Call: HORIZON-WIDERA-2021-ACCESS-03/Twinning

Project SustDesignTex (GA No. 101079009), title: „Sustainable Industrial Design of Textile Structures for Composites" funded by the European Union

Deliverable Report

SUSTainable industrial DESIGN of TEXtile structures for composites (SustDesignTex)

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Project SustDesignTex (GA No. 101079009), title: „Sustainable Industrial Design of Textile Structures for Composites" funded by the European Union

Deliverable Title	**D7.4 (Report from Second Business Forum)**
Deliverable Lead:	Wademekum (WAD)
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Related Task(s):	Task 7.4
Author(s):	Tomasz Balcerzak, Małgorzata Żmigrodzka, Katarzyna Kostur, Paweł Lubecki, Rafał Orłowski
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Abstract	The Second Business Forum was organized as part of the SustDesignTex project under the HORIZON-WIDERA-2021-ACCESS-03 program and took place on January 23, 2025, at the Lodz University of Technology, Poland, during the InnovaTex 2025 conference. The event was conducted in a hybrid format, with 30 participants who attended in person, including representatives from SMEs, academia, and industry stakeholders. The forum served as a platform for discussion and knowledge exchange on sustainable industrial design of textile structures for composites, with a particular focus on the automotive and aeronautical sectors. Key topics included the role of circular economy (CE) principles, IT innovations, and AI applications in sustainable textile production, as well as the European Union's Strategy for Sustainable and Circular Textiles. During the event, experts from Lodz University of Technology, Wademekum, and Partners delivered presentations and moderated panel discussions covering innovative IT tools, challenges in CE implementation, ESG in aviation, and sustainability strategies. The forum provided valuable insights into industry needs, regulatory challenges, and opportunities for collaboration between SMEs, research institutions, and large enterprises. Details of the Second Business Forum presentations, along with key findings and conclusions, are included in this report. Additionally, the outcomes of this forum will be published in the Scientific Journal of Safety and Logistics (SJSL) as part of the project's dissemination and exploitation activities.

Detailed description

Project Deliverable D7.4, scheduled for completion by Month 28, marks a key milestone in a collaborative project involving renowned institutions: Lodz University of Technology (TUL) in Poland, University of Borås (HB) in Sweden, RWTH Aachen University (ITA) in Germany, University of Zaragoza (UZ) in Spain, and the Polish company Wademekum. This deliverable supports the establishment of a Business Forum under the Industry-Research Dialog Platform, an essential component of the project website. This forum features a knowledge-sharing platform and a survey tool specifically developed to encourage cooperation with Small and Medium Enterprises (SMEs).

The main goals of the forum are twofold: first, to identify and understand the technology and innovation needs of companies across sectors like transportation, aerospace, and marine industries, and second, to conduct a dissemination campaign that effectively targets industry and SME stakeholders.

Thematically, the Business Forum focuses on the automotive, chemistry, textile, and aeronautical industries. It aims to achieve its objectives by leveraging the potential of networking to drive excellence in the transfer of knowledge related to innovative textile structures for composites.

Central to meeting these goals is the joint implementation of a research microproject and the preliminary exchange of best practices between TUL and its partners. Various coordinated activities support this microproject, which is aimed at facilitating a seamless flow of knowledge and expertise.

Researchers from TUL, ITA, HB, and UZ have been participating in an array of activities designed to encourage knowledge exchange and skill development. These include short-term visits, expert consultations, lectures, training sessions, joint research projects, and conference attendance. A key focus of this collaboration is a joint research microproject on designing and evaluating new Textile Reinforcement Composites (TRCs). The key findings from these various activities were shown to the attendees of the business forum.

Deliverable D7.4 represents a crucial step in advancing innovation and technological progress within the automotive and aeronautical sectors. Through careful planning and collaborative efforts, the consortium of academic institutions and industry partners seeks to drive significant advancements in industrial design and composite material development.

Agenda of the second business forum event

S/no.	Part	Time
1.	Welcoming- Greeting guests and participants. Presentation of the purpose and assumptions of the forum and the SustDesignTex Project. Opening remarks:	12:00 – 12:10

	Prof. Katarzyna Grabowska – Dean of the Faculty of Materials Technologies and Textile Design, Lodz University of Technology Prof. Marcin Barburski – SustDesignTex Project Coordinator, Lodz University of Technology	
2.	"Innovative IT Tools for Circular Economy in the Textile Industry: Driving Sustainability and Resource Efficiency" Guest Speaker: Prof. R.M. Chandima Ratnayake, University of Stavanger, Norway Moderator: Dr. A. Bacciarelli-Ulacha	12:10 – 12:40
4.	"Implementing CE in Practice – Challenges and Opportunities for the Textile and Apparel Industry" Moderator: Dr. Monika Malinowska-Olszowy, Prof. Lodz University of Technology	12:40 – 13:00
5.	"What Are the Greatest Challenges Facing the Apparel Industry in Transitioning to Sustainable Practices?" Moderator: Dr. Michał Puchalski, Prof. Lodz University of Technology	13:00 – 13:20
6.	"ESG in Aviation – Challenges and the Future of Sustainable Air Transport" Moderator: Dr. Eng. Katarzyna Kostur- Wademekum/Polish Air Force Academy, Dr. Małgorzata Żmigordzka-Wademekum/Polish Air Force Academy, Dr. Eng. Tomasz Balcerzak- Wademekum/Lazarski University	13:20 – 13:40
7.	Q&A Session	13:40-14:00

About the Session

In an era of dynamic environmental changes and growing awareness of the need for sustainable resource management, the textile industry faces challenges that demand innovative solutions.

