E-commerce Challenges: The Story of Online Groceries

What could be easier than ordering all your groceries online and having them delivered to your doorstep at a time you choose? No more driving to the store, wasting gas and time, pushing carts down aisles, jostling with over-anxious shoppers, or waiting in the check-out lines. For those who don't mind giving up the "social experience" of shopping, as well as aspects like thumping melons to test for freshness, tearing off a shock of sweet corn to smell for mold, or sampling a cut of salami before ordering, online grocery shopping provides a compelling value proposition. In 2013 an estimated 12.5 million online shoppers will generate $5.9 billion in online grocery sales in the United States at over 1200 online grocers.

Online grocery sales have grown 75% since 2006, and are expected to growata around 9% annual through 2016 to an estimated $9 billion. The United Kingdom has the largest online grocery market at around $10 billion in sales. In fact, online grocery sales are growing at nearly three times the rate of traditional grocery sales offline. In a recession, driven by the high cost of restaurant food, as well as gas for cars, consumers are cooking at home more often, and looking for food deals and convenience online. Online recipe sites are seeing a doubling of traffic. Still, there's a lot of room for future growth: online groceries still account for less than 2% of all grocery sales in the United States.

There are three online grocery business models: start fresh, leverage out, and local build. The history of large-scale online grocery begins with the "start fresh" approach of Webvan, launched in 1999 with $400 million of venture funding, and another $600 million of stock sales to the public. Webvan's business plan was audacious: start a totally new nationwide, online, grocery distribution system serving 10 cities at first, and expanding to additional major cities in a few years. When Webvan flamed out in July 2001 after having spent almost $1 billion trying to build the Web's largest online grocery store based on huge distribution warehouses in seven U.S. cities, most pundits and investors thought the entire online grocery business model was either a failure or a fraud. Facing the costs of building an entirely new distribution system of warehouses and truck fleets to compete with existing grocery businesses, not to mention the expense of marketing, and a huge IT infrastructure, Webvan compounded its problems by offering below-market prices and free delivery of even small orders at just about any time of the day or night in urban areas often clogged with traffic. Webvan is generally considered to be the largest and most spectacular e-commerce failure in history. That said, it was also ahead of its time: very few customers felt

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comfortable ordering “high-touch” goods online in 2001. Today, the culture of online purchasing has changed.

Despite Webvan’s failure, the pundits have proven to be wrong again. Online grocery is alive, well, growing rapidly, but with different aspirations and business models. Pundits did not count on Manhattan’s FreshDirect (and hundreds of other local niche online grocers) or the ability of traditional grocery chains to move into the ashes of the online grocery business to create solid, profitable businesses. These firms are learning how to exploit this potential market with profitable business models.

The largest online players today are traditional firms such as California’s huge Safeway Stores, APSupermarket.com, and Shoprite.com in the North East, and Royal Ahold (Dutch owner of the U.S. Stop & Shop and Giant food stores, among others, and the Internet firm Peapod.com). Big-box discount stores such as Costco, BJ’s, and Sam’s Club also offer online grocery services. Sam’s Club, the Wal-Mart-owned big box chain of stores, offers customers a “Click N’ Pick” service: order online, pick it up at the nearest Sam’s Club store, and you won’t even have to stand in line to pay for your groceries. These firms are leveraging their existing nationwide distribution and supply chain systems, as well as their thousands of local stores, to provide shoppers with the opportunity of selecting what they want online, and then picking it up at the local stores or having it delivered by the local stores. These U.S. firms followed the lead of the successful British grocer Tesco. Tesco is the largest chain of supermarkets in Britain and opened an online division in 1990. It is considered to be the largest and most successful online grocery store in the world in 2013.

Peapod expects to generate $495 million in 2012 and grow at a 9.1% sales CAGR from 2012-2016. While Peapod is traditionally known for operating a ‘best-in-class’ home delivery service, the retailer has evolved its model to include QR-Code driven mobile shopping walls, and grocery pick-up – using Chicagoland as its testing ground. Something must be working. Peapod announced that it would launch more than 100 virtual grocery stores at commuter rail stations in Boston, Connecticut, New York, New Jersey, Philadelphia, Washington, D.C. and Chicago. In a virtual grocery store, pictures of products are posted on a large public LCD display with QR codes underneath. Shoppers use their smartphones to scan the QR codes of the items they want. The products in their virtual shopping carts are delivered right to the customers’ homes at their selected delivery time. No need to waste time on the Internet or, worst case, actually go to a physical store.

In the United States, Safeway’s wholly owned subsidiary GroceryWorks.com provides online shopping and delivery services for Safeway stores in California, Oregon, Washington, Arizona, Maryland, Virginia, and the District of Columbia; and for Vons stores in Southern California and Las Vegas, Nevada. Customers register online, entering their personal information, including their frequent shopper cards. They are shown lists of recently purchased items to speed selection. The prices of goods are the same as those in the stores. Safeway has so-called “pickers” roam the aisles of nearby stores using a computerized picklist that directs them through the store in an efficient pattern, and even specifies the order of packing goods into bags. The orders are put into a van and delivered to the customer within a two-hour window for a fee of $10.

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At Royal Ahold's Peapod.com, which serves its Stop & Shop and Giant Food store customers in 24 regional markets, shoppers can view both their online ordering history and their offline purchases at nearby stores during the previous four months. Peapod is the largest online grocery in the United States. Its Web site also features a shopping list that displays items in the order they can be found at the customer's local store. Customers have the option of ordering online and picking it up at the store, or printing the shopping list and taking it to the store. The average online order is about $168, much larger than in traditional grocery stores. For these traditional supermarket chains, the value being offered to customers is convenience and time savings at prices only marginally higher than self-shopping.

