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New investment in town for real recycling

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Center for the preparation of secondary raw materials in Maribor

Maribor has an operative Centre for the preparation of secondary raw materials with most modern technological device in Slovenia and Europe which ensures a quality treatment of mixed municipal waste. The waste is no longer just another expense but an important source of raw materials.

In the next thirty years, about 10 billion people will be living on our planet. The number of the world's population will yearly increase for as much as another Germany, in one day as much as another Slovenia. According to the forecasts, the social status of the third world population will improve. Every third person from poverty will advance to the middle class. This means that consumption will increase.
Today we still take natural resources for granted, although more than 60 % of natural ecosystems have already been degraded. Water, fuel, non-renewable energy is only consumed and consumed. These resources are limited and certainly one day they will run out. What then? How will we survive? How expensive will life be? Will we be able to afford it? These are the challenges of the 21st century and the answer to them is simple. We will have to change the

thinking and attitude towards goods, materials and resources. A radical change is called simply - circular economy.

In the circular economy, materials circulate. Biological materials circulate underground in contact with soil and technical ones above the Earth. Technical materials circulate in a process, where we by using technology create new product from old stuff. In our case, this means that waste must become a valuable resource. Resource to create new raw materials. And this is purely recycling.

The center for the preparation of secondary raw materials consists of over **150** elements, each of which plays an important role in the separation of mixed municipal waste. In one year the Center is able to process almost **40.000** tons of mixed municipal waste in one shift and ensure that **77%** of it is actually recycled.

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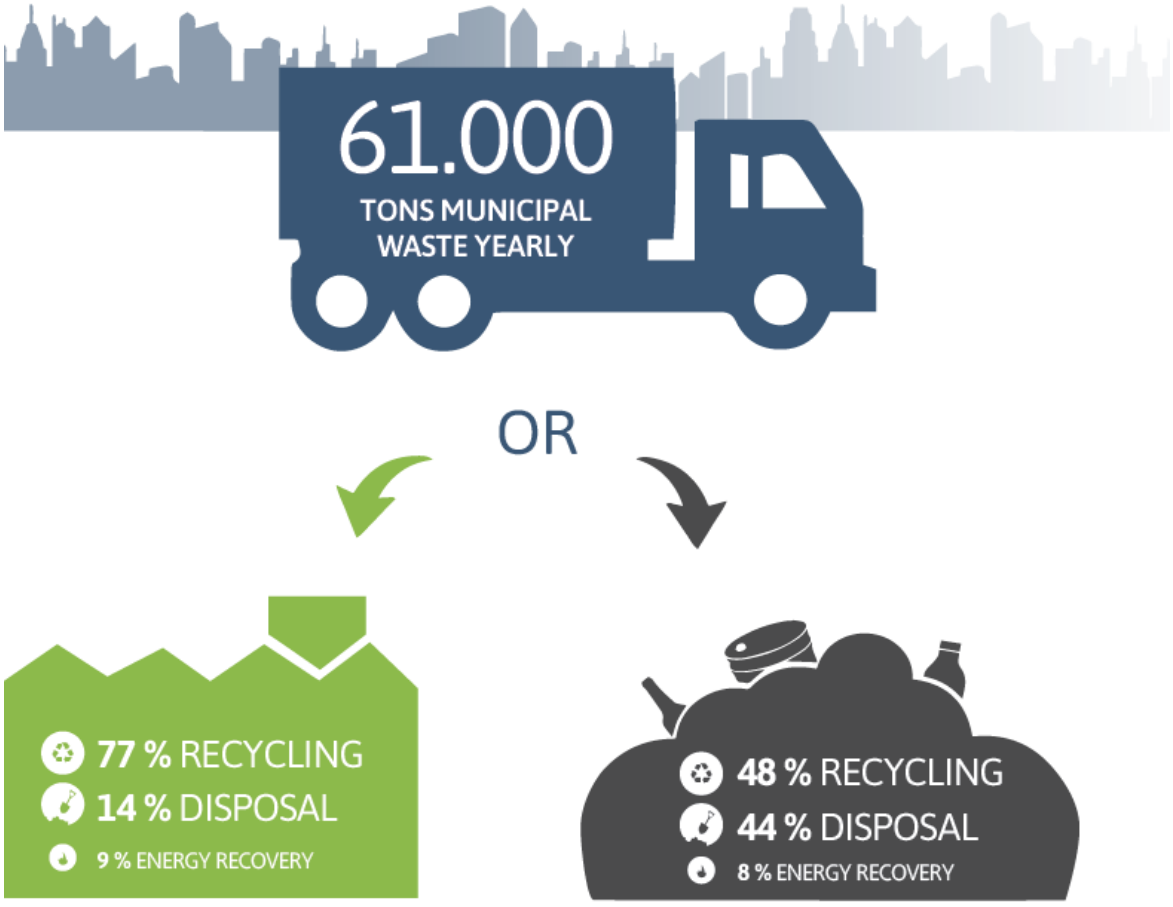
The center for the preparation of secondary raw materials was an idea, which was born almost a decade ago. Although this sounds long, it also has advantage. Its essence is the super modern technology, which exhibits exceptional and unique effects in waste separation not only in Slovenia, but in the entire South-Eastern European region.
Compared to the previous waste management system in Maribor, when mixed municipal waste was for quite a lot of money handed over to a third partner, we now keep our waste in the city and ensure that 77 % of it is actually recycled. That means new clothes, school supplies, toys, furniture and so on are created from our mixed municipal waste. Our waste, separated into pure fractions, becomes usable. Therefore, the investment in the Center for the preparation of secondary raw materials is justifiably called the largest and most important investment in the history of our company.
The first machines started to work on 30th August 2017, when the foundation stone was laid and Slovenians President Borut Pahor stressed the importance of our center for the green and healthy future of the entire region.



