



Wademekum



Institut für
Textiltechnik und
Lehrstuhl für
Textilmaschinenbau



Project title: SustDesignTex - Sustainable Industrial Design of Textile Structures for Composites

- Partners:**
- Politechnika Lodzka, Poland (TUL)
 - Universidad de Zaragoza, Spain (UZ)
 - Hoegskolan Boras, Sweden (HB)
 - Wademekum Ltd., Poland (WAD)

Duration: 10/2022 – 10/2025

Funding: HORIZON-WIDERA-2021-ACCESS-03-Twinning

Agency:

Univ.-Prof.
Prof. h.c. (Moscow State Univ.)
Dr.-Ing. Dipl.-Wirt. Ing.
Thomas Gries
Director

Rebecca Emmerich, M.Sc.

Researcher

Ref.: RE
17.11.2022

Mission Statement

The general objective of the SustDesignTex twinning project is the establishment of a long-term strategic partnership between the participating institutions. These include the TUL (Faculty of Materials Technology and of Textile Design of Lodz University of Technology - FMTTD), 3 leading universities at EU-level (UZ, ITA and HB) and the Polish company Wademekum, Warsaw (Poland). Wademekum is active in the field of the project results implementation. During this project, researchers will get acquainted with the real research interests and conditions of each other, train their skills and transfer knowledge on the new methodologies and equipment. Each one of the partners has a specific role in the project, shown in Fig.1.

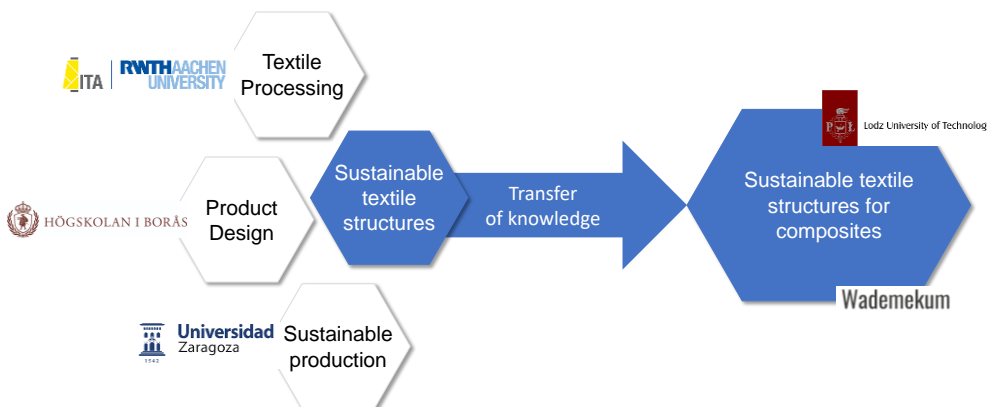


Fig. 1: Role distribution of the project

The research activities of the project will focus on designing innovative textile structures for composites in different applications. Therefore, the ideas of small and medium enterprises (SME), as partners from Wademekum, are considered. The project partners will implement a research and innovation strategy focused on three sub-topics by taking into account the composite product's life-cycle:

- Industrial design including life cycle assessment and circularity performance
- Design and processing of technical textile structures for the reinforcement of composites
- Textile reinforcement composites technology

TUL will get an institutional advancement in research management and administration, research project preparation and develop the skills of its Early Stage Researchers (ESR) via the strengthening TUL research management marathon, roundtables, workshops and the Joint Summer School for TUL ESRs.

Approach

The project is coordinated by TUL and equally supported by all participating partners. In order to build a strong collaboration between partner universities and industries, short-term visits up to 3 month and expert visits at the participating universities are performed. Within these visits a joint research micro-project for designing and assessing new Textile Reinforcement Composites (TRC) will be carried out. Additionally, lectures, training sessions, joint research work and conferences help to strengthen the collaboration and build on the huge potential of networking for excellence through knowledge transfer in the specified field, based on the joint implementation of the research micro-project and a preliminary exchange of the best practice. The innovation of this novel sustainable textile requires the consideration of the eco-design principle and the concept of design for recycling.

Acknowledgments

We would like to thank the European Union for funding the project under the programme Horizon Europe Framework Programme (HORIZON). Furthermore, we would like to thank all project participants for their active cooperation.



Funded by
the European Union

Contact

Rebecca Emmerich

Area: Flat Composite Reinforcements

ITA – Institut für Textiltechnik der RWTH Aachen University

Otto-Blumenthal-Str. 1, 52074 Aachen

Tel.: +49 241 80-49148

rebecca.emmerich@ita.rwth-aachen.de

Area Composites