IoT

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CPG PACKAGING

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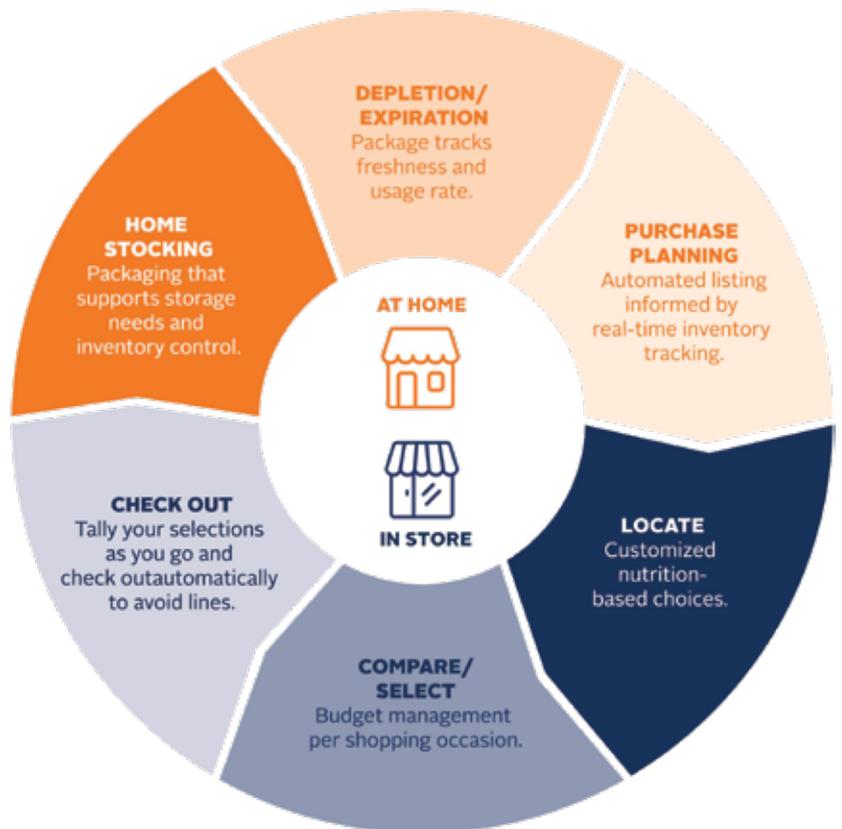LEFT

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A Vision for Delivering Personalized Consumer Value

by Ken Miller

IoT (internet of things) technology is changing the retail shopping experience. Amazon Go allows consumers to walk out the door with merchandise, unhindered by the age-old checkout process we've come to accept. The grocery chain Wegmans uses merchandise tracking and location to upgrade the customer experience. These forward-thinking retailers are dictating to product manufacturers. Think of it as a high-tech version of what WalMart has done for years in dictating SKU sizes, pricing and other product characteristics.

What if the CPG manufacturers took the lead in controlling their fate by defining a better consumer experience both in the store and at home? A vision of the not-too-distant future leverages a strong understanding of the consumer, the application of developing technology and a good dose of imagination to create customized, relevant and rewarding experiences via packaging. Here's how IoT technology may impact package innovation in ways that can dramatically transform the benefits consumers derive from packaged goods.

AT HOME

DEPLETION/ EXPIRATION
Package tracks freshness and usage rate.

PURCHASE PLANNING
Automated listing informed by real-time inventory tracking.

HOME STOCKING
Packaging that supports storage needs and inventory control.

IN STORE

LOCATE
Customized nutrition-based choices.

CHECK OUT
Tally your selections as you go and check outautomatically to avoid lines.

COMPARE/ SELECT
Budget management per shopping occasion.

It's likely that select high-margin categories and venues will be the first to make use of technology to upgrade the shopper experience—categories like OTC medications, home goods and electronics, and perhaps soft goods like clothing. But it's not too early to think about how products in your local grocery store (and those you manage) might comply as costs go down and benefits go up.

Let's examine one shopping scenario to see how IoT technology could deliver a more useful, customized experience for the shopper both in store and at home. We're all familiar with the "Big Shop" weekend shopping experience. This is the occasion where the family shopper heads to the local supermarket (or big box) with list in hand to buy everything the family needs for the coming week. We see this occasion as a cycle of activities that begins and ends in the home. Based on our experience in mapping the "Big Shop" with consumers, this is how IoT can enhance the experience.

I. PURCHASE PLANNING: This activity involves item listing and meal planning for the week. What if packaging data, including information about current household inventory and prior

purchase history, could automatically create a list of "fill-in" items for your manual edit? It would allow you to delete or swap items and add discretionary ones, too. Plus, project your expected budget for the occasion.

II. LOCATE: At retail is where IoT-connected packaging really shines. Let's say a consumer has a member of the household with a salt restriction, so the shopper is trying to limit salt across the family menu. It's not a problem thanks to an application that presents salt data and compares choices with an easy-to-use interface. Not only that, consumers could place an item in context with the other ingredients in the cart or already in the pantry. This allows the consumer to see the total sodium content and make tradeoffs in real time. If necessary, alternative menu item suggestions could be generated on the spot.

III. COMPARE AND SELECT: Let's not forget the budget. The system compares the prices of items in the consumer's cart with previous purchases for confirmation. It can present less

expensive options and even tally the total cost as the consumer shops. This works like an active online shopping cart to keep track of the total cost.

IV. CHECK OUT: Ideally there should be no delay for checkout. A way to get busy consumers out the door even faster than Amazon Go! is a select and pay process in which purchase data informs Purchase Planning as the cycle returns.

V. HOME STOCKING: Integrated packaging technologies and home storage locations provide an automated running inventory of items eliminating the need for weekly search and discovery missions.

VI. PRODUCT DEPLETION: Here's the "engine" behind Purchase Planning and the last stop on the "Big Shop" occasion cycle. On-package and storage environment technologies could interface to measure freshness status, depletion rate and how quickly a product is being used. Consumers can set parameters and signals for how long and how much—and even whether to buy more or less next time. Again, feeding the Purchase Planning and cycle repeats.

What technologies can and will enable these kinds of customized benefits? IoT, AR (artificial reality) and AI (artificial intelligence) are no longer out on the distant horizon, they're here and ready to be adapted and applied. Harnessing these and other emerging technologies can move us beyond just simple convenience. This kind

of functionality can provide a personalized, high-value shopping experience that will motivate trial, drive loyalty and lift brand engagement.

Cost may currently prevent each and every package from having the kind of embedded technology necessary to deliver on all of these benefits today. However, a quick scan of available and evolving QR and RFID labels can already utilize a variety of data that can be matched to prior consumer behavior to present options and tie products together in recipes. Previous purchase behavior can readily become a database of information that presents consumers with personalized options that meet nutritional, dietary, budgetary and taste preferences.

Linked devices and appliances could certainly play a role by reporting on the status of products brought into the home and updating lists accordingly. The brands and the retailers working together may be the key to truly personalized experiences that provide meaningful benefits. Retailers are in a unique position to capture consumer purchase data intelligently and without intrusion. Ultimately, it's up to us to avoid the "let's do it because we can" paradigm and shift toward a "let's do it because of the consumer benefit" mentality. 💬

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