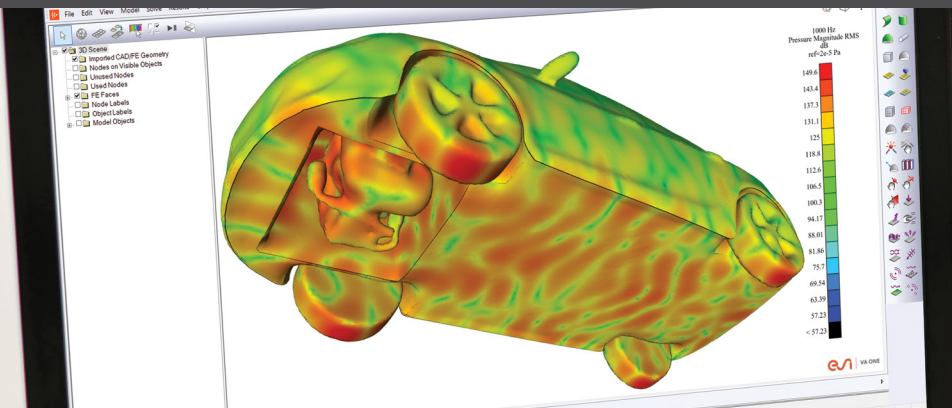


VIBRO-ACOUSTIC SIMULATION SOFTWARE VA ONE



Accurately predict vibro-acoustic performance prior to production. Engineers in automotive, aerospace and heavy industry rely on a full-frequency environment for vibro-acoustic qualification and sound design.

Optimize acoustic quality early in the design process

Accurate predictions must be performed early in the design process to ensure designs meet legislative goals for pass-by, underwater noise radiation, and cabin acoustic comfort. Interior noise is a critical product differentiator for end users in the automotive industry.

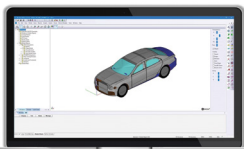
Traditional industry practice of relying on late-stage test procedures to identify design countermeasures can negatively impact both product cost and performance. A more effective design strategy is to eliminate interior and exterior noise issues prior to physical prototype production.

Efficiently achieve design objectives for interior and exterior noise

ESI VA One is a single environment for vibro-acoustics analysis that allows engineers to perform accurate predictive noise and vibration assessments early in the design cycle. A single user interface provides access to a vibro-acoustic simulation environment, covering the full frequency spectrum through a set of seamlessly coupled and proven modeling methods. This results in VA One users quickly achieving optimal design productivity by removing the need to deploy separate solutions with different user interfaces and managing the exchange of data between different environments.

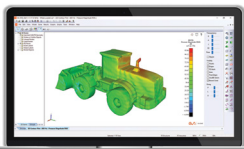
VIBRO-ACOUSTIC SIMULATION SOFTWARE VA ONE

By optimizing every component of the Flying Spur firstly in the virtual world, **Bentley** engineers reduced physical prototypes and created the quietest in-cabin experience.



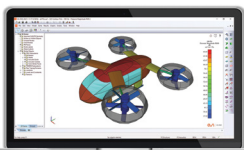
Virtually improve acoustic performance of electrified vehicles

Automakers use the aero vibro-acoustics module in VA One to optimize passenger acoustic comfort that in electric vehicles is strongly influenced by wind noise. The ability to assess the effect of noise sources and noise transmission paths early in product development results in the creation of a more satisfying passenger experience.



Get operational safety and comfort right

VA One equips acoustic engineers with a single simulation tool to meet requirements related to noise regulations and standards for optimal cabin comfort and ensuring compliance with environmental noise regulations.



Effectively optimize noise for new air mobility technologies

Complex sources comprising engine turbulent boundary layer (TBL) and shock cell, all contribute to meeting design challenges for new air mobility vehicles. ESI VA One allows efficient design trade-offs when searching for optimal cabin trims. The single development environment empowers design engineers to get acoustic environmental standards and cabin brand objectives right the first time.

LEADING SOFTWARE FOR EFFECTIVELY OPTIMIZING ANY POTENTIAL NOISE SOURCE

- Fast computation with Ray Tracing
- Statistical Energy Analysis (SEA) & trim modeling feature
- Modeling of all boundary elements (BEM) including fast multipole ones
- Full library of materials, physical properties & subsystems



Learn More:

esi-group.com/products/vibro-acoustics