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Mission Impossible? Yummy77 Delivers Groceries within the Hour

Shanghai bustled with the energy of 24 million people. As 150,000 bus drivers plied the roads and 50,000 teachers taught their lessons, a modest staff of about 500 sought to make each day more convenient for interested customers. Yummy77 ran an online grocery store which, by summer 2014, allowed consumers to place an order by phone or computer and receive delivery to their home or office as soon as an hour later. In some ways it was the pinnacle of online shopping—delivering items of modest value, assuring temperature control and delicate handling to protecting perishable fruits and vegetables, and doing it all with exceptional speed that made overnight delivery decidedly passé.

On one hand, key indicators were reassuring. Reviewers were positive, and customers kept coming back. Yet Yummy77's model had proven more capital-intensive and more complicated than the founders had initially expected. Meanwhile, well-funded competitors were drawing near. Yummy77 had built 53 small stores around the city, both to showcase goods and to facilitate quick delivery almost anywhere—but the costs and complexities of these stores ran counter to the capital-light ideals some people associated with tech startups. Would further growth spread fixed costs more efficiently—or push inefficiencies to the brink? What if competitors copied Yummy77's approach or expanded even faster?

The White Whale of Grocery Delivery

For a string of tech startups, grocery delivery had been a tempting opportunity but, for most, ultimately an insurmountable challenge. Beginning in 1999,[1] a dozen firms had attempted to serve this market, and most had failed. The first US "dot com" cohort had a particularly tough run. Webvan was first to enter the market and set a high bar, promising home delivery of groceries within 30 minutes.[2] A rival, Homegrocer.com, quickly followed in March 2000, boasting a nearly identical model. Anticipating high returns, both companies scrambled to build brand new warehouses and fleets of dedicated trucks.[3] A few months later, Homegrocer's still-small customer base could not support the company's infrastructure, and Homegrocer was sold to Webvan, which accumulated over $800 million in losses and itself collapsed a year later.[4] Meanwhile, competing delivery service Kozmo used bicycles when delivering games, videos, and even Starbucks coffee in addition to food, but soon suffered a similar fate when mounting losses ultimately forced it to cease operations.[5] Collectively, these and other early grocery delivery services lost approximately one billion dollars.[6]

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Beginning in 2014, a new generation of grocery delivery services sought to succeed where others had given up. Amazon Fresh, offered in select neighborhoods in Seattle, Southern California, Northern California, New York, and a few areas of New Jersey, and Philadelphia,[7] touted the cheapest new model for groceries but required a minimum of $50 per order. Amazon also repeatedly threatened to require a $299 Amazon Fresh Prime membership for customers to use the service, though Amazon repeatedly delayed imposing that requirement for fear of losing customers, instead offering a $7.99 delivery fee so long as a customer was a member of Amazon's standard Prime shopping service ($99 per year).[8] Separately, Amazon's Prime Pantry offered dry goods and other household stables at a delivery fee of $5.99 per box.[9]

Meanwhile, Google Express offered lower prices—unlimited free deliveries for $95 per year or $4.99 per delivery[10]—but reduced the range of available products by excluding perishable and temperature-controlled goods. While Google maintained some warehouses, the service primarily relied on retail partners to store the goods, which reduced launch costs and allowed for faster expansion.[11]

In comparison, Instacart's model was in some respects less ambitious, as it facilitated the delivery of groceries from existing stores rather than dedicated warehouses. Yet, its model was scalable in a way that made it unique: it could operate anywhere with demand and with available workers willing to pick up items and make deliveries. Its service was also speedy: Like predecessors a decade earlier, Instacart promised the delivery of goods within the hour.[12] As of 2015, Instacart's $99 annual membership fee waived all delivery fees for orders over $35.[13] That said, critics had questioned the company's pricing, alleging that, in addition to charging for delivery staff time (for customers without annual memberships), the company marked up grocery prices above actual store prices. In a Wall Street Journal test purchase, Instacart marked up the prices of some items by as much as 26 percent.[14] Some analysts questioned whether Instacart could overcome an apparent cost disadvantage: Relying so heavily on existing retailers, Instacart had to pay standard retail prices for every item, including a share of rent and overhead, plus additional amounts for delivery staff.

