



National Cart Services

The Perils of Underestimating Cart Management Cost & Complexity

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- Confidential -

Managing carts is a constant hassle that never seems to run smoothly...



The yard is a mess, and the cart services team never has the time to clean it up



How is it possible that we need to order another truckload of carts already?



Residents are calling and asking when their cart will be repaired or replaced



...and it's a constant struggle to manage increasing costs for fuel, labor and materials without asking for increased fees



City Commission revisits possible increase in solid waste collection fees

By [Hawah Ezell](#)

Published: Feb. 6, 2025 at 11:27 AM EST

GAINESVILLE, Fla. (WCJB) - This time next year, Gainesville residents could be paying a very different price for trash pickup.

In August, city commissioners considered increasing trash fees to support their zero waste goals, so rates increased by 10% to 15% for the commercial hauling of trash.

Now residential rates could follow suit, possibly at a 20% increase.



Rising costs raise San Antonio's trash fees for first time in 4 years

by [Iris Dimmick](#)

August 30, 2024

The morning light had just begun to peek over the horizon as Aaron Darland, 24, and dozens of other drivers for the City of San Antonio's Solid Waste Management Department started up their garbage trucks.

Darland checked fluids, flipped on cameras and kicked the tires of the modern, side loader truck before heading out on his route last week.

Side-loader, as opposed to the rear-loader trucks that require manual manipulation of trash bins, are faster and more fun, Darland said, gesturing toward the joystick used to control the robotic arm that reaches out, grabs the bin and dumps the trash into the truck's hopper to be hauled away.

'Everything is going up'

If the proposed budget is approved, all customers' monthly environmental fee would more than double, from \$1.26 per month to \$3 per month.

The price for the smallest, 48-gallon trash bin would stay the same at \$14.76, but the cost for a medium-sized bin would go up \$1 per month, from \$18.76 to \$19.76. The price for the 96-gallon bin would go up \$3 per month, from \$23.76 to \$26.76. There are no additional fees for recycling bins.

yan Eastman, a city commissioner department shared. "A 50% increase in tipping has gone up by 35% so in order

The Florida Times-Union

Split vote by Jacksonville City Council approves doubling of residential garbage fee

The fee that residential property-owners pay in Jacksonville for garbage collection will go up for the first time since 2010

By: [David Bauerlein](#)

JACKSONVILLE - The fee that residential property-owners pay in Jacksonville for collection of their garbage will go up for the first time since 2010. Jacksonville City Council voted 12-7 for increasing the fee that homeowners and some other residential property-owners pay each year for collection of trash, recyclable items and yard waste at the curb.

The current annual fee is \$51.80. The increase will boost the fee to \$324 later this year and would be followed by \$354 a year in 2026 and a \$384 assessment in 2027. The council also voted to freeze the fee for low-income households.

to \$22.50, the current federal poverty level. For a four-person household, the income level would be \$46,800 to apply for the freeze on the garbage fee.

Opponents of fee increase say City Council should cut spending

Voting against the garbage fee increase were council members Kevin Carrico, Rory Diamond, Terrance Freeman, Mike Gay, Nick Howland, Reggie Gaffney Jr. and Ron Salem. Diamond said before even considering a fee increase, council members and Deegan should cut spending. "You have to at least try, and we haven't even tried," Diamond said.

Salem said he did a masterful job rolling out his legislation and promoting it through media appearances and social media.



National Cart Services

Overlooked & Underestimated: Cart Management is Often an Afterthought in an Operation Focused on Hauling

Cart management is a **cost driver that haulers (both public and private) overlook** in an environment where the expectation is to maintain service levels without increasing cost

Symptoms of Neglect

- Tracking and servicing **thousands of carts** in the field is **operationally complex**
- It requires a **skillset that is vastly different** than managing **weekly hauling routes**
- Because of the focus on hauling, cart management is **rarely scrutinized for innovation or cost saving** opportunities
- The “Amazon Effect” means constituents **expect faster and faster service** which increases expectations and often leads to greater dissatisfaction

Overlooked & Underestimated: The Impact of Cart Mismanagement and Neglect Multiplies Over Time