The session "Round Table - IT Innovations in Textile Production" offered a unique platform for knowledge exchange on the circular economy (CE) and the application of modern IT technologies, including artificial intelligence (AI), in the textile industry.

Additionally, the panel discussed European Union strategies such as:

- The EU Strategy for Sustainable and Circular Textiles outlines the framework for sustainable production and consumption of textiles in line with the European Green Deal.
- The challenges and opportunities for implementing circular economy principles in businesses, including compliance with EU regulations promoting waste reduction and efficient resource utilization.

Session Objectives

- Exchange experiences on best practices and successes in implementing CE principles in the textile industry.
- Analyze innovative IT technologies supporting sustainable textile production.
- Discuss challenges and opportunities for deploying AI tools, including optimizing recycling and minimizing waste.
- Deliberate on EU requirements in the circular economy domain, emphasizing the relevance of the EU Strategy for Sustainable Textiles for entrepreneurs.

The conclusion of the second business forum is planned to be published in the Scientific Journal of Safety and Logistics as part of dissemination activities.

The Scientific Journal of Safety and Logistics (SJSL) is a free-of-charge, open-access, peer-reviewed, interdisciplinary academic journal focused on advancing research and discussions at the intersection of safety and logistics. The journal aims to publish original research, reviews, case studies, and commentary that contribute to the understanding and improvement of safety practices and logistics management in various industries, including but not limited to aerospace, maritime, manufacturing, transportation, supply chain, healthcare, and construction.

https://www.sjsl.net/index.php/journal/index

Conclusions

The Second Business Forum, organized on the premises of the Lodz University of Technology in Poland, served as a platform for discussion and knowledge exchange on sustainable industrial design of textile structures for composites, with a particular focus on the automotive and aeronautical sectors. Key topics included the role of circular economy (CE) principles, IT innovations, and AI applications in sustainable textile production, as well as the European Union's Strategy for Sustainable and Circular Textiles.

The forum incorporates an online knowledge exchange platform and a survey tool designed to facilitate collaboration with SMEs. This tool enables the identification of industry needs in the realms of new technologies and innovative solutions, supporting a targeted dissemination campaign aimed at industry and SME stakeholders. The platform's database includes companies from sectors such as transportation, aerospace, and marine industries.

This Business Forum was primarily focused on the automotive and aeronautical sectors. Key participating companies include Bowi-styl; Gedeon; Moratex; Tricomed; Łukasiewicz Research Network – Textile Institute; Łukasiewicz Research Network – Institute of Biopolymers and Chemical Fibres; Łukasiewicz Research Network – Institute of Leather Industry; Texpol; Dywilan; Baltex; Wigolen; MDH; Rymatex; Pabiantex; Sempertrans; Corning; Glassfiber Krosno; Krosglass; Technotex; Saertex – MILAR; Miejskie Przedsiębiorstwo Wodociągów i Kanalizacji; Hydro Extrusion Poland; AWP Nordic Products; Browin; BSH; Delia Cosmetics Distribution; DELL Products; LUMILEDS; Łódzka Specjalna Strefa Ekonomiczna; MIRBUD; MITMAR; Ceramika Paradyż;

Pietrucha; Rossmann; VEOLIA; Wielton; Związek Przedsiębiorców Przemysłu Mody Lewiatan; Gedeon; Top Secret; Teofilów; Recte-Komes; Marilyn; Polexim; WOLA; Ariadna; TZMO; Ogólnopolska Izba Branży Skórzanej; Oh!Zuza; Vanilla night&day; Deni Cler; BOWI-STYL; Biliński; Kastor; Air Force Institute of Technology; Royal Star; Eurotech; NDH Sprzęt Medyczny; NFM Group; Malco Company; Summit Polska; MST Company; Compremum; JAKUSZ Company; AIRBUS; SCANWAY; THALES; LOT AMS; STER COM; ODBAS; Lublin Airport; 5TX Surf company.

The findings and insights from this Business Forum will be compiled into a report and published in the *Scientific Journal of Safety and Logistics* (SJSL) as part of the dissemination and exploitation results. SJSL is a free, open-access, peer-reviewed journal focused on advancing interdisciplinary research at the intersection of safety and logistics, covering industries such as aerospace, maritime, manufacturing, transportation, supply chain, healthcare, and construction.

https://www.sjsl.net/index.php/journal/index