In some respects, grocers' own efforts seemed to be most successful. As early as 1989, grocery delivery service Peapod offered an early online ordering system in partnership with Chicago-based Jewel Food Stores. (Because this implementation predated consumer Internet access, Peapod provided modems and special software to help customers place order.) By 1995, Peapod had expanded to include Safeway in San Francisco and Kroger in Columbus, Ohio.[15] In 2000, the company became a fully-owned subsidiary of Royal Ahold and began to work instead with Ahold USA grocers Stop & Shop and Giant Foods. Affiliated solely with these stores and operating only in five states, Peapod used Ahold's buying power to make high-volume, low-cost purchases, which reduced distribution and transportation costs and lessened pressure to mark up products above in-store prices. Between 2001 and 2012, Peapod added coverage of much of the East Coast, and as of 2015 the company reported having made more than 20 million deliveries. In the company's understated style, Peapod's web site promised more to come: "Peapod certainly has plans to grow."[16]

The Dawn of Yummy77

Yummy77 founder and CEO Ping Mi began her career as a software developer at Bank of America as well as erstwhile telecom giant MCI. After studying at Berkeley's Haas Business School, she took product management roles at Oracle and Siebel, building ERP and CRM systems. Noticing rapid developments in China, she elected to return to her homeland, initially as CTO of PPG Direct Merchant, an e-commerce platform specializing in clothing.

After nearly twenty years in the United States, Ping felt reverse culture shock—lacking certain produce that had become routine in the US. Her personal desire for distinctive fresh fruits and vegetables led her to found Yummy77 in Shanghai in May 2013. She explained the objective: "I started Yummy77 to help office workers prepare warm, delicious meals for their families at a touch of their fingers." Ping's vision emphasized the proletariat: "Our goal is to provide convenience, freshness, and value for average people."

COO Roger Wu explained Yummy77's strategic choice of products and focus. Looking at other e-commerce platforms, Roger noted that "everyone else was doing standard merchandising, like cell phones and televisions, with mass quantities at factory-standard quality. But no one was doing fresh groceries, nonstandard items, or agricultural items. Even two apples grown on the same tree could have different sizes and tastes, and there are so many factors affecting the quality that gets to customers' hands, so competitors ran away from this space. It was a blue sea opportunity, and we were drawn to it."

Yummy77 began by launching a billboard advertising campaign that featured classic art juxtaposed with food. One billboard featured the Mona Lisa smiling as she received a platter of fish. The company simultaneously launched a set of early promotions waiving delivery fees. Furthermore, Yummy77 touted special prices for featured products. For example, one early offer touted 12 Chilean gala examples for 31 yuan (about US $5). (**Exhibit 1** presents the marketing to consumers.) As Yummy77 added new products from new manufacturers, it often offered free samples when a user bought related products. For example, as Yummy77 added grapes from a new grower, an order of oranges might include a free portion of grapes. All told, Yummy77 found that it spent approximately 100 yuan (about US $16) to attract a customer who placed one order per week.

The company's initial service provided next-day delivery for orders placed by 4 pm. Deliveries were scheduled within four-hour windows from 9am to 6pm each day. For deliveries in Shanghai, Yummy77 also offered later options, 6pm to 9pm, for an additional fee of 5 yuan (less than US $1).

Focusing solely on food, Yummy77 offered some 2,000 items, including fruits, vegetables, meat, poultry, fish, seafood, milk, eggs, grains, oils, and snacks, though notably foregoing household items such as cleaning supplies. **Exhibit 2** presents the 20 most popular items as of summer 2015. Yummy77's "About Us" page emphasized "premium" items, which included imports from nearly twenty countries. COO Roger Wu explained the rationale: "We knew we were serving office workers who are prepared to pay for quality goods. We focused on imported foods and premium foods based on the preferences of these customers." For example, Yummy77 featured cherries imported from the United States or Peru, Zespri Kiwi from New Zealand and avocados from Mexico—high-end fruits which these customers were thrilled to obtain.

