Almost 200 international participants joined the virtual workshop "Circular product development – the secrets to design for and from recycling", which took place within the framework of the EU project PolyCE. The experts presented their experiences and findings on the holistic circular economy for high-tech plastics as well as best-practice strategies developed in line with the motto "Design for Recycling and Design from Recycling". An additional highlight was the appearance of Frans Timmermans, Commissioner for Climate Action and Vice President of the EU Commission, who is responsible for the Green Deal. He was given recommendations for action for effective plastics recycling.

In 2017, PolyCE (Post-Consumer High-tech Recycled Polymers for a Circular Economy) started with the common goal of the 20 project partners to activate a shift towards a circular economy for plastics. The aim is to use high-tech plastics that are already in use, such as those found in cell phones, televisions, vacuum cleaners and the like, as a source of raw materials and thus reuse them entirely, with an awareness of the entire value chain. These goals are highly topical for more than just research purposes, as the European Commission also sees the need for a movement towards the circular economy and has adopted a Europe-wide strategy with the help of which ten million tons of recycled plastics are to find their way back onto the market in the form of new products by 2025.

In the current workshop, the focus was primarily on the design of WEEE plastics obtained through mechanical recycling. In keynote speeches, the experts explained the challenges of the last four years, but also showed that recycling of plastics is not a simple task, but it is a solvable one – a clear signal to manufacturers to use recycled plastics more intensively in the future.

It was a special honor that Frans Timmermans, one of the three Executive Vice Presidents of the EU Commission in charge of the Green Deal, participated in the interactive workshop. The project coordinator and environmental expert at Fraunhofer IZM, Gergana Dimitrova, virtually presented him with the guidelines "Design for and Design from Recycling", which were produced during the project and contain, among other things, practical guidelines for designers.

Frans Timmermans: "We need to move towards a circular economy. Wanting to be the first climate neutral continent as Europe is not a goal in itself. It is part of helping humanity understand that we need to live within planetary boundaries.

We also need to ensure that our products respect the highest sustainability standards. We need durable, re-usable, repairable products. Products made of recycled materials and designed for high quality recycling in turn. This is an essential discussion where your project makes such a timely contribution. The book you are launching today is crystal clear about what needs to be done."
It is clear: only with a circular economy we can reach climate neutrality.”

Continuing into the afternoon, a varied mixture of presentations, case studies and open question rounds allowed different approaches to be presented, showing how a move towards the reuse of recycled plastics can be implemented step by step and what design recommendations need to be taken into account. The guidelines include five categories:

1. the avoidance of hazardous substances
2. easy access to environmentally harmful product components
3. the use of recycled materials
4. the use of recyclable materials
5. the use of material combinations and connections that allow easy access to these materials.

These guidelines are considered the first coordinated guide for the electronics industry. They will help decision-makers in product design and manufacturing, as well decision-makers at the government level, to participate in the development of sustainable products.

The PolyCE consortium consists of: KU Leuven, Ona Product SI, Philips, ECODOM, the European Environmental Bureau (EEB), Ghent University, Imagination Factory, KunststoffWeb, MGG Polymers, PEZY Group, Prolabin & Tefarm, SITRAPLAS GmbH, TECNALIA Research & Innovation, TU Berlin, UL Environment, University of Northampton: Institute of Logistics, Infrastructure, Supply and Transportation, Whirlpool, UNU-VIE SCYCLE and Fraunhofer IZM.

Download the guidelines: https://www.polyce-project.eu/results/

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Gergana Dimitrova in conversation with EU Commissioner Frans Timmermans
The guidelines “Design for and Design from Recycling”, which were produced during the project and contain, among other things, practical guidelines for designers.