

# Virtual Process & Part Design for Thermoplastic Composites



We support you during the evaluation and development phase with integrated simulation chains for injection molding, organosheets, thermoplastic tapes and other sophisticated multi-material systems

# Virtual Process & Part Design for Thermoplastic Composites

In a highly competitive industry, the number of multi-material components is increasing rapidly. The background to this increase is that the component weight can be reduced by integrating different materials at almost the same costs.

We at AZL have first-hand experience with many technologies and together with our team of experienced CAE engineers we help you identify and redesign potential applications.

In addition, we can help you to set up sophisticated simulation models and material cards.

## Our Offer

- Screening of potential material and production technologies
- Definition of component-specific requirements and load cases
- Development of application and technology-specified CAx chains
- Design of the primary concept up to detailed optimizations with market leading software
- Derivation of cost and sustainability indicators
- Testing and validation of prototypes

Duration 4-6 months

## Your Benefits

- Identification of cost-saving potential through material savings and improved material-specific design
- Better prediction of performance in cyclic and dynamic loading conditions
- Improvement of cost and eco KPIs through hybrid material combinations
- Information for investment decisions

Technology Screening & Evaluation

Component Definition & Design Analysis

Complete Process/Mechanics Analysis

Set up Material Cards

Prototyping & Validation

## Our Expertise

As a one-stop shop for market and technology know-how, the AZL brings together experts and decision makers from academia and industry of all positions in the value chain, to support business and technology development. Located in the heart of one of the leading high-tech ecosystems, RWTH Aachen University, AZL assists in the development, benchmarking and improvement of composite-based multi-material technologies. In addition, the AZL Partnership frameworks offer access to an open innovation network of more than 80 international companies to find solutions for industrial implementation and establishment of lightweight technologies in the market.

## Our Assets related to Virtual Process & Part Design for Thermoplastic Composites

- Expert knowledge in CAD/CAE
- Advanced material modelling knowledge
- State of the art labs
- Hands-on prototyping
- Industrial expertise
- Industry and university network through Partnership and RWTH Aachen ecosystem



**Warden Schijve**  
+49 241 475 735 - 17  
+49 177 5129780  
warden.schijve@  
azl-aachen-gmbh.de