

SPEEDING UP MATERIALS DESIGN

MANAGING COMPOSITES USES ALTAIR TOOLS TO DESIGN, DEVELOP, AND DRIVE INNOVATION

About the Customer

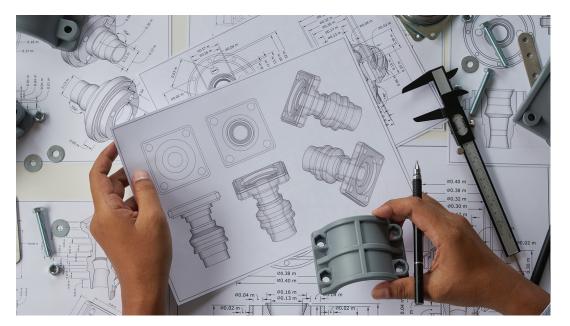
Managing Composites is a team of composite experts who deliver turnkey service covering all parts of the product development process — from concept and engineering to manufacturing and quality production. Whether it's designing a blank sheet of paper or industrializing a factory, Managing Composites is a one-stop shop for all composite needs. Its CAE department focuses on the structural analysis of different components, from a small sporting-goods part to a full carbon-fiber monocoque car chassis. The Managing Composites CAE team is also responsible for all the activities involved in the characterization of materials for simulation purposes.

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Ignacio Carranza Guisado, CAE Manager, Managing Composites





Their Challenge

To the team at Managing Composites, innovation means being able to use composite materials for any application — even if it's never been done before. "We love a challenge," says Ignacio Carranza Guisado, CAE manager, Managing Composites. "Understanding the different manufacturing processes and promoting new technologies is fundamental. And more importantly, the key is to share absolutely everything we do, so that everyone can benefit from innovation." Managing Composites constantly strives for better understanding of how materials behave and interact with each other and the world around us. They needed high-performance computing (HPC) tools that would enable the kind of advanced simulation and modeling that was required to keep innovating.

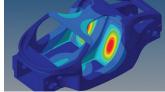
Our Solution

Managing Composites implemented the Altair[®] Unlimited[™] virtual HPC appliance to efficiently manage materials designs in the cloud, accelerate their workflow, and automate tasks. "Altair's versatility and wide catalog of solutions were a key factor," says Carranza, who has worked with Altair tools throughout his career. "It was an easy decision." He added, "It's extremely simple to implement since it's based on the cloud and you can even monitor your simulations in real time from your phone." Altair Unlimited delivers a user-friendly environment with an intuitive workflow, powered by the Altair[®] HPCWorks[®] platform for efficient workload management, resource optimization, and administrator control with detailed reporting. The team can easily move from classical finite element analysis (FEA) tools from the Altair[®] HyperWorks[®] platform — including Altair[®] HyperMesh[®], Altair[®] OptiStruct[®], and Altair[®] Radioss[®] — to material modeling with Altair[®] Multiscale Designer[®] or fast, meshless Altair SimSolid[®]. They also rely on process simulations such as Altair[®] Inspire[™] and tools to create predictive models and perform calibration. "We have a variety of tools included in the package and thanks to Altair's licensing system," says Carranza, "it's possible to increase productivity without any sort of time or financial penalty. The HPC helps a lot and everything is easy to implement, so the team can go from zero to full speed in a matter of seconds."

Results

Advanced simulation capabilities have enabled the Managing Composites team to identify potential design improvements quickly and efficiently. They can predict structural performance with a high level of accuracy, allowing them to propose new changes and study different variations before manufacturing prototypes — saving both time and money. They can also create components that are lighter while maintaining or improving structural stability. **"Using Altair gives us confidence, which ultimately translates into top quality solutions and satisfied customers.**" Carranza also emphasizes Altair's expert customer service. "From commercial questions to very technical ones, there's always someone from Altair ready to jump in and help."





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