

Centexbel-VKC INFO 2022-03 | March 2022



## Circular Economy for Textiles & Plastics



### Breaking news!

**EU strategy for sustainable and circular textiles is published!**

*"By 2030 textile products placed on the EU market are long-lived and recyclable, to a great extent made of recycled fibres, free of hazardous substances and produced in respect of social rights and the environment. Consumers benefit longer from high quality affordable textiles, fast fashion is out of fashion, and economically profitable re-use and repair services are widely available."*

**[Read the new EU strategy for sustainable and circular textiles](#)**

Dear <<First Name>> <<Last Name>>

Recent floods, draughts and wild fires, the global pandemic and the Russian invasion in Ukraine are all clearly underlining the **urgency to rethink our economic strategies and priorities** in favour of local and shorter supply chains, resource efficiency and independence, alternative energy sources, and a drastic reduction of CO2 emissions to mitigate global warming.

In this edition we will address the initiatives on a European and regional level, and the R&D activities and services of Centexbel-VKC to assist the industry in the transition to a circular economy (CE).

But let's start with the announcement of two international events addressing this major theme!

## **International Conference & European Masterclass**



On 17 & 18 November, 2022, Centexbel organizes, in partnership with Fedustria, the third international conference on a "Circular Economy for Textiles & Plastics" that will focus on:

- Reuse, Repair & Recycling
- Design for recycling & Design from recycling
- Processing and sorting techniques
- Business models
- Waste reduction



**SAVE THE DATE: All info will be available on this page!**



## **The European Masterclass**

### **Innovation in Circular and Biobased Textiles**

The Textile ETP, in collaboration with STFI (DE), RISE (SE), Centexbel (BE), and Centrocot (IT) launches a new European Masterclass in the spring of 2022, focusing on Innovation in Circular & Biobased Textiles.

1. Gain knowledge, understanding and practical insights from Europe's leading innovators in circular & biobased textiles.
2. Learn about the technology state-of-art of circular and biobased textiles, market and regulatory trends, major European and national programmes and initiatives, future trends, enabling design and business model innovation.
3. Position yourself and your company as a European innovation leader or status-quo challenger in circular and biobased textiles.
4. Build yourself a European network of like-minded innovators and thought leaders.

**Read more and register**

## **Standards for a circular economy**



## Europe fosters circular economy through legislation, policy objectives, and standards

In order to achieve EU's objectives of decarbonization and circular economy, we must rethink the way we design and develop products, processes and services. Similarly, the content of standards might need to be adapted and further developed to support this endeavor.

The Centexbel experts follow up the EU legislative developments as well as the activities of CEN (and CENELEC) technical committees and working groups in the field of a circular economy for textiles and plastics.

### **Standards offer opportunities for an equal, level playing field and economic growth!**

If you wish to be kept informed of the latest developments, contact [Karin Eufinger](#) to join the Belgian mirror committee "Circular economy and sustainability for textile and plastics".

[Read more \(pdf\)](#)

**ISO/TC 323 – Circular Economy** includes five Working Groups (WGs) that are developing standards related to terminology and communication, implementation, measuring and assessment, and other practical aspects that can



have an impact on the textile industry.

ISO TC 38 textile WG 35 is sector specific and is currently working on a definitions standard that combines terminology used to claim environmental aspects. It also includes terminology and the definitions on circular aspects.

**Read more and discover the working groups & Draft documents**



We would also like to share with you two studies with a specific focus on textiles that the European Commission has recently published:

[“Data on the EU Textiles Ecosystem and its competitiveness”](#)

[“Study on the Technical, Regulatory, Economic and Environmental Effectiveness of textile fibres recycling”](#) by Vito, Centexbel and EcoLogic

## Research & Development

**C-4CE** [*Competences for a Circular Economy*] is an Interreg Vlaanderen-Nederland project with the aim of accelerating the circular economy (CE) in the region by stimulating the development of the required competencies.

