SIMCENTER FEMAP

Finite Element analysis software for advanced engineering design

Simcenter Femap is a powerful engineering simulation tool that leverages finite element analysis (FEA) to model and analyze product performance under real-world conditions. With its intuitive interface and advanced capabilities, Simcenter Femap enables engineers to better visualize and understand product behavior, improving design quality and efficiency.

Ideal for companies of all sizes, Simcenter Femap can import geometry from any CAD platform, offering a complete analysis environment that supports a wide range of industrial applications, from aerospace and automotive to consumer goods manufacturing.

Why choose Simcenter Femap for simulation?

Accurate and detailed modeling

Simcenter Femap allows you to create highly detailed and precise finite element models, improving the ability to predict product performance under real operating conditions. This leads to greater reliability and reduced development and prototyping costs.

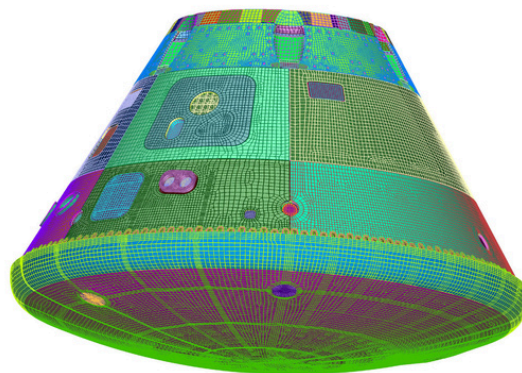### Intuitive and user-friendly interface

Designed to be accessible to engineers of all experience levels, Simcenter Femap provides an intuitive user interface that simplifies the setup and analysis process. Its ease of use ensures quick software adoption and increased team productivity.

Integration with leading FEA solvers

Simcenter Femap integrates seamlessly with industry-leading FEA solvers, such as Simcenter Nastran, delivering a wide range of advanced analysis capabilities. This compatibility allows users to fully leverage solver features, ensuring accurate and reliable results.

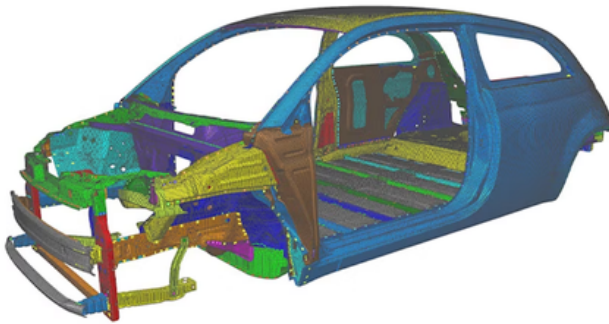### Broad range of industrial applications

With its comprehensive set of analysis and simulation tools, Simcenter Femap is ideal for multiple industries, including aerospace, automotive, marine, energy, and consumer goods. This versatility enables companies to respond quickly to evolving market demands, boosting innovation and competitiveness.

"The ability to create advanced, accurate, and fast models definitely gives us a competitive edge, and it has become a critically important contribution in these fast-paced and technically demanding spacecraft projects."
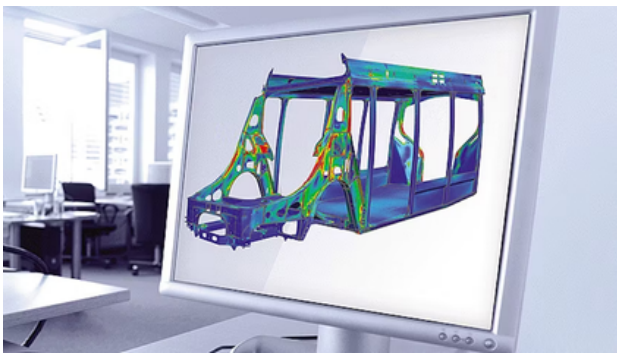— Jeff Preble, SpaceWorks
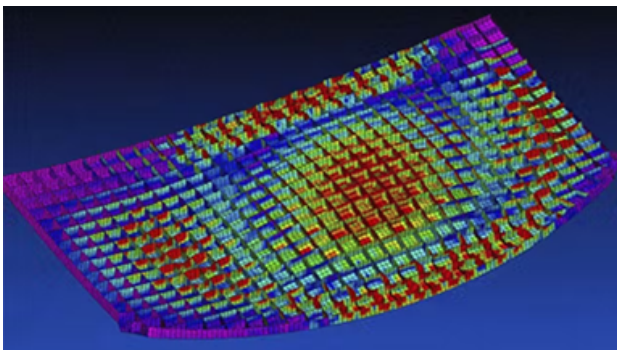
Pre/post-processing

Spend less time creating finite element models and more time analyzing results. Seamlessly move from multi-CAD geometry to a fully defined and ready-to-run analysis model, thanks to unique tools for CAE geometry editing, full meshing, FE assembly management, multi-CAE solver environments, and rapid post-processing and reporting of results.

Structural analysis

Simcenter Femap provides advanced tools for structural analysis, enabling the simulation and evaluation of structural behavior under various loading conditions. Using finite element analysis, the software helps identify critical areas, optimize materials, and ensure structural integrity—enhancing design quality while reducing development costs and prototyping time.

Dynamic response analysis

With Simcenter Femap, dynamic response analysis becomes straightforward and efficient. The software enables the modeling and simulation of structural behavior under varying loads and operational conditions, predicting deformations, stresses, and vibrations. This advanced capability allows for the optimization of designs, improving product safety, durability, and overall performance.