



PRESS RELEASE:

10 October 2018

New Design-Driven Material Innovation (DDMI) methodology focussing on circular textiles

- **New tools and methods have been developed to support a multi-stakeholder collaboration to produce high-value materials and products from textile waste**
- **Designers have driven the scientific material development process, involving LCA experts, consumer researchers, manufacturers and industry partners from the performance clothing and automotive sectors.**
- **Using interdisciplinary workshops, people from diverse backgrounds have collaborated to produce six 'master cases'; high-value commercial products made from regenerated textile waste.**



Involving designers at the front-end of material innovation processes is an opportunity to develop new materials that are appropriate for current consumer requirements and have a swift route to market.

The Trash-2-Cash project aimed to develop 'circular' materials made from textile waste that are fully recyclable. This involved a large number of different disciplines from around the material life cycle: 18 partners in total from the EU.

The disciplines involved in the project included industrial design, garment design, design research (theory & practice), manufacturing, social science (consumer behavior), life cycle assessment, textile-sorting and recycling as well as material science, research and development.



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 646226



However, there are a number of challenges in bringing together different disciplinary fields to achieve this common goal. Designers and scientists and other experts have different working practices and methods.

New tools and methods were developed by designers and facilitators to meet this challenge. These included a new DDMI process scheme, Life-Cycle Thinking (LCT) tools, Face Mapping and design research methods focusing on participant faces, voices and stories to build shared understanding within the T2C team.

A white paper on the DDMI methodology used in T2C is due to be published at the end of 2018.

Papers, blogs and podcasts about the DDMI methodology are available on the Trash-2-Cash website: www.trash2cashproject.eu

Visit our showcase at **Klokgebouw** during Dutch Design Week 2018 and decide for yourselves whether our DDMI methodology offers a promising new way to develop new market-ready and circular materials.

Ends



NOTES TO THE EDITORS:

18 partners in 10 countries turning textile waste into new high-value products

Trash-2-Cash is an EU funded textile research based project centred around fibre-regeneration in the circular economy. Taking waste and making new fibres is the project mantra. 18 partners across 10 European countries in the fields of science, design and manufacturing collaborate together.

Cotton and polyester, mainly in blends, make up 80 percent of fibres used globally. Both industries present **serious** environmental problems, many of which are in developing countries. With global textile waste doubling annually in volume in many areas of the developed world, the T2C consortium believe fibre regeneration in tandem with recycling can help to address most of these issues.

The Vision:

The Trash-2-Cash project aims to progress us towards the sustainable textile industry of the future, one that benefits both people and the planet. Growing problems with paper fibre waste from the paper industry and textile fibre waste, originating from continuously increasing textile consumption, is being challenged through design-driven innovation.



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TRASH CASH

“All the clothes that we throw out and fibres wasted in production are actually a valuable resource that we can’t afford to discard. This project gives us the opportunity to challenge that.”

Emma Östmark, RISE Research Institutes of Sweden

Every year we throw away over 3 million tonnes of textiles in the EU28 countries. In this unique collaboration between designers, scientists and manufacturers, the EU-funded Trash-2-Cash project tackles the growing problem of textile waste by thinking through design and developing state-of-the-art fibre recycling methods, to create profitable new high-performance fibres.

Collaboration is Key:

Designers, design researchers, scientists, raw-material suppliers and end-product manufacturers from across Europe make up this cross-disciplinary and cross-sectorial consortium. 18 partners, from 10 countries, are working on this Design-Driven Material Innovation (DDMI) project, where the whole supply chain is represented. Having all of these specialists on board means that new fibres can be spun and woven, knitted or formed into textiles and hard materials, which can then be made into innovative new products.

User Needs First:

The partners are working together to develop state-of-the-art textile recycling technologies to produce new fibres that are ‘designed’ for the kinds of products people want.

“The new Trash-2-Cash fibres will not only be ‘made from waste’ but will be created to be used appropriately and fully before going into future recycling processes. We’re using less harmful processes for people and the environment, and we’re designing-in performance so that these fibres offer a full package for consumers and the environment.”

Prof. Rebecca Earley, University of the Arts London

Made for Future Recycling:

Together the collaborators are defining material properties and evaluating newly developed eco-efficient cotton fibre regeneration processes and polyester recycling techniques. Novel materials are being constructed in order to generate new textile fibres and other products that will be compatible with the environment for a sustainable future. Prototypes – for high quality fashion, interiors and automotive contexts – are currently being developed to be produced in a realistic test production environment.

New Models:

The T2C team is not just aiming to create amazing new regenerated fibres, it is also pioneering ‘Design-Driven Materials Innovation’ a whole new approach to developing materials. In many ways the team see this as the legacy offer – a model for other creative designers to work in collaboration with science and industry to create sustainable change.



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Trash-2-Cash project statistics:

Total budget: 8,928,994.75 €
EU Contribution: 7,933,461.00 €
Duration: 42 months
Start date: 1 June 2015
End date: November 2018
18 partners from 10 countries
9 work packages (WPs)

www.trash2cashproject.eu



FOR FURTHER INFORMATION AND HIGH-RESOLUTION IMAGES PLEASE CONTACT:

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