# Steering Into Tomorrow

The shopping carts of the future will be both high-tech and traditional.

By Bob Ingram

That familiar clang in the cart corrals of today's supermarkets, as familiar as "paper or plastic" has become to shoppers, will be made in the future by a new generation of shopping carts, some familiar and others still on the drawing board.

Case in point: Walmart has more shopping carts than any entity on the planet, so it should come as no surprise that the Bentonville, Ark.-based mega-retailer has recently secured a patent for its own shopping cart of the future.

While Walmart didn't return requests from *Progressive Grocer* for comment on the cart, technology website SlashGear.com reports that the patent is for an autonomous system that wouldn't require the traditional carts themselves to be replaced. Instead, a small robotic device, visually similar to a robotic home vacuum cleaner, is attached to existing manually operated carts. The device is intended to fetch the cart from the corral, after which the customer could then take control of the shopping cart or could, alternatively, have the robotic device continue to power it for them.

When the robotic device gets to a cart, it slides itself under the front and attaches itself to the rails on the bottom of the cart, and then essentially serves as a motor, intelligently driving the cart to the customer. If the customer doesn't want the device's aid any more, it will detach from the cart and steer itself back to its base, being careful not to run afoul of shoppers.

The circular device would be powered by a central system, enabling the robot to find the customer — regardless of where they are in the store — and bring them a cart. The patent suggests that this could be accomplished by using a physical button device in the Walmart store or by using a Walmart mobile app.

"I think it's great that Walmart is moving in the direction of IP [internet protocol] in this way," says Sucharita Mulpuru, chief retail strategist for New York-based event organizer Shoptalk. "That's taking a page from great innovators like Amazon."

Mulpuru cautions, however: "Patents don't say anything other than that someone thought it was an interesting idea. Most of these patents are never realistically scalable or functional. Until we see a beta [version] in a market and it is transformational to shopping, it's too premature to say it will transform shopping. But what I do think it says is: 'Hey, Walmart is not a dinosaur. This is a company that will be formidable in retail for years to come.'"

## Global Innovation

Another shopping cart patent has been issued to Mordag Design, in Istanbul, Turkey, which bills itself as "the Studio of Rational Art." The firm's Z-Cart is a futuristic "expandable, rechargeable mobilized shopping cart," according to the company's president, Meta A. Mordag.

Z-Cart is designed to enable rapid shopping, especially in large supermarkets, Mordag says. The main body, which can hold removable baskets and bags in different sizes, can also be expanded when needed. An optional rechargeable scooter can be integrated into the main body, allowing the shopping cart to carry the user.

Designed for relaxed and rapid use, the scooter system carries the user in a standing position. According to Mordag, it ensures a safe ride within the store by using infrared

**OLD SCHOOL** The C-Series Group from Versacart Systems is among the 50 traditional carts the company makes.

**Z-CART**
**From Mordag Design, in Turkey, this futuristic model is expandable, rechargeable and mobilized.**

distance detectors on its front and rear.

The patented product placement system in a Z-Cart allows the user to group products as they're taken from the shelf. The system also enables the use of different-size shopping bags.

With the help of the removable shopping baskets, Mordag says, people shopping together can collect products from different parts of the market and place them on the same Z-Cart.

Meanwhile, in Brazil, Hellmann's, a brand of global food giant Unilever, has trialed shopping carts enabled with near field communication (NFC) technology that texts recipe ideas including products in nearby aisles to shoppers browsing with jars of Hellmann's mayonnaise already in their carts.

The NFC tags embedded in the carts, the products and the shelves detect where the shoppers are in the store and display recipe suggestions related to the ingredients within their proximity.

If shoppers decide that they want to make a recipe, they can click on an icon to be directed to where the other necessary ingredients are in the store and also share the meal idea with friends across social networks.

### Enhancing the Traditional

Mike Reynolds, VP and general manager of Boulder, Colo.-based Versacart Systems Inc., envisions lighter, more durable carts designed to accommodate electronic systems, both embedded for in-store use and enabled for consumers.

"Store equipment and shopping carts need to evolve to fit seamlessly into new retail environments," says Reynolds, whose company makes about 50 types of traditional and convenience-style shopping carts. "We will continue to create unique carts that meet the needs of the marketplace, working with our grocery partners to deliver quality and efficient cost-effective solutions."

Americana Cos., in Omaha, Neb., has rolled out cart innovations such as rust-inhibiting zinc plating, a 5-inch shopping cart wheel that won't flat spot, and antimicrobial child seat belts.

"We have seen some patents for shopping carts that will drive-push on their own," says Americana Cos. President Terry Swanson. "We are not one of those inventors to date, but as one of the largest maintenance/repair companies, with over 75 crews, we would be able to maintain and install any new invention that pertains to a shopping cart."

In Seoul, South Korea, SK Telecom has developed a virtual shopping cart called Smart Shopper. "Instead of using traditional shopping carts, customers can add items to virtual carts via a scanner that reads bar codes on products," says Cindy Hyungsung Kang, SK's public relations manager. "They can then purchase items conveniently at smart self-checkout kiosks without having to wait in a checkout line, and have purchased items delivered to their homes, free of charge, on a desired date and time, instead of carrying heavy bags."

With Smart Shopper, Kang asserts, retailers can offer a unique and tailored personal shopping experience by providing users with customized shopping-related information like special offers, discount coupons, and product recommendations based on the user's previous shopping history and movements within the store.

"Smart Shopper itself does not store any personal information," Kang emphasizes. "Once the user makes a purchase at a 'Smart Checkout' self-checkout kiosk, all data stored within the bar code scanner is automatically deleted."

Smart Shopper is a an omnichannel platform built with advanced information and communications technology (ICT), including bar code scanning, NFC and Bluetooth low-energy (BLE) technologies. It's currently in use at the Lotte Department Store in Korea, the world's third-largest department store chain.

So, while the shopping cart corrals of tomorrow might be the same, what they hold for shoppers certainly won't be. **PG**

> **"Store equipment and shopping carts need to evolve to fit seamlessly into new retail environments."**
>
> **—Mike Reynolds, Versacart Systems Inc.**