Deposit Return System in Slovakia returned over 100 million bottles and cans since January 1st, 2022

- Slovakia launched its DRS system as the 11th European country, and it took them only 10 months
- Since the launch of the DRS on the 1st of January 2022, Slovak citizens (5,5 Mio people) returned over 100 million plastic bottles and cans
- Deposit Return System in Slovakia processes on average 200 000 returns per day
- <u>Sensoneo</u>'s DRS system works as a backbone of the entire system as it integrates all stakeholders and gathers data from all sources within the process chain

Background of the DRS implementation in Slovakia

The history of the Slovak deposit return scheme dates back to 2003 when the first public discussion about its implementation started. Since 2019 these efforts became more tangible - the country defined a strategy with a focus on a deposit return scheme for PET bottles and metal and aluminium cans. Like in Lithuania and Estonia, DRS in Slovakia was designed to run along with the ongoing separate collection of plastics – a system that was established years ago.

On January 1st, 2021, the Ministry of Environment established the <u>Deposit Return System Administrator</u> as the managing body of the DRS in Slovakia. DRS Administrator was created by a consortium of four non-profit professional associations representing producers and retail, that cover 80% of the products in plastic bottles and cans on the Slovak market and approximately 3.000 commercial establishments.

In March 2021, the newly established non-profit organization launched an implementation phase, which included a tender for the supplier of this system planned to go live on the 1st of January 2022. The expectations were very high, and the time pressure made the selection process even more challenging:

"We were looking for a reliable and responsible partner experienced in the field of IT and digitization as well as oriented in the field of waste management," said Lucia Morvai, Director of external affairs & Communications of the DRS Administrator.

Sensoneo succeeded in the selection process thanks to its **expertise in digitization and references on large-scale systems using its own reverse logistics solution**, which helped large, nationally operating recycling companies and take-back operators automate and optimize their daily operations.

Martin Basila, CEO and Co-founder of Sensoneo: "By working on the DRS system, we utilize our know-how in the field of digital transformation of waste management. It is very motivating for us to

participate in a project with such a positive impact on recycling. We look forward to the next stages that will further streamline the system."

Inspired by the best plus innovations

To design the Slovak DRS system, the Administrator took **inspiration from countries where they successfully run the schemes for decades** and complemented it with the **innovations that prepare the system for years to come**: "From each functional system, we picked what we considered to be the best in specific areas, and thus we laid out the outlines of our own system. We adopted mostly the best practices from Scandinavia and Baltics," explained Mária Trčková, CEO of the DRS Administrator.

"We had just 6 months to build the information system. In addition to the integration of data of all the stakeholders, we also had to integrate the data of 6 different manufacturers of various types of reverse vending machines, "explains the challenges Peter Knaz, Take-Back Systems Division Director.

Despite the time shortage, **the system went live just like planned - on the 1st of January 2022**: "The international community was really impressed by this speed. However, we have a long way to go and many other plans on how to make the current system even more convenient and sustainable.," added Lucia Morvai.

Sensoneo is the backbone of the Deposit Return System

The Slovak DR system is a modern solution that **ensures a smooth and continuous daily flow of reliable data including functionalities that make the operations efficient and automated**. The Sensoneo system is the backbone of all the processes that stakeholders need to carry out their tasks and fulfil their goals - from manufacturers, distributors, collection points, and carriers, through dealers, warehouses, customers, and recyclers to the government.

All data is transparently recorded and protected - the lifecycle of each package is traceable from its launch on the market until it's returned in the form of recycled material for new bottles and cans.

All operations are performed in real-time, and they include **optimization of transport routes and logistics** as the intention of the system is to keep the carbon footprint as low as possible.

For consumers, it is important that they can conveniently partake. To achieve that, many processes must be perfectly executed in the background: "Each step must be properly recorded and traceable so we can evaluate and prove the efficiency of the system. We are accountable to the producers who finance the system, to the traders who take the packaging, and, finally, to the consumers who use it," explains Lucia Morvai.

Material circularity is the goal

"Avoid littering and increase people's motivation to handle waste responsibly is the primary mission of the system. In addition, with such well-sorted material, it is possible to achieve higher recycling targets. The material can be used in a closed loop, supporting bottle-to-bottle, and can-to-can recycling. For this reason, we are convinced that DRS is currently the only truly proven solution for many countries to meet ambitious recycling targets and support the circular economy," explains Lucia Morvai.

The immediate goal is to collect at least 60% of sold packaging by the end of 2022. "At the moment, it is difficult to predict what results we will achieve in the first year, but given the current trend, we assume that we are on our way to reaching a level of around 70%," explains Lucia Morvai.

Until June of this year, a **transitional period is in place when deposit and non-deposit packaging are sold on the market simultaneously**. Besides the reverse vending machines, consumers also actively use the opportunity to have their packaging returned with manual scanners - this option is practiced in small shops and remote locations.

In addition, the system itself is being continuously upgraded to make it even more practical and convenient for consumers. It is also **planned to expand it into new segments**: "We are trying to further streamline logistics and gradually introduce vehicles equipped with compression mechanisms to minimize the volume of transported packaging. We also want to expand collection channels outside the standard stores to make DRS even more convenient for consumers," explained Mária Trčková, CEO of the DRS Administrator.

DRS in Slovakia in numbers

- Over 2400 collection points are registered in the system
- The System includes over registered 3.000 EANs
- The total value of the vouchers issued so far reached almost 15 million euros
- Over 100 million packaging units returned since the launch of the system

-End-

About Sensoneo:

Sensoneo develops and provides enterprise-grade smart waste management solutions that support the digital transformation of waste management to achieve efficiency, transparency, and sustainability.

Sensoneo is redefining the way waste is managed. Through its unique smart waste management technology, Sensoneo helps to cope with the biggest challenges in today's world of waste management – lack of efficiency and transparency. As an outcome, the solution enables the customers to achieve 30-63% reduction of waste collection routes and 97% accuracy on actual waste production.

Sensoneo's smart waste management has attracted cities and businesses around the world, and the solution has been installed in more than 60 countries on 5 continents.

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About Deposit Return System Administrator:

"Správca zálohového systému, n.o." (Deposit return system Administrator) is newly established non-profit organization responsible for creation, administration, financing, and coordination of deposit system in Slovakia.

The cooperation of beverage producers and retailers ensures:

- better transparency of the system,
- better mutual control and coordination.
- common interest in smooth, economic and environmentally sustainable operation of a system that is consumer-friendly and meets collection goals.

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