

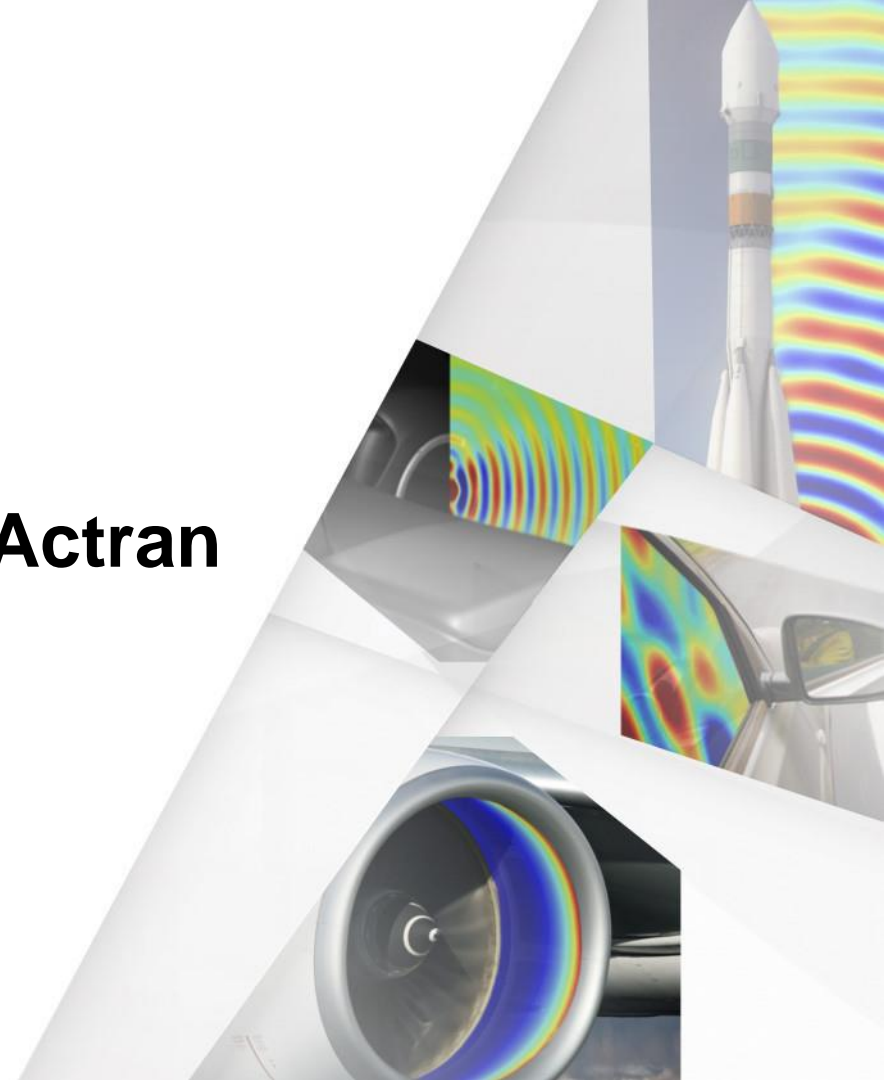
Acoustic simulations with Actran

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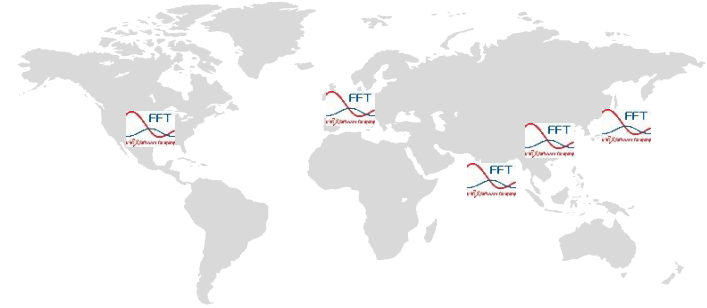
Expertise : Acoustic simulation



Company & Solution

Company – Free Field Technologies

- **20 years** of experience in industrial acoustic challenges
- 60 **worldwide** Acoustic CAE experts
- FFT develops the **acoustic simulation software Actran**



Solution: **Actran**

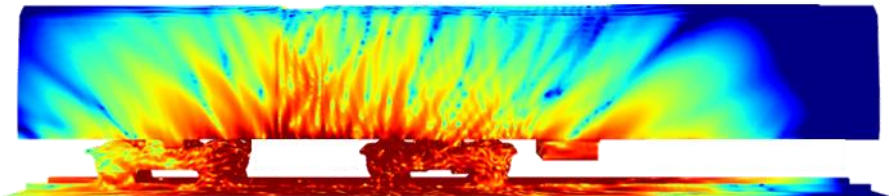
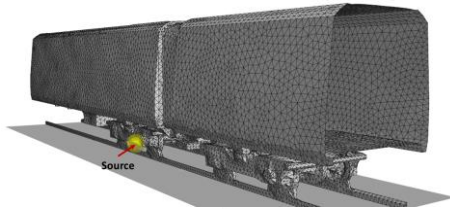
- Adopted by **300 industrial customers**
- Various Applications:
 - **Vibroacoustics** : structural vibrations generating noise
 - **Aeroacoustics**: noise generated by turbulent flows
 - Efficient solution to tackle industrial challenges
- Connected to other physics
 - Structural dynamics
 - Fluid dynamics
 - Electro-Magnetic



