

Consumer and industrial electronics

Zumex

Concurrent engineering helps build a better juicer

Product

Solid Edge

Business challenges

Deepening product conceptualization
Increasing inter-departmental coordination
Streamlining validation processes
Adapting products to contexts of use
Offering revolutionary new technology

Keys to success

Using 3D design
Cultural change in product development
Speed and visualization capabilities
Concurrence between engineering and marketing
Intense use of Solid Edge during the concept phase

Results

Reduced development time by 50 percent

Solid Edge helps Zumex optimize new product development

Juicing up new product development

Zumex markets products in more than 80 countries, placing its goods in large retail chains such as Starbucks and in corporate cafeterias such as those for Apple and Facebook. With more than 25 years of experience in fruit and vegetable processing and manufacturing juicers, the company is headquartered in Valencia, Spain.

Solid Edge® software from product lifecycle management provider Siemens PLM Software enables Zumex to make smarter decisions that lead to better products; in this case commercial and consumer juicing machines, or juicers. "We aim our products at premium customers, so it is important for us to maintain a high level of quality in all our marketing, design and production processes," says Eloy Herrero, manager of marketing at Zumex. "Our goal is to offer the best products to the most demanding customers."

The company has exceptional market presence. Herrero notes, "Zumex has 50 percent of the worldwide juicer market." He points out that the creative foundation of the company is the workforce at the company's headquarters, where new products are developed from an immersive focus on the end-user.

According to Antoni Flotats, director of innovation and development, this product



development focus is essential to the success of Zumex: "At the start of every project, we work separately on three main concepts: context of use, technical requirements and functional requirements. Then, we work together to integrate these concepts during the technical and aesthetic design phases."

Flotats believes using the latest information technologies is essential to the creation of innovative products. He explains, "Advanced design tools allow us to develop products concurrently with other

Results (continued)

Increased collaboration between departments

Enabled high definition of products prior to manufacturing

“Solid Edge is essential when you need to conceptualize a product with a special focus on the contexts of use, the features and the design, because it enables you to see how the machine will operate.”

Eloy Herrero
Manager of Marketing
Zumex

departments, to enable us get as close as possible to meeting the specific needs of our customers.”

3D design opens the door to innovation

Zumex was one of the first companies in its industry to test the use of 3D design tools. The company acquired its first license of Solid Edge in 1998. The use of Solid Edge soon became a key element in helping Zumex develop more innovative juicers. “The juicer is becoming more of an appliance, which means the contexts of use proliferate as well as product functionality, quality, technical and aesthetics. As a consequence, we incorporate more plastic or injected metal parts, which is why a 3D tool is essential to us,” says Flotats.

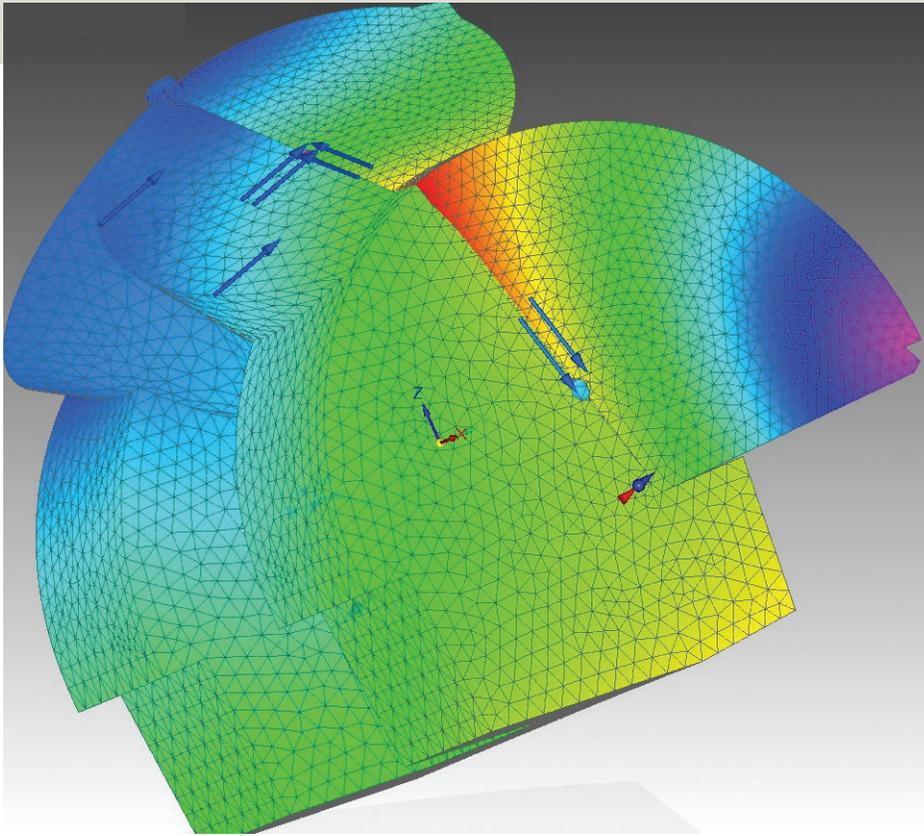
In 2013, Zumex engineers were tasked with creating a completely new machine that would be 50 percent smaller, 60 percent more versatile, use less than 65 percent of the parts in prior machines and incorporate revolutionary – yet inexpensive – new juicing technology. The new

juicer was positioned somewhere between an industrial product and a home appliance. That’s when the company expanded the number of its licenses of Solid Edge with synchronous technology. The high quality and affordable price of Solid Edge, combined with the security that comes from the support of a company such as Siemens PLM Software, were decisive factors in the decision. “Their offer was attractive and the use of Siemens PLM Software technology was well established in the Valencia area,” says Flotats. “For us, it was essential to count on their close support and on their involvement and commitment to our company.”

