



# AT&T Smart Waste Solutions

## Improving insight and efficiency into waste management

### Business Challenges

It's all about bridging the gap between service quality and rising operational costs. As customer demands evolve, waste tools have remained the same. Many government entities currently depend on traditional systems in waste cycle management including a scheduled waste service which ensures that dumpsters are emptied at pre-set times regardless of fill level. Collection services often lack real-time visibility, and this reliance on a fixed schedule and fixed rate system often result in:

- Inefficient collection schedules
- Overpaying for an under-utilized system
- Lack of visibility into service quality and container status

Many of these issues could be improved through increasing the visibility into waste cycle management, which could then result in more effective time and cost management.

### AT&T Smart Waste Solutions Can Help

AT&T delivers a connected waste management solution designed to solve the inefficiencies of traditional services. Instead of sticking to a predefined pick up schedule that remains consistent week after week, waste is picked up based on need. A sensor-based technology works to provide real time visibility and allow for optimized pickups and deliveries.

### Potential Benefits

- Enable dynamic collection routes
- Reduce dumpster overflow
- Decrease required resources and costs
- Reduce site visits
- Verify collections
- Reduce customer complaints

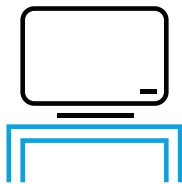
The potential benefits of this service will give the collecting organization increased visibility into volumes generated and they will know the status of the container in near real time. Miles driven by collection vehicles can be optimized, potentially eliminating useless pickups while service levels to other locations are fine tuned.

### Here's How it Works

AT&T Smart Waste Solutions help organizations monitor waste over time by creating customized collection schedules; in turn, there is opportunity to reduce costs, accurately track and report waste and recycling pickup, implement service improvement and operate more sustainably.

By using dynamic operation management tools, organizations can create demand-based routes, voice guided turn-by-turn navigation and monitoring and reporting of plan deviations and collection issues such as blocked access or container damage in real time. Service delivery is optimized by avoiding the often time-consuming impediments right from the start.

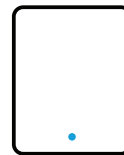
By using APIs, AT&T Smart Waste Solutions also enable integration into existing ERP, CRM, End User Portals, Pricing Tools or route management software, thereby maximizing existing investments.



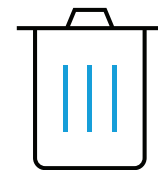
Sensor data powers **advanced analytics software**, automatically generating optimal service plans based on unique waste behavior



**Operational software** tracks waste behavior trends, tracks container and fleet status and service performance in real time



Operating partners use **tablet app** for optimized, sustainable collection schedules and routes to service containers



**IoT sensor** monitors waste containers

## Features

### IoT Hardware

Sensors are designed to monitor containers 24 hours a day, collecting data to power the predictive algorithm which works toward anticipating fullness and preventing container overflow by creating a custom collection schedule:

- Ultrasonic sonar measures uneven surfaces
- 3.6V Lithium battery 10+ year battery life, 5-year warranty
- Temperature safe: -50° – +90°C, GPS enabled, watertight, resistant to: humidity, salt mist, shock and dust

### Customer Portal

Access waste data and insights via Hub Portal to enable:

- Collection schedules
- Container management – includes location, tilt and temperature alerts
- Fill level measurements
- Predictive analytics
- Collection detection and notifications

### Custom Reporting

The reporting tools allow you to access stored information to build reports in Excel or your existing software platforms:

- Hub Reports – Export collections and alerts
- API – Use RestAPI to integrate reporting into existing your software

### Mobile Application

Information can be shared through a mobile application to communicate:

- Collections (past and future)
- Fill levels
- Maps of containers
- Service assistance

### Scout Tool

Container stickers with QR codes can be used to report overflow, contamination, equipment damage and any other waste need.

### Service Planning and Notifications

Analytics software connects sensors and specialized management tools.

Smart Plans are automated routes developed daily to create collection routes. These GPS guided itineraries are optimized based on:

- Container behavior predictive analytics
- Real time container activity (fill levels and collections)
- Customer set parameters

An in-field tablet application can provide:

- Daily Smart Plans sent automatically
- Voice guided turn by turn navigation
- Real time metric tracking
- Monitor and report plan deviations
- Collections problems instantly reported back from truck (contamination, blocked access, container damage, etc.)

The analytics software monitors your waste over time, providing you with data and insights aiming to:

- Reduce costs
- Accurately track and report waste and recycling
- Implement service improvements
- Operate more sustainably

AT&T Smart Waste Solutions fit existing containers, trucks and systems to create the most effective and cost-efficient waste practices – while keeping constituents happy and informed.

To learn more, please contact your AT&T Public Sector representative.