FreshDirect exemplifies the third and most common online grocery business model: local build. Other well-known local niche players include Inland Marine (Houston), Gopher Grocery (St. Paul), and Greenling (Austin), all with revenues greater than $1 million. These local online grocers focus on knowing their local customers, high-quality fresh produce, low costs, and convenient delivery.

In July 2002, Joe Fedele and Jason Ackerman founded FreshDirect as a new kind of high quality and high-tech food preparation and delivery service in Manhattan, and raised $120 million in venture funding. Operating out of a 300,000-square-foot plant in Queens just across the river from Manhattan, FreshDirect trucks deliver groceries to densely populated Manhattan, Brooklyn, and Queens at prices 25% below what most New York grocers charge. It charges a $5.49–$6.79 delivery fee, depending on location and size of order, and requires a minimum order of $30. The value proposition to consumers is convenience and time savings, but also higher quality at lower prices.

How can FreshDirect succeed at these prices? One answer is that FreshDirect concentrates on very fresh perishable foods and stays away from low-margin dry goods. For instance, the FreshDirect Web site features around 3,000 perishables and 3,000 packaged goods compared to the typical 25,000 packaged goods and 2,200 perishable items that a typical grocery store offers. To do so, FreshDirect created the most modern automated perishable food processing plant in the United States. While most of the factory is kept at 36 degrees to ensure freshness and quality control, dedicated areas vary from a low of minus 25 degrees for frozen foods to a high of 62 degrees in one of its specially designed fruit and vegetable rooms. At the factory, FreshDirect butchers meat from whole carcasses, makes its own sausage, cuts up its own fish, grinds coffee, bakes bread and pastries, and cooks entire prepared meals. FreshDirect employs the same "make-to-order" manufacturer-direct philosophy as does Dell. Cleanliness is an obsession- the factory was built to exceed U.S. Department of Agriculture standards.

Critical to the success of FreshDirect is a powerful IT infrastructure that seamlessly connects online customers to inventory, billing, and then to truck delivery. The firm uses SAP software (an enterprise resource planning system) to track inventory, compile financial reports, tag products to fulfill customers' orders, and precisely control production down to the level of telling bakers how many bagels to cook each day and what temperature to use. It uses automated carousels and conveyors to bring orders to food-prep workers and packers. The FreshDirect Web site is powered

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by BEA Systems' Weblogic platform, which can track customer preferences, such as the level of fruit ripeness desired, or the preferred weight of a cut of meat. FreshDirect also uses NetTracker, Web site traffic and online behavior analysis software, to help it better understand and market to its online customers. At peak times, the Web site has handled up to 18,000 simultaneous shopping sessions. The final piece in the formula for profit is a supply chain that includes dealing directly with manufacturers and growers, thus cutting out the costs of middle-level distributors and the huge chains themselves. FreshDirect does not accept slotting fees (payments made by manufacturers for shelf space). Instead, it asks suppliers to help it direct-market to consumers and to lower prices. To further encourage lower prices from suppliers, FreshDirect pays them in four business days after delivery, down from the industry pattern of 35 days.

FreshDirect was profitable for the first time in 2008. The key to profitability has been improving its execution of the initial concept, and a rededication to customer service, just plain listening to customers. In recent years, FreshDirect has introduced the following "customer centric" ideas:

- **Produce:** Employed experts to rate the freshness of all produce and set prices accordingly. This reduces customer concerns about not being able to feel the product.
- **Packaging:** Eliminated the use of foam, and reduced the number of cardboard boxes by 1.5 million in response to customer complaints.
- **Favorites: Developed a customer relati-onship management system that tracks each customers' past purchases, and presents them on-screen for re-ordering. Increased order size by 10%.**
- **Recommender system:** Added a YMAL (You-Might-Also-Like) cross-selling tool, which recommends products that other customers purchased. Added 5% to total revenue.
- **Rating systems:** Developed a rating system for its own produce and seafood that allows grocers to showcase their best goods and customers to decide what "looks" good online.
- **Order pattern analysis:** Instituted a system to reminds customers of their favorite products and e-mails them when the system thinks they might be running out.
- **Computer-driven truck packing:** Created to handle over 45,000 deliveries a week in the New York Metro area.
- **Web apps:** FreshDirect introduced an iPhone app that allows mobile shoppers full access to its complete Web offerings. More than 65% of FreshDirect's customers have smartphones, and 50% have iPhones.

With these features and direct mail campaigns, FreshDirect has increased customer loyalty and reduced its churn rate (the number of customers who leave the service). Currently, 65% of its total customer base of around 600,000 active customers are repeat, loyal customers, whose average order size is over $120, and who contribute 80% of FreshDirect revenues. Word among investors

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is that FreshDirect is planning an IPO in the near future, causing many to roll their eyes as they remember the history of Webvan in early part of the decade. Is this time different? The technology has changed drastically, there's more bandwidth to explore food products online, and the culture has shifted to using smartphones as mobile shopping devices. Best of all, FreshDirect is working from a financial perspective. Although a private company that does not issue financial information, analysts estimate that in 2013 FreshDirect will generate over $450 million in revenue, and expand its customer base to over 600,000 customers in the New York and Philadelphia metropolitan areas.