Automate Shopping Cart Counts

Learn how our 9-month pilot used IoT to remotely track carts

READY IOT

How much is your store spending to count and replace shopping carts each year?

Between lost and damaged carts, retailers need to constantly restock their inventory. The difficulty with tracking carts is that the typical process is manual, time-consuming, and prone to error. Without dependable counts, stores may be unaware their cart fleet has become inadequate. This puts them at risk of lost revenue because customers purchase less without a cart.

Ready IoT has created a custom counting solution for shopping carts. Using a combination of affordable wireless devices, we provide a location-based inventory for any cart fleet. By automating cart counts, retailers will gain numerous benefits:

Eliminate labor hours spent doing manual counts	**Sync data with cloud computing for trending**	**Enable accurate replacement forecasting**	**Ensure timely new cart orders**	**Drive refurbishment efficiencies**	**Decrease redundant replacements**

Learn about our 9-month pilot with a major retailer. We documented that **cart totals fell by a dramatic 70%, including over the holiday season.** The tracking data highlights the advantages of automating shopping cart counts.

THE HIDDEN COSTS OF SHOPPING CARTS

Cart inventory can dwindle due to theft and major repairs. Even cosmetic issues like rust or cracks can remove a cart from circulation. One customer estimates that they lose approximately 15-20% of carts per year. At an average of $150 for a new cart, replenishing inventory is a major source of capital expenditures.

Running the Numbers on Cart Replacements

We calculated the annual cost of new carts for a national chain versus a single store.

National Fleet	15% average carts lost per year	Replacement total x $150 per new cart
2 million carts	300,000 carts to replace	$45 million

Individual Store Fleet	15% average carts lost per year	Replacement total x $150 per new cart
600 carts	90 carts to replace	$13,500

Labor is another line item associated with cart inventory. Estimates range from $70 to $200 spent per month on labor for manual count carts.

$4,800 – The Annual Cost of Manual Cart Counts

Hourly Overtime Cost for a Qualified Technician	Monthly Hours Spent on Manual Counts	Cost Per Month of Manual Counts	Total Cost Per Year of Manual Counts
$200	2	$400	$4,800

Beyond fleet management costs, inadequate cart inventory can negatively affect the bottom line through:

1) Customer Satisfaction

   Shoppers become frustrated when carts aren't available, lowering a store's brand reputation and guest experience. Customers should not be tempted to shop with a competitor due to cart availability.

2) Lost Revenue

   Total purchase price is often higher with a cart than when customers opt for a basket or their hands. Carts allow guests to select more items, resulting in a larger final bill.

3) Municipal Fines

   Cart litter is a growing problem. Municipal ordinances imposing fines for abandoned carts is a national trend, with fines ranging from $25 to $5,000 or more per cart.

Despite the financial significance of shopping carts, tracking has always been a challenge. Relying on manual counts doesn't match the realities of today's fast-paced retail operations.

One retailer estimated that every cart represents an average $25 purchase. If the corrals are empty, consider that lost revenue multiplied by every customer who can't find a cart.

THE DOWNSIDE OF MANUAL CART COUNTS

Most retailers rely on multiple staff members to manage cart inventory. At the store level, a member of the facilities team conducts a manual count. Many retailers use third-party maintenance contractors which increases the cost of the counts. They report findings to a manager, who then orders replacements or contracts a third-party service to repair carts. Collected data is often pushed to an operations executive on the corporate level to analyze further.

The human factor means there is significant room for error, ranging from inconsistent counts and incorrect tallies to delayed approvals for repairs or replacements. In some organizations, it may be unclear which department should track these capital expenditures.

There is also a disadvantage in count frequency. Carts are commonly inventoried once a month, leaving four weeks for retailers to notice their fleet is shrinking. With out-of-date or incorrect data, stores don't have a reliable way to forecast replacement needs. This puts them in a reactive position to cart shortages. Last-minute cart orders also put a retailer at the mercy of a cart manufacturer's production and shipping timelines.

Ready IoT bypasses these issues by automating cart counts, including data collection, analysis, and notification. With accurate and timely counts, stores will know the exact number of replacement carts to purchase as well as damaged carts to service.

OUR TEST STORE

Our client is a multinational retail corporation. With millions of carts, managing their fleet is a major cost center. They were experiencing an average loss of 15-20% carts per year. We conducted a 9-month trial at a proof of concept location, tagging 200 of 234 shopping carts.