Breda University of Applied Sciences (NL) and Centexbel (BE) would like to invite you to participate in this project by answering a number of questions. The questions relate to CE competences and education/training in the field of CE. The focus of this survey is on non-technical competences for CE.

Completing the questions will take no more than 10 minutes. All data will be processed confidentially and there will be no communication about individual companies.

This questionnaire is restricted to Flemish and Dutch companies.

**To the Questionnaire**

**Discover the C-4CE project**



[Philippe Colignon](#) & [Edwin Maes](#)

Simple in its approach, the circular economy conceals a great complexity in the implementation of the different concepts it integrates.

The Interreg **EcyTwin** project, of which Centexbel is a partner, covers many aspects such as standardisation, extending the life of products, and also the evaluation and promotion of circular products.

The **GT CONTRACT group**, which is part of this project, has taken the approach a step further by creating the "**Circular Hotel Interior**" **certification mark**. This approach is based in particular on a circularity index that makes it possible to evaluate the degree of circularity of the products and companies that wish to be included in the catalogue.

**The development of this tool required a lot of time and adjustments. One of the challenges was to avoid greenwashing, while at the same time avoiding unrealistic criteria. On the other hand, a practical, transparent and reliable tool was needed.**



In the end, the criteria are divided into 4 categories:

1. Eco-design
2. Eco-production
3. Lifetime extension
4. Reduction of waste

Each category has a corresponding badge that can be obtained (depending on the score obtained) and then promoted on the brand's platform.

This tool has been tested with the project's partner companies and is almost finalised. And the work necessary to create the certification mark is underway!

## Ecy-Twin project



GoToS3  
**RETEX**



## RETEX: from recycling to circular production

[Philippe Colignon](#)

For many companies, recycling represents a gateway to the circular economy. Using recycled materials and/or ensuring that products will be partially or fully recyclable can be relatively simple.

**In RETEX, a circular value chain was created from the recycling of polyester/cotton workwear.**

This project is now closed, but it has been extended into the real world by the Belgian company **UTEXBEL**, which has successfully developed a concept (Dr. Green) based on the tests carried out.

# RETEX: From recycling to Circular Economy



Recycling: GARMENTS TO GARMENTS

## How is this concept really circular?

- Industrial symbiosis: clothes at the end of their life become the raw material for recycling
- Eco-design: design of new garments to optimise the removal of buttons and labels at the end of life
- Composition: only 33% virgin cotton fibres to replace the cotton destroyed by dozens of washing cycles
- Production waste added to the mix to improve product properties
- Regional production (except for cotton origin)
- Maintenance, control and repair of garments until the end of their life
- In the end, the circularly produced aprons are the starting point of a new cycle

**Do the RETEX**



[Lien Van der Schueren](#)

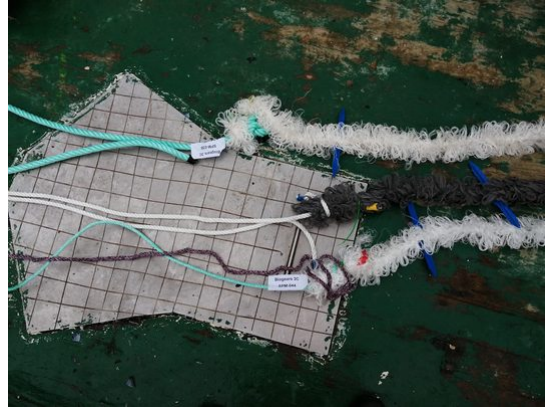
The European project BIOGEARS started in November 2019 and was set up to develop **innovative bio-based ropes that are biodegradable in composting facilities.**

We are now **testing** the first BIOGEARS prototype ropes, made from yarns produced and optimized by Centexbel, in **real marine conditions** to show that they're are fit for purpose and meet the industry needs.

*In this test setup, two types of bio-based ropes are tested alongside*

conventional, fossil-based ones at mussel and seaweed farms in Spain  
- © BIOGEARS

[Read More](#)



The BIOGEARS project will run from 2019 – 2023 with an EU contribution of €945,000, funded by the European Union CINEA EMFF programme under the EMFF-0102018 Blue Labs call.

