

TRANSFORM DEVELOPMENTS WITH VIRTUAL PROTOTYPES

LOWER COSTS

Development, testing & certification

DEVELOPMENT EFFICIENCY

Shorter go-to-market time

DESIGN OPTIMIZATION

Reduction of labour & material requirements

Drag & weight reduction

Reduced emissions & fuel efficiency

NVH and thermal comfort analysis

Reduced community noise

INNOVATIVE SOLUTION

Improved safety, de-icing scenarios

Electrification & autonomous systems

3D-corrected Virtual Blade Model

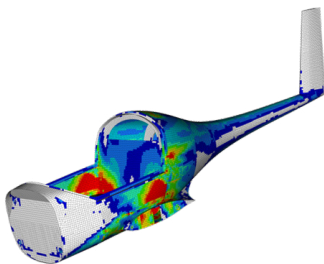
MATERIAL DESIGN

Advanced material solutions including composites

COMPONENT ANALYSIS

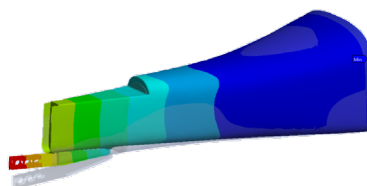
Landing gears, hydraulic & break systems

INDUSTRIAL EXPERIENCES | PROJECT EXAMPLES



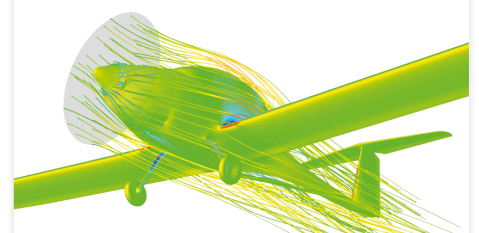
ULTRALIGHT AIRCRAFT

The composite structure of an ultralight aircraft was modelled using layered shells, and static calculations were performed according to aviation standards. Ply thickness and orientation could be weight optimized throughout an iterative process, finally saving 29% in weight beside an improved strength.



TOWING

Towing capability development for a light aircraft (CS-LSA) was done by investigating effects of towing forces of the carbon sandwich fuselage and determining necessary local reinforcement layers and insert environments.



VIRTUAL BLADE MODEL

Development and utilisation of the 3D-corrected Virtual Blade Model for aerodynamic assessments accounting for the three-dimensional effects induced by the propeller blades of a motor-glider aircraft. The method has been fine-tuned based on in-flight test data.