

Prague to pilot large-scale, dynamic waste collection

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[Sensoneo](#), a global provider of smart waste management solutions, has announced the first European capital with whom they will partner on a large-scale deployment using their innovative waste management solution. As of spring of 2021, the Czech capital will pilot collecting waste via automated routes able to dynamically respond to changes in waste production and the city's infrastructure.

Dynamic waste collection is part of an ambitious project of Sensoneo focused on the demonstration of environmental and economic benefits resulting from large-scale deployment of the Sensoneo solution. Given the scope and the tools applied, it is an ultimate and revolutionary model example at a global level. [The project is co-funded by the Horizon2020 program of the European Innovation Council.](#)

Thanks to efficient collection planning, the city of Prague will be able to systematically decrease the environmental impact related to the waste collection process, maximize efficiency of the currently available vehicles (trucks) and employ flexibility in the case of unanticipated changes. The ongoing pandemic of COVID-19 is one such example, as it is profoundly changing traditional waste generation patterns and standard collection frequencies, and the current routes are not able to flexibly cope with these changes.

The project is implemented thanks to the grant of the European Innovation Council, which was awarded to Sensoneo in [competition of over 2000 most innovative technology companies](#) from 38 European countries. The grant, which was focused on projects supporting the objectives of the European Green Agreement, will make it possible to demonstrate the benefits of a wide deployment of Sensoneo smart waste management solution in the area of quality collection services, economics and environment.

„Cities around the world face challenges related to growing urbanism, increasing volume of waste and insufficient flexibility, which has been now even more highlighted with the ongoing pandemic. Innovative technologies, which we will test during the pilot project, follow [Prague's strategy](#), focused on sustainability and a circular economy. I am convinced that this project will contribute to our plan of making Prague an active initiator of green technologies.” adds Petr Hlubuček, Deputy Mayor of Prague for the Environment, Infrastructure, Technical Equipment and Safety.

The project, unprecedented and unique by its large-scale deployment, includes the following procedures:

- **Collection Efficiency Analysis (AS-IS ANALYSIS)** for all waste commodities using Sensoneo's unique method, based on processing all currently available data related to containers, vehicles and realized routes – **provides the identification of weak points and opportunities for savings and improvement of the quality of service;**
- **Set-up of the new cycling routes and frequencies (TO-BE ANALYSIS)** in order to increase the continuous efficiency and quality of service, combines the shortest possible routes, on-time collection, and maximum possible utilization of vehicle capacity with the long-term goal to **reduce the number of vehicles used during waste collection;**
- Collecting waste via **automated routes** (flexibly reflecting daily specific requirements) using Sensoneo's **navigation, which is tailor-made for the unique requirements of individual waste collection vehicles ->**

this facilitates the employment of drivers without prior driving experience in particular districts or particular routes;

- Final evaluation – **showcases savings** (time, cost, fuel, emissions) with a BEFORE-AFTER comparison.

Along with the above, the project also includes the **realtime monitoring of 550 containers for electronic waste** with Sensoneo sensors to optimize waste collection, ensure sufficient free capacity for citizens and thus, **support the recycling of this commodity**. The operation part of the project will take one year.

The city of Prague thus receives a unique opportunity to live-test the technology, which has the objective to cope with the current waste challenges in cities. **Patrik Roman, CEO of Pražské služby, a.s.** [Prague services – a wholly-owned subsidiary of the city of Prague]: *„Digitization is a huge topic in the field of waste management. It has been our long-term goal to identify and implement the tools that drive the improvement of the waste collection process and the quality of our service. This project upgrades the established systems of daily planning, real-time performance monitoring and evaluation. Planning waste collection routes for over 130 thousands containers in Prague is a complex and very demanding job and the succesfull outcome of this project can significantly help to improve it.”*

Šárka Koháková, Logistics Manager at Asekol, a.s. [wide take-back system for electrical and electronic equipment]: *„With this project, we will be able to equip most WEEE containers across Prague with sensors and thus make the collection of discarded electronic equipment even more efficient. We expect that the ability to provide sufficient free capacity in containers will support the positive attitude of the citizens to the sorting of electrical waste.”*

„We have chosen Prague as one of the key partners based on our experience with the underground containers monitoring project. We perceive the Czech capital as one of the European leaders in the introduction of smart technologies and support of the transition to a circular economy. We believe that our tools bring great gains to the city's daily operations. We are convinced that the evaluation will ultimately prove the tangible benefits of our solution to both the environment and the economy – reducing the carbon footprint and improving resource efficiency,” says **Martin Basila, Founder and CEO of Sensoneo, j.s.a.**

Michal Fišer, CEO of Operátor ICT, a.s. [a municipal joint-stock company that provides a wide spectrum of information and communication technologies services for Prague]: *„A proactive approach and the use of innovative technologies is part of our urban DNA. Our company drives the testing and implementation of innovative technologies and we are doing our best to further utilize the data we collect from them. Smart waste collection is part of our Smart Prague 2030 strategy, which defines a zero-waste city as one of its priorities, and we believe this should be built on responsible and intelligent waste management.”*

The preparation phase of the project has already started and the launch of the operational phase is scheduled for March 2021. The entire project, including the evaluation, will run until September 2022.



This project is co-funded by the Horizon2020 program of the European Innovation Council under the Agreement no 101010676.

About Sensoneo, j.s.a.

Sensoneo is a global enterprise-grade smart waste management solution provider that enables cities and businesses to manage their waste efficiently, lower their environmental footprint and improve the quality of services.

Through its unique smart waste management technology, Sensoneo is redefining the way waste is managed.

The solution combines in-house produced Smart Sensors that monitor waste in real-time with advanced tracking and monitoring equipment and sophisticated software providing digital transformation and data-driven decision making which results in transparent waste streams, optimization of waste collection routes, frequencies, and vehicle loads and the introduction of incentive programs dedicated to decreasing waste production.

Sensoneo's smart waste management has attracted cities and businesses around the world, and the solution has been installed in more than 50 countries on 5 continents. The company is the winner of several reputable competitions (Microsoft Awards 2018 in the category of Public Administration & Smart City, PropTech Startup Europe 2019, Deloitte Fast50 2020 Impact Stars), a member of Circular Slovakia and a member of PropTech for Good.

About Smart Prague

Smart Prague 2030 is an ambitious city strategy based on the introduction of innovative and smart technologies making the city a better place for living. The strategy defines six key areas, where the introduction of modern technologies will have the greatest positive impact: Mobility of the Future, Smart Buildings and Energies, Waste-free City, Attractive Tourism, People and the City Environment and the Data.

About Operator ICT, a.s.

Operator ICT a municipal joint-stock company that provides a wide spectrum of information and communication technologies services for Prague. Its agenda includes Smart City projects management, professional consulting and implementation of ICT projects for Prague, its city districts and other city companies. Operator ICT goal is to facilitate and improve life in Prague with the help of meaningful and innovative projects that make the capital an advanced world metropolis. Operator ICT strive for continuous development, better quality of life of the citizens and efficient use of data and energy. All this with the latest tools and technologies.

About Pražské služby, a.s.

Pražské služby is a wholly-owned subsidiary of the city of Prague, capital of Czech republic. The company provides with the installation of containers of different kind of capacity, collection of mixed and sorted waste, food-waste, bio-waste, hazardous waste, and electronics. The company also provides electronics recycling, paper sorting, disposal of confidential documents, manages Collection Yards located across the city of Prague and the facility for energy recovery of waste (ZEVO).