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# DECOAT

[Ine De Vilder](#)

DECOAT provides for a recycling loop for coated and dyed textiles and plastics, consisting of the following steps:

1. Dismantling of the different parts of the product
2. The different materials are then optically sorted according to the chosen trigger and sent to the corresponding process that is responsible for the release of the coating/paint (e.g. the CreaSolv<sup>®</sup> process, a heat-triggering oven or a microwave that can trigger certain additives).
3. After the detached coating is removed, the material is transported to an extruder where secondary raw materials are produced in the form of pellets, which can then be used to make a similar product to the original.

In the meantime, different triggers have been synthesised and evaluated, so that we have already been able to make a selection of triggers with and without potential.

[Read More \(pdf\)](#)

DECOAT is funded by the European Union's Horizon 2020 research and innovation



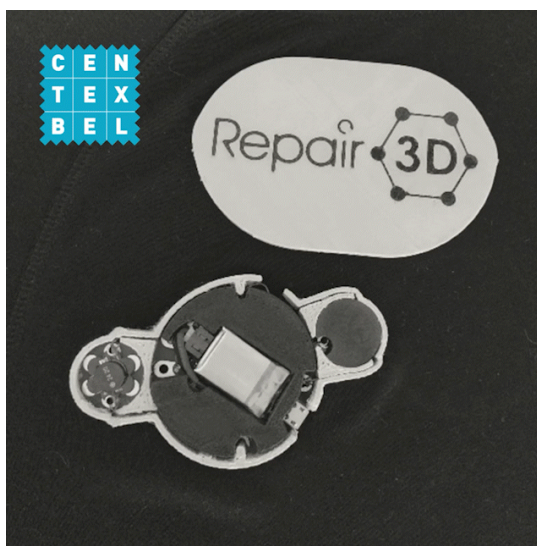
## Recycling and Repurposing of Plastic Waste for Advanced 3D Printing Applications

[Sofie Huysman](#) & [Tom Vercoutere](#)

**Repair3D** aims to develop innovative reclamation and repurposing routes for end-of-life plastics and carbon fibre (CF). The overall goal is to minimize plastic and carbon fibre waste accumulating in landfills, by employing different Additive Manufacturing (AM) techniques and nanotechnology solutions to produce 3D printed products with a high added value.

Centexbel developed a smart textile application, as one of the [Repair 3D](#) project's industrial demonstrators: it consists of a flexible encapsulation unit, 3D-printed directly on textile, and removable electronic components such as a temperature sensor that will trigger an alarm if the body temperature is too high.

[Read More \(pdf\)](#)



This project has received funding from the European Union's Horizon 2020 H2020-NMBP-ST-IND-2018-2020 - Smart plastic materials with intrinsic recycling properties by design (CE-NMBP-26-2018) - under grant agreement No 814588-2



## The future of the floor covering industry: **RECYCLING!**

[Ine De Vilder](#)

The European H2020 [CISUFLO](#) – Circular Sustainable Floorings– project started in November 2021 and aims to develop innovative circular products for the flooring industry, prompting, in the long run, the adoption of a circular economy model throughout the entire value chain and beyond.

CISUFLO is coordinated by Centexbel and focuses on carpets, laminate and vinyl floorings.

- Belgian industrial partners: Deceuninck, Beaulieu International Group and Unilin
- Partner associations located in Belgium: EUFCA, EPF and EUPC

[Read More \(pdf\)](#)



This project has received funding from the European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement No 101003893



## **EMPOWERING LOCAL, CIRCULAR & BIO-BASED TEXTILES**

[Lien Van der Schueren](#), [Guy Buyle](#), [Willem Uyttendaele](#)