Yummy77 sought to offer prices similar to standard retail stores. With the company's focus on premium items, competitive pricing required simplifying supply chains to reduce costs. Indeed, many Chinese customers had found high-end fruit an unreasonable luxury at the prevailing prices charged by other retailers. But by buying directly from suppliers, Yummy77 avoided the brokers, forwarders, and other intermediaries that inflated the price of this product at other retailers. Seeing lower prices, customers then bought much more, and for China's growing upper-middle class, cherries, kiwi and avocado could be increasingly routine indulgences.

On top of item pricing, Yummy77 added a small delivery charge of 10 yuan (US $1.62 at the prevailing exchange rate as of January 1, 2015), though orders of 99 yuan (about US $16) waived the delivery fee. Customers were not expected to tip delivery drivers.

Yummy77 implemented deliveries through a three-step process relying on a single central warehouse, 30 delivery stations each serving roughly a ten kilometer (6.2 mile) radius, and scooters for final delivery. The process began at the central warehouse, a 120,000-square-foot facility located in metropolitan Shanghai. In addition to holding inventory, the warehouse provided a staging area for "pick-and-pack" gathering the goods for each delivery. Next, delivery trucks transported each day's orders to each of 30 delivery stations throughout Shanghai. These delivery stations, open only to Yummy77 staff, were about 800 square feet (roughly the size of a two-bedroom apartment), with oversized refrigerators to preserve fresh meat and produce. Finally, delivery staff loaded a few orders into the back of a scooter (with foam insulation and ice packs for temperature control), delivered the goods to customers, then returned to the delivery station to pick up more. For final delivery, Yummy77 favored scooters, not full-size trucks, because traffic regulations limited the use of large vehicles in many neighborhoods. In some places, minivans supplemented scooters for customer deliveries. Because delivery stations were located near customers' neighborhoods and because only a scooter was required to make deliveries, Yummy77's last-mile costs were modest; the company paid delivery staff approximately 3 yuan (about US $0.50) for each order delivered to a customer.

With reasonable prices for imported goods previously viewed as unduly expensive, customer reaction was positive—in emails, customer interviews, low return rates, and high repeat purchases. Yummy77's customers tended to be internationally oriented, whether from having spent time overseas (often to study or work), or from movies and other media presenting international cuisine and practices.

While customer response was favorable, there were some notable limits. For one, many Chinese customers preferred to buy live fish and shrimp, as seeing the creatures still alive confirmed their health and freshness. To keep the seafood alive required tanks and staff attention, neither of which Yummy77 was prepared to provide in the delivery stations. Furthermore, a 10 kilometer journey from delivery station to a customer's location might be too long for seafood to survive in a bag. And if a customer was not home to accept the order in person (a possibility with four-hour delivery windows), the customer would be unable to confirm the item's condition upon arrival.

Meanwhile, some delivery stations became increasingly hectic. With 100 orders per day at a single delivery station, it was usually workable for staff to track what went where and to organize efficient deliveries. But when a delivery station reached 500, packages became cluttered and errors were inevitable. Yummy77's standard response was to split popular regions into two or more delivery stations, both to reduce distance to customers and to increase capacity. But each split also meant added cost. The company estimated that opening a delivery station cost about 60,000 yuan (about US $9,500), and operating costs were about 20,000 yuan per month ($3,150). More stores also meant more complexity, including more stops for delivery trucks coming from the central warehouse.

Competitors

The market for electronic ordering of fresh food in China more than doubled from 2013 to 2014, reaching 2.89 billion yuan in total.[17] This increase was embodied in the rise of a number of competitors.

1mxian. Founded in October 2014, 1mxian offered delivery of fresh fruit in Beijing, Shanghai, Wuhan, Nanjing, Hangzhou, Tianjin, Shenzhen, and Chengdu.

Beequick. Founded in May 2014, Beequick provided one-hour delivery of fresh produce, snacks, beverages, liquor, coffee and other products from preexisting community convenience stores. Membership was open to all interested convenience stores, though each store had to provide its own delivery drivers and vehicles. By November 2015, Beequick had served over 250,000 customers in Beijing, Guangzhou, and Shenzhen, and had made plans to expand to other major cities in China. Customers could place orders both from Beequick's mobile app as well as via the popular social app Wechat.

