

Lightweighting: Assessing the Impact of the Use of New Materials on Performance

ESI Delivers Seamless Integration of nCode to Enable Fatigue and Durability Predictions

nCode

As automotive OEMs strive to reduce vehicle weight, engineers must introduce and combine new, innovative materials and reduce design margins without

"Renault, HBM-n-Code and ESI have been conducting durability tests in Virtual Performance Solution on simulations for over 24 different load cases. Using those calculations, fatigue analysis was successfully conducted with nCode Design Life™."

René Denisse

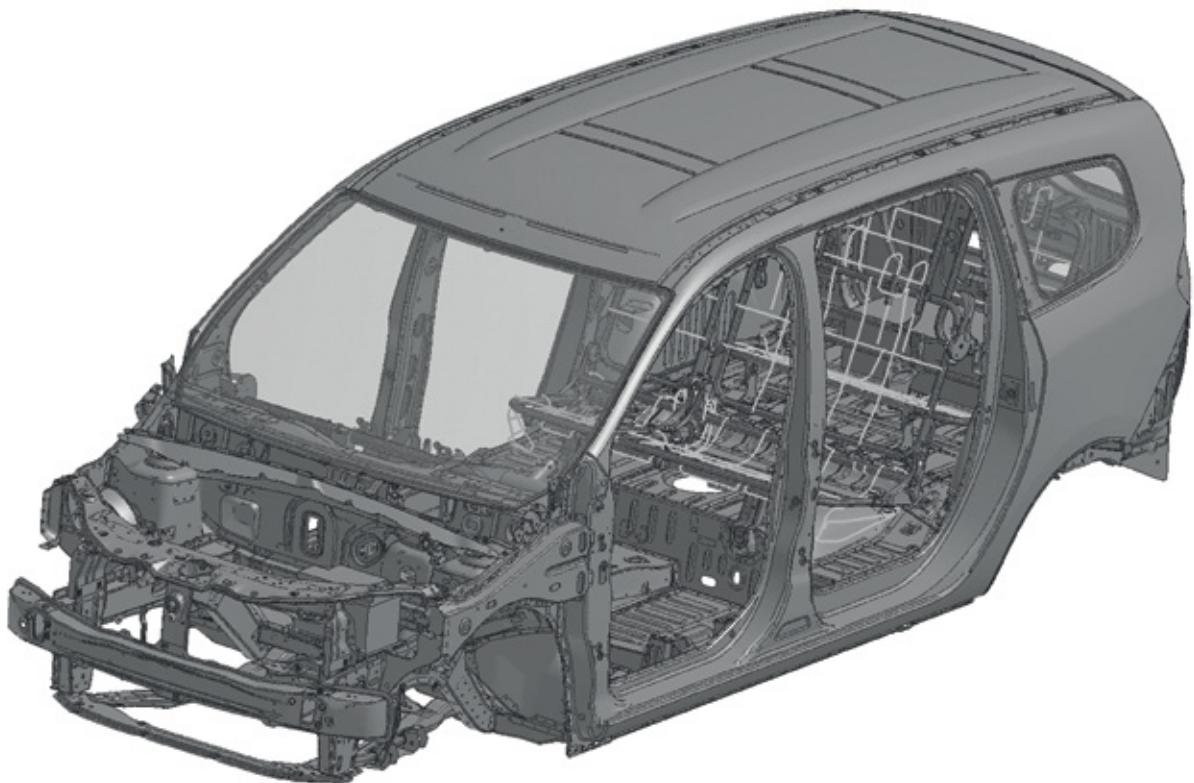
Simulation and Validation Section
Manager
Renault

impairing product performance. To anticipate the risk of non-performance and to avoid costly design changes, product design teams seek an early evaluation of all performance domains – including fatigue and durability. Only then, can they efficiently understand design trade-offs and define optimum solutions.

To support engineering teams in meeting or exceeding lightweight and performance target requirements, ESI Virtual Performance Solution (VPS) enables early prediction of product performance across multiple domains, using a single core model: from crash and safety performance to static and dynamic strength & strain analysis, NVH, and even water flow. ESI's flagship software empowers engineering teams to accelerate innovation while keeping time and cost under control.

To further strengthen its solution, ESI is partnering with HBM, the British company behind nCode and a leader in fatigue and durability prediction. Using nCode Design Life, design engineers in charge of the body, chassis and closures can now address fatigue and durability at the same time as all the other performance domains already supported in VPS. Improving workflows and skipping the cumbersome and error-prone tasks of file formatting and transferring, engineers gain time and efficiency to achieve more numerous iterations before the design freeze – essential to driving automotive innovation.

 for more information
www.ncode.com
www.esi-group.com/VPS



Body in white durability prediction using ESI Virtual Performance Solution and nCode. Courtesy of RENAULT