

CONSUMER PACKAGED GOODS & RETAIL
TECKDES



Challenge:

The Buenos Aires-based packaging design and engineering consulting firm TECKDES sought to optimize its project lifecycle, from idea generation to product launch, in order to drive customer satisfaction and accelerate business.

Solution:

TECKDES partnered with Dassault Systèmes to better collaborate and transform its end-to-end processes through the **3DEXPERIENCE** platform and its *Perfect Package* industry solution experience.

Benefits:

Perfect Package's integrated application capabilities and end-to-end project visibility enabled streamlined product development for accelerated launch times, higher quality, fewer recalls and lower materials consumption – all generating cost savings, environmental benefits and customer loyalty.

PACKAGING INNOVATION DRIVES SUSTAINABLE GROWTH

Consider a bottle of water as it sits on a supermarket shelf to be chosen by a consumer among competing options – maybe thanks to brand recognition, price or simply a pleasing package design. But a lot more is required of that bottle than is not readily apparent. It has to protect its contents during shipping, minimize weight to reduce material and transportation costs, twist open easily in a buyer's hands – all involving a plethora of engineering and design decisions blending art and science. Multiply that by every product on every retail shelf on the planet and that translates into an over US\$8 trillion consumer packaged goods (CPG) industry, according to global management consulting group McKinsey & Company.

"Something that people don't know about the packaging world is that every detail is important. We have to take care of many aspects, such as how the bottle cap interacts with the package, as well as the labeling technology and the transport," said Agustin Acuña, packaging project manager at TECKDES, an engineering consulting company based in Buenos Aires, Argentina. "As consumers, we just go to the store and pick what we are looking for, but for our clients, there's a lot of work behind it."

World-renowned brands like Coca-Cola, SC Johnson, Unilever and Novartis turn to TECKDES for critical product development and project implementation. TECKDES provides these services and transforms how products are designed, developed and tested with the help of Dassault Systèmes' **3DEXPERIENCE**® platform and its *Perfect Package* industry solution.

"We chose the **3DEXPERIENCE** platform because it helps us develop a complete project from end-to-end without needing to switch software," Silvio Colombo, co-founder and CEO of TECKDES, said. "We can work in a single collaborative platform to perform product design, development, enhancement processes and activation at the point of sale."

INTEGRATED PROCESSES, POWERED COLLABORATION

Taking a product from inception to launch is a multi-phased process requiring close communication with TECKDES customers as well as among internal designers, engineers, technicians, sales people, marketing staff and others.

"In the past, we used software in silos that made us work in isolated ways," Colombo said. "We had to keep switching applications, and no one had end-to-end visibility into the project."

Never content to blindly follow tradition, TECKDES constantly transforms its processes to improve outcomes. "In the past, we'd sketch a design by hand, then transition the paper into the digital world, then create the 3D model, then rendering, then the simulation – and repeat," Franco Mercado, design director at TECKDES, recalled. "With the **3DEXPERIENCE** platform, TECKDES designers can naturally sketch in the digital world. We can produce a 3D model and get a live rendering of the product immediately. The virtual reality tool then enables us to show the client the product in a visual, real-world setting."

"One of the main benefits of the **3DEXPERIENCE** platform is that all staff can work together – all of the graphic and industrial designers alongside the engineers and technicians," Laura Gandur, creative director and a graphic designer at TECKDES, said. "Having the whole team working end-to-end avoids problems and accelerates project delivery. We can assure the customer that they will receive a product that has been reviewed and corrected throughout different phases of the workflow."



"The 3DEXPERIENCE platform enables us to work more efficiently by centrally managing packaging projects in a collaborative platform with our customers to ensure every initiative is delivered on time and on budget."

– Agustin Acuña, packaging project manager, TECKDES

CUSTOMER RELATIONSHIPS TRANSFORMED

With the ability to access the **3DEXPERIENCE** platform through the cloud, TECKDES customers stay in close touch with their projects to obtain exactly the results they want.

"The value for our customers through the experience is much faster visualization of the project status," Acuña said. "Customers don't need us to generate information or deliverables for them; they access the platform directly, and based on that, they can make design decisions faster and

determine next steps. We can adapt easier to late changes and significantly reduce resource bottlenecks and cycles of rework due to miscommunication. The **3DEXPERIENCE** platform enables us to work more efficiently by centrally managing packaging projects in a collaborative platform with our customers to ensure every initiative is delivered on time and on budget.”

The **3DEXPERIENCE** platform has transformed TECKDES’s relationship with its customers, added Colombo. “Today our customers are an integral part of packaging development – and that builds satisfaction and loyalty.”

LOWER RECALLS AND COST, FASTER TIME TO MARKET

While enhanced collaboration was a key benefit of using the **3DEXPERIENCE** platform, TECKDES also sought to optimize package performance and reduce recalls with the *Perfect Package* industry solution experience.

