



RETHINK, REDUCE, REINVENT:

THE SUSTAINABLE PACKAGING SOLUTION



HOW DOES PLASTIC FIT IN A SUSTAINABLE ECONOMY?

Plastic is an integral part of the consumer experience, and that's not going to change anytime soon. But manufacturers are beginning to recognize that heavy use of this material can lead to serious environmental problems downstream. Did you know:

- 40% of plastic is single-use packaging that is quickly discarded¹
- Nearly half of all plastic ever manufactured has been made since 2000²
- Less than 20% of plastic is recycled globally

Luckily, consumer packaged goods (CPG) companies can adopt sustainable business practices and manufacture bottles and containers that use less plastic. Companies like TECKDES, Amcor and RETAL are taking steps to protect our environment while continuing to be market leaders. These companies are leveraging technology to reduce their consumption of natural resources while saving time and money. You can experience similar results when you make eco-friendly packaging solutions your top priority today.





LESS IS MORE

CPG companies that incorporate recycled materials, reduce excess packaging and offer eco-friendly alternatives can create a positive environmental impact while also positioning themselves for stronger profits. By reducing the consumption of raw materials, companies can lower their manufacturing costs and increase overall margins.

By emphasizing waste reduction, companies can respond to customer sustainability demands, deepening customer loyalty. And by adopting eco-friendly packaging as a strategy, companies can anticipate an increase in repeat customers while establishing sustainability best practices in the industry. With the right tools and resources, your company can seamlessly grow your “ecological handprint” – your positive environmental impact.

THE PERFECT PACKAGE

Dassault Systèmes' Perfect Package cloud solution on the **3DEXPERIENCE**® platform helps companies efficiently create sustainable and affordable packaging designs.

With Perfect Package's cloud capabilities, you can simulate and test new packaging designs before production while reducing on-premise infrastructure expense.

Sustainable packaging tools on the **3DEXPERIENCE** platform can be used to optimize design and case configuration for better cargo efficiency, fewer trips, lower miles and reduced carbon emissions.

RETHINK, REDUCE, REINVENT

Most are familiar with the phrase “Reduce, Reuse, Recycle.” However, in manufacturing, there is another three-R adage that’s equally as important: “Rethink, Reduce, Reinvent.”

As a company fully invested in consumer packaging, you can adopt the “Rethink, Reduce, Reinvent” approach to cut down on single-use plastics by producing packaging that contains less material or that incorporates biodegradable, compostable or recyclable materials.

The Perfect Package cloud solution from Dassault Systèmes can streamline your process by helping your team rethink, reduce and reinvent package design using virtual design and simulation tools. Many CPG firms have benefited from this collaborative, eco-friendly and profitable mindset. You can, too.



