



PSI ECOLOGY LTD

On A Quest to Create a Cleaner Planet with Smart Waste Management Solutions

Let's talk trash for a second. Have you ever wondered how much trash you pile up every day? According to World Bank Researchers, at least 3.5 million tons of solid wastes are generated in a day, which is 10 times the amount a century ago. And as this figure continues to grow, the global garbage will reach 11 million tons by the end of the century. So, if nothing is done, there will be more debris and plastic in oceans than aquatic animals by 2050.

With the mounting waste slowly turning our planet into a giant dump yard, it is a lot harder now to treat or manage the global trash. It is contaminating the ocean, polluting the air, and causing global warming and environmental degradation which are adversely impacting the quality of life; not just for humans, but unknowing plants and animals. To summarize, the situation is grave if not acted upon. So, what can be done to reverse this trend? To find the answer to this question, many responsible organizations are relentlessly working to come up with more environmentally friendly and efficient waste management solutions that can curb the issue.

Based in Israel, PSI Ecology Ltd is one such pioneering company dedicated to creating a platform that enables autonomous waste management in smart cities around the globe. Its innovative Databin system optimizes waste collection by analyzing evacuation rate patterns and providing real-time alerts regarding garbage levels. "Our mission is to develop IoT-based infrastructure which will provide innovating tools for waste management making Databin system a major player within smart cities and autonomous vehicles eco-system," asserts Avi Ron, the founder and CEO of PSI Ecology.

Delivering an End-To-End Service for Waste Management

"As a result of our service, our customers obtain a new set of tools to manage waste collection process they never had

before while saving unnecessary expenses by optimizing truck drivers' daily routines along with the ability to respond in real-time," opines Ron.

The company understands that the process of waste collection differs in different cities depending upon a variety of factors such as city size, budget, topology, container types, and usages. Adding to this is the daily workforce habit and daily operations that were never based on any technology before and this further makes the implementation phase a critical task. Thus, to address this issue, the company focuses on designing a reliable, versatile, and fully automated system that can be tailored for any customer needs and configured according to existing work methods while requiring minimal intervention by any employee. It also makes sure its system can be easily used by any third party making Databin a must-have provider for any smart city solution. "It does not matter if the customer is a municipal authority, governmental body, or a private company - Measurement data, transmitted from our end units is the same for all our customers," adds Ron.

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Databin is a smart IoT monitoring solution that collects data regarding garbage volume, humidity, temperature, analyzes all data and transmits it to our customers.

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Databin: A Smart IoT Monitoring Solution That Optimizes Waste Collection

Started as a joint project with Israel's Innovation Authority, Databin is a smart IoT monitoring solution that collects data regarding garbage volume, humidity, and temperature, analyzes all data, and transmits it to the user interface. It is the only system (AFAIK) that supports a fully automated end-to-end service with no action required from any of its users, including the evacuation truck driver. The driver just needs to drive between the stops as navigated by the system and the pickup process is being recorded automatically in real-time. So, by the time the driver gets back to his seat, his tablet is already updated, and driving directions to the next point is ready on his screen. With intelligent routing and collection, Databin helps its customers reduce mileage, streamline garbage collection and prevent environmental hazards associated with garbage accumulation. It saves between 30-50 percent of evacuation costs. Moreover, it learns the behavior of the bins and improves and optimizes the work plans from program to program.

Looking at its efficiency, many leading organizations are increasingly adopting Databin for waste optimization. In Israel, the Tamir Government Recycling corporation, which works to reduce waste through recycling, chose the smart system's Databin from PSI Ecology to optimize and achieve maximum optimization in the collection of recycled material and reduce waste.

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Rani Aidler, CEO of Tamir – Israel Recycling Corporation

Rani Aidler, CEO of Tamir – Israel Recycling Corporation, has delineated his experience of associating with Databin: “Databin system deployment within Tamir’s recycling containers contributed greatly to improving our level of service to municipalities residents and reinforced public confidence in recycling process by enabling on-time collections.”

“Additionally, Databin system significantly reduced our operations costs while provided us with the tools for real time management & control of trucks’ daily routes and recycling containers status along with the ability to verify optimal Geographical distribution of our containers and all through a user-friendly interface.”

During the last year, Databin has also been chosen to deploy its technology over three major verticals:

- **Waste:** A 10-year contract with the Israeli government to supply the system to most Israeli municipalities.
- **Recycling:** A 5 years contract with the main Israeli recycling company to supply the system to municipalities across Israel
- **Agriculture:** A private contract with the biggest fertilizer supplier in Israel.

“Till today we already supplied thousands of end units and in the next years we are expecting to supply tens of thousands of end units based on current contracts only, all with a wide national spread,” affirms Ron.

Continues Working towards a Greener Future

The company has grown dramatically since its inception in 2000. Today, it works with almost all municipal authorities in Israel as well as many private companies. Databin system has made the company a leader in the field of smart cities and looking forward, it believes further development will only strengthen this bond.

Moving ahead, PSI Ecology has many other innovative projects in its pipeline. In fact, it is in the final stages of approving one such innovative development plan for the Ministry of Environmental Protection of the State of Israel for a sophisticated product that will highly improve the quality of municipal sewer systems. With such groundbreaking innovations and technology excellence, it aspires to further expand its footprint to fight the global issue of waste management. “Our main goal for the near future is to become an International company that deploys our system around the world while helping cities move smoothly into a new smart world,” concludes Ron.