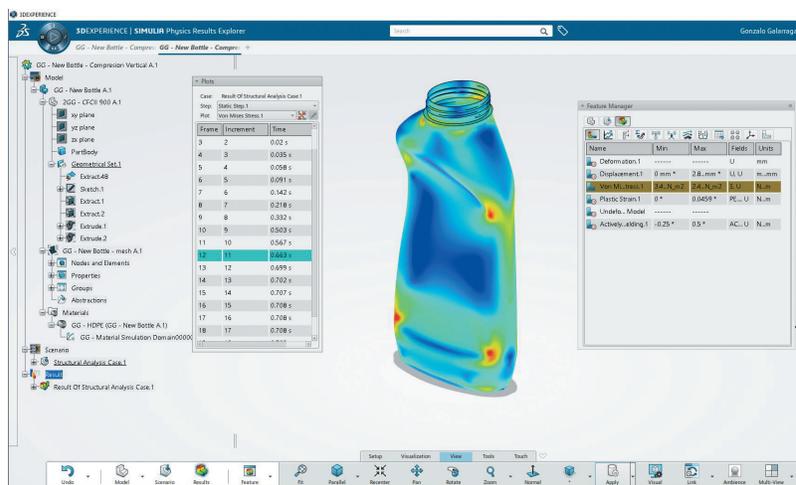
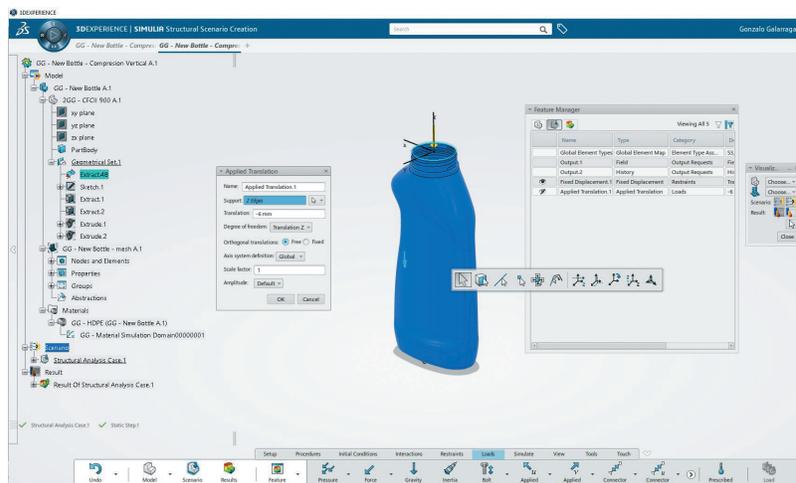
“Thanks to *Perfect Package*, we’ve been able to reduce the launch time of our projects,” Colombo said. “We generate more design alternatives in the creative stage and improve information traceability. Packaging products are validated in two instances: in the preliminary design phase and in the final detail phase, so we can assure that our packaging products are not going to have issues or require rework.”

With the **3DEXPERIENCE** platform simulation apps, TECKDES performs vertical compression analysis by simulating product stacking, understanding that they must account for changes in sea level between where the product is initially bottled and where it’s placed on a shelf.

“We can see the bottle deformed and un-deformed, and from this analysis the weight can be reduced and the manufacturing costs can be reduced – while still ensuring the product meets all required quality standards,” Gonzalo Galarraga, R&D and finite element analysis (FEA) engineer at TECKDES, said.

Using the simulation capabilities of the platform, TECKDES enabled The Coca-Cola Company to reduce the plastic consumption in its Aquarius water bottles by 25%. “It was a challenge because that product has to stand up in shelves similar to ones with more grammage,” Mercado said. “We put a lot of focus into the technical part of the design process. The simulation app enabled us to analyze the top load of a bottle and the internal pressure. We analyzed the weight and how that bottle will be transported, stocked and drank.” This allowed TECKDES to determine the minimal amount of material used while still maintaining structural integrity through the full product lifecycle, from manufacturing to the consumer experience.

“We know that we can create really good designs, but not everyone can create really functional designs,” Mercado added. “Here at TECKDES, we put a lot of impact into the technical process as it’s very important to know the 360-degree lifecycle of a product from beginning to end so that we can eliminate recalls.”



Top image: By using the Dassault Systèmes *Perfect Package* industry solution on the **3DEXPERIENCE** platform, TECKDES is able to generate more design alternatives in the creative stage with confidence in its structural integrity.

Bottom image: The simulation capabilities on the platform allow TECKDES to determine the minimal amount of material used while still maintaining structural integrity through the full product lifecycle.

Focus on TECKDES

TECKDES is a consulting company focused on product design and development with high added value.

Revenue: \$2.5 million EBITDA (2016)

Headquarters: Buenos Aires, Argentina

Employees: 24 designers, engineers and creatives

For more information
www.teckdes.com.ar

GLOBAL VISION OF A SUSTAINABLE FUTURE

Colombo keeps his sights not only on how TECKDES has already changed, but also on its evolving future. Continuous development of new design strategies and development processes enabled by the **3DEXPERIENCE** platform places the company at the leading edge of industry innovation. TECKDES plans to expand globally, bringing environmentally sustainable solutions that benefit the planet and its people.

"TECKDES has to be a principal actor in global change related to clean energies, lighter materials, food care and environmental preservation," Colombo said. "Dassault Systèmes **3DEXPERIENCE** platform allow us to not only transform our customer relationships, but also to make the kinds of differences we need to see in the world."

"TECKDES is a special company because it is driven by a very characteristic engine, which is the curiosity of discovering new ways to perform our daily work and new ways to contribute to the world," Acuña said.

"We want to have a more social and responsible approach, advising our customers about recycled material, biomaterials, compostable materials," Colombo concluded. "The **3DEXPERIENCE** platform frees us to imagine, design, and create products that make a difference."



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Our **3DEXPERIENCE**® platform powers our brand applications, serving 12 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 220,000 customers of all sizes in all industries in more than 140 countries. For more information, visit www.3ds.com.