Impact of Neglect

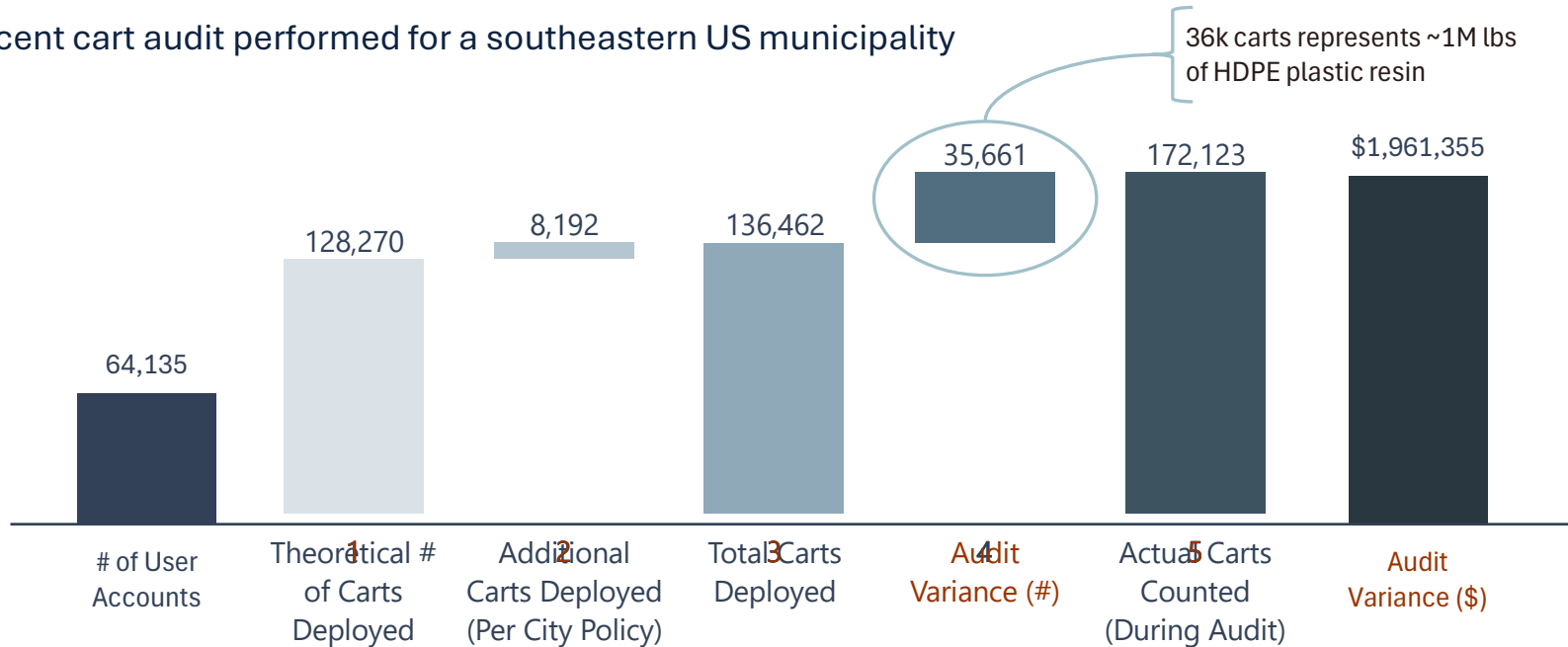
- Capital is spent on **carts that are not needed**
- Labor underutilization adds **costs per action that could be avoided**
- Warranty claims are not pursued and regrind is not optimized **leaving money on the table**
- Manually routing employees in the field **adds time and cost** to service calls

The impact may not be evident (yet) but as the costs multiply it becomes more and more difficult to ignore...

The Scale of the Problem: Inventory Management

Over time, unmanaged inventory **will escalate into significant, avoidable expense** without a tracking system to monitor cart inventory, whether they are at the curb or in the yard

Consider a recent cart audit performed for a southeastern US municipality



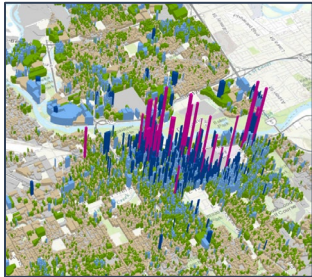
36k carts represents ~1M lbs of HDPE plastic resin

Underestimating the complexity of managing cart inventory at the onset of the cart deployment has resulted in a significant financial discrepancy after only 4 years

