

TAKING  
**COOPERATION**  
FORWARD

 ENTeR Final Conference (webinar), 10<sup>th</sup> November 2020

## ENTeR - Project & Results



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## About the project ENTeR



**Textile  
goods**

- Focus:** Textile waste reduction  
Prevent depletion of non-renewable resources in textile industry
- Effects:** Strengthen innovation capacity of textile companies  
Sustainable links among industrial textile areas  
Closer cooperation on waste management and Circular economy
- Location:** Five Central European countries  
Relevant presence of the textile and clothing industries
- Vision:** Accelerate cooperation between the involved textile territories  
Promoting a joint offer of innovative services ('Virtual centre')  
Optimized management of textile waste, in a life cycle and eco-design perspective



## Funding programme INTERREG Central Europe (2014 - 2020)

- Structural fund of European Union to support the cooperation between Central European countries
- Financial support from European Fund for Regional Development (EFRD) for
  - Public and private institutions
  - Germany, Italy, Croatia, Austria, Poland, Slovak Republic, Slovenia, Czech Republic and Hungary
- Main topics for funding:



Innovations



CO<sub>2</sub> reduction



Environment & culture



Traffic



# ENTER EUROPEAN NETWORK ON TEXTILE RECYCLING

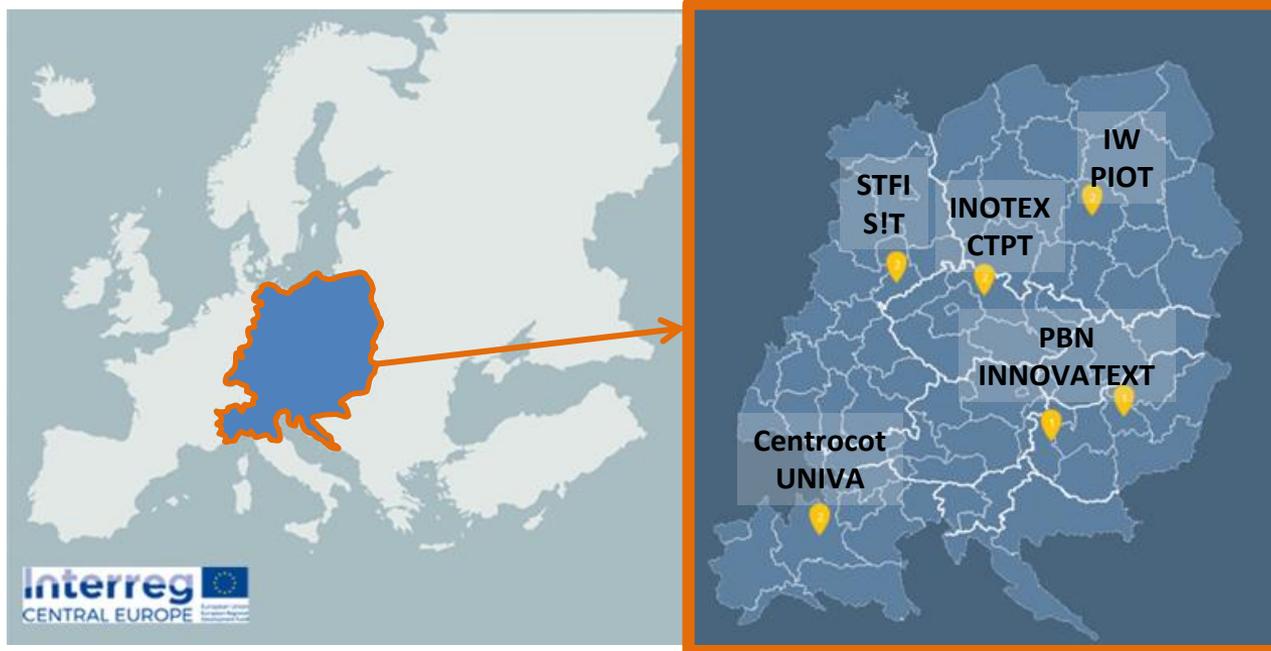
## Project data

- Priority axis 1:** Cooperating on innovation to make CENTRAL EUROPE more competitive
- Specific objective** 1.1: To improve sustainable linkages among actors of the innovation systems for strengthening regional innovation capacity in Central Europe
- Project start:** 01 July 2017
- Project duration:** 36 months + 5 months
- Partners:** 10 partners from 5 countries
- Project coordinator:** CENTROCOT (IT)



