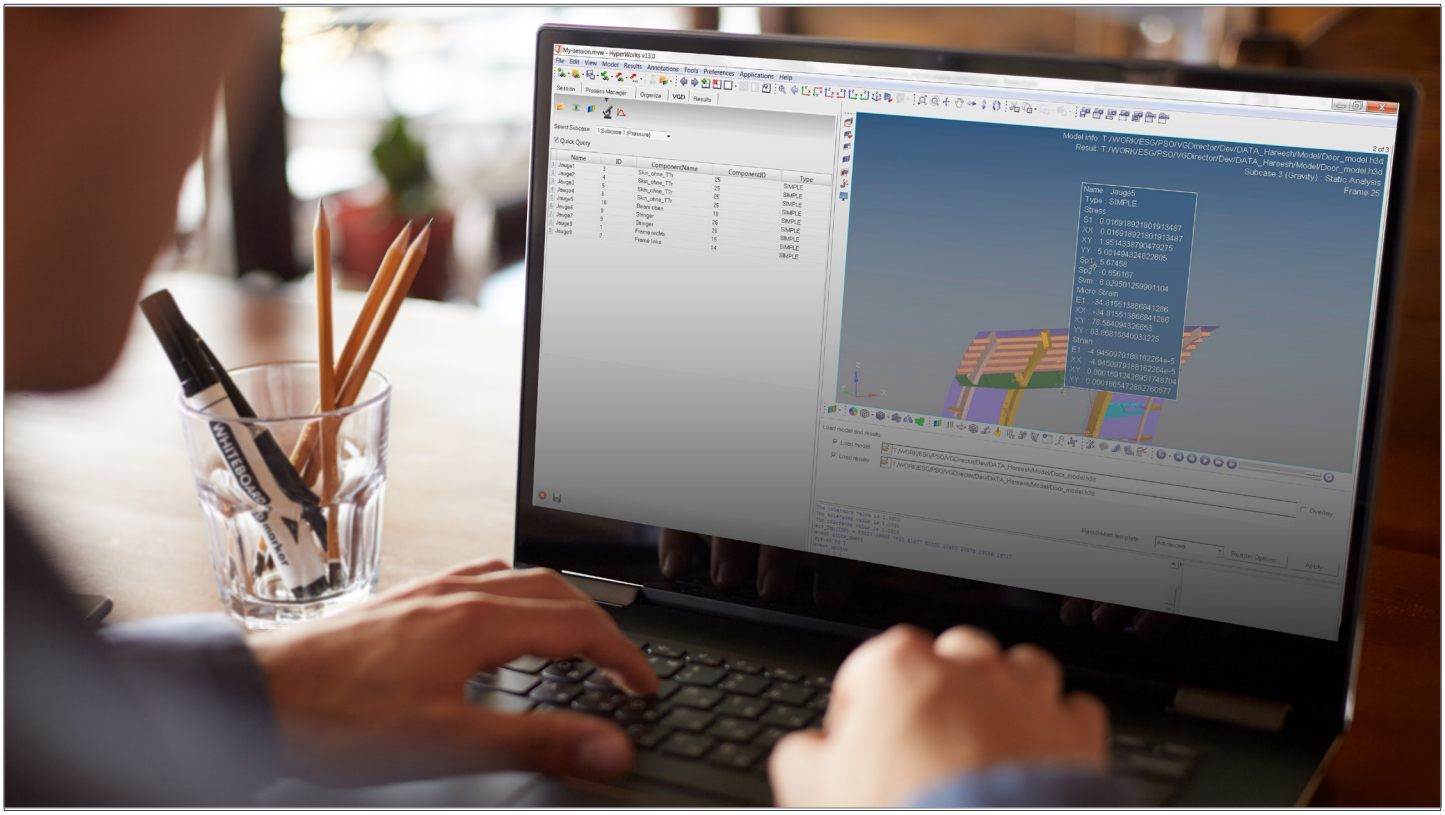
Altair Tailored Solutions

Customized Software Enhancements

Altair | HyperWorks



Altair understands that design processes are very specific to individual companies. As part of our commitment to enable our customers to create innovative design solutions efficiently, our services group routinely tailors Altair HyperWorks™ solutions to meet their unique requirements, embedding the simulation platform with client specific intelligence.

Solution Highlights

- Automate, standardize and simplify engineering practices
- Customize software solutions to accelerate product development
- Fast and flexible deployment
- Increase efficiency and product performance through process modifications
- Packaged solutions leveraging Altair's licensing model
- Fully customized workflows addressing specific needs

Learn more:
altair.com/tailored-solutions

Benefits

Simplified Processes
Working closely with our clients, we identify improvements in their existing operations and increase efficiency through system integration, process automation, and data management.

Flexible Solutions
Bundled software and service packages are tailored and delivered based upon a customer's unique environment and requirements.

