

Motivation

The project has been inspired by an international network of innovative companies shaping the future of HP-SMC



Kick-Off of AZL's Workgroup "High-Performance-SMC" with more than 60 participants

SMC (Sheet Molding Compound) has been a proven and first choice solution for several applications for many years, the most important markets are

- Automotive
- Electronics
- Building and Construction

The drive to further weight savings and significant reduction in CO₂-emissions requires a next generation of **High-Performance SMC** (HP-SMC) that features

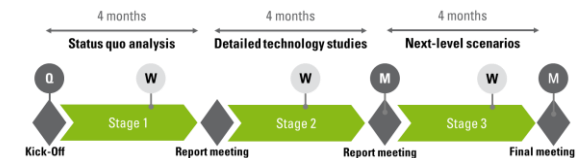
- short and continuous fiber reinforcements
- both carbon and glass fibers
- customized resin compounds.

This study provides in-depth knowledge on SMC applications and technologies, key challenges and technological solutions for establishing High-Performance SMC and serves as basis for the elaboration of design guidelines, a target-orientated development and to open up new business opportunities.

Content

The **market and technology study** will focus on:

- The state of the art of SMC and HP-SMC technologies and their readiness
- Use cases & value chains for structural and Class A applications incl. best practice solutions
- FMEA, key challenges and fields of action for development to establish HP-SMC
- Next-level solutions and new business opportunities



STAGE 1: STATUS QUO ANALYSIS

- Technological state of the art for (HP-)SMC
- Use cases and applications
- Production scenarios & value chains

STAGE 2: DETAILED TECHNOLOGY STUDIES

- FMEA analysis for specific application and production scenarios
- Current technologies and their readiness
- Best practices solutions
- Remaining key challenges & fields of action

STAGE 3: NEXT-LEVEL SCENARIOS

- Scenario development to solve key challenges
- Evaluation of potential solutions from other technology areas
- Overview of market, value chains and providers for next-level solutions
- Basis for new business opportunities and development



High-Performance SMC

Joint Market and Technology Study

INSTITUT FÜR
KUNSTSTOFFVERARBEITUNG
IN INDUSTRIE UND HANDWERK AN DER RWTH AACHEN



AZL Aachen GmbH in cooperation with
AZL RWTH AACHEN
Aachener Zentrum für
integrativen Leichtbau
UNIVERSITY

Key Benefits

The target group are companies already active in the SMC value chain as well as companies which want to enter the SMC market.

KEY BENEFITS

- In-depth knowhow of the **technological state of the art** of HP-SMC & best practice solutions
- Provision of detailed insights into **SMC applications** and **value chains**
- **Key challenges and fields of action** to establish HP-SMC
- Overview of **next-level solutions** for targeted development
- Basis for evaluating **new opportunities for your business development**
- Entry into a **long-term strategy community** along the whole value chain and evaluation of cooperation opportunities

SPECIFICALLY, THIS MEANS FOR:

- **Material suppliers**
Efficient improvement and development of HP-SMC materials based on latest technology insights
- **Equipment and mold suppliers**
Design and produce next-generation equipment and molds tailored for demands of HP-SMC
- **Part manufacturers**
Speed-up development processes and offer new solutions based on HP-SMC
- **OEMs**
Directly communicate your demands to a network of companies and gain know-how from other value chain members
- **Engineering suppliers and part developers**
Gain knowledge on how to design products- and processes for HP-SMC

Conditions

TIMELINE

- Start: September 2017
- Duration: 12 months
- Regular workshops with participants

PROJECT CONTRIBUTION

External Participants	AZL and IKV Partners*
15,000.00 € (excl. VAT)	12,000.00 € (excl. VAT)

* We offer a 20 % discount for AZL partner companies and members of the IKV association of sponsors.

Your Contact

STUDY COORDINATION

For further information on the study content and procedure, please contact:



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During an information event in May 2017, the AZL Workgroup on "High-Performance SMC" together with companies interested in the study discussed and sharpened the content of the study. © AZL Aachen GmbH



Competences along the entire SMC process chain are represented at the RWTH Aachen Campus. © Campus GmbH/Steindl



Home of AZL in the Production Engineering Cluster at the RWTH Aachen Campus
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