Benlai. Founded in July 2012, Benlai delivered groceries to 22 cities including Beijing, Tianin, and Shanghai. First, customers made orders on Wechat or the Benlai mobile app, including choosing a nearby store. Next, the store received the order and prepared it. Finally, the store delivered the order through Benlai's logistics service or a third-party delivery service. As of November 2015, Benlai did not charge either customers or stores for the service, though the company indicated that it might charge in the future. A separate source of revenue came from Benlai's supply chains providing goods to stores.

Dmall. Founded in April 2015, Dmall provided fresh products as well as daily consumer goods. It began operation in Beijing and, as of 2015, had elected to perfect its implementation before expanding elsewhere. Dmall collaborated with established grocery stores including Buddies, Metromall, NGS1685, and Wumart, which hold inventory. When a customer made an order on the Dmall app and chose a nearby grocery store, a Dmall staff person gathered the items in the specified store, then delivered the order to the customer's home. Dmall's grocery store partnerships followed two models. For some grocery stores, the partnership was exclusive for some period, meaning that the grocery store would not sign up with any other delivery service. For others, the grocery store became a shareholder in Dmall, thereby assuring a long-term relationship. Dmall leaders summarized the company's approach: "no purchase, zero storage, asset-light, one-hour delivery."

Epermarket. Launched in 2012, Epermarket helped Shanghai's foreign residents find high-quality and safe food from their homelands. Founder Jean Yves Lu had worked for 18 years in the food and beverage industry. As of 2015, Epermarket charged 30 yuan for standard delivery and 50 yuan for same day, with delivery fees waived for orders over 300 yuan. The company covered almost all of Shanghai and boasted delivery in special vans with three separate temperature zones. In addition to touting competitive pricing and discounts, the company supported customer service in English, French, German, and Chinese.

Farmlink. Founded in June 2014, Farmlink supplied restaurants with food products including vegetables, fruits, oil, rice, eggs, frozen and fresh meat and seafood, seasonings, drinks, dry goods, drinks, and even restaurant supplies and appliances. As of November 2015, Farmlink provided deliveries to Beijing, Shanghai, and Chongqing. Farmlink emphasized the efficiencies of focusing on restaurants only, and it sought to offer special savings to small and medium-sized restaurants that might be unable to negotiate the best prices on their own.

Fields. Founded in 2009 by Sun Art Retail Group (a leading food retailer in China), Fields was known for unique products like gluten-free quinoa milk as well as organic produce, though it also offered a full complement of meat, poultry, fish, seafood, dairy, drinks, alcohol, and more. Fields charged delivery fees of 50 yuan for orders less than 100 yuan, 20 yuan for orders 100 to 200 yuan, and no charge for orders above 200 yuan. Fields covered Shanghai (excluding Chongming District) and its five surrounding cities. Fields' web site offered service in five languages.

Fruitday. Founded in 2009, Fruitday focused on importing fresh fruit products with a focus on midrange and high-end products. Fruitday provided web-based ordering along with telephone ordering and physical stores. Running its own cold storage and cold-chain logistics, Fruitday provided service in ten cities in China, with more than 60% of its business from cities other than Shanghai.

Kate & Kimi. Focusing on Shanghai's foreign residents, Kate & Kimi offered farm-fresh vegetables, healthy imported goods, "superfoods," and specialty vegetables and garnishes such as edible flowers and microgreens. Deliveries were free for orders over 200 yuan. The service covered all of Shanghai.

Meicai. Supplying agricultural product to about a thousand small to mid-sized restaurants, Meicai offered a comprehensive selection of items including vegetables, fruits, meats, poultry, fish, seafood, rice, flour, oil, seasonings, and more. Service covered 18 cities in China including Beijing, Shanghai, and Tianjin.

S.F. Best. Launched in May 2012, S.F. Best was founded by S.F. Express, a leading private express delivery enterprise in China, roughly equivalent to UPS. It drew on its parent company's strong logistic experience, touting origin-direct sourcing and a cold chain to ensure freshness. As of November 2015, its geographic coverage included Beijing, Shanghai, Tianjin, and eight cities in three provinces.

