

YEŞİLOVA GROUP

Case Study



Photo © Yeşilova Group

Challenge

Turkey-based industrial manufacturer Yeşilova Group supplies aluminum parts and components to Tier 1 automotive manufacturers. It needed to centralize its data to improve collaboration with clients, enable concurrent engineering between teams and shorten design time.

Solution

The company selected the 3DEXPERIENCE platform on the cloud with the industry solution *Bid to Win* to bring together its design and product lifecycle management processes and data in one place. Cross-discipline integration and rich design functionality allow Yeşilova's engineers to define,

simulate and validate designs for each client with full traceability.

Benefits

Yeşilova is now using the same industry-leading software as its clients. Able to seamlessly share designs via the 3DEXPERIENCE platform on the cloud, the company has significantly improved its collaboration capabilities and customer service. With engineers all working on the same platform from different locations using the most up-to-date information, Yeşilova can accelerate its design processes, validate ideas and resolve design constraints early on.



The **3DEXPERIENCE** platform on cloud was the right decision for our business needs and has been particularly useful for remote working.

– Onur Sinak, Product Development Engineer, Yeşilova

ALUMINUM PARTS FOR NEXT-GEN CARS

The battery pack is the most expensive part of an electric vehicle. A large slab, containing hundreds to thousands of individual battery cells that power the motors, serves as the interface between the powertrain and the car's structural elements, and accounts for at least a quarter of the total vehicle cost. Protecting it is therefore a top priority. That's why companies like Yeşilova Group have turned their attention to developing innovative structures for safely and securely housing the battery pack in the vehicle.

Based in Turkey, Yeşilova specializes in making aluminum products and counts leading automotive manufacturers among its major customers. In the 45 years it has been in business, the company has evolved from selling aluminum sheets to delivering an end-to-end service, working with its clients to provide aluminum parts that meet their specific needs. Today, Yeşilova's research and development team is busy working on new aluminum components for the next generation of cars.

"Our department is responsible for automotive innovation," said Onur Sinak, new product development engineer at Yeşilova. "Our main focus is developing aluminum chassis parts and we're the first to coordinate a European Union funded project in Turkey to develop a battery case structure."

Creating the battery case is a challenging design task as it must satisfy a catalogue of requirements, including being lightweight, crash-proof, corrosion-resistant, electromagnetically shielded and able to regulate temperature. For Yeşilova, which is committed to building a better world, aluminum is the ideal material for this particular component in terms of properties, efficiency and sustainability – it is available in abundance and is highly recyclable. The finished product is the result of a successful collaboration with its automotive OEM clients and cutting-edge design – all achieved on the **3DEXPERIENCE**® platform.

COLLABORATION ON TOP

When Yeşilova adopted the **3DEXPERIENCE** platform on the cloud, one of the key drivers was to use the same industry-leading design tools, including the design application CATIA, as its automotive clients.

"Many of our customers use CATIA to design their products and we wanted to be able to speak the same language as them," Sinak said. "With the **3DEXPERIENCE** platform on the cloud,

we can carry out joint work as a single voice – our engineers, customers and suppliers on each project can come together as one to design flexibly and at speed. Another added bonus is that many engineering students learn CATIA and so they join us already knowing how to use the application. They appreciate how user friendly it is."

With this new collaborative approach, Yeşilova can resolve design issues early – before they become costly and impact production.

"Handling our design processes on the **3DEXPERIENCE** platform, we can seamlessly go through revisions before progressing to technical drawings for production," Sinak said. "We are seeing lots of benefits from using the platform. We're accelerating our design processes and can visualize design constraints to prevent mistakes. We can reuse designs too, which really helps us to work more efficiently."

Critically, the **3DEXPERIENCE** platform allows Yeşilova to integrate its design and product lifecycle management software in one place to enable cross-discipline collaboration and achieve full traceability throughout the entire product development lifecycle and beyond. Compatibility functionality also allows existing CATIA and non-CATIA models to be brought into the platform natively.



Precision cutting machine at Yeşilova's facilities

"We currently have over 60 engineers connected to the platform," Sinak said. "Our plan is to integrate all disciplines on the platform so that everyone has a single view of the product lifecycle. This is essential for us and one of the main reasons we chose **3DEXPERIENCE**."

BUSINESS CONTINUITY ON CLOUD

Yeşilova worked with consultants from Cadem Digital, a Dassault Systèmes business partner in Turkey, to handle its transition to the **3DEXPERIENCE** platform on cloud.

"We knew they would be able to help us shape our vision and take best advantage of the platform," Sinak said. "They have been a great support as we've got up and running on it."

Not only did Cadem Digital handle the implementation and develop training programs, it also supported Yeşilova in mapping its business processes to the platform.

"They helped our users arrange their set up to suits their business needs," Sinak said. "We didn't have to change many processes and the ones we did were really easy."

Yeşilova's decision to opt for a cloud implementation of the platform is already paying dividends, with low upfront investment, always up-to-date applications, and anytime, anywhere access supporting its engineers to work remotely.