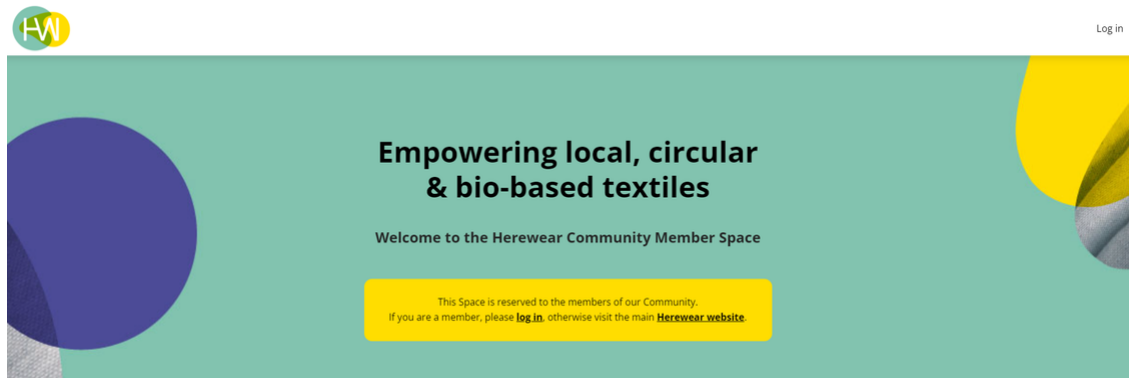
Polyester represents 64% of the annual global fibre consumption. Unfortunately, this widely used fibre is oil-based and mainly sourced in the

Middle East. Moreover, small fibre fractions are released from polyester garments contributing to the well-known plastic soup.

Therefore, the HEREWEAR project, coordinated by Centexbel, investigates the suitability of polylactic acid (PLA) mixed with other bio-polyesters to improve the comfort properties.

Test results on the first blends of PLA with bio-polyesters such as PBS and PHA show very positive results for further textile processing steps.

[Read More \(pdf\)](#)



[Join the Herewear Community](#)



HEREWEAR project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101000632



[Edwin Maes](#)

**CircTex** focuses on the development of **recycling and production technologies** in a closed-loop process chain for **PET workwear**, decreasing as such non-renewable input materials and the ecological impact in textiles.

Workwear is the ideal starting point for an industry-wide innovation, since this sector has a high need of input materials as reuse is not allowed.

A new microwave separation line has recently been installed at partner Wear2GO in the Netherlands. More details will be disclosed in the next CircTex Newsletter and on [LinkedIn](#).

**[Subscribe to the CircTex Newsletter](#)**

**[CircTex project website](#)**



[Ine De Vilder](#) & [Robbe De Biscchop](#)

Remove2Reclaim aims to develop innovative solvent-based extraction routes to remove additives, such as titanium dioxide, from different polymer matrices and to reuse both titanium dioxide and polymer in new products. This dissolution route will be a nice add-on to existing mechanical and chemical polymer recycling schemes.

Centexbel-VKC is charged with:

1. Pre-treatment, detection and sorting of polymer (waste)
2. Solvent selection and polymer dissolution
3. Further processing of recovered TiO<sub>2</sub> and polymers

**[Read More](#)**

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## Sustainability labels

### OEKO-TEX® celebrates 30 years of expertise as a foundation for the future

March 3, 2022

The vision of the OEKO-TEX® Association, which was founded in March 1992 through a partnership between the Hohenstein Research Institute and the Austrian Textile Research Institute (OETI), is still reflected today in the organisation's core values: **trust, safety and sustainability**.

For three decades, OEKO-TEX® has pursued the goal of building trust for companies and consumers and enabling them to make responsible decisions to protect people and the planet. *"Our services bring transparency to the international textile and leather industry supply chains,"* says OEKO-TEX® Secretary General Georg Dieners. *"They enable all stakeholders to make mindful decisions that help preserve our planet for future generations."*

[\*\*Read the official OEKO-TEX® press release\*\*](#)

[\*\*\(re\)discover the OEKO-TEX® certification schemes\*\*](#)

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## JOINING FORCES TO ACHIEVE CPA TARGETS

### **PolyCert Europe and Monitoring Platform MORE: joining forces to achieve the CPA targets**

In the light of achieving the Circular Plastics Alliance (CPA) targets of 10 million tonnes of recycled polymers used annually between 2025 and 2030 set up by the European Commission, we are delighted to announce that two unique tools, namely [MORE platform](#) and [PolyCert Europe](#) are joining forces.