Tesco. A British multinational grocery and general merchandise retailer based in Hertfordshire, England, Tesco also operated 131 physical stores in China. Tesco launched deliveries in 2013 in Shanghai. Delivery included fresh produce, cold goods, and other groceries. A fee of 8 yuan applied per order. After a 2014 reorganization and 2015 rebranding, Tesco deemphasized grocery delivery.

Tootoo. Founded in 2008, TooToo offered a range of certified organic products including fresh vegetables, fruits, eggs, meats, milk, yoghurt, tofu, steamed buns, bred, seafood, grains, beans, oilseed kernels, net kernels, plant oils, soy sauce, vinegars, fruit juices, teas, wines, and cosmetics. Deliveries were available to eight cities across China.

Womai. Launched in August 2009, Womai was founded by China National Cereals, Oils and Foodstuffs Corporation (COFCO) to enter into the e-commerce market. A large state-owned enterprise, COFCO provided Womai with a considerable variety of products, while Womai also counted Chinese search engine Baidu among its investors. Initially, Womai only sold products from COFCO, but it subsequently expanded to offer other high-end food, alcohol, and beverages from both China and beyond. As of November 2015, its geographic coverage included Beijing, Tianjin, and 138 cities in 12 provinces.

Xuxian. Founded in late 2014, Xuxian was an O20 online fruit store. Customers place orders online or via a mobile app. At the end of each day, Xuxian totaled the demand for each product, bought the required items, and delivered orders to its pick-up stores. Customers could pick up the next day beginning at 11am. Xuxian targeted white-collar workers and university students.

Yiguo. Founded in 2005, Yiguo was an online fruit store focusing on high-end fruits, more than half of which were imported from foreign countries. Yiguo provided deliveries to fourteen cities across China.

Yihaodian (also known as Yhd): Founded in 2008 by former executives from Dell, Yihaodian offered more than eight million products covering fourteen product lines, including food as well as cameras, clothing, and computers. Delivery fees ranged from 4 to 12 yuan per order. Yihaodian operated logistics centers in Shanghai, Beijing, Guangzhou, Wuhan, and Chengdu, along with delivery stations in 34 cities across China. Grounded in part in the expertise of Walmart, an investor, Yihaodian touted a cost advantage including an optimized supply chain that reduced costs for purchase, storage, delivery, and customer service.

Meanwhile, broader market changes also impacted traditional grocery stores throughout China. Many grocery stores had structured their offerings to lose money on fresh food in order to attract customers for other items such as clothes and electronics. This approach made sense because customers had to buy fresh food at least weekly, and their frequent trips to do so were natural opportunities to sell other household supplies. Durable products had been logical profit centers thanks to less risk of inventory spoilage as well as high prices relative to product size. But as consumers began buying durable items online, supermarkets' revenue from this category began to drop. Grocery stores thus became more reliant on fresh food, scaling back loss leaders in that area as well as adjusting the mix of space and inventory within each store.

International grocers faced particularly serious challenges. In 2012, French grocer Carrefour was ordered to temporarily close a Chinese branch in Zhengzhou after reports that the store had sold expired meat and mislabeled ordinary chicken as "free-range."[18] In 2015 the company was the world's second-largest retailer by revenue, but its future in China was uncertain: after opening 11 large "hypermarkets" in 2014, Carrefour elected to close eight of them. Company managers attributed the closures to reduced spending by Chinese consumers, and suggested that the chain would open more small stores in the coming years.[19] Meanwhile, UK-based Tesco also suffered high losses in China and in 2013 was forced to enter into a joint-venture with state-owned China Resources Enterprise[20]—leading to CRE's first loss in more than ten years.[21]

Reinventing the Model

By summer 2014, Yummy77 had expanded to the major cities in almost all provinces throughout China—but competitors were equally aggressive. While Yummy77 offered imported goods, it maintained a reputation for low cost, in contrast to some of the competitors described above.[22] Yummy77 recognized that certain niches could support premium pricing, but the company was unwavering in its insistence on serving the mass market.