"The **3DEXPERIENCE** platform on cloud was the right decision for our business needs and has been particularly useful for remote working," Sinak said. "Compared to an on-premise system, we have a lot more flexibility. And the speed of the cloud platform helps us to work and communicate effectively with our clients. We can easily collaborate with each other from completely different locations."

Data security is a top priority, and Cadem Digital and Yeşilova's IT department addressed any concerns associated with using public cloud servers.

"When we consulted our IT workers, they told us that the risk of working on cloud is much lower than working on local servers," Sinak said. "All our projects are stored on the cloud and we have no concerns. Neither do our customers. They also share and store their know-how on the cloud."

END-TO-END VISIBILITY

Yeşilova takes its role as a sustainable business seriously. Building on its credentials developing high-quality, long-lasting aluminum products, the company plans to extend its technological capabilities and use the **3DEXPERIENCE** platform on the cloud to further streamline its product development processes beyond design through to manufacturing and sales to cover the entire product lifecycle.

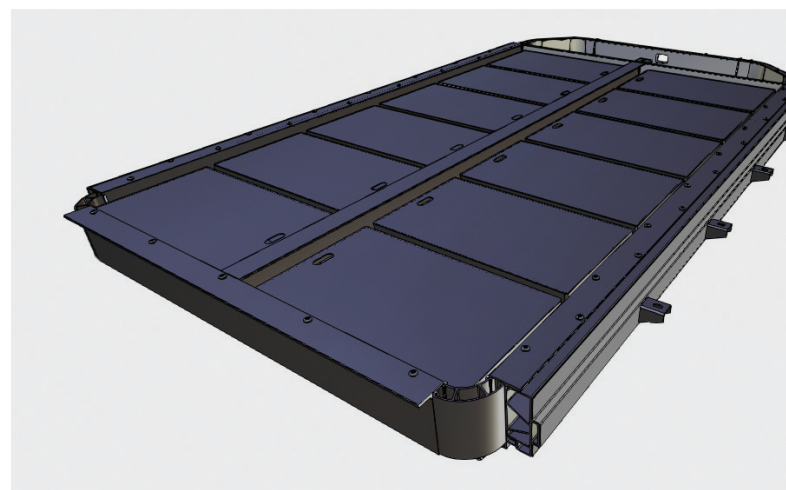
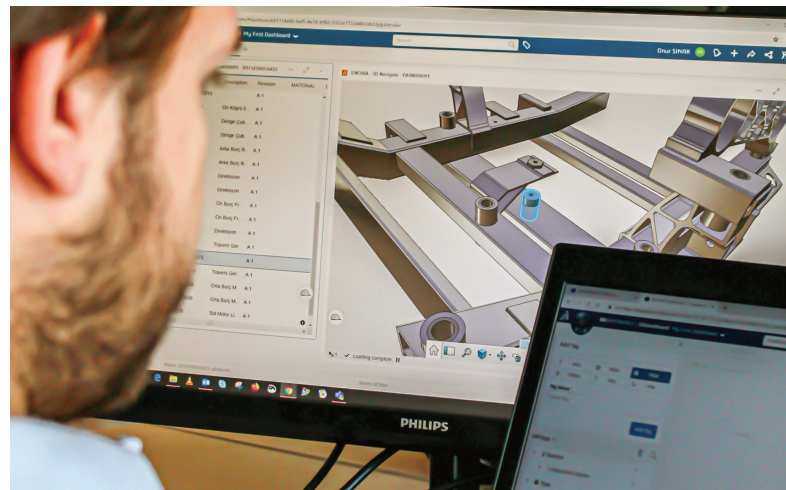
"The next step is to integrate our production processes, production planning, project management and engineering change," Sinak said. "All of these developments will help us become more efficient. We have chosen a future-proof platform that will grow with our business needs and support us to adapt to fast-changing industry trends."

More about the solution:

Bid to Win provides a centralized 'single source of the truth' when synchronizing multi-site projects, development changes, product data and requirements management. As business is won and successfully completed, success factors are captured for re-use in a systematic process to fortify expertise and build a knowledge base.

Benefits

- Consolidate and expand the customer base with faster innovation
- Accelerate profitable opportunities
- Ensure global project integrity and quality
- Unify cross-discipline teams seamlessly
- Create the processes to deliver profitably
- Learn from the past while leveraging legacy ideas and concepts



Top image: The **3DEXPERIENCE** platform enables cross-discipline collaboration, full traceability throughout the entire product development lifecycle.

Bottom image: Yeşilova's aluminum battery pack design

Focus on Yeşilova Group

Yeşilova Group has been manufacturing industrial products using aluminum for half a century. The company serves a number of industries reliant upon the use of aluminum parts and components. In particular, Yeşilova is a specialist in the automotive sector, making a variety of aluminum products for commercial and passenger vehicles.

For more information: www.yesilova.com.tr/en

Focus on Cadem Digital

Cadem Digital is a leading 3DEXPERIENCE platform reseller in Turkey. The digital transformation specialist works with companies across the aviation and defense, transport and mobility and industrial equipment industries to modernize their design, engineering, production, analysis, simulation and product lifecycle management processes based on the 3DEXPERIENCE platform.

For more information: www.cademdigital.com.tr



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