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### **Autoneum and Free Field Technologies: collaboration in vehicle acoustic design**

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**In light of global megatrends such as electromobility and sustainability, the requirements for the acoustic design of vehicles are becoming even more challenging. Simulation software and computer-aided engineering (CAE) not only improve the acoustic performance, but also accelerate the design process of new models. Through its collaboration with software company Free Field Technologies (FFT), Autoneum's proven acoustic simulation methods for vehicle acoustics are being incorporated into FFT's leading modeling software, Actran, thus setting new standards in CAE design of noise, vibration, harshness (NVH) and data exchange.**

As the demand for electric vehicles continues to grow across the globe, both development time of new models and their time to market decreases, while new powertrain systems are increasing the requirements in acoustic management. In order to further shorten the development process for vehicle manufacturers and to reduce vehicle noise as effectively as possible, Autoneum and the Belgian software company FFT, part of Hexagon's Manufacturing Intelligence division, are relying on their combined strengths: Thanks to the partnership, vehicle manufacturers will in the future benefit from Autoneum's decades of experience in designing tailored sound packages, as Autoneum's validated methodology for the prediction and insulation of structure-borne noise will be incorporated into Actran, the industry-leading simulation software for acoustics and vibroacoustics. Manufacturers therefore not only gain easier access to more accurate and production-based data: The precise prediction of vehicle performance early in the development process also allows them to significantly reduce design and lead times in addition to optimally balancing performance, weight and cost of noise-insulating materials.

Simulation tools developed by Autoneum such as SILVER and GOLD will form a crucial part of the new solution that will be integrated into Actran. Focusing on both body vibration and the performance of acoustic damping materials, they allow for the prediction and optimization of the NVH characteristics of vehicles in the concept phase.

Davide Caprioli, Head of Acoustic and Thermal Management at Autoneum, on the new partnership: "Autoneum's simulation tools for vehicle acoustics are already being used successfully by manufacturers and suppliers worldwide. By working with FFT and integrating our know-how into the Actran software, our methodology will now be even more widely and readily available, thus making it the global standard in NVH engineering."

Diego Copiello, Product Manager at FFT, adds: "Hexagon offers market-leading CAE solutions that help identify noise sources and mitigate their harshness. Our collaboration with Autoneum will provide new tools to industry engineers to help them optimize the acoustic design of their vehicles and provide their customers with a quiet and comfortable driving experience."

Autoneum and FFT have already demonstrated their expertise in the development of innovative and sustainable methods in vehicle acoustics in numerous joint scientific papers. Thanks to their new partnership, going forward the two companies will also exploit their synergies to further optimize and standardize processes and workflows for acoustic design and to improve the design and modeling of NVH materials as well as the exchange of data between manufacturers and suppliers.

The enhanced FFT Actran software will be presented at the HxGN LIVE Design & Engineering virtual conference in October 2021.

**Photos:**

Images can be downloaded at [www.autoneum.com/images/CAE-simulation-sound-field](http://www.autoneum.com/images/CAE-simulation-sound-field).

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**About Autoneum**

Autoneum is globally leading in acoustic and thermal management for vehicles. The Company develops and produces multifunctional, lightweight components and systems for interior floor and engine bay as well as the underbody. Customers include almost all automobile manufacturers in Europe, North & South America, Asia and Africa. Autoneum operates 53 production facilities and employs around 12 800 people in 24 countries. The Company with its headquarters in Winterthur, Switzerland, is listed on the SIX Swiss Exchange (ticker symbol AUTN).

[www.autoneum.com](http://www.autoneum.com)

**About Hexagon | FFT**

Hexagon is a global leader in sensor, software and autonomous solutions. We are putting data to work to boost efficiency, productivity, and quality across industrial, manufacturing, infrastructure, safety, and mobility applications. Our technologies are shaping urban and production ecosystems to become increasingly connected and autonomous – ensuring a scalable, sustainable future. Free Field Technologies (FFT), part of Hexagon's Manufacturing Intelligence division, enables manufacturers to design and optimise products with powerful acoustic, vibro-acoustic and aero-acoustic modelling software and solutions. Learn more at [fft.be](http://fft.be). Hexagon's Manufacturing Intelligence division provides solutions that utilise data from design and engineering, production and metrology to make manufacturing smarter. Hexagon (Nasdaq Stockholm: HEXA B) has approximately 21 000 employees in 50 countries and net sales of approximately 3.8bn EUR.