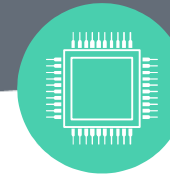




Innovative IT tools for a
circular textile economy:
driving sustainability and
resource efficiency.



Prof. Katarzyna Grabowska
**Dean of Faculty of Material Technologies and Textile
Design**

Lodz University of Technology

116 Zeromskiego Street
90-543 Lodz, Poland



Lodz University
of Technology



University
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Project Introduction

Project Coordinator:

Prof. Katarzyna Grabowska,

Dean of the Faculty of Material Technologies
and Textile Design,
Lodz University of Technology

MEETING AGENDA

TIME	SESSION	SPEAKER
09:00-09:30	Welcome coffee	
09:30-10:30	Start of the Meeting, Welcome Word and Introduction	TUL
10:30-11:10	Presentation of the Partners	TUL, GU, UiS, UCAV
11:10-11:30	Coffee Break	
11:30-12:30	Project Work Plan, Budget Allocation and Partner Responsibilities	TUL
12:30-13:00	Q&A Session	TUL
13:00-14:00	Visiting of the Faculty of Material Technologies and Textile Design	
14:00-15:00	Lunch	



Project acronym: **AIdesignTEX**

Project title: **Innovative IT tools for a circular textile economy: driving sustainability and resource efficiency.**

Project number: 101159060

Funding Scheme: HORIZON-WIDERA-2023-ACCESS-02

Start date of the project: **01st October 2024**

Duration: 36 months till: **30th September 2027**

Budget: 1 498 183.75 Euro

**Project coordinator name: Prof. Katarzyna Grabowska,
Lodz University of Technology**

Tel: +48 42 631 33 00

Project coordinator e-mail: katarzyna.grabowska@p.lodz.pl



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UiS – University of Stavanger

Department of Mechanical and
Structural Engineering and Materials
Science (IMBM)

UG - Ghent University

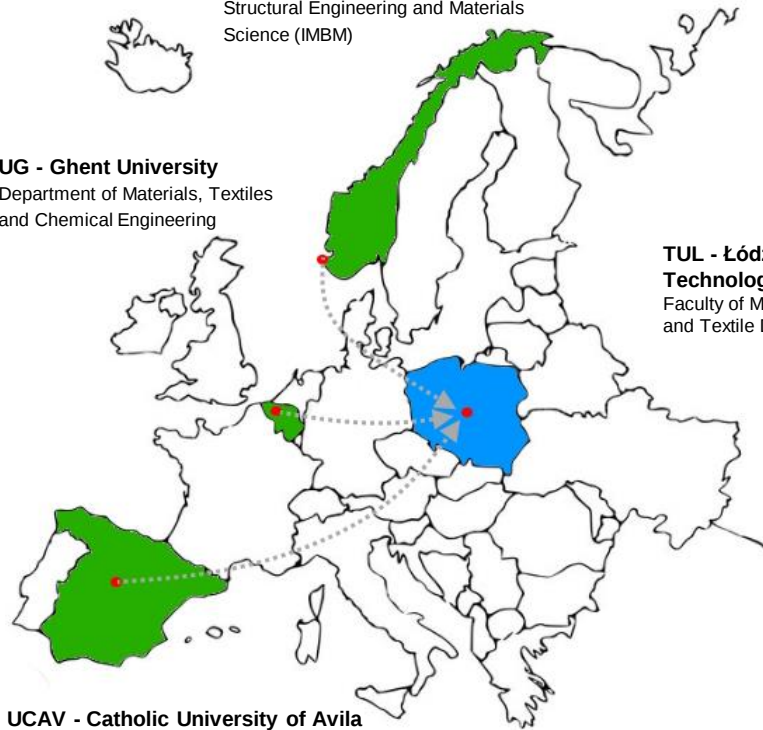
Department of Materials, Textiles
and Chemical Engineering

**TUL - Łódź University of
Technology**

Faculty of Materials Technologies
and Textile Design

UCAV - Catholic University of Avila

Department of Entrepreneurship and
Management



The AIdesignTEX project's general objective is to establish a **long-term partnership between TUL and high-ranking counterparts among EU peers through networking activities.**

The networking and partnership implemented in the project will raise the institutional research and administration profile of TUL in the textile production design processes by utilizing artificial intelligence and machine learning tools to develop textiles that are more easily recyclable or biodegradable.