The Cost of the Problem: Increased Cost Per Service Call

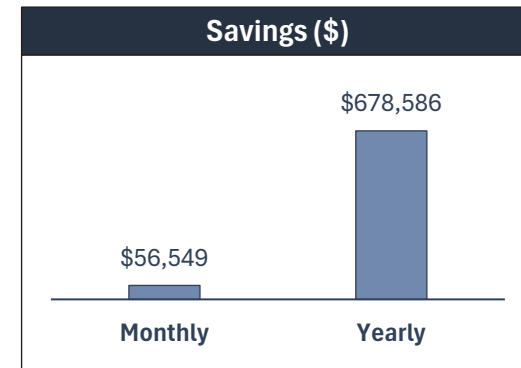
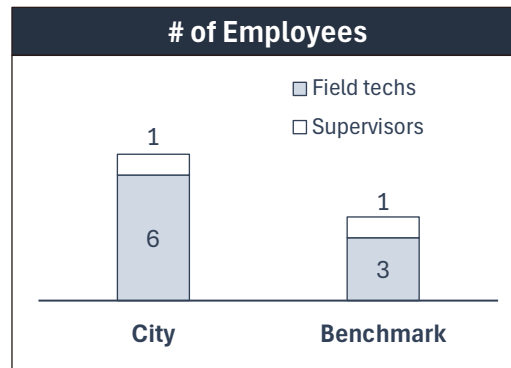
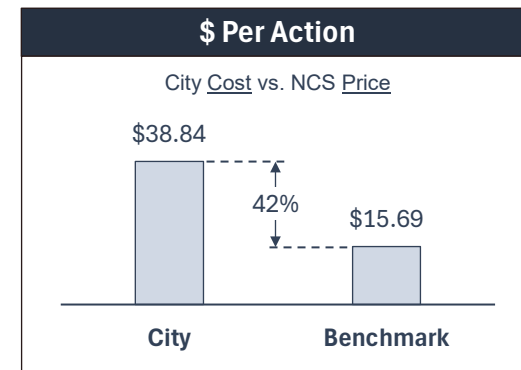
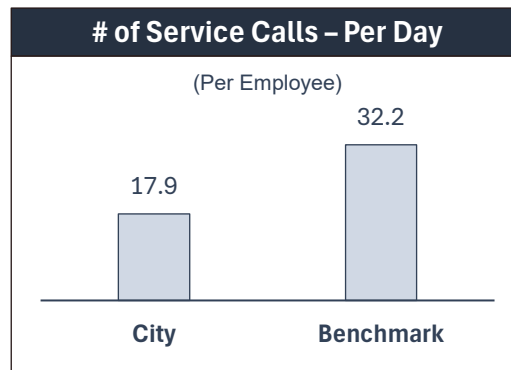
Utilizing manual routing and paper tracking systems **decreases the velocity of service fulfillment** and **increases the cost per action**

A comparison of NCS benchmarks to a Southwest U.S. city's internal cart management cost study



