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# Mayors and Businesses Driving Economic Growth

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## Rubicon Global: Atlanta Uses Smart City Technology to Power Waste and Recycling Collection

**Project Description:** With city and state budgets continually being squeezed, more and more cities are turning to public-private partnership agreements as a way to bring innovative thinking and tangible solutions to their citizens. The City of Atlanta's Department of Public Works was looking for just such a partnership, setting ambitious goals for improving efficiency, increasing recycling rates and effectiveness, and driving improved sustainability.

Enter Rubicon Global, a private technology company born in the waste and recycling industry with a mission to end waste, in all of its forms. Rubicon's technology innovation—the RUBICONSmartCity™ platform—provides comprehensive waste and recycling data to cities, enabling them to reduce operating expenses, divert waste from landfills, improve recycling programs, track key metrics, and work toward long-term sustainability goals.

As a pilot program, Rubicon entered into an agreement with the City of Atlanta to install RUBICONSmartCity technology into the City's hauling vehicles and run it free of charge for six months.

**City Challenge:** Like many cities, the City of Atlanta faced a myriad of challenges related to waste and recycling collection, including:

- Inefficient routes
- Missed pickups
- Recycling going to landfill
- Unreliable vehicles
- Lack of operational data

The partnership between the City of Atlanta and Rubicon addressed these challenges using a combination of Rubicon's smart city technology and operational improvements implemented by the City's Department of Public Works.

Rubicon's technology enabled the City to identify opportunities for improving the efficiency of the City's routes, reducing missed pickups, and pinpointing which vehicles were causing the most breakdowns. In addition, Rubicon helped the City to identify that recycling vehicles were routinely disposing of loads at the landfill instead of the recycling facility. Overall, Rubicon's technology empowered the City with a stream of reliable operational data, enabling the City to make better decisions about improving waste collection throughout the City.

**Impact:** RUBICONSmartCity was installed in the City of Atlanta's fleet of 89 garbage, recycling, and yard waste vehicles, servicing approximately 96,000 residents. After the conclusion of the pilot, the following results were identified:

- **POTENTIAL SAVINGS AND REVENUE:** Rubicon identified actual and potential cost savings of up to \$783,453 annually in areas such as landfill diversion, optimized waste and recycling routes, and reduced maintenance costs.
- **LANDFILL DIVERSION:** After analyzing data collected by Rubicon's technology, the City reduced recyclables going to landfill by 83%. This equaled 355 tons of recyclable material being kept out of landfills.
- **FLEET MAINTENANCE:** Rubicon's data showed that just 10 trucks were responsible for two-thirds of potential maintenance issues. The City focused on these trucks to reduce truck downtime.
- **ROUTE OPTIMIZATION:** Rubicon adjusted the City's solid waste service schedule from four to five days, decreasing the total amount of trash routes per day and balancing the number of hours driven among drivers.
- **SUSTAINABILITY:** Rubicon and the City made changes to waste and recycling operations that delivered savings of 4,752 MTCO<sub>2e</sub>.

**How-To:** Beyond the technology, cities often need to make operational changes to realize the gains identified by the technology. For example, recycling is a complex and costly issue. One way that a city can improve its recycling efficiency is by having a cleaner recycling stream and by educating its residents about what can and can't be recycled, so an entire load of recycling doesn't become contaminated by non-recyclable materials. To achieve this, cities may need to make a change in the way they handle recyclable materials.

With a commitment to improvement and technology to enable it, cities can make significant gains in improving solid waste and recycling collection. All cities should look at technology companies—such as Rubicon Global—and ask about piloting the technology and solutions first, as opposed to securing budget for the solution immediately. Once the ROI is demonstrated for the project, the conversation on contracts and a longer-term solution can easily be had.

**General Tips:** The smart cities movement is at a watershed moment. Cities have a once-in-a-generation opportunity to use technology that is low cost, leverages existing city assets, and drives significant process improvement for city systems.

By shifting to a technology-based, data-driven model, public works departments can achieve greater operational efficiency and drive better customer service. By committing to collect and analyze data from the field, sustainability departments can develop better recycling, zero waste, and resiliency policies. Technology can bring these two departments of city government together, ensuring that they are oriented towards delivering more effective service and more sustainable outcomes. Pilot programs through private-public partnerships like these are tremendous opportunities for a great city like Atlanta to make enormous strides in delivering better government.

**Budget:** For the City of Atlanta, there was no cost incurred for this initial pilot program, as Rubicon offered it as a free six-month pilot. Rubicon offers this to all cities across the United States, and around the world. If a city is interested in how it can leverage technology across its fleets and fleet management process to improve efficiency, increase recycling rates, and drive improved sustainability, Rubicon can work with any city team to make this happen.

**Funding:** Free Six Month Pilot Program

**Tags:** Service Delivery Improvement, Innovation, Cost Savings, Environmental Impact

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