Yummy77 service was strongest in the provinces closest to Shanghai. In the cities of Hangzhou, Suzhou, and Nanjing, Yummy77 operated its own distribution facilities. Elsewhere in China, Yummy77 contracted out delivery to Shunfeng (SF), a shipping and logistics company. Shipping temperature-controlled items remained challenging. For example, Shunfeng would charge more than 80 yuan (US $12) to ship two pounds of steak with temperature control—a cost that Yummy77 could not reconcile with the prices it sought to offer to customers. As of October 2015, Yummy77 therefore offered a reduced selection of non-temperature-controlled merchandise to customers outside its own distribution areas.

It was untenable to lose money indefinitely, and despite a widely-publicized $20 million investment from Amazon, Yummy77's capital was limited. A price war with competitors would only exacerbate losses, and well-funded competitors were backed by Alibaba and Tencent, so Yummy77 might not prevail.

Instead, Yummy77 moved towards opening its own retail locations throughout Shanghai and, the company planned, beyond. These neighborhood stores were approximately 2,000 square feet, similar to the size of a midsized Starbucks in the United States, and much smaller than a standard grocery store. They therefore stocked only the items that were purchased most frequently, typically about 2,500 items (SKUs) per store. Popular items included dozens of types of fresh fruits and vegetables, as well as meat and, in a popular addition, live fish in tanks. **Exhibit 3** shows photos of a Yummy77 neighborhood store, while **Exhibit 4** shows a representative floor plan.

While ordinary grocery stores might plan a new location for months or years, Yummy77's neighborhood stores were easier to open and cheaper to operate. On average the company estimated that opening a new store cost about 200,000 yuan (about US $31,500), and operating costs were about

55,000 yuan per month ($8,650) The company opened 50 such stores by March 2015, putting a store within two kilometers of 70% of its Shanghai customers and covering the entire area within the outer ring of Shanghai's third and outer-most circumferential "ring road" highway.

Crucially, neighborhood stores served both to display goods and to store inventory for rapid delivery by Yummy77's staff. In the revised operating model, customers' online orders would be fulfilled from inventory in the nearest store, then delivered by scooter by a Yummy77 staff person. More stores therefore reduced delivery distance as well as the customer's wait for items to arrive.

Yummy77's small stores brought logistical benefits. With stores so close to customers, it was realistic to deliver most orders within an hour, a benefit that Yummy77's marketing materials prominently touted. Indeed, more than 98% of orders were delivered within an hour, on average in just 43 minutes, and company projections suggested it would be possible to reduce the average delivery time to just 30 minutes. Customers clearly appreciated the faster deliveries: With in-an-hour delivery, Yummy77's retention rate for first-time customers nearly doubled, growing well above 50%. Customer order frequency also increased; as of October 2015, the average customer ordered more than three times per month, with some customers ordering twice a week or even more than that.

That said, small stores also added complications. First, to tell a customer about the items in stock in the customer's neighborhood store, Yummy77 had to begin by requesting the customer's delivery address—an additional step standing in the way of presenting featured merchandise. Then, if a customer ordered an item not in stock at the nearest store, Yummy77 would send the item from the central warehouse to the nearest store for delivery the next day. Yummy77's site clearly alerted customers to the applicable delivery time, but with a new expectation of delivery within an hour, next-day delivery suddenly seemed slow. These factors combined to increase the urgency of correctly predicting which neighborhoods would order which products. COO Roger Wu explained: "Rather than predicting how much of each item is needed in each city, we must now predict how much of each item is needed in each neighborhood."

Yummy77 reported that in-store browsing was particularly helpful in attracting customers who might not have been inclined to order online. Under Yummy77's initial model, most customers were aged 20 to 40, and most were familiar with computers and electronic commerce. But retail customers tended to be somewhat older. These customers reported that they particularly appreciated delivery for heavier items such as rice and cooking oil. Once they had seen Yummy77's merchandise in store, they were more willing to buy online.

Small stores necessarily reduced the items available for purchase. But touch-panels in each store allowed consumers to browse additional items for online ordering and delivery. Store staff were trained to direct customers to these touch-panels and help them place online orders from within the store. To further encourage online orders, Yummy77 offered rewards points for ordering online, yielding discounts on future purchases.