# ENTER EUROPEAN NETWORK ON TEXTILE RECYCLING

## Consortium



### Project partners (10 partners from 5 countries)

- **Italy:** CENTROCOT Spa (Lead Partner)  
UNIVA - Unione degli Industriali della Provincia di Varese
- **Hungary:** PBN - Pannon Business Network Association  
INNOVATEXT - Textile Engineering and Testing Institute
- **Poland:** IW - Polish Technical Centre on Textiles and Clothing  
PIOT - Polish Textiles Association
- **Germany:** STFI - Saxon Textile Research Institute  
S!T - German Textile Cluster
- **Czech Rep.:** INOTEX - Technical Centre on Finishing Textile Processes  
CTPT - Czech Technology Platform for Textiles



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## Project objectives

- **Cooperation model** based on joint expertise of project partners in the field of eco-design and resource efficiency
- Demonstrate the advantage of **operational cooperation** between research and industrial partners in the field of textile recycling
- **Investigation in technical aspects** of reutilization textile waste from the clothing sector as well as the technical textiles' sector
- **Development of a platform** to catalogue, exploit and utilize industrial textile waste and textile residues
- Strengthen the **innovation capability** of textile companies in Central Europe by supporting a close cooperation in the field of waste management and resource efficiency



## Measures

- Collection and assessment of **waste volumes** and waste composition in textile companies of the participating regions/countries
- Collection of **existing solutions and demands** concerning re-utilization of textile waste
- Establishment of an **electronic platform** to characterize materials streams (use of raw materials, waste to be disposed, product portfolio)
- Detection and identification of joint problems in companies of the partner regions related to textile waste should be possible via the e-platform (development of special software functions and applications) → establishment of **cooperation models**



## Structure of the project & Work packages

- Regional analysis
- Interviews
- Site visits
- Strategic agenda

WP1: Textile  
waste & recycling



- Pilot cases
- M3P platform
- Virtual centre

WP2: Innovation  
on textile waste  
management



- Training modules
- Action plan
- Circular economy agreement

WP3: Approach  
& Validation



- Working progress reports
- IAB meetings
- Dissemination activities

WP C:  
Communication



- Financial and activity reporting
- Partner meetings
- Steering activities

WP M:  
Management



## Outputs/Results



### OUTPUT 1

Strategic Agenda  
on textile waste  
management and  
recycling



### OUTPUT 2

Textile Waste  
Database



### OUTPUT 3

Pilot cases



### OUTPUT 4

High Level  
Training modules



### OUTPUT 5

Textile Network  
for circular  
economy



### OUTPUT 6

Action Plan on  
“Improvement  
of textile industry  
towards circular  
economy”





## OUTPUT 1

Strategic Agenda on textile waste management and recycling

### What is the SA?

- Summary of state of art of textile waste situation in ENTeR project regions
- Regional SWOT analysis
- Analysis of new solutions and business models
- Definition of action lines:
  - Legal policy areas
  - Waste management
  - Research trends and technologies
  - Communication
  - Education
- Identification of critical factors and strategic objectives





## OUTPUT 1

Strategic Agenda on textile waste management and recycling

### How is it achieved?

- Regional site visits in five participating countries
- Regional analysis for each partner region and other CE countries
- Interviews and questionnaires (88 companies)
- SWOT analysis: SoA of T&C sector; identification of critical points
- Summary of results
- Publication as official document