Railway acoustic simulations

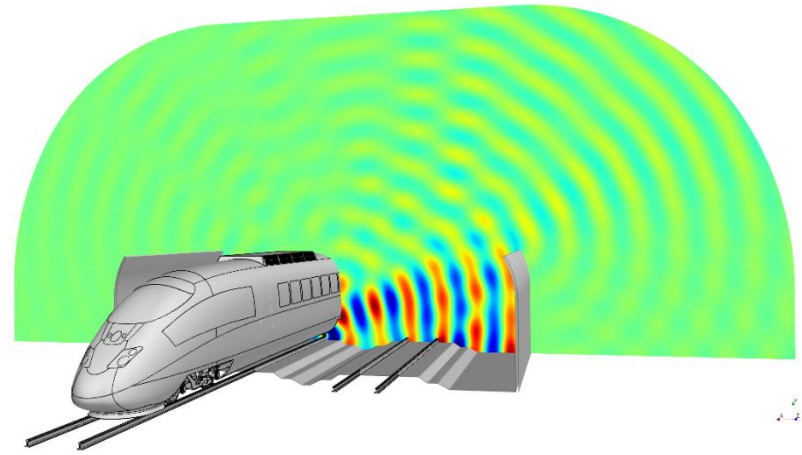
Interior Noise

- Acoustic comfort
- Acoustic Transfer Path analysis
- Acoustic Insulation
- Ventilation systems
- Noise control systems



Exterior Noise

- Aerodynamic noise
- Acoustic propagation effects
- Sound Barrier Design & Far field prediction
- Virtual certification

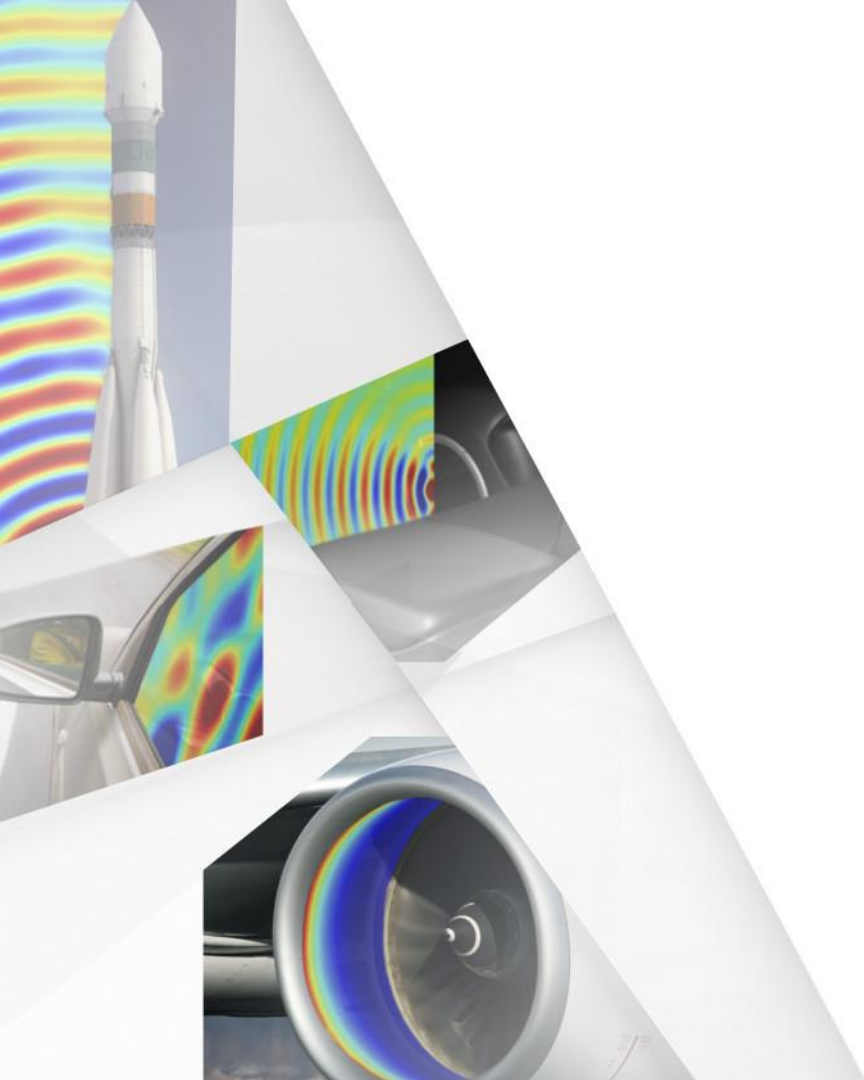


Projects in Shift2Rail

Looking for partnership :

S2R-OC-CCA-01-2019: Noise and Vibration

- Exterior noise simulation tools
 - Actran has : integration effects, uncertainty modeling techniques
 - Looking for partners: extend noise source library
- Pass-by noise source separation
 - Actran has : separation technique, post-processing
 - Looking for partners: Beamforming, tests
- Separation track noise vs vehicle noise
 - Develop contact noise modeling in Actran
- New materials and concepts
 - Based on acoustic material properties, simulate the noise transmission improvements



Thank You

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