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Presentation of Partners

Project coordinator: Prof. Katarzyna Grabowska,

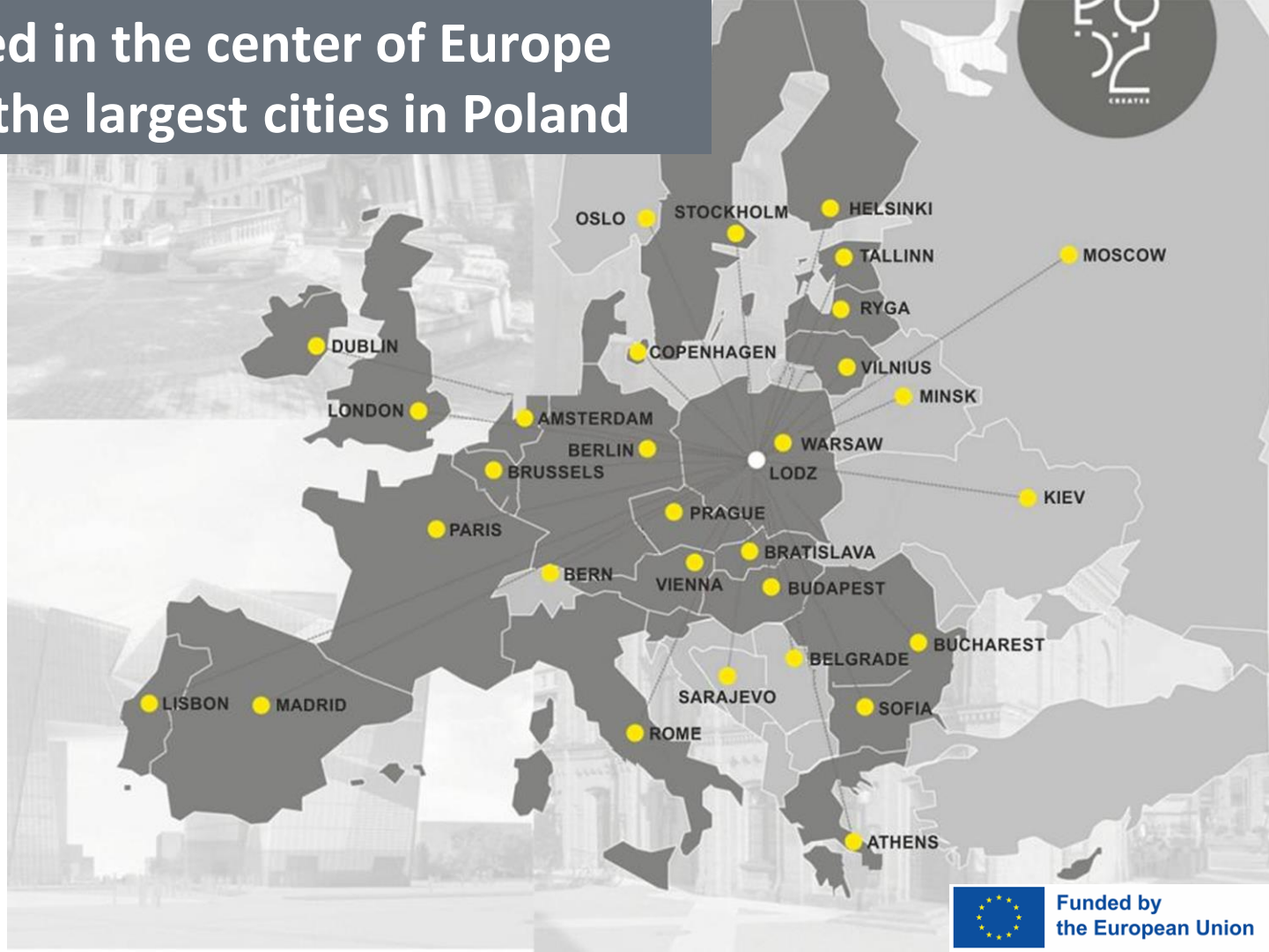
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Lodz is located in the center of Europe and is one of the largest cities in Poland

The city of unique
historical and cultural
heritage, constantly
changing and
developing.



