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The Advantage in the Waste and Recycling Industry

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Web-Based Cart Management: Overcoming Technology Barrier Myths

The right Web-based software will not only streamline your service operations and improve your bottom line, but it will also prepare your business for what's to come.

By Mark Harvey

The challenge facing many waste and recycling haulers and municipalities today is the ability to know where their cart assets are in the field and how to effectively track the service history of those carts between staff in the field and operations back at the office. Lost or damaged assets mean lost revenue and customer complaints. Collections managers are beginning to understand the true business value of knowing where their assets are and managing those assets throughout their useful life to protect their investment and retain high customer satisfaction. This value includes tracking a cart from manufacture to assembly and delivery by assigning the asset to a specific customer location (address and geo-location), then managing the useful life of the whole cart fleet during swaps, drops, repairs and replacements. Web-based, cloud-managed software is the ideal solution for smart cart management and simplified, efficient business operations.

CartLogic™ Plus is accessible via the web through desktop or laptop computers, tablets or smart phones. Images courtesy of Cascade Engineering.

The Basics of Web-based Asset Management Software

At the most basic level, the benefits of using Web-based, cloud-managed software include:

- *Mobility*: Anyone with Internet access and a secure login can use the software on-the-go from their preferred device (desktop, laptop, tablet, smart phone).
- *Hosted Solution*: Web-based software requires no hard installation of hardware or software, meaning minimal-to-no set-up, automatic updates and feature additions with no maintenance downtime.
- *Smart, Scalable Application*: Cloud-managed means the application is built on a secure infrastructure that has the ability to scale to meet demand.
- *Low Cost Structure*: The ability to develop, manage and maintain a single application for all customers from one platform, without a required hardware/software installation allows the supplier to decrease product cost and increase flexibility.

A great example of Web-based, cloud-managed software in use in our daily lives is a personal e-mail account such as Gmail™, Yahoo!®, etc. where your content is securely stored in a cloud and accessible at any time, from anywhere.

Current State of Asset Management

Every solid waste operation, large or small, has some knowledge of their container purchases and a basic understanding of their customer list, but if they're not connecting the dots that those carts at the curb are data points in the larger view of their operations, then they've got holes in their revenue stream, which equates to opportunity for their business. Keeping track of those carts and continuously maintaining an accurate and up-to-date, or "clean," database of the assets associated with a customer location better equips you as a municipal waste department or hauler to streamline your operations, accurately forecast inventory levels, estimate product lifecycles, and focus on participating in the larger process of environmental conservation through recycling participation programs and volume-based collections. All of this leads to a healthier bottom line. Now, think of the possibilities if all of your asset information could be:

- Managed in one place
- Available in real-time from anywhere
- Accessible to multiple employees within your team simultaneously
- Automatically compiled into downloadable electronic reports to increase inventory transparency and account for services rendered

Instead, many businesses attempt to manage their assets using manual spreadsheets and customer files in the office, but this cumbersome process is latent with human error and easily susceptible to the "I'll get to that tomorrow" syndrome of our ever-growing industry. Compounded, these issues often culminate in stacks of unorganized paper reports, incomplete or illegible

Case Study

Challenge:

A municipal waste management department was experiencing significant increases in requests for cart services and swaps after their city-wide assembly and delivery services were completed for 46,000 trash and recycling carts. They were also expecting a new cart inventory delivery and needed to maintain a comprehensive database to protect their investment into the future.

Although the original A&D was completed with Web-based software, resulting in a clean inventory database to begin, an inefficient, manual process was employed in the department's office following the A&D, which involved multiple spreadsheets, paper-based files and various user techniques maintaining the inventory history. This, combined with the high level of service requests was resulting in a loss of cart history information.

Solution:

They turned to Cascade Cart Solutions to provide a Web-based tool to maintain their existing cart inventory, handle new cart inventory delivery data, and track and manage all cart services forward. Cascade delivered CartLogic™, their scalable Software as a Service (SaaS), Web-based cart asset management solution, loading the City's original inventory database and geocoding cart locations so the carts were associated with their customers' address location.

Through simple integration, CartLogic provided the City with the ability to fully track and manage their entire waste and recycling cart fleet through the assets' useful lives, from cart manufacture data, to delivery, maintenance and replacement, all on an easily accessible, Web-based platform. CartLogic immediately improved inventory visibility, enabled reporting capabilities by customer and cart, and simplified service completion confirmation, which in-turn improved customer service response time and increased customer satisfaction.