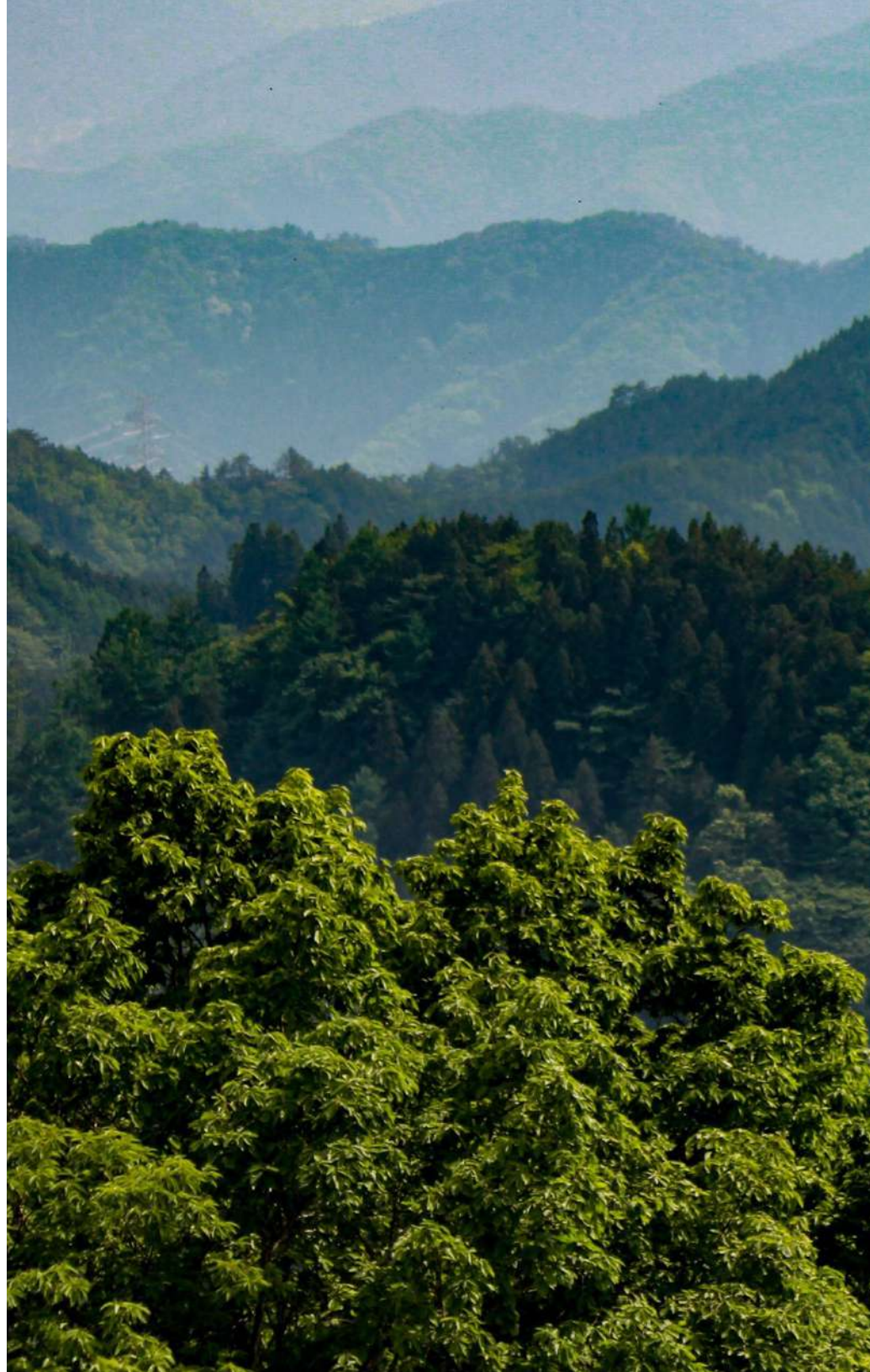
PACKAGING THAT BENEFITS THE PLANET

Manufacturers who create sturdy, lightweight and sustainable packaging are flourishing in the retail landscape. Argentina-based design and engineering firm TECKDES, for example, helps companies such as Coca-Cola and Unilever reach their sustainability goals.

Tasked to reduce costs, reduce time to market and develop more environmentally friendly packaging, TECKDES turned to Dassault Systèmes' **3DEXPERIENCE** platform for help. Previously, TECKDES sketched designs by hand, which was inefficient and time-consuming. By migrating to the cloud with Perfect Package, TECKDES was able to create renderings and 3D models much more quickly. Using virtual simulation, TECKDES improved their collaborative efforts and gained the ability to incorporate client feedback in real time.

As a result, TECKDES was able to improve product design and performance while maintaining structural integrity but using fewer materials. Leveraging the **3DEXPERIENCE** platform, TECKDES helped Coca-Cola and Unilever streamline the production process from the shop floor to the store shelf. In the end, TECKDES **reduced plastic consumption in water bottles by 25%**.

Because of their success, TECKDES anticipates expanding its reach globally and creating more eco-friendly product solutions. According to Silvio Colombo, co-founder and CEO of TECKDES, "The **3DEXPERIENCE** platform allows us to not only transform our customer relationships but also to make the kinds of differences we need to see in the world."





IMPROVING QUALITY, REDUCING WASTE

Global packaging supplier Amcor faced a similar challenge when it came to helping our environment. The company produces more than 20 billion bottles annually for brands like Pepsi, Kraft and Jim Beam. Their goal was to reduce the amount of plastic in containers for sustainability and cost-effectiveness while maintaining high quality standards.

Dassault Systèmes' **3DEXPERIENCE** platform was the answer. Amcor was able to leverage SIMULIA virtual design and simulation tools to simulate packaging performance, eliminating the need for physical prototypes. In the process, Amcor reduced its fossil fuel consumption, lowered its costs and sped up time to market on new designs.

Additionally, Amcor was able to reduce the use of single-use plastics such as polyethylene terephthalate (PET) by incorporating more lightweight recycled materials. Since 2006, Amcor has been able to reduce PET consumption by more than 100 million pounds annually. In a recent interview, Hansong Huang, Director of Advanced Engineering at Amcor, states, "By engineering high-quality containers that reduce spillage and waste, we contribute more to sustainability."