## OUTPUT 1

Strategic Agenda on textile waste management and recycling

### Where can I find it?

[www.interreg-central.eu/enter](http://www.interreg-central.eu/enter) (under publications)

### How is it used?

- Overview of SoA of textile recycling in the involved regions
- To go deeper in pilot cases (research trends, waste management)
- Create a matrix of collaboration (collaboration model)
- Basis for action plan



## What is it?

It is a database of textile waste based on the **M3P Platform**, developed in the Life Project M3P. The aim of the tool is to help the “match” between a company offering a “waste” and another requesting raw material. **The numbers: 274 companies, 496 waste, 24 technologies.**

## How was it done?

At present we have **144 textile companies catalogued, of which 64 are registered in the platform, 229 textile waste investigated.**

We learned:

- ✓ an industrial waste is not immediately reusable and inserted into another industrial process
- ✓ a company generally does not have access to information and technologies of another sector

## The future

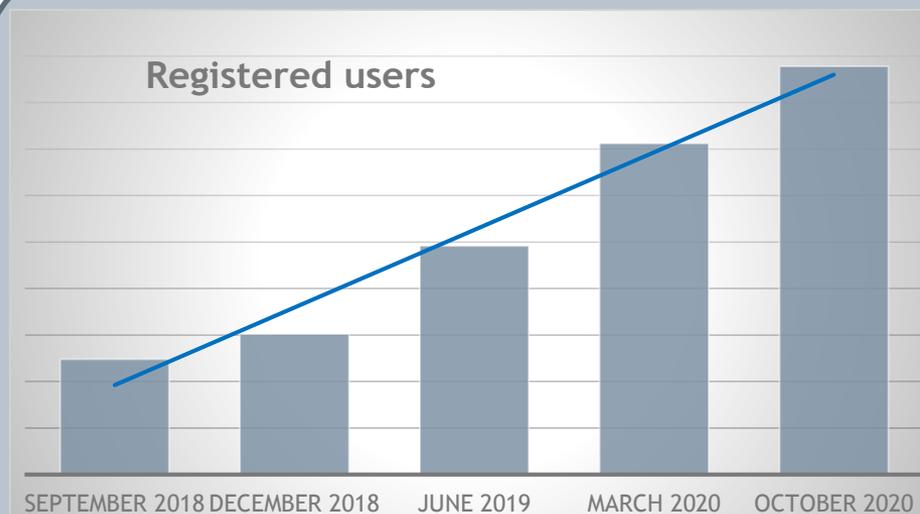
The platform is still active and will register companies and waste in future as well, aiming at increasing the number of “matches” among waste, materials and technologies paving the way to industrial symbiosis, beyond the Central Europe regions involved in ENTeR project.



## Some Data



Registered Companies	Catalogued waste	Catalogued technologies	Technological News
274 64 (ENTeR)	496 127 (ENTeR)	24	3571



NACE Codes	Countries	Request waste info and association
114	9	More of 80

M3P Platform	Registered users	Difference	% Growth
September 2018	124	0	0%
December 2018	151	27	21,70%
June 2019	246	95	62,90%
March 2020	356	110	44,70%
October 2020	439	83	18,91%



# PILOT CASES

No	Title of the Pilot Case	Country
1	New recycling approach for textile waste from a finishing company	Germany
2	Waste generation from manufacturing of technical textiles	Czech Republic
3	Prolongation of the service life of textile products	Czech Republic
4	Recycling Aramidic fibers from pre- and post-consumer garments.	Italy
5	Post production waste management and treatment system	Poland
6	“Wool Waste” raw material development	Hungary
7	Waste management for in-house logistic system	Hungary
8	3D printing in textile industry	Hungary
9	Guidelines for medical devices in the Pandemic Emergency	ALL



## We learned:

- ✓ partners took advantage of sharing validated procedure for treating, transporting, transforming waste.
- ✓ company appreciated either the possibility to collaborate with other companies able to collect and re-use their waste or the advice received by experts in waste management.