A further set of challenges came from the company's rapidly-growing scope. For one, opening stores required significant time, personnel, and capital: Each store required a lease on space plus fixtures, local managers, and staff. Some investors questioned these costs, favoring a platform model with much less capital. Wu defended the company's approach: "We firmly believe that neighborhood stores are the right way, because they put us closer to our customers. Plus, the one-hour commitment is actually not an extra cost, as it yields savings for fuel and staff time. We wouldn't want to be stuck in traffic for three hours coming from a distant distribution center." Indeed, as of fall 2015, Yummy77 sought to expand to 120 stores within Shanghai's outer ring road.

Operating this revised model yielded insights for further improvement. In a May 2015 addition, Yummy77 staff began to pick up items from other neighborhood vendors. For example, en route from a Yummy77 neighborhood store to a customer's apartment, a delivery driver could stop at a candy store, coffee shop, bakery, or an even ice cream specialist. Convenience stores were an equally natural fit for the model, offering all manner of personal items including toiletries. At each Yummy77 neighborhood store, a manager assessed suitable vendors in immediate vicinity. One notable requirement was satisfactory computer records: Yummy77 needed to know a vendor's stock on hand in order to provide availability to customers. Most vendors were willing to provide Yummy77 with a bulk discount due to volume, often 10% to 15%. With that discount, Yummy77 could sell items to the customer at the same price as going in person, though without the hassle. As of fall 2015, a further expansion called for pickup and delivery of cooked food and complete meals, letting a single delivery driver combine groceries from a Yummy77 neighborhood store (perhaps a meal for later) with a ready-to-eat meal, in a single drop-off.

Business-to-Business Prospects

Yummy77 managers realized that the company's logistics infrastructure could serve not just consumers but also businesses and indeed restaurants. In June 2015, the company began to pursue commercial sales. At first, Yummy77 treated small restaurants the same as consumers, letting them order one day for delivery the next. Restaurants already used this approach for orders from other suppliers, so this fit both restaurant routines and Yummy77's operating model. As Yummy77 shifted to within-an-hour deliveries, restaurants got the benefit of that speed, allowing them to adjust to unexpected demand—particularly useful for small restaurants with limited space to store ingredients and with significant uncertainty about customer demand. Yummy77 also added discounts for frequent customers. The largest and most frequent customers received discounts of approximately 20% compared to the prices charged to consumers.

Yummy77 managers were pleased with the early response. In the first four months, more than 1600 small restaurants signed up. Their average order was 430 yuan (about US $68), but with daily orders increasingly common, restaurants could have an outsized impact on company revenues. Orders also tended to emphasize larger quantities of fewer distinct items, such as a whole case of a given drink, which offered additional efficiencies in packing and fulfillment. As of October 2015, restaurants and other commercial accounts totaled 25% of Yummy77's business, growing notably faster than consumer sales.

From Yummy77's perspective, restaurants were particularly useful in increasing the company's scale. More sales helped justify additional neighborhood stores which in turn increased efficiency. Furthermore, greater sales improved purchasing power to lower prices for everyone.

As of October 2015, competitors had offered little response. The restaurant supply business was notably fragmented, with regional firms and no national incumbent. Indeed, other restaurant supply firms tended to use multiple layers of brokers and distributors, potentially adding cost over Yummy77's direct model and shorter supply chain.

Looking Ahead

Yummy77 CEO Ping Mi stressed the broader benefits of food delivery. "For office workers, it's a major headache to have too little time to buy food and prepare dinner after work. Our one-hour service serves this vast, unmet demand—getting the right food to the right place at the right time, so customers can focus on delicious meals for their families."

Yummy77's site proclaimed that the company's "Delicious Feast" would help busy urbanites "decompress" from Shanghai's "pressure-cooker-style living" to "discover the fun of food." Repeat purchases seemed to validate the company's approach: Of customers who placed an order during September 2015, the average was *three* orders that month. But neighborhood stores brought unavoidable overhead costs and would only be profitable if volume continued to grow. The company hoped to add 72 more Shanghai neighborhood stores by summer 2016, taking the total to at least 120 and perhaps somewhat beyond. It would also be natural to expand the neighborhood store concept to other cities in China. But these expansions would require convincing investors that the model was viable, and Yummy77 managers projected that they would need at least US $100 million to expand in the way that they hoped. Far from getting rid of stores, grocery delivery might turn out to entail building more retail locations. Was this the right way forward?

