

Preventing plastic waste in the circular economy: new possibilities for companies



Plastic pollution is emerging as one of the most damaging trends to the ecosystem. There is a growing concern among the public about the persistence of plastic waste. Due to the significant public interest and recent awareness rising campaigns more and more customers consider the consequences of their day-to-day plastic usage. Despite that growing number of individuals, cities, scientists and politicians recognise the vital need for action, the amount of plastic packaging is still increasing. In fact, plastic production is forecasted to almost quadruple by 2050.

Tackling plastic pollution and reducing the production of plastic are complex challenges where politics, communities, science and industries need to work together in order to make a difference. In fact, industries should have a leading role in solving the world plastic problem. There are more and more companies worldwide who understand that by developing new business models they can positively influence the changes and can reduce their plastic waste. These companies are aware that rethinking plastic usage can improve their competitiveness, reduce their costs and can make their operations more resource efficient.

The term "circular economy" is gaining a growing attention. Circular economy is an alternative to the traditional or "linear" economy. It aims to provide more sustainable solutions to companies through the whole value chain. By integrating circular economy principles into their operations companies will have the possibility to develop new business models. These models can offer new business opportunities, encourage sustainable business practices, help them to be more resource resilient and they can generate additional revenue streams.

Different research projects tackle challenges around the development of circular business models and system-wide innovation. One of them is the eit Climate-KIC eCircular project that promotes new business models and consumption patterns. The project focuses on the plastic-based material systems and enhances plastic waste prevention by developing and supporting digital and innovative solutions.

The Wuppertal Institute in Germany has partnered with the Climate-KIC initiative and leads two recent projects of the eCircular

Initiative. One of these projects explores possibilities around a development of consultancy services related to the prevention of plastic waste while the other project enhances possibilities around plastic waste recovery by regional blockchain networks. The main aim of both projects is to provide research based evidence for the development of new business models with potential to enable waste prevention by companies.

Plastic waste prevention is seen as a great business opportunity. It can not only save money for the companies but can transform the whole relationship with their customers. However business opportunities linked to waste prevention are still underdeveloped and not yet systematically analysed. The first project of the Wuppertal Institute analyses options for waste prevention consultancy services (focusing on plastic waste packaging) and explores the potential market for such services. Exchanging views and cooperation with the different industries and businesses is inevitable for the project's success. To this aim the project includes a webinar to reach out to wider interest groups and to raise awareness of possibilities in the prevention of plastic waste.

The other project focuses on the whole plastic life-cycle and investigates how the blockchain technology can support the circulation of plastic materials. It aims to identify business models where the use of blockchain enables plastic waste prevention or improves the supply chain of secondary plastics. Along the project the European and more precisely the German plastic market is being analysed to identify existing plastic blockchain networks and opportunities around the usage of blockchain in circular economy applications.

Blockchain technology can have a great transformative capacity for the plastic industry. At a later stage of the project a capacity building event will be organised that enhances the diverse transformative potentials of blockchain. If you are a company interested in or experienced with blockchain and plastic waste recovery the Institute is looking forward to your participation in the programme.

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