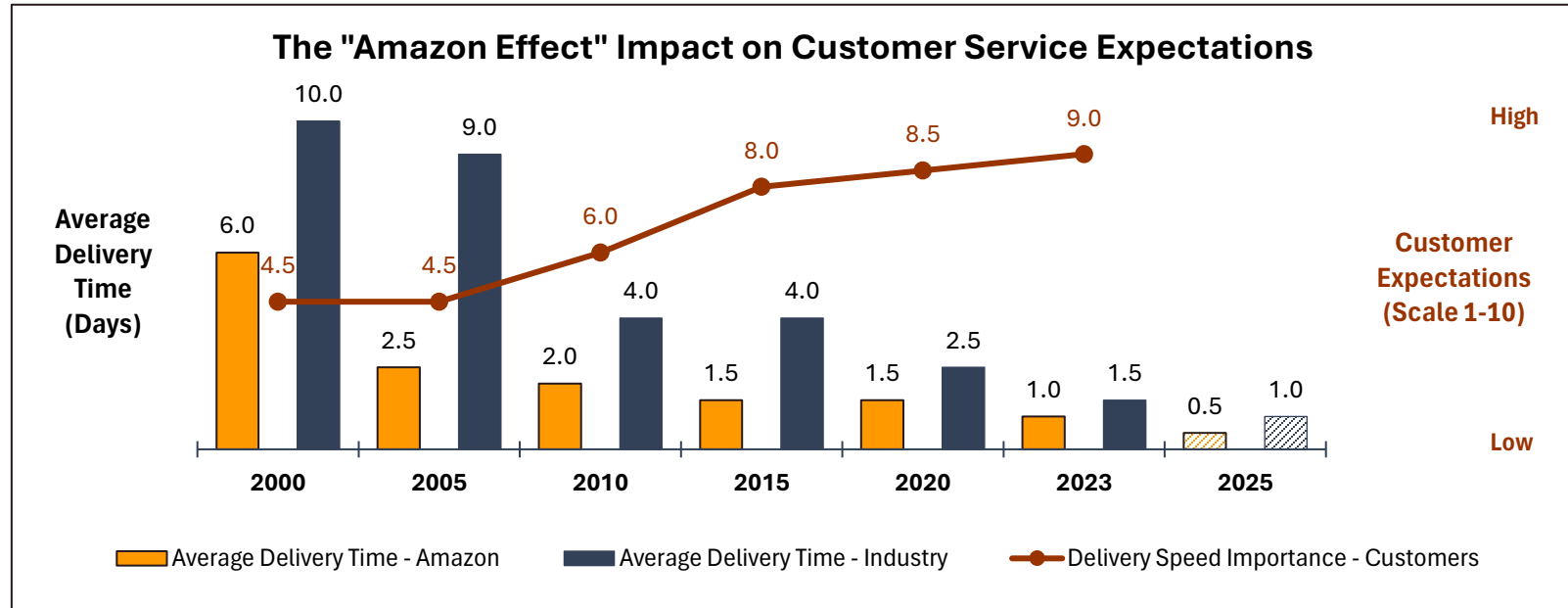
Housing Density: 757/mile²

Service Calls/Day: 113



The Amazon Effect: Increasing Expectations for Faster Service

Amazon, DoorDash, UberEATS and many others are conditioning customers to expect service order fulfillment within hours – not days



Technology to provide service updates via text message throughout the service call fulfillment cycle is also increasingly impacting satisfaction scores

Operational Improvement: Acknowledge the Operating Differences Compared to Collection and Promote a Specialization Mindset

Hauling Mindset

- Excel file of the prior day's cart-related service tickets
- Routing = driver's familiarity with the city (Google maps)



- Shared with the hauling operations
- pulled from cart management to fill in for loader drivers
- The most junior or senior employees



- Stops/Day are only a function of the prior day's tickets
- Inventory ins and outs aren't reconciled



- "We'll get to the yard to clean it up soon"
- Transient workforce = disinterest in continuous improvement



Operational Improvement: Acknowledge the Operating Differences with Hauling and Promote a Specialization Mindset

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Systems



People



Metrics



Mindset

Cart Management Mindset

- **Software that integrates** with city-systems via API
- **Auto-routing** technology to **optimize stops**, vehicle alerts
- **In-cab cameras** to promote safety

- Hire right – **don't overpay** for unnecessary CDL licenses
- Full-time, long-term **cart management focus**
- Pre-test for **customer service mentality**

- KPI's **monitored real-time** – displayed on tablets/phones
- **Quarterly/monthly individual/team bonuses** to promote individual and team accountability

- Best practice sharing, training and **performance rewards**
- **A clean yard – daily requirement** before clocking out

Inventory Management Best Practices: Model, Promote and Focus on Inventory Reconciliation Best Practices



1

Start on the Right Foot

- During the A&D **insist** that all carts are **geo-located** to an address including serial # and RFID tag
- Verify the database is clean and **spend the time** to reconcile to your city's system



2

Stay on Top of It

- Training – instill that any physical material movement **must have** an associated system material movement
- Conduct **regular audits**; track variances, identify root causes for failures and **implement corrective actions**



3

Use the system

- Understand manufacturer lead times and **adjust reorder points** accordingly based on usage
- Track scrapped cart weight to **estimate regrind** value and manage **warranty claims**

Financing Cart Acquisition: Tax-Exempt Municipal Leases are a Cost-Effective Way to Fund Cart Acquisition

TELP's offer municipalities an efficient, **low-cost way to finance capital expenditures** at low effective interest rates