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Lodz University of Technology:

- 2 237 academic staff,
 - 13 050 students,
 - 573 Ph.D. students,
 - 110 000 graduates,
- 60 fields of study,
 - 9 faculties
 - International Faculty of Engineering (IFE),
 - International Doctoral School (IDS)



Faculty of Material Technologies and Textile Design

AIdesignTEX

Main field of studies at the Faculty are:

- Textile Engineering
- Textile and Fashion Industry
- Design

1. Institute of Textiles

- Department of Chemistry and Physical Chemistry of Polymers
- Department of Material Science, Commodity Science And Textile Metrology
- Department of Yarns, Nonwovens And Polymer Composites Technology
- Department of Sustainable Development And Textile Marketing
- Department of Knitting Technologies And Textile Machines

2. Institute of Architecture of Textiles

- Textile and Clothing Architecture
- Fabric Technology and Construction
- Clothing and Textronics
- Visual Communication

3. Department of Mechanical Engineering, Technical Informatics and Chemistry of Polymer Materials



Presentation of Partners

Prof. R.M. Chandima Ratnayake, Dr.,
Department of Mechanical and Structural Engineering and
Materials Science,

University of Stavanger



Presentation of Partners

Prof. Karen De Clerck ,

Department of Materials, Textiles and Chemical Engineering,

Ghent University



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Presentation of Partners

PhD. Ricardo Reier Forradellas

Director of Ávila Business School,
Faculty of Social Sciences and Law,

Catholic University of Ávila

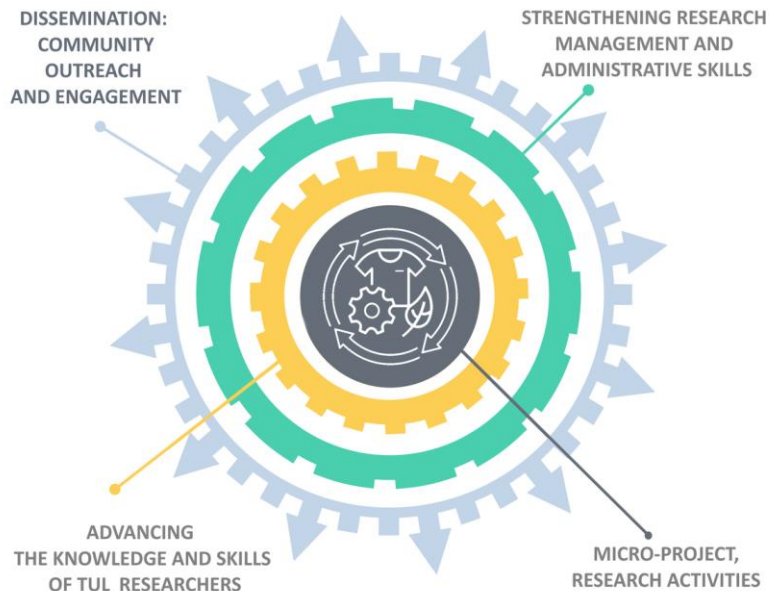


Project Budget

Małgorzata Michalak,
Lodz University of Technology

Project Work Plan and Partner Responsibilities

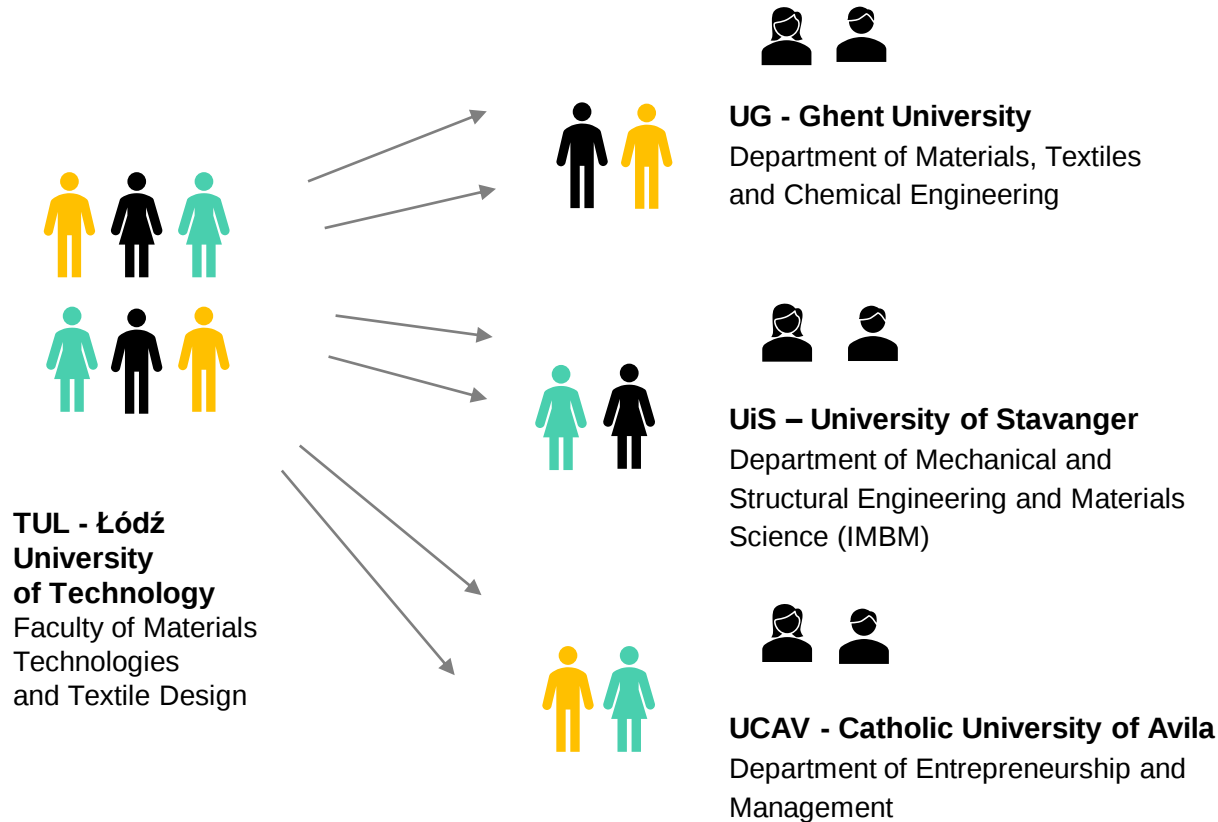
Dr inż. Anna Bacciarelli- Ulacha,
Lodz University of Technology



Microproject: Circular Economy in Textile Production

- **Activities:** Mentoring, long-term visits, summer schools for academic and administrative staff.
- **Focus:** Use of Artificial Intelligence (AI) and Machine Learning (ML) tools to design textiles that meet Circular Economy criteria.
- **Goal:** Create circular economy loops for textiles from various raw materials.
- **Impact:** Solutions help producers implement sustainable practices—saving water, energy, minimizing waste, emissions, and pollutants.





The responsibilities and activities during the program:

- **Cooperation on microproject,**
- Preparation of joint publications,
- Participation in conferences,
- Learning from mentors during exchange visits

The scheduled visits:

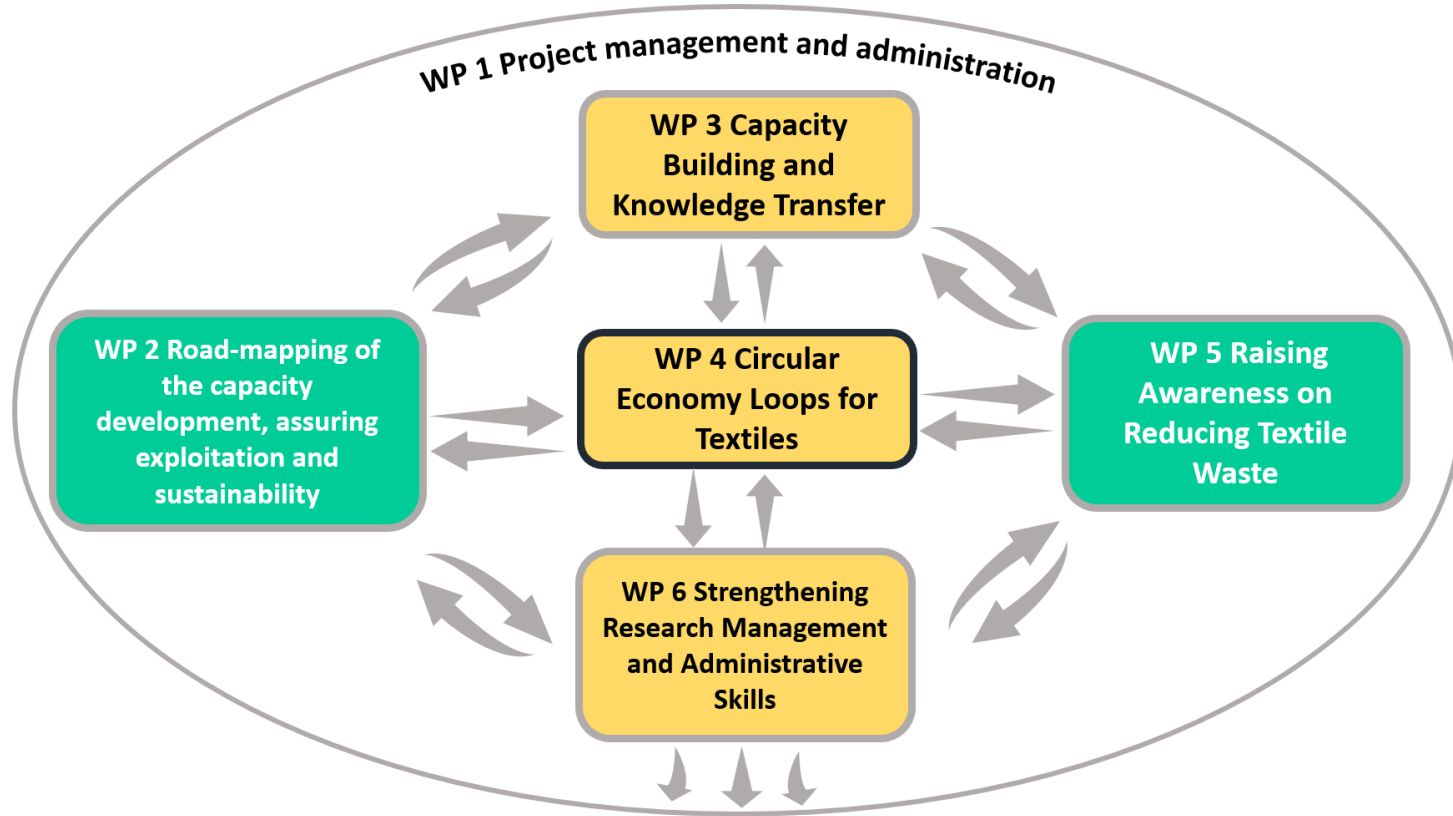
- Long-term visits: 31 days in 2025,
- Short-term visits: 10 days in 2026 and 10 days in 2027.



Key AI designTEX activities:

- **Educational Programs:** Organizing summer schools and workshops focused on circular economy and AI/ML applications in textile design.
- **Collaboration with Third Countries:** Developing links with universities and companies in Asia to promote sustainable practices and capacity building.
- **Marketing Campaign:** Raising environmental awareness through online content, involving popular brands and influencers.
- **NGO Cooperation:** Partnering with NGOs to support sustainable development and the circular economy.
- **Industry Collaboration:** Establishing relationships with the textile and fashion industry to apply research and foster innovation.
- **Research Management and Administrative Skills Development:** Enhancing the research management and administrative skills of TUL employees through study visits, workshops, and training sessions with advanced partner institutions.