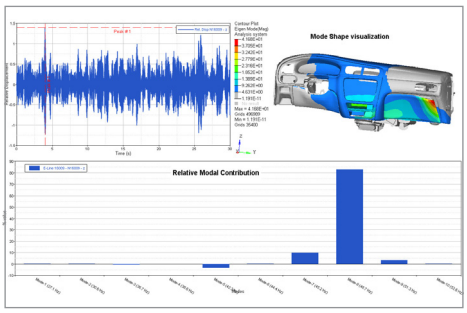
Accelerate Product Development
Automate, standardize and simplify common engineering practices so our clients' engineers can focus on developing new products and avoid being consumed by repetitive and highly time-consuming tasks.

Expertise
With more than 800 designers, engineers, scientists and creative thinkers across the globe, our team is well qualified and highly experienced in diverse applications of engineering analysis.

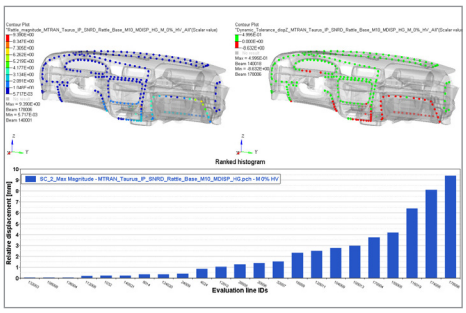
Packaged Solution Offerings

After many years of creating tailored solutions for our clients, we've learned that select engineering groups require very similar modifications to the core HyperWorks experience. To address this, we created a series of Packages Solution Offerings (PSO's) that leverage our client's investment in Altair's licensing model. Developed, implemented and supported by our specialist services team, our PSO's are rapidly deployed and customized to meet each organization's unique processes.

Noise, Vibration, & Harshness Director
HyperWorks has a broad range of NVH functionality for NVH engineers, designed to reduce the simulation cycle time, freeing CAE engineers to focus on optimizing product design and performance. NVH Director (NVHD) is the first commercial software solution that makes full-vehicle NVH simulation possible in the most advanced and streamlined form.



Results visualization in Squeak & Rattle Director



Optimization and design exploration with MDO Director

Mobile-accessible dashboards in Weight Analytics

Squeak & Rattle Director
Altair's Squeak and Rattle Director (SnRD) is a novel set of software automations to rapidly identify and analyze design alternatives to eliminate the root causes of squeak and rattle (S&R) in assemblies. Tailored to be deeply integrated within the client's environment and processes, SnRD offers a complete set of capabilities to streamline the entire S&R simulation workflow process from model creation to results visualization. Fully integrated in Altair HyperMesh™ and Altair HyperView™, this user-friendly solution provides a highly semi-automated approach to determine relative component displacements in the time domain that can lead to undesired squeaking and rattling in products. By identifying potential areas of concern in the early stages of design, the overall design quality can be improved, and significant cost and time savings can be realized.

Multi-Disciplinary Optimization Director
A multi-disciplinary optimization (MDO) approach allows for exploration of all design requirements simultaneously, achieving lighter products, faster. Until now, enabling this process on live vehicle programs has been a challenge. Altair's MDO Director is a novel set of software tools that provides a process to rapidly set up, execute, post-process and explore the design of MDO problems with gauge variables. Designed to ensure that existing CAE processes can remain unchanged, the MDO Director can be tailored to be fully compatible with our client's design processes and environment, and thus, tailored to be integrated in a simulation-driven product design environment. Fully integrated into the HyperWorks software platform, the MDO Director provides a semi-automated process to reduce the complexity of MDO set up, enabling teams to drive the design to program timescales within a user-friendly environment.

Weight Analytics
Altair's Weight Analytics (WA) solution manages the entire Weight and Balance (W&B) process empowering engineering and management teams to control and ensure W&B attributes meet program requirements. Deployed as a common weight management tool across the enterprise, WA enables faster and more accurate decision-making with on-demand access to visualize, analyze and predict W&B at any point in time during the entire Product Lifecycle (PLC).

Additional packaged solutions include:
- **Automated Reporting Director:** automate the mechanics of generating a report
- **GeoMechanics Director:** convert seismic data and perform reservoir simulations
- **Impact Simulation Director:** predict drop impact damage with a process-oriented end-to-end automation
- **Model Mesher Director:** manage the entire meshing process, including model simplification and repair
- **Virtual Gauge Director:** correlate strain gauge positions between test data and simulation
- **Weld Certification Director:** validate weld lines against regulations

Custom Workflows
We know that our PSO's don't cover everything, which is why our specialized consulting team is available to work alongside an organization's engineering groups to identify inefficiencies in their design processes, and suggest tailored modifications to streamline CAE workflows and solve specialized industry vertical engineering challenges.

"Altair was able to provide us with a customized program that precisely catered to our reporting needs, allowing more time to focus on the project."

James Smith, Senior Design Technician
F. tech R&D North America