]

FLEXIBLE PACKAGING EXTENDS SHELF LIFE [2]



HIGHER PACKAGING RECOVERY GOALS [3]

As the U.S. and other countries drive toward higher recovery goals, it will require additional focus on new flexible packaging recycling technologies and recovery systems. Consumer education is vital to impact behavior change and effectively utilize new systems.



Over 80% of marine debris comes from countries that lack waste management infrastructure. Global investment in infrastructure, industry initiatives and consumer behavior would help in reducing marine pollution.

Consumer behavior and a lack of waste management systems contribute to litter and marine debris. Investment in infrastructure in developing countries is needed to reduce ocean-bound plastics, and more consumer behavior education in developed countries, where the infrastructure is already robust, is needed to reduce litter.

WASTE MANAGEMENT AND RECOVERY FOR FLEXIBLE PACKAGING [3]

Maximizing value recovery and minimizing environmental impact at the point of package disposal requires a conscious choice by the consumer.

WRAP

Store Drop-Off Program – Wrap Recycling Action Program: Allows consumers to recycle flexible packaging that is made from polyethylene (PE). This may include items such as newspaper bags, produce bags, bread bags, dry cleaning bags, overwraps for napkins/paper towels/bath tissues or air pillows used in e-commerce.

HOW2RECYCLE

How2Recycle on-package labels provide consumers with instructions on which flexible packaging components can be recycled and how. The program informs consumers about flexible package components that may be dropped off at stores with their plastic grocery bags for recycling.

MRFF

Materials Recovery for the Future (MRFF): An industry coalition across the flexible packaging value chain that is engaged in finding solutions for improved recovery of flexible packaging. The MRFF project is an industry initiative committed to advancing auto-sort of flexible packaging at materials recovery facilities (MRFs) from single-stream waste collection systems, including end-markets for sorted material.

MRFF
MATERIALS RECOVERY FOR THE FUTURE

INTEGRATION WITH SMART TECHNOLOGY

Advances in technology help solve challenges within the packaging supply chain and encourage positive consumer behavior associated with end-of-life management of flexible packaging.

More than 40 smart cities are adopting open data policies, which could lead to improved packaging collection and composting efforts as a result of data sharing.[3]

The global smart waste collection technology market is expected to **grow to over $223.6 million in 2025.**[4] Innovations will lead to efficient waste collection and sortation of traditionally difficult-to-recycle flexible materials.

The development of industry 4.0 will use artificial intelligence and robotics to enhance operational efficiency of packaging and will predict issues before they occur.[3]

SMART TECHNOLOGY

Smart technology, mobile devices and the growth of the Internet of Things will enable printed electronics to be included on packaging to communicate with consumers and educate them on where and how they can recycle flexible packaging.

OPTIMIZATION FOR E-COMMERCE

Lack of sustainable e-commerce packaging is increasingly a concern among consumers. Flexible packaging has an opportunity to reduce the amount of material used in e-commerce shipping, optimize shipping space on trucks and design packaging for easy returns.[3]

E-commerce is expected to more than double, growing from **$2.29 trillion in 2017 to $4.8 trillion by 2021.**[3]

34% of American consumers say the **type and amount of packaging materials** used in e-commerce is indicative of the **retailer's environmental policy and commitment.**[5]

Flexible Packaging Association
Connecting. Advancing. Leading.

Less Resources. Less Footprint. More Value. Flexible Packaging

Sources:

1. United States Environmental Protection Agency, United States 2030 Food Loss and Waste Reduction Goal
2. Flexible Packaging Association, Value of Flexible Packaging in Extending Shelf Life and Reducing Food Waste Report
3. Flexible Packaging Association, "A Holistic View of the Role of Flexible Packaging in a Sustainable World" Report
4. Navigant Research, Smart Waste Collection
5. Sealed Air Corporation, Packaging for e-Commerce Success

Visit **www.flexpack.org** to learn more and view the full "A Holistic View of the Role of Flexible Packaging in a Sustainable World" report.