

COMPANY NAME Bioelektra Group		
	SECTOR Food	

Bioelektra Group cooperates with local authorities, enterprises and organizations engaged in waste management and seeking more effective solutions, as well as institutes and research bodies, interested in further waste management technology development. Their mission is to change the way people think of waste management.

CHALLENGES

With rapid population growth and urbanization, municipal solid waste generation is expected to rise to 2.2 billion tonnes by 2025. Consumption has changed dramatically, as consumers have much more choice and products are designed to have shorter lifespans with many single-use and disposable products. Moreover, unhealthy lifestyle as well as industrialization leads to the development of chemical, oil & gas, automobile and medical industries, which further increases waste generation. Waste generation rates are rising around the world.

INNOVATIONS

Bioelektra has developed and utilized an innovative technology for municipal solid waste as a complementary solution to waste management. The activity of the company is based on a mechanical-heat waste treatment (MHT) called RotoSteril, different from traditional technology for municipal waste treatment. Waste is sterilized at high temperature and pressure, which kills all microorganisms in the waste and makes it odourless. Subsequently sterilized waste is sorted into usable fractions of different secondary raw materials, organic fraction and RDF. These fractions can be further used for other processes and products. Usually these fractions are sold to recyclers.

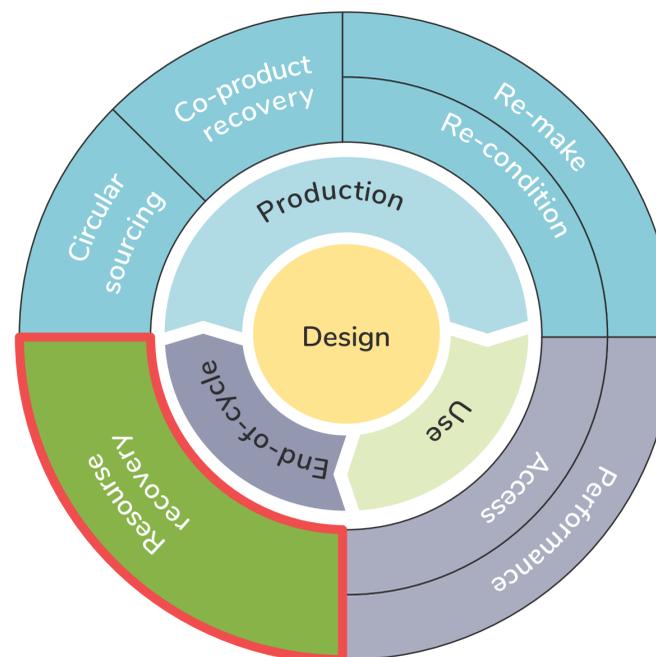
“Collecting high quality waste streams for recovery, re-use, remanufacturing and recycling requires not only appropriate technology and highly innovative commercial organizations but also citizen engagement and integrated infrastructure development from the municipal to the EU level.”

KEY ENABLERS

Among key enablers are EU policies introducing restrictive requirements in waste management (landfilling reduction, high recycling levels), national and global need for efficient technology in municipal waste management, social needs to simplify separate collection systems, and global policies for climate protection – reducing GHGs emissions, the need of new sources of renewable energy, and the global need for carbon footprint reduction.

“All stakeholders are convinced that there is a need for close partnership between the waste industry and companies with a circular vision for their products.”

CIRCULAR ECONOMY BUSINESS MODELS

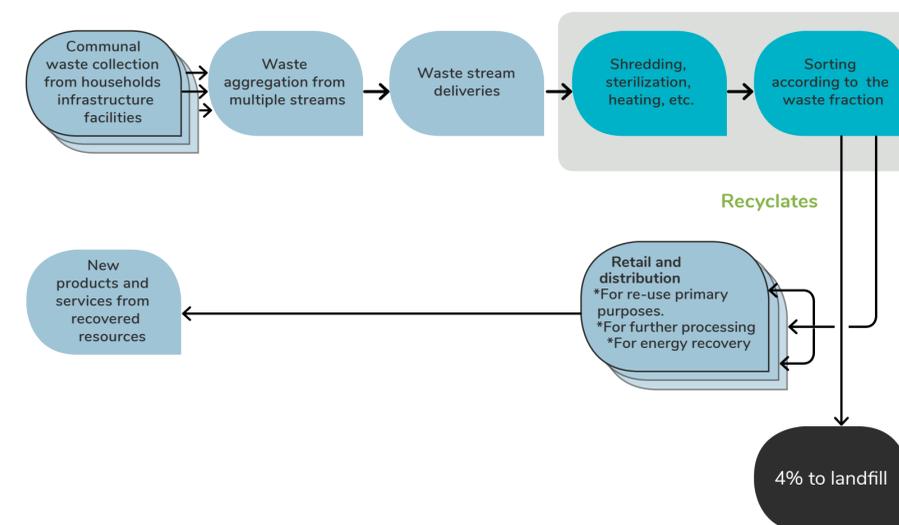


KEY OUTCOMES

The contribution of Bioelektra to closing the loop is primarily based on a very high recycling rate - up to 96% of the municipal solid waste stream. Short-term and long-term benefits will include reducing environmental burden as well as creating both high-skilled and low-skilled jobs for an inclusive, green economy.

The company is involved in a process that allows to obtain clean, secondary raw materials and organic fraction, ideal for recycling purposes. It has now the full control concerning the composition of final products – recyclates - that they obtain. This means that those products can circulate in the economy for longer.

MATERIAL FLOWS



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