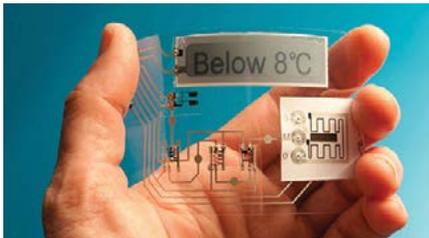


MARKETINSIGHTS | OCTOBER 2014

FOOD Smarts

Can your food tell you whether its quality has been compromised? Innovators in the active and intelligent packaging market are working to ensure that one day, it can. Keeping pace with growing consumer demand for high-quality packaged food and manufacturers' concern for longer product shelf life, on-pack indicators of freshness and temperature are a rapidly developing product segment within the smart and intelligent packaging market. Advocates for this emerging packaging segment cite the benefits of better information throughout a products' lifecycle, allowing for more informed decision-making from manufacturing through the point of consumption.



WAS IT HOT IN THERE?

Expected to launch this year, Bemis' Smart Labels can be used on a wide range of products from meat and cheese to medical devices and personal care items.¹ The Smart Sensor System utilizes Thinfilm technology to assist with cold chain management on perishable products and merchandise that cannot exceed a specific temperature threshold. The sensor tag measures, records, and stores sensory information in the re-writable Thinfilm memory, and outputs that information when a reader is placed in close proximity to the tag.

FRESH FOR LIFE

Essentra Packaging launched AquaSense label technology to help maintain and control the moisture content within packaging, ensuring products stay fresh and flavorful.² The absorbent AquaSense pad is pre-filled with liquid (typically water) and activated when a consumer opens the package for the first time. The pad gradually releases liquid over time to maintain a controlled level of humidity inside the package, which keeps the product at peak freshness and reduces potential waste from drying out.



INCREDIBLE, EDIBLE... Packaging

With more consumers reading ingredient labels as a means of determining product quality, there is a growing awareness and interest in exterior product packaging as well. Consumers may soon expect much more from their product packaging than mere recyclability.



EDIBLE EQUITY

Some companies are using edible packaging on a promotional basis to create unique brand associations with nutrition and responsible packaging waste reduction. U.S.-based ice cream truck brand, **Coolhaus**, has taken it a step further, using an edible, potato-based wrapper, custom printed with edible soy ink graphics as the permanent packaging for their ice cream sandwiches. This added executional detail reinforces Coolhaus' brand positioning, "we're all about satisfying your sweet tooth AND mother nature."³

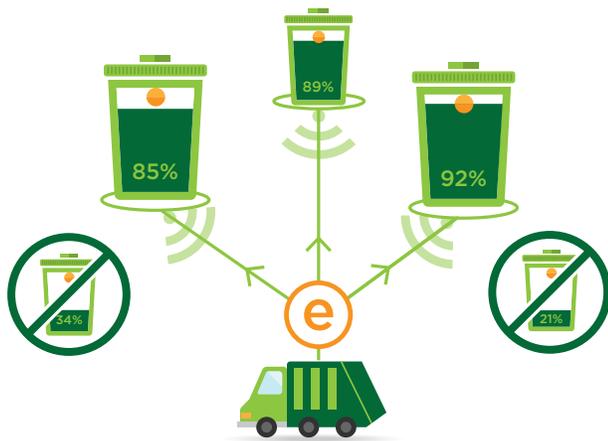
INSPIRED BY NATURE

Stonyfield Farm is test marketing Frozen Yogurt Pearls, a new product that utilizes WikiFoods edible technology to replace traditional plastic packaging with natural, edible food skins. The outer layer of the product is an organic fruit 'envelope' that serves both as a thermal barrier and a protective membrane for what's inside.⁴ Although Frozen Yogurt Pearls can be washed, carried and handled without being damaged, prevailing consumer and retailer concerns about perceived hygiene issues prevent them from being sold today in a completely package-free format.⁵ With a shared goal of ultimately eliminating unnecessary packaging and reducing waste, Stonyfield and WikiFoods are partnering with retailers to design package-free solutions for the near future.



TALKING Trash

Addressing environmental concerns while also improving efficiency and reducing costs is a big opportunity for waste management companies. The single largest cost for most companies is the physical garbage collection from residential and commercial customers; however, intelligent sensors are now being introduced to help drive out costs through automation and optimized planning.⁶



I NEED A PICK UP, PLEASE

Helsinki-based **Enevo** will be expanding its *cleantech* services across Europe and into North America this year. Enevo is a services firm that provides sensor units to waste management companies for free. The goal of their service is to optimize waste collection schedules, reducing overflowing bins and eliminating unproductive pickups to empty bins, resulting in direct cost savings in waste logistics of up to 50%. The wireless sensor units measure and forecast variables like volume and temperature within the waste bin and sends that data back to Enevo via GPRS.⁷ The company then uses the data to optimize customer waste collection intervals and routes.