**PRESS RELEASE**

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### **Centexbel coordinates Taskforce to boost transition to a textile circular economy in Walloon Region**



[Philippe Colignon](#)

To facilitate the transition towards a circular economy, the Walloon Region has published a Circular economy deployment strategy (see link below) and entrusted Centexbel with the coordination of a taskforce addressing the transition of the textile and clothing industry. The taskforce includes key partners and important players such as Wallonie Design, federations (Fedustria, Ressources, etc.), research centres and competitiveness clusters.

Within the framework of this ambitious project, Centexbel acts jointly with the Walloon Region alongside the numerous actors of the textile sector to

enable them to widen their field of vision and to develop more “circular” solutions. All types of EOL textiles will be looked at in terms of collection, sorting, dismantling and recycling. Scenarios leading to reuse or remanufacturing will also be developed.

For Philippe Colignon, Centexbel consultant on circular economy, *“acting upstream of the value chain and developing new innovative business models that implement this transition through a series of priority lines of action, such as eco-design, are keys to success in the circular economy.”*

**CIRCULAR WALLONIA Stratégie de déploiement de l'économie circulaire 2021**

## Publications



Interview with Philippe Colignon in Fokus Industrie (March 2022) on *“L’industrie textile et la Wallonie pour soutenir l’économie circulaire”* and the actions of Centexbel to accompany the ambitious strategy that the Walloon region adopted in 2021: **Circular Wallonia**

**Interview on page 9**



# VLAANDEREN CIRCULAIR



AGENTSCHAP  
INNOVEREN &  
ONDERNEMEN



**Vlaanderen**  
is ondernemen

## Centexbel and the Circular Economy files

[Isabel De Schrijver](#)

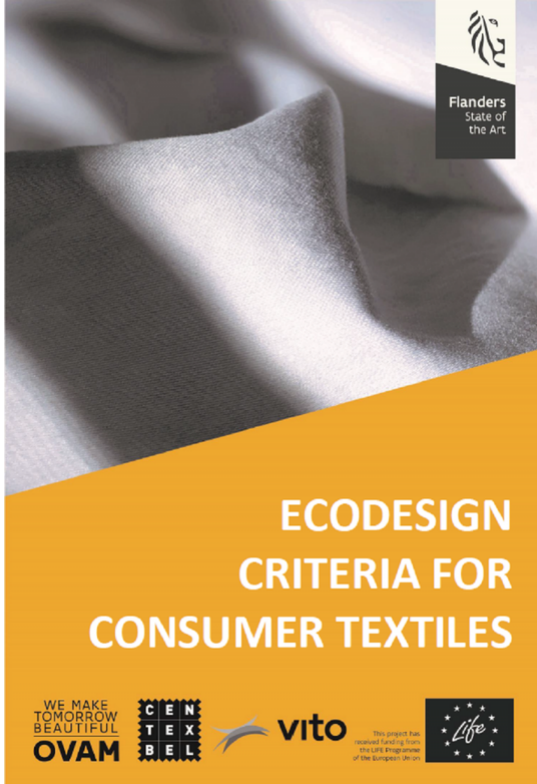
The "Circular Economy" dossier published online by Agentschap Innoveren & Ondernemen was recently supplemented by an interesting theme article on chemicals and plastics.

This article shows how the chemical and plastic converting sectors view circularity and what concrete steps they are taking to make the world of chemicals and plastics more sustainable. VLAIO business advisor Rik Candries had an instructive chat with Ann Verlinden, Karen Van Wesenbeeck and Wannes Libbrecht of Catalisti and Isabel De Schrijver of Centexbel. Two organisations that have a broad view on the sector, based on their connecting role between the business and knowledge worlds.