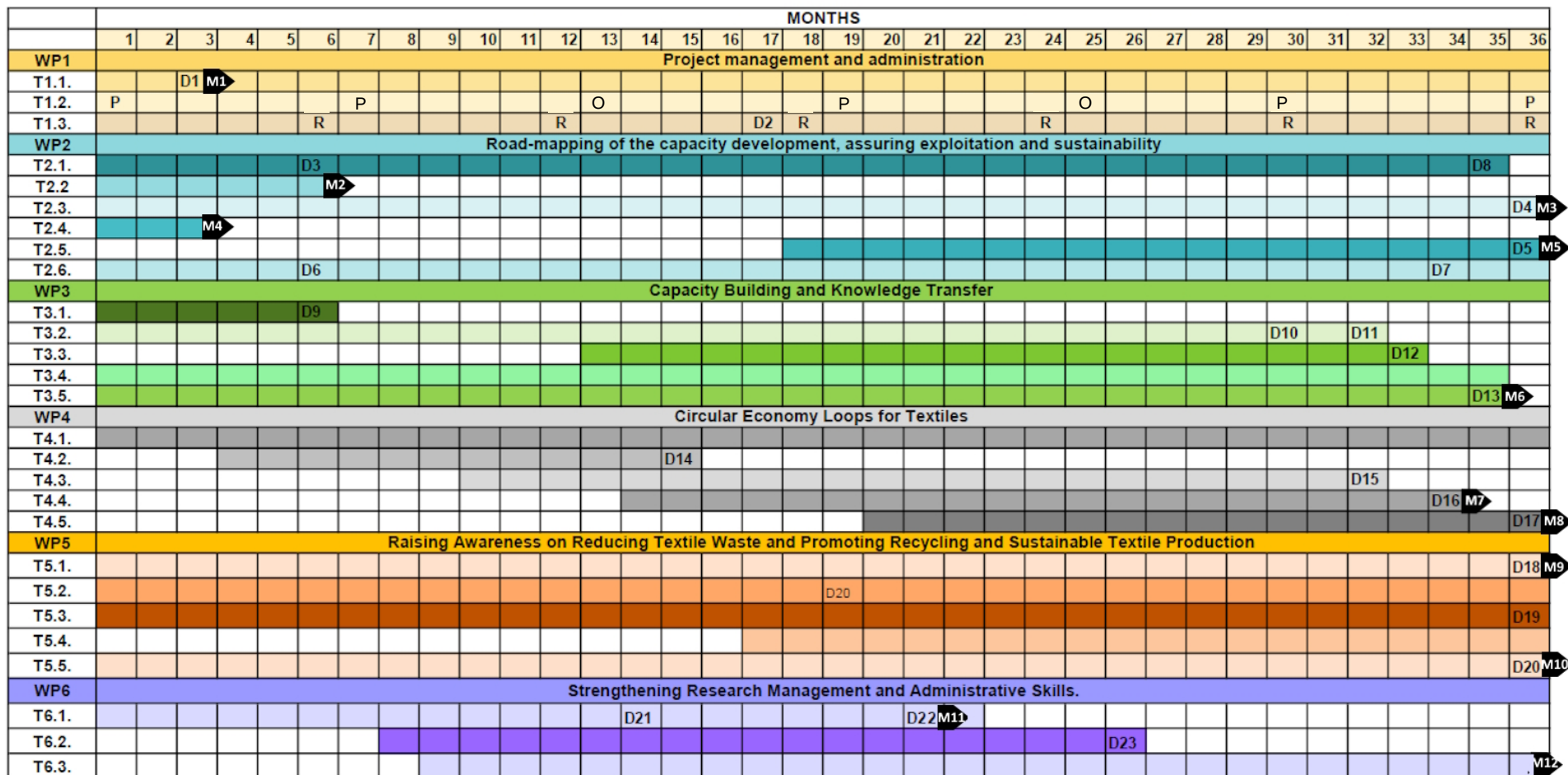


A diagram showing the six WPs connected to the central project objective

Project Timeline and Key Milestones

Dr inż. Iwona Nowak

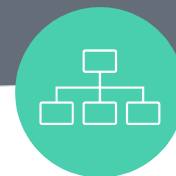
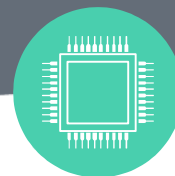
Lodz University of Technology



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AldesignTEX

Thank you



Coordinator :

prof. Katarzyna Grabowska, e-mail: katarzyna.grabowska@p.lodz.pl

Dean of Faculty of Materials Technologies and Textile Design



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