

Providing Specialist Engineering Services and Solutions

SDI Engineering is a specialist engineering company that supports customers in the aerospace, defense and related sectors. Our long-term strategy is to grow our market and to continue expanding into other areas that require engineering skills and resources in research and development, modeling, simulation, design and analysis.

Services

Through the application of mathematical modeling and simulation, and niche engineering skills, SDI offers a diverse range of services including:

- Research and development
- Advanced modeling and simulation
- Design and analysis
- Testing and certification support



SDI performs various projects in the following applied specialty areas:

- Aeroelastics/aeroservoelastics and loads analysis, including flutter
- Structural design and stress analysis, mechanical systems and vibration analysis
- Control systems and control law development
- Hydraulics, actuator modeling and handling qualities
- Aerodynamics modeling and analysis
- Condition monitoring and remote sensing
- Industrial IoT

Proprietary Software Tools

SDI has developed proprietary software tools under multiple research and development projects. These tools are commercially available and are also used by SDI to perform engineering services:

- **GearSim**: Landing gear modeling and simulation coupled with CFD capability to predict the landing gear's response to various inputs including varying terrain, hard landings, braking, steering, etc.
- **ARES**: Aerial refueling analysis for hose and drogue dynamic behavior prediction, and refueling system and component design studies
- **ASSURE**: Aeroelastics/aeroservoelastics for the prediction of uncertainties and the reliability of systems affecting the dynamic characteristics of advanced flight vehicles







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