Results:

The City and other haulers using the industry-specific, Web-based cart management software are experiencing significant benefits, including:

- *Mobility, User Flexibility*: The Web-based software allows any user to access accurate, up-to-date data on the go with any internet-enabled device and login info, resulting in ease of use throughout the organization from Owner/President to Customer Service Rep
- *Business Efficiency through Reporting*: Quick, easy and accurate cart tracking enabled by the software frees time for personnel to forecast inventory needs and complete ROI analyses through basic asset, service and warranty reporting
- *Meeting Sustainability Goals*: Accurately tracking cart life cycle from manufacture to replacement allows haulers to properly adjust their inventory purchases, requiring less production of on-hand inventory at the manufacturer, and anticipate the end of life of their assets, meaning carts will be removed from the waste stream and properly recycled at the end of their useful life

Cart service work orders are completed on the street using rugged handheld computers, tablets or smart phones.

field service tickets, and numerous, inconsistently formatted spreadsheets managed by multiple people on the team, perpetuating the cumbersome process. The repeated "Here, let me just find that on my desk," response from customer service reps isn't gaining customer loyalty or retention. So, the next time the Manager calls from the road and asks for the daily service report of maintenance, repair, swaps and deliveries, wouldn't it be great if you could remind them to simply log in to your Web-based software program that puts the data right at their fingertips?

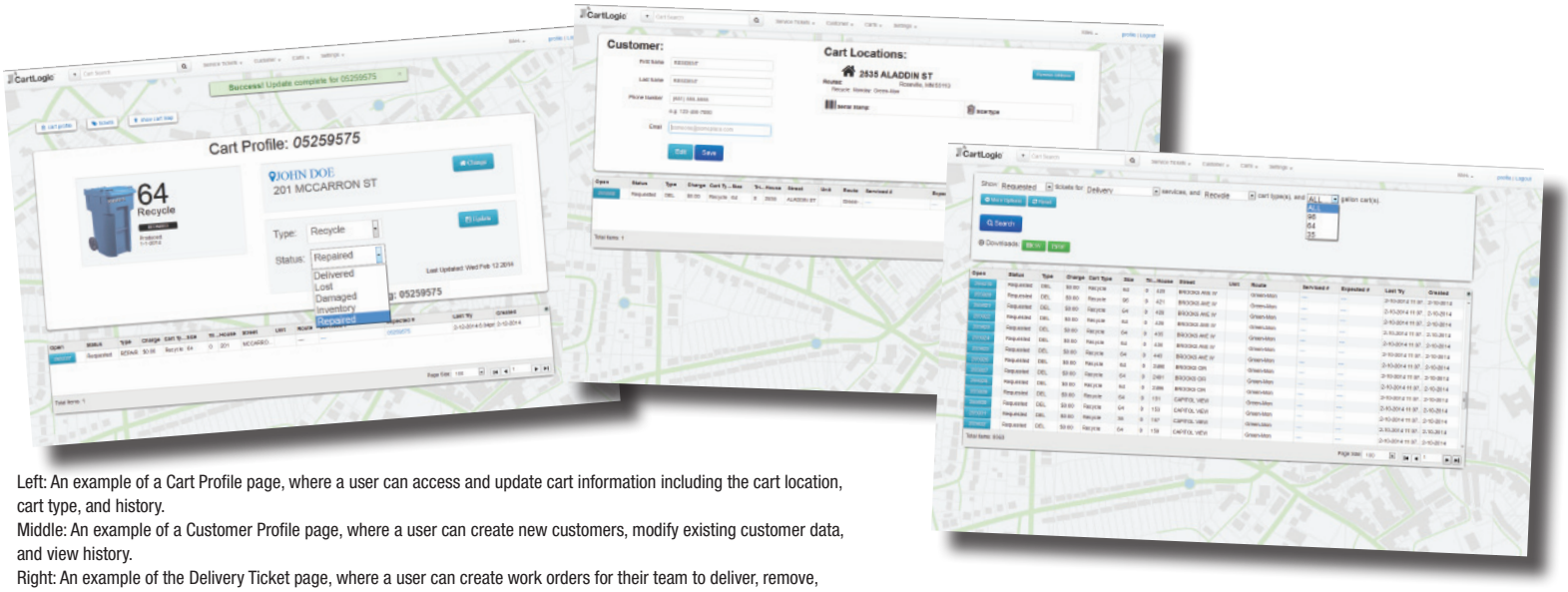
Why Should I Change?

Today, it is estimated that there are nearly 120 million residential waste and recycling carts at curbs throughout North America. As a hauler or municipal solid waste department, whether you call yours garbage cans, trash bins or collection containers, no matter how you slice it, that's a lot of assets to manage. Not to mention the fact that each of those assets is associated with a customer, equating to revenue for your business. And when you consider current industry trends, the number of carts in your fleet and the complexity of your customer relationships will only continue to grow with the additional organics and green waste programs popping up from city to city, meaning you'll have more assets to manage per customer and more information to keep track of back at your office. Now, more than ever, the accuracy and accessibility of your database will be key to maintaining customer accounts and positive revenue growth.

Can I Change Now, and Quickly?

Maintaining knowledge of your cart inventory isn't necessarily new to the solid waste industry, as serial numbers have been used since the onset of cart manufacturing. With the addition of barcodes in the early 2000s, the idea of technology was introduced into the asset tracking conversation and spreadsheets became the go-to data format. Then, taking it to the next level, radio frequency identification, or RFID, labels and tags were incorporated into cart programs in the mid 2000s, making it possible to not only catalog your cart inventory, but also electronically associate your individual assets to your customer locations, called geo-coding. These technologies lay the foundation for basic asset tracking of your cart fleet, but truly managing your inventory and cart history on a day-to-day basis is crucial to a smart, agile and healthy business.