Zumex implemented additional licenses of Solid Edge with the help of Grupo ProCUE, a Siemens PLM Software partner. “The implementation was fairly forthright,” says Ignacio Colomer, consultant at ProCUE. “Zumex was already using the software, so we focused on a modest training program to take full advantage of the new features of Solid Edge.”

“We need to realize and validate concepts quickly and accurately so we can get to the development stage with 95 percent of the product brief in the finished product, a goal we have achieved with the help of Solid Edge.”

Antoni Flotats
Director of Innovation and Development
Zumex



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Herrero notes that it quickly became clear that Solid Edge was the ideal platform to help Zumex direct its development processes towards creating increasingly more innovative and competitive products. He explains, “One of our milestones is bringing the product to a market that is rapidly changing with customers demanding smaller, more visually attractive juicers. Solid Edge is essential when you need to conceptualize a product with a special focus on the contexts of use, the features and the design, because it enables you to see how the machine will operate.”

Solid Edge helps revolutionize product development at Zumex

After implementing Solid Edge, Zumex has notably modified its main approach to conceptualizing and developing products. Engineers work concurrently with marketing managers regarding a product’s contexts of use, features and the technical solutions, then work on the aesthetic aspects, which should reflect all three of these drivers.

“Solid Edge allows us to make a cultural change, generating lots of ideas, contexts of use, functionalities and techniques that can be quickly and easily shaped on prototypes before the application of the best ideas concerning the technical and aesthetic design,” says Flotats. “Solid Edge allows us to evaluate all the concepts from the points of view of both marketing and engineering, step-by-step, ensuring that the end-product will meet all expectations.”

The result of this cultural change was “Soul,” a new Zumex juicer that combines innovative juicing techniques with the look of a commercial appliance. Zumex advertising extols the Soul as “The result of always wanting to keep a step ahead. Soul is evolution, achieving the best in the least possible space, capable of squeezing oranges, limes and lemons with a wide range of calibers. Natural innovation designed to make your life easier.”

“The use of Solid Edge for FEA has become a great time-saving device. During physical machine testing, the breakages that occur coincide exactly as predicted by the FEA analysis.”

Eloy Herrero
Manager of Marketing
Zumex

Soul is the result of the intense collaboration between the engineering division and the marketing department. “With Solid Edge, we can tangibly visualize all developments, contexts of use, functionalities and technology to enable us to give our opinion, which is important for our marketing department,” says Flotats. “The 3D file generated using Solid Edge enables us to present the machine both internally and commercially long before it is manufactured.”

Flotats calls this coordination between departments “micro-steps market engineering,” and sees this as one of the main benefits of implementing Solid Edge. “At other companies, engineering and marketing teams work independently; at Zumex, we do it in an open and concurrent way,” says Flotats. “With 3D design, the marketing department can better understand the machine, see the complexity of the system and imagine technical concepts integrated into the design. Meanwhile, the engineers can better understand functionality and the contexts of use. Ultimately, this allows us to link the technology with commercial interests.”

Solid Edge helps Zumex develop products flexibly, rapidly and economically

Zumex also benefits from the flexibility and the capacity of visualization provided by Solid Edge to recreate the context of use for its juicers, also known as engines. Herrero highlights the benefits of presenting a product specifically adapted to its environment. “We have engines in supermarkets, airports, bars and in private companies,” he says. “We are a company that understands our customers. With the help of Solid Edge, we don’t just manufacture products; we materialize a representation of the context. This enables us to manufacture the ideal juicer for each environment. Our process is not only about listening to the market, but also about exciting end-users to enjoy a premium juicer.”

Meanwhile, Flotats recalls that significant cost savings and improved productivity were enabled by the Solid Edge solution. “We orientated Solid Edge to boost the conceptualization phase based on the validation of simple and separate concepts

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Solutions/Services

Solid Edge
www.siemens.com/solidedge

Customer's primary business

Zumex specializes in the design and manufacture of automated juicers for hotels, restaurants and general retail use.
<http://es.zumex.com>

Customer location

Moncada (Valencia)
Spain

Partner

Grupo ProCUE
www.procue.net

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and we did it rapidly at a low price," Herrero says. "This means a reduction of development time by 50 percent, because by using Solid Edge we can accurately define and validate our concepts, so we can avoid changes during the product development process, especially last-minute changes that lead to delays and cost increases."

He also emphasizes the time savings during the post-conceptualization and technical development phases and especially the time savings achieved by using finite element analysis (FEA). "The use of Solid Edge for FEA has become a great time-saving device. During physical machine testing, the breakages that occur coincide exactly as predicted by the FEA analysis," he says. "FEA has incredible precision and this saves a lot of time, in addition to giving us much greater visibility to all improvements."

A year after expanding the company's use of Solid Edge, Zumex is marketing the Soul juicer, while engineering is focused on creating new products. The results have been so positive that Flotats is considering adding additional Solid Edge licenses in the future.

Flotats concludes, "We were looking for tools that enable us to work intensely on conceptual abstractions. We need to realize and validate concepts quickly and accurately so we can get to the development stage with 95 percent of the product brief in the finished product, a goal we have achieved with the help of Solid Edge."

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