## Pricing

### One-Time Costs

Category	Description	Price Per Sensor
Hardware	WE-009 Sensor	\$215.00
Installation	Field services required for physical sensor installation	Custom quote
Removal	Field services required for physical sensor removal	Custom quote
Professional Services	Project Management and Reporting (Price per hour)	\$175.00

\*Pricing for additional professional service needs listed under NASPO pricing for Professional Services from AT&T Mobility

### Monthly Costs

Category	Description	Price Per Sensor
Rate Plan	Cold Container - A mapped container without a sensor	\$1.50
Rate Plan	Inventory Sensor - Sensors that are active but not installed	\$1.50
Software	Hub Subscription – Manage and Operation Portal	\$12.00
AT&T Control Center M2M IoT Plans	1MB - Overage Rate \$1.00/MB	\$3.75
AT&T Control Center M2M IoT Plans	2MB - Overage Rate \$1.00/MB	\$4.31
AT&T Control Center M2M IoT Plans	3MB - Overage Rate \$1.00/MB	\$4.69
AT&T Control Center M2M IoT Plans	5MB - Overage Rate \$1.00/MB	\$5.25
AT&T Control Center M2M IoT Plans	10MB - Overage Rate \$1.00/MB	\$6.19
AT&T Control Center M2M IoT Plans	25MB - Overage Rate \$1.00/MB	\$7.50
AT&T Control Center M2M IoT Plans	150MB - Overage Rate \$1.00/MB	\$13.50
AT&T Control Center M2M IoT Plans	250MB - Overage Rate \$0.015/MB	\$15.00
AT&T Control Center M2M IoT Plans	1GB - Overage Rate \$0.015/MB	\$18.75
AT&T Control Center M2M IoT Plans	2GB - Overage Rate \$0.015/MB	\$21.50
AT&T Control Center M2M IoT Plans	5GB - Overage Rate \$0.015/MB	\$34.00
AT&T Control Center M2M IoT Plans	10GB - Overage Rate \$0.015/MB	\$60.00
AT&T Control Center M2M IoT Plans	20GB - Overage Rate \$0.015/MB	\$112.50

\*Connectivity costs based on rate plans listed under NASPO pricing for AT&T Mobility Rate Plans



### Important Information

**General:** The product suite from AT&T solution as described in this Sales Information (the "Solution") is available only to AT&T's eligible government customers with a qualified AT&T agreement ("Qualified Agreement"). The Solution is subject to (a) the terms and conditions found at <https://www.enevo.com/terms>, ("Additional Product Terms"); (b) the Qualified Agreement; and (c) applicable Sales Information, including this document. For government customers, any Additional Product Terms not allowable under applicable law will not apply, and the Qualified Agreement will control in the event of any material conflict between the Qualified Agreement and the Additional Product Terms. Any service discounts, equipment discounts, and/or other discounts set forth in the Qualified Agreement do not apply to the Solution. The Solution may not be available for purchase in all sales channels or in all areas. Additional hardware, software, service and/or network connection may be required to access the Solution. Additional fees, charges, taxes and other restrictions may apply. Offer subject to change.

**Professional Services:** Upon completion of any Professional Services, customer must either sign the acceptance document AT&T presents or provide within five (5) business days of the service completion date written notice to AT&T identifying any non-conforming Professional Services. If customer fails to provide such notice, customer is deemed to have accepted the Professional Services. Customer will in a timely manner allow AT&T access as reasonably required for the Professional Services to property and equipment that customer controls. Customer will ensure that the location(s) to which access is provided offer(s) a safe working environment, free of hazardous materials and reasonably suitable for the Professional Services. The Professional Services provided will be performed Monday through Friday, 9:00 a.m. to 5:00 p.m., local time. The mandatory software installation and configuration is estimated to take two days and must be completed within 45 days of order placement. If customer's acts or omissions cause delay of installation and configuration beyond 45 days of order placement, AT&T will invoice customer for the installation and configuration charges after the 45th day. If the Professional Services provided in connection with the Solution are more complex than those described in this product brief, then a separate statement of work describing the activity and related terms and pricing will be executed. If impediments, complications or customer requested changes in scope arise, the schedule, the Solution, and fees could be impacted.

**Coverage:** The Solution operates in the domestic United States. However, wireless data coverage is not available in all areas. AT&T coverage maps are available at [att.com/business/coverage](http://att.com/business/coverage).

Wireless data coverage is subject to transmission limitations and terrain, system, capacity and other factors

**Customer Personal Data ("CPD")** may be transferred to or accessible by (i) AT&T personnel around the world (ii) third parties who act on AT&T's or AT&T's supplier's behalf as subcontractors; and (iii) third parties (such as courts, law enforcement or regulatory authorities) where required by law. Customer will only make CPD accessible when it has the legal authority to do so and any necessary consents. Customer will camouflage or securely encrypt CPD. CPD includes, without limitation, name, phone number, email address, wireless location information or any other information that could or does identify Customer or its end users. Customer is responsible for providing end users with clear notice of AT&T's and Customer's collection and use of CPD obtained via this offer, for obtaining any necessary end user consents, and for complying with, and advising end users about, AT&T's Privacy Policy at <http://www.att.com/gen/privacy-policy?pid=2506>