

Why Automate Your Waste and Recycling Collection?

Presented by:
Tom Turchiano
Municipal Manager



cascade
cart solutions

Why Automate?

- Reduced Injury Risks
- Reduced Vehicle and Labor Needs
- Reduced Environmental Impact
- Reduced Tipping Fees
- Improved Neighborhood Aesthetics
- Reduced Public Health Risks
- Employee Retention
- Benefits for Residents
- Things to consider.....



Reduced Injury Risks

- Workers no longer will have to go behind vehicle to dump the containers.
- Reduces the amount a worker will have to lift.
- Also reduces the chances of getting punctured by needles.
- Helps to prevent knee, rotator cuff, and lift related injuries.
- Reduces Worker Compensation claims!



Reduced Vehicle and Labor Needs

- Automation increases productivity of workers
 - Some communities have seen up to 300% efficiency.
 - More households can be picked up quicker.
 - The more efficient, the smaller the fleet can become!
- Reduces crew sizes per truck from a typical two person crew to just one person!



City of Lakeland Florida Example

Estimated Financial Results for Implementation of Automated trash Pickup, in Lakeland FL
(43,000 residential customers)

Factors	Current Program	Automated Program
Staffing	64	35
Vehicles	26	24-22
Collection Frequency	2 x week	1 x week
Cost (\$/month/home)	\$15.82	\$14.32-\$13.45*
Potential System Savings		\$774,326-\$1,220,862

* Projected rates (first year to full automation)

Rogoff, Marc J. "Automated Waste Collection: How to make sure it makes sense for your Community." *www.APWA.net*. APWA, Mar. 2010. Web. 6 Oct. 2011.

Reduced Environmental Impact

- Fewer Trucks
- Less Fuel Consumed
- Fewer Air Emissions
- Fewer traffic and safety impacts on the street
- Less wear and tear on the streets



Reduced Tipping Fees

- Carts with lids keep water, ice and snow out of the waste stream.
 - When moisture enters the waste stream, it creates additional weight and that contributes to additional money spent on tipping fees.



Improved Neighborhood Aesthetics

- Uniform containers eliminate unsightly set-outs!
- Containers with lids are less likely to be tipped over or torn apart by animals.
- Less litter on the street.



Reduced Public Health Risks

- Containers mitigate odors and health concerns.....



Employee Retention

- Fewer injuries, less impact on your knees, joints and rotator cuff= HAPPY EMPLOYEES!
- Happy Employees are easier to retain.....



Municipal Statistics

- Anchorage, Alaska
 - Prior to automation, worker comp costs were \$172,000 per year.
 - Current worker comp claims have been reduced by 91%, \$15,000 per year.
- Orlando, Florida
 - Automation cut work crew by 2/3.
 - Prior to automaton, they had three workers per truck, now they use one person per truck.
- Cleveland, Ohio
 - Recycling automation pilot program has saved about \$60,000
 - Fewer injuries and less workers comp paid out.

Benefits for the Residents

- Convenient way for residents to dispose of their waste.
- Wheeled containers are very easy to maneuver.
- Containers keep rodents and pets out of trash.
- Helps eliminate over service as carts have a finite capacity compared to manual bag programs.
- Cleaner, healthier neighborhoods with clean and vibrant streets.



Things to consider.....

- Prior to making the switch, consider your geographic conditions.
 - Narrow streets, traffic patterns, street parking, dead-ends, tight cul-de-sacs, low hanging wires and trees....
- Consider Vehicle Maintenance.
 - Most automated vehicles require much more hydraulic maintenance.
- Operating cost reduction plan.
 - Automation requires fewer employees per truck.
- Provide assistance for those who require help with carts.
 - It is a fact that 1-6% of the population may need special assistance with their cart.

More things to consider.....

- Pay As You Throw Programs
 - Automation and Carts make it simple to create tier programs or usage programs.
 - Technology such as RFID and CapturIT, allows you to invoice residents for what is set out.
 - Also creates less revenue leakage for community and a per use rate for the resident!



More about what RFID/Truck Systems can do for you!

- Confirm bin or cart quantity and size
- Listing non-paying customers that currently receive your services
- Confirmation of customers with extra garbage and/or overfilled containers
- Equipment optimization



RFID/Truck Systems continued.....

- Report of bin and cart condition
- Verify customers being serviced are actually “active”
- Route numbers and days of pickup are correct
- Service codes are correct
- Standardized addresses



RFID/Truck Systems continued.....

- Rates match what is actually being collected
- Service types
 - curbside pickup, carry out, road service, alley pickup, etc.
- Confirm route sequencing
- Identifying unmarked bins and carts
- Identifying overlapping routes



RFID/Truck Systems continued.....

- Color confirmation of bins and carts
- Provide profit analysis for each route each day
- Provide productivity report for each driver and route
- Provide safety report for each driver and identify potential risks



Summary

- Automation can save you money with:
 - Improved safety
 - More efficient routes
 - Improved employee retention rates
 - Reduced environmental impacts
 - Improved neighborhood aesthetics
- Automation provides superior service to your customers!

Questions?

Thank You for your attention and participation today!

For More information about Cascade Cart Solutions or Capturit please send me an email @ tom.turchiano@cascadeng.com

Footnotes and Resources

Conversation with Brian Vanderwood, General Foreman Solid Waste Services, Anchorage AK on October 7, 2011

O'Donnell, Patrick. "Automated trash collection replacing garbagemen to cut injuries and - sometimes - costs." *The Plain Dealer*. N.p., 9 Jan. 2011. Web. 4 Oct. 2011.
<http://blog.cleveland.com/metro/2011/01/automated_trash_collection_rep.html>.