MARIBOR
TODAY

MARIBOR
IN THE PAST

The Center for the Preparation of Secondary Raw Materials is the only one in Slovenia that ensures purely recyclable materials after the waste is machine-sorted to pure output fractions. The investment is worth 12.5 million euros and places Maribor on the map of important players in waste management industry in Europe.
Construction began at the end of August 2017, for the first time, the machines were tested in the middle of May 2018. The center for the preparation of secondary raw materials is fully operational since the end of June this year.

The surface of the device extends in an area of over 5.000 square meters. The center for the preparation of secondary raw materials consists of over 150 elements, each of which plays an important role in the separation of mixed municipal waste. Within one year the Center is able to process almost 40.000 tons of mixed municipal waste in one shift.

When the truck delivers waste to the Center for the Preparation of Secondary Raw Materials, the waste route begins with tearing up all the bags in which the waste was deposited in black containers. Waste then travels to the drum, which sorts the waste into four sizes. This is very important, since large sections could cause disturbances and clogging. They could also cover small material and make sorting more difficult. So efficient and technologically advanced seal drum provides the basic condition that the output fractions are cleaner and of better quality.

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Now waste is ready for a real action. Two optical machines eliminate all plastics. This moves forward to two ballistic separators, which classify plastics in size and shape in three fractions: rolling materials, or so-called 3D material, for example bottles, separated from flat materials or so-called 2D materials, such as various foils, the fine fraction is sieved.

This is extremely important for the efficient operation of optical devices called the NIRs. The NIRs begin to sort different types of materials. The Center for the preparation of secondary raw materials has 6 of them. NIRs are separating waste by means of infrared light. In addition, three iron magnets are provided in our center, two air separators and two turbine circuits that sort colored metals, predominantly aluminum.
Extremely precisely sorted mixed municipal waste is divided into three main groups after completing the journey at the Center for the preparation of secondary raw materials: fractions suitable for recycling, light and heavy fraction. While the bulk of the mixed municipal waste that we bring to the Center goes further into the recycling process, the light fraction is handed over and used in heating plant. The heavy fraction is disposed. In the Wcycle model, we are already looking for ways and technologies to process the heavy fraction further. This would completely avoid waste disposal.

The ratio of waste to recycling, which is passed on as a light and heavy fraction, makes our Center for the preparation of secondary raw materials so unique in this part of Europe. 77 % of all collected waste is used for real recycling, 9 % of the light fraction is dedicated to energy use, only 14 % of the heavy fraction is disposed. Such results are not reachable at any other center in Slovenia. That's why only our Center for the preparation of secondary raw materials is purely recycling.

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