Exhibits

Exhibit 1 A featured product

Source: Yummy77

Exhibit 2 Most popular items

Xinjiang Korla Pears (500 g)	Snow Rong Mushrooms (150 g)
White Grapefruit	White Radish (450 g - 750 g)
West State Honey (1.5 kg)	Pepper (thin-skinned) (250 g)
Local Potatoes (500 g)	Local Bananas (2 pieces)
Light Diamond Pasteurized Yogurt	Carrots (300 - 350 g)
Shanghai Local Red Fruit (500 g)	Shallots (50 g)
Mengzi Pomegranate (2 pieces)	Mengzi Pomegranate (3 pieces)
Tomatoes (500 g)	Foreign Eggs (8 pieces)
Shandong Red General Apples (2 kg)	Red Onion (500 grams)
Filet Mignon (150 g)	Wrinkles Toilet Paper

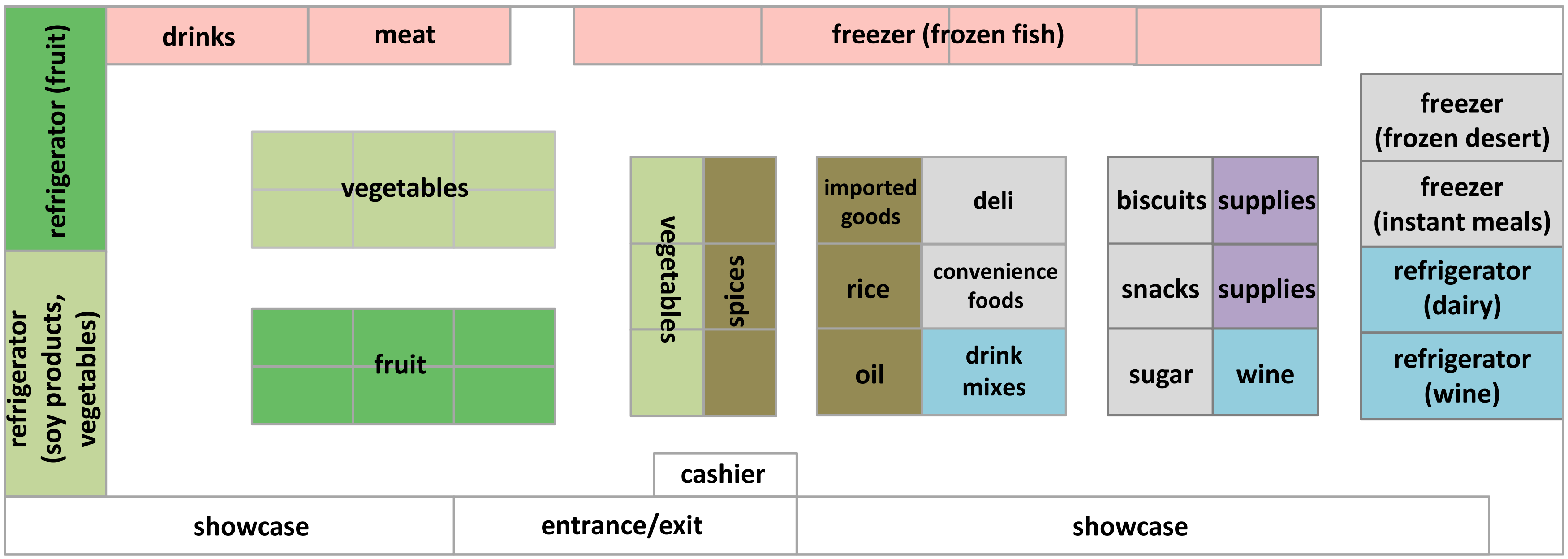
Source: Yummy77

Note: Items sorted from most popular to least popular. Based on sales to date as of October 2015. Item descriptions translated by casewriter.

Exhibit 3 Photos of a Yummy77 neighborhood store

Source: Yummy77

Exhibit 4 Floor plan of a Yummy77 neighborhood store



Source: Yummy77

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