MORE WASTE, LESS SPACE

Touting an 80% reduction in waste collection trips, **BigBelly** offers solar-powered, self-compacting trash receptacles linked wirelessly to a proprietary management system that monitors waste stations and optimizes collections. The compacting benefit of each BigBelly bin, a feature powered by its built-in solar panels, allows each bin to hold approximately five times more waste or recycling than traditional bins which decreases the number of required collections. Similar to Enevo's sensors, BigBelly's bins provide real-time data on a compactor's fill capacity. The information provided by the bins allows waste managers to then optimize collection routes and schedules.⁸





Connecting With GENERATION “ME”

As the holiday shopping season nears, Millennial-focused marketers are exploring emerging technologies and mediums to engage this elusive target. Millennials are more than twice as likely to embrace new digital, social, and mobile channels; yet also desire having those technologies authentically integrated into their brand experience before, during, and after purchase. For those reasons, it is more critical than ever to ensure a Millennials’ technology-driven brand experience is seamless, genuine, and innovative.



CALLING ALL SWEET TOOTHS

Krispy Kreme’s Hot Light is a broadly recognized and well-loved asset for the brand. To help enhance their customers’ experience, Krispy Kreme created a Hot Light app and an online desktop widget that alerts loyal fans when donuts are “hot off the line.”⁹ The app also allows users to set their preferred location and provides directions to the nearest “Hot Now” Krispy Kreme location, creating an opportunity to drive impulse purchases while also adding value to their customers’ brand experience.

MAKE IT ABOUT ME

Advertising on Instagram is a new medium that has been tested to varying success with a select group of brands. According to data provided to Adweek by

Instagram¹⁰, early results for the social photo-sharing site are promising. Advertisers—including Michael Kors, Hollister, and Ben & Jerry’s—averaged 60 percent higher engagement rates for their posts in the three days following their paid promotions. With relatively limited spend, Ben & Jerry’s claimed to have reached 9.8 million U.S. consumers, while Levi’s stated it reached 7.4 million U.S. consumers.¹¹ One key to success? Allowing Millennials to discover the advertised product organically through the consumer-centric experience being featured by the brand.



Trust Through TRACEABILITY

Although globalization is an essential part of the international food trade, it has created a complex and vulnerable food supply chain, subject to higher risks of contamination and poor quality.¹² And while traceability helps farmers, distributors, retailers and everyone in between provide high-quality foods to customers around the world; perhaps the greatest benefit of track-and-trace technology is the ability to build and nurture trust with consumers.

RAISING THE BAR

Zego uses an interactive Quick Response (QR) code to inform its consumers of each energy bars' allergen content at the batch level. Zego goes several steps beyond the standard manufacturer warning of cross-contamination by allowing consumers to see exactly how much of a potential allergen might be in their bar's specific batch—all with a simple smartphone scan of their patent-pending QR code.¹³



Trace your food back to the source.



TWO-WAY DIALOGUE

The HarvestMark Food Traceability App links brands with shoppers in the retail store or at home, delivering a new level of communication and information that can increase brand engagement.¹⁴ Consumers use the app to get the food safety validation they want, when they want it. In return, they provide real-time feedback to manufacturers, including retail purchase location, freshness statistics, and shopper comments. Not only do consumers benefit from the added reassurance of safety through traceability, but in the same manner as Zego, brands differentiate themselves by building trust and loyalty through consumer transparency.

Ready to HEAT and EAT

After spending the bulk of their day working long hours and commuting, consumers are seeking shortcuts to maximize their limited leisure time. One shortcut rapidly gaining traction with today's busy shoppers is the convenience of chilled and frozen Ready Meals. According to TechNavio, the Global Ready Meals market is forecasted to grow at a CAGR of 4.25 percent between 2013 and 2018.¹⁵ While frozen meals account for the majority of Ready Meal category sales in Europe and the U.S., the chilled segment is projected to experience the fastest growth,¹⁶ igniting a wave of packaging innovation designed to improve preparation speed and optimize food quality.



THE HOT & COLD FACTOR

Netherland-based **Shieltronics** has developed microwave-shielding technology that enables heating and re-heating of warm, hot, and cold items within the same package without under- or over-cooking items. The special structure of the two-compartment package saves consumers time by allowing dissimilar foods that require different cooking times, like raw or partially cooked proteins and vegetables, to be microwaved at the same time while achieving optimal temperatures.¹⁷

ALL-IN-ONE BENEFITS

Chefs Diet, a line of high-end ready meals for health-conscious U.S. consumers recently launched in **Cyrovac's Simple Steps** packaging. Simple Steps leverages Cyrovac's Sealed Air technology, enabling food to be prepared, shipped, displayed, sold, and heated in the same package.¹⁸ The self-venting package also has a vacuum seal to eliminate air and help preserve flavors.



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