We documented a significant drop in carts in a matter of months. Our technology captured a steady 70% decline in cart totals, starting at 200 carts and reducing to 75 carts. 140 carts went missing in less than a year – none were replaced or repaired.

The vanishing cart inventory was most pronounced over the Thanksgiving-Christmas holiday season. This store had empty corrals during the busiest retail time of the year, including weekends. This problem would have been avoided if our counts had been used to trigger reorders of new carts.

How much did the empty corrals cost the retailer? While the lost revenue from this single location is impossible to quantify, it is easy to project that it was significant. Moreover, this was just one out of thousands of stores. Multiplying this problem across an entire portfolio highlights how quickly the costs of empty cart corrals can escalate.

Original sample was for 200 tagged carts in one test store location
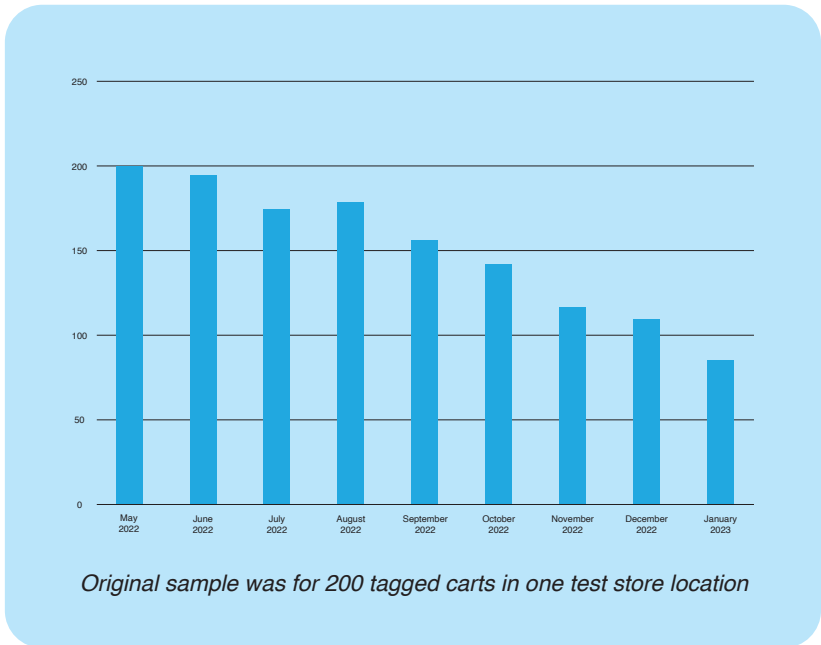
MESH FOR SUCCESS

We employ a mesh network of three RF (radio frequency) methodologies in our solution, including Bluetooth, LoRaWAN, and LTE.

Each cart is seen by this network and the counts are transmitted to the cloud via a secure cellular network. The reporting interval is customizable and Ready IoT works with the retailer to maximize accuracy while managing data costs. Ready IoT's Ready Asset Pro UI is available to visualize the data, create reports, and send notifications. Alternatively, the data can be injected directly into the retailer's data lake.

The solution has no negative effects on the customer experience. The tags are unobtrusive and install quickly with a permanent adhesive. Because of their minimal profile, they won't impact cart operation while in use or being nested into a cart mule or corral. The device batteries will support a 5-year cart life.

THE FAST TRACK TO ROI

Our solution offers several paths to ROI. While the actual numbers will vary from retailer to retailer, every store will realize benefits in each of the following areas:

Full cart corrals
Take the average ring at your store and that's the value of always having a cart available.

New cart purchases
While a low cart inventory is problematic, surplus cart orders are also a misuse of funds. Having accurate counts facilitates efficient new cart orders. It also ensures that new carts are only sent to the stores that need them, when they need them.

Cart reclamation
Damaged carts are candidates for refurbishing. Maintaining a count of damaged carts can be used to trigger collection and refurbishment. A refurbished cart might cost $50 on average, which is a good investment compared to $150 for a new cart.

Sustainability
Companies can also demonstrate good environmental stewardship by protecting a cart's lifecycle.

Leverage
The same mesh network that supports the cart counting solution can be leveraged for hundreds of additional solutions without the need for further infrastructure investment.

Totally intrigued and want to chat specifics?

Please reach out to Ben Muhlenbruch, our VP of Business Development,
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