RUBICON

CUSTOMER STORY

Denton, Texas

Overview

In 2019, the City of Denton, Texas released a request for proposal (RFP) seeking a smart routing solution that could help optimize its operations, provide more reliable fleet maintenance data, and improve customer service. Denton selected RUBICONSmartCity™, a technology suite that helps city governments run more efficient, effective, and sustainable operations, as its partner. Two years later, the City of Denton is a blueprint of a technology-driven smart waste operation that is committed to continuous improvement of customer service and creating a better quality of life for city residents.

78
sanitation vehicles

$286K+
annual savings

With RUBICONSmartCity installed in its fleet of 78 vehicles, the City has completely digitized its solid waste operation, reduced citizen reported pickup issues, and identified over $286,000 in annual savings through reduced go-back trips and fuel savings due to improved routing. Per Dusty McGehee, the Crew Leader for the City of Denton's Solid Waste and Recycling Department, "Overall this system allows us to optimize our collection processes, reduce our contamination rates from our commercial and residential routes, and allows us to provide that exceptional customer service that our citizens and the customers of the City of Denton deserve."

Below are more details on what this partnership has delivered to date.

Digitized operations

Prior to its partnership with Rubicon, the City printed out paper route sheets for its residential, commercial, cart, and bulk operations. Rubicon worked with the City to digitize all 240 of its weekly routes and all 120,000 of its weekly stops, saving the City 75,000 pieces of paper per year. With the RUBICONSmartCity platform, the City also digitized operations such as weight ticket logging, pre- and post-trip inspections, pickup issue documentation, and more. Managers no longer need to keep track of multiple printed reports to view route information; instead they can access all of this information on

RUBICONSmartCity's central dashboard while receiving updates in real-time. Dispatchers notify and route drivers more effectively, managers create new routes more rapidly, and fleet managers triage vehicle issues more efficiently. Additionally, with all data on the City's solid waste operations stored in one place, managers can access streamlined reporting and analyze opportunities for further operational efficiency.

75,000
pieces of
paper saved

120,000
stops digitized

Improved customer service

In 2019, the City had no way to verify if a driver collected a load at each customer's address. When a customer called the City to report a missed pickup, the standard protocol was for the driver to go back to the customer's address no matter what.

Now, with Rubicon's in-cab technology, drivers take pictures and log notes if there are any issues preventing a given pickup at an address. This allows drivers to avoid unnecessary go-backs, which based on conservative estimates cost the City roughly $23 per address. In 2021, drivers logged almost 88,000 issues that prevented collection. Almost 77% of pickup issues were instances where residents had not put their carts out at the proper time for collection. This data allowed the City to share accountability with customers and resulted in a 70% reduction in unnecessary go-backs. The City has realized over $150,000 in cost savings annually through reduced go-backs and an estimated 131 tons of avoided CO2e emissions, the equivalent of taking 29 passenger vehicles off the road annually.

Streamlined routing

Rubicon's route management functionality enables the City of Denton to adapt and respond to the day-to-day issues that arise without disrupting service. For example, if a there is a truck breakdown, Denton drivers use RUBICONSmartCity's Route Assist tool to log into the unfinished route, immediately accessing all the remaining stops left to be serviced and ensuring complete and seamless coverage across the City. Drivers took advantage of this tool

70%
Reduction in unnecessary go-backs

$158K+
In cost savings annually through go-back reduction

131 tons
CO2e avoided
Equivalent to 29 passenger vehicles off the road each year

in 2021, using the feature for 9% of all routes, providing seamless customer service amid a pandemic and driver shortage.

Furthermore, with RUBICONSmartCity's route sequencing and turn-by-turn directions, the City reduced average route mileage by 39 miles across the City's 65 residential routes. This mileage reduction saved the City roughly $127,000 in fuel costs and 461 tons of CO_2e emissions, the equivalent of taking 100 passenger vehicles off the road annually.

Reduced recycling contamination

The City of Denton has a long history of sustainable environmental management and is committed to increasing materials diverted from landfills. To achieve this goal, it is critical to reduce contamination at the source, as one contaminated bin of recyclables can send an entire truckload to a landfill. Using RUBICONSmartCity's issue tagging functionality, waste auditors note and take a picture of the recycling bins that are contaminated, and most importantly, let drivers know which bins to service and which to leave out. The City also utilizes location alerts on their in-cab interface to notify drivers if there are customers in multi-family homes or school districts that typically have contaminated recycling. Drivers can then take special care to inspect these bins so they do not contaminate

an entire truckload.

With RUBICONSmartCity, the City of Denton's average monthly contamination decreased by 21% over the course of 2021 and average accepted monthly recyclables increased by 150 tons. The City now generates thousands of additional dollars through increased capture of recyclable materials and saves 5,188 tons of CO_2e emmissions, the equivalent of taking 1,128 passenger vehicles off the road annually.

Powered by AWS

RUBICONSmartCity is a software-as-a-service (SaaS) offering that is powered by Amazon Web Services (AWS). Rubicon leverages the AWS Cloud and other tools to empower cities to use cloud-based technology and machine learning to support their vision for a smarter city.

To learn more and sign up for a free pilot, visit: rubicon.com/cities