Luckily, all of these foundational elements have paved the road for using technology to accurately maintain a healthy cart inventory. Through Web-based cart management software, electronic information collection in the field—whether by smart phone or rugged handheld—can easily be uploaded from the service team for quick processing by the office



Left: An example of a Cart Profile page, where a user can access and update cart information including the cart location, cart type, and history.
Middle: An example of a Customer Profile page, where a user can create new customers, modify existing customer data, and view history.
Right: An example of the Delivery Ticket page, where a user can create work orders for their team to deliver, remove, exchange, and repair containers deployed in their service area.

staff. This seamless data sharing allows for a simplified, paperless workflow and minimizes human error by eliminating data re-entry from field to office.

How Do I Make the Switch?

Considering the move from a labor intensive, paper-based cart service workflow to managing your container fleet through Web-based software may seem daunting, but the barriers you may fear about this technology are really the basis for how the best cart software is built. Considering the technology myths around this transition will help you learn what features to look for and what benefits there are to using Web-based software to track and manage your cart fleet.

Myth #1: Web-based Software is Complicated and Hard to Use

Although there are plenty of the "we do it all" software packages available in today's asset management world, requiring installation discs and version upgrades only through request to the manufacturer, the reality of a well-built cart asset management solution is like a puzzle piece within the larger operations puzzle. The software will be built to handle container management as the primary goal, and integration into other waste business processes will be considered secondary. You should look for:

• *Software built for the industry by the industry*: Large, all-in-one Enterprise Resource Planning (ERP) systems can be great tools for large teams, but they're not built for everyone. Often, they're a mass of applications developed for various industries and adapted to the waste and recycling space in a "one-size-fits-all" package. Instead, look for a cart management application that is built by, or at least informed by, industry veterans that understand what goes on day-to-day to maintain a cart fleet.

• *Web-based access*: It doesn't get much easier than "accessible at any time, from anywhere with your preferred internet-enabled device."

• *Cloud-managed platform*: Ideally you want to look for a cloud-managed program because it means your data is securely stored in the cloud, on equipment and in a platform that your team doesn't have to install or maintain, which will reduce the need for your IT personnel to manage the technology.

Myth #2: Web-based Software is not Reliable or Secure

Without making the obvious argument about personal hard-drive crashes and the susceptibility of paper reports to food, water and fire damage, the reliability and security of Web-based software can easily be illustrated again by the Gmail or Yahoo e-mail account examples. Keeping in mind that both of those services are often free, fee-based software typically incorporates even more stringent securities. You should look for:

• Disaster recovery: Inherent in most Web-based software solutions, but a point to confirm with the supplier, is a disaster recovery plan for data. Typically this involves back-up servers and data duplication, which sounds like geek speak, but rest-assured they know the ins and outs of program redundancy.

• Cloud-managed: Again inherent, but worth the confirmation, is if the supplier is hosting their software service on a reliable hardware infrastructure.

Myth #3: It Will Take Too Long to Train My Staff How to Use Web-based Software

The benefit of the time it's taken for the industry to adopt technology at the cart management and service history level, is the self-training most generations have already experienced while adapting to smart phones, tablets, social media and more. In addition, as Myth #1 states, software built for the industry by the industry means ease of use from the field services tech all the way through the organization to operations management. You should look for:

• Multi-user accounts: With the ability of multiple employees to login simultaneously from various locations using unique accounts, single training sessions can be held for large groups.

• Service training: Ideally the Web-based software will come with online training or virtual webinar offerings from the supplier. Onsite training may also be offered for a hands-on learning approach.

• Multiple data views: In the world of book learners and visual learners, a Web-based container management software will preferably have multiple descriptions of the data on the screen, both text and image versions of the cart and customer information to suit different users. This may even include a mapping function similar to Google Maps™, allowing you to visualize your cart fleet and increase location knowledge.

Myth #4: If I Use Web-Based Cart Management Software, I'll be Locked into One Vendor Forever

Again, we will reference back to Myth #1 here, as this is still a valid argument in the case of some ERP systems. However, well built, Web-based cart management software will allow for exporting and integration of your data. You should look for:

• Data liberation: A supplier should understand that you own your data and that you may want to integrate that data with existing software systems, or export that data at any time for full control of your inventory and customer database.

Looking Ahead

The right Web-based software will not only streamline your service operations and improve your bottom line, but it will also prepare your business for what's to come in the future. By simplifying your A&D and service tasks, seamlessly tracking maintenance, loss and damage of assets, accurately recording and accounting for services rendered, and automatically tying all of your asset data back to your customer accounts, your team will see the benefits of Web-based software in your day-to-day operations. Freeing your staff from cumbersome, paper-based processes will save costs and allow your business to focus on building more customer relationships. | WA

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