CapEx vs. OpEx	All Cart-Related Costs	Standard Lease Contract
<ul style="list-style-type: none">• Cart-related expenses are bundled into a lease with terms set by the city• The lease payment is treated as an operating expense• The monthly payment is constant for the lease term	<ul style="list-style-type: none">• The lease can many cart-related expenditures (parts, RFID readers, A&D, etc...)• The lease is signed with a municipal financing firm chosen by the municipality• The cost of capital² is passed through to the municipality	<ul style="list-style-type: none">• Is not debt on the balance sheet & does not require direct voter approval• Lower interest rate due to tax-exempt status• Attractive terms:<ul style="list-style-type: none">✓ \$0 up front payment✓ Lease-to-own✓ No residual value✓ No end-of-lease buyout✓ Can be paid off early

*National Cart Services has a program that **combines cart management with cart procurement** into a cost/cart/month = Carts-as-a-Service*

Internal Cost Management: Understand the True Cost of Cart Management Compared to Industry Benchmarks

Inputs¹

Required Inputs

- # of carts
- # of Field Technicians
- # of actions per day
- # of vehicles

Optional Inputs

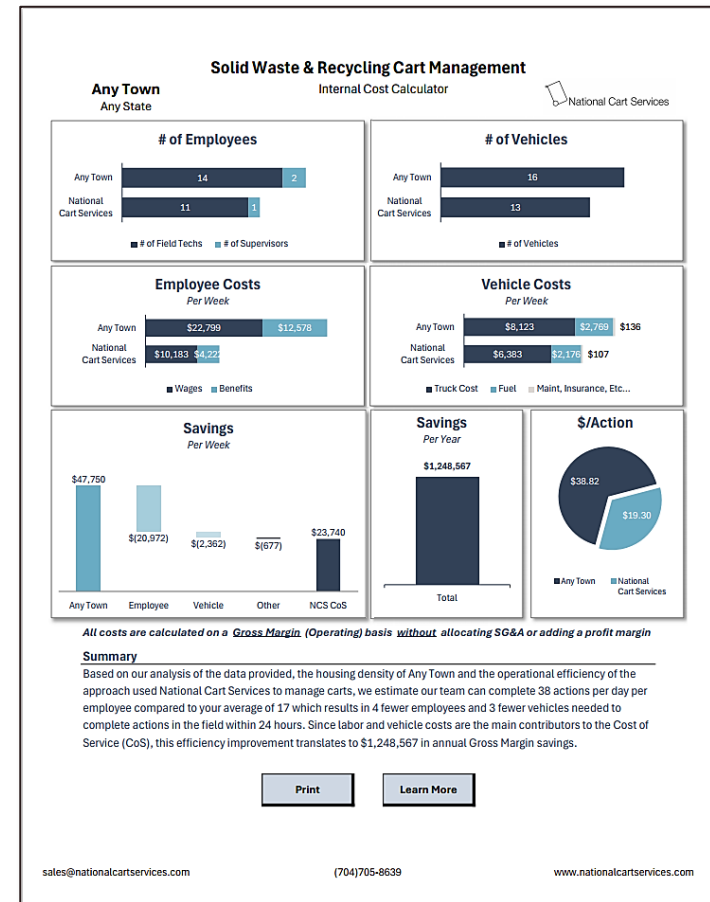
- By position
 - # of employees
 - Hourly/Annual wage rates

Providing optional inputs will increase the accuracy of the cost estimate

Methodology

- **Compares your inputs** to National Cart Services benchmarks
- Provides you with the **quantity and cost of both labor and vehicles** which is 90% of direct costs
- Uses US Bureau of Labor Statistics **wage rates for your state** to calculate wages (if not entered)
- Determines **mileage and fuel consumption** using housing density and average miles traveled
- Ability to print the report or **request more information**
- www.nationalcartservices.com

Output



¹ NCS does not retain any data submitted

Key Takeaways: Cart Management Areas of Focus to Improve Service Levels and Reduce Costs

Cart Management Costs More Than You Think

Hidden costs from inefficiencies, labor, and inventory mismanagement add up over time.

Specialization Leads to Cost Savings & Efficiency

Treating cart management as a dedicated function improves service, reduces waste, and cuts costs.

Rising Expectations Demand Faster, Smarter Service

Customers expect quick response times—modernizing processes ensures higher satisfaction.

Technology & Data Improve Performance

Automated tracking, optimized routing, and digital inventory reduce cost per action.

Understanding Internal Costs Unlocks Savings

Benchmarking and tracking real costs reveal areas for operational improvement.

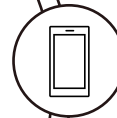
Questions?



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