[Read more](#)

### Ecodesign criteria for Consumer Textiles

This study by Centexbel, Ovam, and Vito examined which type of ecodesign criteria for textile products would have the greatest impact. The results will hopefully serve as input for the EU textile strategy. In addition, it was requested to formulate clear ecodesign requirements to be able



to expand the Ecodesign Directive with a textile category in addition to that of electronics.

[Read More](#)



## Circular Braiding: The Industrial Experience with Centexbel

The European THREAD project has performed several experiments on our 3D Multilayer interlock braiding machine, which is part of the Textile Platform in Grâce-Hollogne.

*“Here we come to a successful end of an exciting industrial experience in Centexbel, Belgium. The hands-on experience with the circular braiding machine, its cutting-edge performance, the limitations [...] has been a remarkable experience in the scientific pursuit.”*

[Read More](#)





## **INNOVATION WALL CALL:**

### **Put your product in the spotlight**

Does your company make innovative products with a strong circular vision? Do you want to share that vision with the world? You can!

For the second time, companies from the textile and plastics sector will be given the opportunity to redefine the Innovation Wall and to display their creations. Each selected product will be given a space of 1 m<sup>2</sup>.



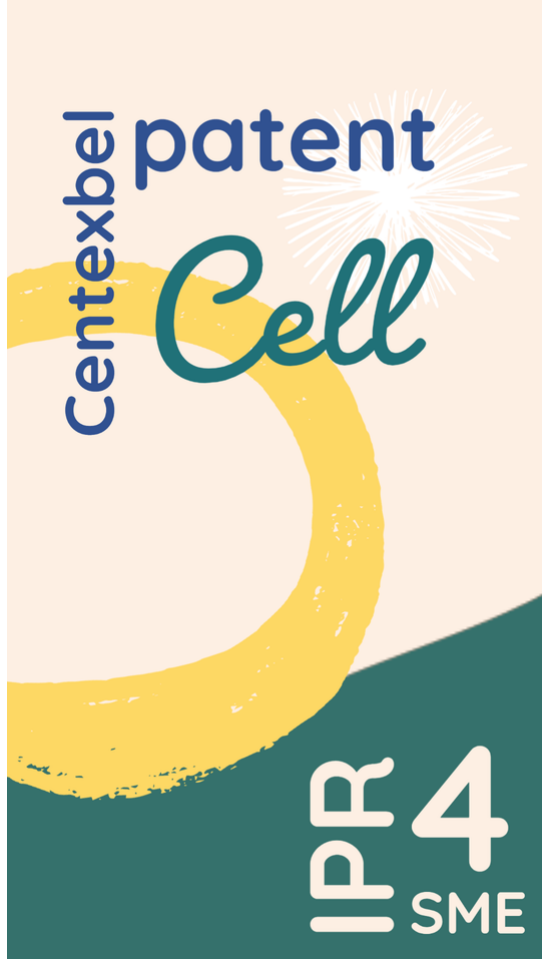
**Join the innovation wall**



**programme & registration**

## **Patent cell updates**

Centexbel founded the [Patent-cell](#) in collaboration with the [Department of Intellectual Property](#).



of the Federal Public Service Economy.

The Centexbel Patent Cell supports SMEs in the textile sector in all their patent related questions and makes IPR more accessible and engaging.

**Please note that EUIPO - European Union Intellectual Property Office announces a €47 million fund scheme to help SMEs protect their intellectual property. [Read more](#)**

**Patent Alert "Circular economy"**



Centexbel has created five standards cells to follow-up the evolution of standards and regulations and to inform the textile and plastic converting industries by means of publications, work groups and information sessions and by facilitating personal contacts between companies and experts.

**Standard Cells**

**Normenantennes**

The standards cells are an initiative of the Belgian FPS Economy and have been created to better inform SMEs about the impact of standards on their companies as well as to promote the application of standards.



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