The ultimate hat trick in package design

CPG manufacturers and packaging suppliers often face a 'pick two of three' dilemma in creating new designs. Should they focus on consumer delight, sustainability or cost? **Dassault Systémes** can help deliver all three through its Perfect Package solution.

Perfect Package can cut package design time and costs by up to 50%.

There is a time-tested saying in project management: "Cost, performance and schedule – pick two of three." It represents the complexity present in any project. Packaging experts have been conditioned to think about how to balance the different constraints to deliver the optimum result.

Companies often face the same dilemma when developing new package designs. How do they balance package aesthetics with material costs? How do they create a unique shape while driving manufacturing efficiencies? How do they make a 'green' package while creating consumer delight at the right price? Companies are often forced to pick two of three elements due to the complexity and effort involved in creating new package designs.

Break the cycle by designing virtually

Dassault Systémes has created Perfect Package 3DEXPERIENCE to drive better, faster, smarter innovation for packaging initiatives. It enables brand manufacturers, design agencies, packaging suppliers and artwork studios to collaborate using virtual technologies in order to create breakthrough designs, and rapidly iterate from concept development to final production.

Perfect Package can cut package design time and design costs by up to 50%, while virtually eliminating packaging-related recalls and quality incidents.

Co-create new concepts

Developing new packaging concepts requires designers to translate ill-defined consumer opinions into new designs that can win at the shelf. This often requires months of consumer research to create final designs.

Perfect Package can cut concept development time by up to 90%. A beauty care manufacturer used Dassault Systémes' design solutions to co-create new packaging concepts with consumers.

An industrial designer listened to consumers and used 3D sketching tools to generate new realistically rendered concepts. The next day, consumers assessed these packaging ideas within in-home and in-shelf contexts. An eight-week process was completed in just 24 hours, while dramatically improving the shelf impact and consumer acceptance.

Greener packages using modelling and simulation

Shaving a few grams from a package can translate into a saving of millions of dollars, while helping to drive more sustainable products. Packaging companies such as Amcor and St Gobain use simulation to reduce the weight of their package designs for almost 50 billion packages a year. Simulation helps optimise packages design to require raw materials and energy while maintaining their strength and resistance to breakage. This reduces the CO_2 emissions while creating a package the consumer will love, and saving millions in raw material and transportation costs.

Cut costs by optimising packaging for manufacturing and the supply chain

Package designs are often simplified to make manufacturing and the supply chain more efficient. What starts as a unique package shape is often reverted to oval, square or circular footprints to optimise conveying, filling and packing operations.

Simulations of packaging designs and manufacturing operations can help designers create unique packaging that fits into existing capabilities. Coca-Cola engineers use virtual bottle models to optimise designs based on the type of beverage the bottle will hold and the manufacturing process used. This cuts time to market while improving supply chain efficiency.

Rethink package design

Dassault Systémes has helped major consumer packaged goods (CPG) manufacturers and packaging suppliers to rethink package design by creating an integrated platform combining product, package, manufacturing and retail elements in a single environment. This accelerates innovation, lowers cost of failure, improves sustainability, and allows innovation teams to explore more options and validate them with consumers within current budgets, helping to solve the "two of three" dilemma. ■

Further information
Dassault Systémes
www.3ds.com/cpg