CREATING A GREENER WORLD

Similarly, global packaging manufacturer RETAL wanted to lower plastic consumption. RETAL was also challenged with the task of reducing time to market while satisfying customer demands for sturdy, lightweight and environmentally friendly packaging.

RETAL deployed the **3DEXPERIENCE** platform. They used its design and simulation applications, CATIA and SIMULIA, to save materials, time and money while producing durable and sustainable plastic containers. Similar to Amcor, the firm wanted to reduce the amount of PET in bottles and eliminate physical prototypes.

With CATIA and SIMULIA, RETAL accomplished its goal of producing lightweight, high-quality products while reducing PET usage and expediting time to market. As a result of their efforts, the company strengthened its leadership position and improved responsiveness to market opportunities.

“Because consumers choose brands that provide them with healthy and sustainable products, these brands, in turn, come to us to develop environmentally friendly solutions for their packaging needs,” says RETAL’s Andrew Huestis.

PREPARING FOR THE FUTURE

CPG companies want to conserve plastic and produce more eco-minded packaging. The **3DEXPERIENCE** platform is the perfect starting point for your organization to grow your ecological handprint.

Dassault Systèmes' cloud solutions are critical tools for packaging firms to leverage. By modeling and simulating the performance of packaging in the digital world, you can create quality designs that consume fewer resources, reduce waste and save money. More so, companies who have adopted an eco-friendly packaging strategy have experienced an increase in their rate of repeat customers while maintaining their corporate and social responsibilities.

As consumers become increasingly sustainability-minded, industry leaders will continue to make sustainability a top priority, conserving natural resources and protecting our planet for future generations.

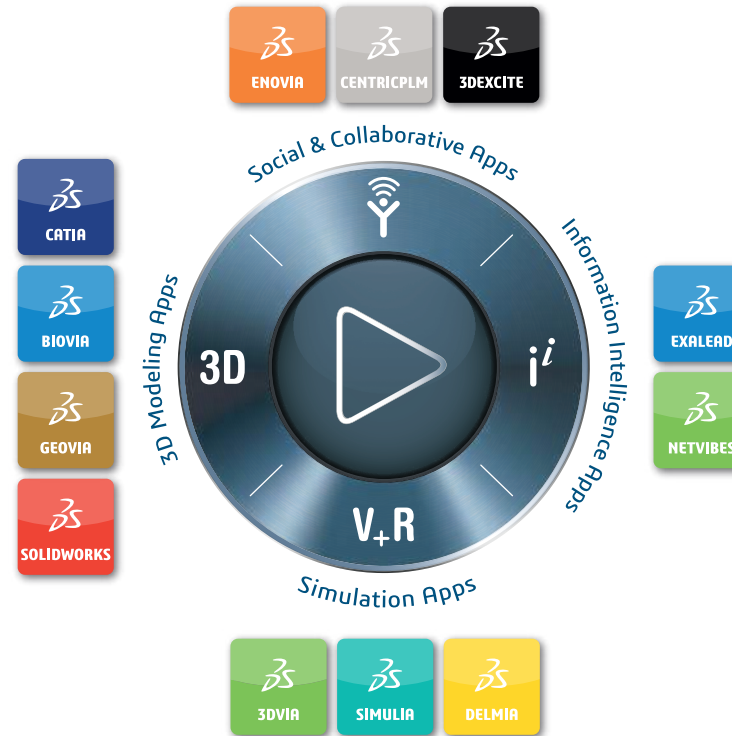
Sources:

¹World Economic Forum, “[5 Steps That Could End the Plastic Pollution Crisis and Save Our Ocean](#),” March 2019

²National Geographic, “[Fast Facts About Plastic Pollution](#),” December 2018

Our **3DEXPERIENCE®** platform powers our brand applications, serving 11 industries, and provides a rich portfolio of industry solution experiences.

Dassault Systèmes, the **3DEXPERIENCE®** Company, provides business and people with virtual universes to imagine sustainable innovations. Its world-leading solutions transform the way products are designed, produced, and supported. Dassault Systèmes’ collaborative solutions foster social innovation, expanding possibilities for the virtual world to improve the real world. The group brings value to over 250,000 customers of all sizes, in all industries, in more than 140 countries. For more information, visit www.3ds.com.



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