## The future

The methods and procedure of processing wastes, the feasibility studies developed according a Circular Economy Model can be shared with other companies registered in M3P Platform and further companies that belong to other European regions.



# HIGH LEVEL TRAINING COURSES

## What are they?

The partners jointly developed 6 training modules

	Training path	Responsible partner/region
1	Expert for research and design in the textile sector	Italy
2	Strategic Agenda including Regional Analysis and Action Lines	Hungary
3	Main textile recycling technologies and methods to recover, reuse and recycle textile waste	Germany
4	Projects and networks (national and European) related to textile recycling including research trends and needs coming from the industry	Poland
5	Technical and economic findings from the pilot cases and professional profiles	Czech Republic
6	Eco-design techniques applied to textile processes	Hungary

The aim is to provide qualified skills to companies that have to face the innovation and sustainability challenge.



## How were they done?

Most of training courses were held in e-learning mode, due to COVID-19 restrictions.



200 people trained



Overall positive feedback

The professional profile of **“Expert of design and research for textile sector”** was outlined.

## The Future

The training course can be replicated in presence or e-learning mode. The need to train young people and re-train workforce on circular economy and green profiles is an important issue for European Union (Green Deal).



## High Level Training Courses - Timetable:

D.T3.1.1 - High level training modules		
Responsible	Dates & Places	Number of participants
Partner in the regions	IT: 7 <sup>th</sup> /14 <sup>th</sup> /21 <sup>st</sup> ,/28 <sup>th</sup> May 2020 / Online	114/80/87/55 participants
	HU: 28 <sup>th</sup> May 2020 / Online	43 participants
	DE: 13 <sup>th</sup> November 2019 / Chemnitz	25 participants
	CZ: 16 <sup>th</sup> September 2020 / Online	23 participants
	PL: 27 <sup>th</sup> February 2020/ Zduńska Wola 24 <sup>th</sup> September / Lodz	18/17 participants



## What is?

A portfolio of innovative services (“Virtual Centre”) to textile companies and interested subjects in the central European area, based on sharing:

The best practices available

Specialist knowledge from national textile research centres

## How was it done?

The competences of each partner related to Circular Economy was analysed, the results of Strategic Agenda were merged in the Collaboration Model, which focused assets, functions and added value from exchange.



# COLLABORATION AGREEMENT/ VIRTUAL CENTER

## PROPOSED CONCEPT



Proposed exchange functions	Beneficiaries	Added value from exchange
brokerage / match making	industries	find solutions / reach critical mass
information / news	industries	raise awareness
organise offer of solutions	R&D centres and industries	cross-regional technology transfer
monitor pilot cases	R&D centres and industries	scale-up and finalise applications
share training modules	industries	build capacity and skills
develop new services	R&D centres and industries	increase service portfolio & customers
....	....	....



## The Future

The collaboration model foresees implementation of the following lines of activity:

- a) Maintenance and evolution of the M3P platform
- b) Communication and dissemination
- c) Matchmaking and networking
- d) Support to technology transfer
- e) Sharing of training modules

Some lines will be implemented on a voluntary basis by the partners, other requires allocation of dedicated human resources and the raising of specific funding.



## What is it?

Is a Plan that defines needed actions to support Circular economy in the textile companies of the regions involved in ENTeR Project

## How was it done?

It is oriented towards the implementation of the common goals of the partnership, based on the fundamental pillars defined in the Strategic Agenda, and the main deliverables of the joint research and collaboration of the last three years.



## The Future

The perimeter of application of the Action Plan is the partnership of ENTeR, that shared common objectives of promoting innovation in material resources efficiency and reducing the environmental impact of the products over the life cycle.

The Action Plan could be a starting point for future collaborations with other European textile regions.



# ENTER EUROPEAN NETWORK ON TEXTILE RECYCLING



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**CENTROCOT**  
Innovation experience



**SÄCHSISCHES  
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