

# FRESH FOOD CO

**Information Technology**  
**Retail**

**Medium difficulty**  
**Interviewer-led case**

This case focuses on choosing an IT solution provider and architecture for a new e-commerce venture in the grocery industry. It tests all the aspects of the interview scorecard, with a challenging structuring question. It is only suitable for candidates applying to digital or technology-focused roles.

## Problem definition

Your client is the Fresh Food Company, one of the leading grocery chains in California with over 1,000 stores spread across the state. Recently, several small technology firms started competing with Fresh Food's core business by offering to deliver groceries purchased online to the customer's home (for a fee). Early indications suggest that this proposition is popular with wealthier consumer segments.

In response, the Fresh Food executive committee has decided to launch its own online grocery service, starting in three major cities: Los Angeles, San Diego and the San Francisco Bay Area.

You have been asked to recommend an end-to-end technology solution for web shop and order fulfilment. The Chief Information Officer has already narrowed down the option set to three potential vendors: AutoMoat, Darkea and Storely.

**Which technology vendor should the Fresh Food Company choose for its new online business?**

## Additional information

At this stage of the case, specifics about each potential vendor remain to be investigated, and further details will become available as the case progresses. Redirect the candidate to structuring their approach to the problem by asking what they would like to know about each option.

If asked at this stage or later, you may share that:

- Fresh Food is looking to maximize profits with the new venture and expects it to be self-sustaining in the long run. The executive committee understands it will take several years to break even, and the new venture must meet the company's IRR hurdle rate (the exact rate is not relevant).
- Fresh Food will not consider any options outside the 3 listed.
- You can only consider the initial three markets as you make your recommendation, even if expanding the online venture to additional cities remains a future possibility.

### Question 1 (Structuring)

What would you look into to determine which provider should be chosen?

#### Guidance for interviewer

All candidates should touch on prioritizing features based on consumer preferences in their upfront structure. If a candidate does not cover market/consumer appeal, remind them that vendors may offer differing features and ask them on what basis they would choose among feature sets.

#### Possible answer

##### 1. Sales maximization capabilities

- Ability to meet key consumer needs (e.g., fast and reliable delivery, good user experience, large basket size)
- Web shop sales performance (e.g., conversion, pricing/promo levers)
- Front-end customization to Fresh Food brand (brick & mortar business)
- Integration with Fresh Food's CRM and Loyalty Scheme

##### 2. Operational efficiency

- Order preparation productivity (e.g., amount of labor required to prepare an order, time from order placement to order ready) and resulting fulfilment cost
- Delivery productivity (e.g., delivery model, efficiency of delivery routes) and resulting delivery cost
- Order preparation and delivery capacity, flexibility to shrink/expand
- Integration with Fresh Food's ERP (e.g., inventory, procurement, financials)

##### 3. Cost of solution

- Upfront development, license and acquisition costs
- Annual license fees

##### 4. Risk

- Implementation timeline
- Maturity of chosen solution
- Dependence on 3rd parties, level of control

**Question 2** (Judgement & Insight, Numeracy)

Fresh Food has shared the summary findings from their initial market research, which covered grocery purchasing patterns in California (share Exhibit 1).

**Based on this data, which customer segment is the most attractive and what are the implications on the choice of vendor?**

**Guidance for interviewer**

The key insight is that Segment C is the most attractive as it represents the largest profit pool (3x that of the second) with an average level of competition (2 competitors). Prompt the candidate to calculate the weekly profit pool if needed. In completing the quantitative assignment, the candidate is encouraged to take shortcuts and round extensively as exact figures are not required. Choosing segment C implies that the technology vendor should be well-suited to large but relatively infrequent orders.

If a candidate asks, please share that:

- All households in the three focus cities have been segmented into the 4 segments shown
- Average margin is the basket gross margin before order fulfilment, delivery and overhead
- Growth is expected to be similar across all segments

**Possible answer**

*Segment C is the most attractive, because it presents the largest profit pool, together with a moderate competitive intensity.*

*Segment C presents a profit pool of \$120M per week or \$6b per year. We reach this conclusion by multiplying the figures provided in Exhibit 1 to calculate the weekly profit available in each segment. In doing the calculations, let us assume that all respondents who say they are willing to shop online will purchase all their groceries online:*

<i>Weekly profit pool</i>	=	<i>No. of households</i>	X	<i>Orders per week</i>	X	<i>Order size</i>	X	<i>Avg. margin</i>	X	<i>% willing to shop online</i>	
<b>Segment</b>		<b>No. of households</b>		<b>Orders per week</b>		<b>Order size</b>		<b>Avg. margin</b>		<b>% willing to shop online</b>	<b>Weekly profit pool</b>
A		2.5 M	X	2.0	X	\$90	X	34%	X	25%	= \$38 M
B		3.5 M	X	3.0	X	\$100	X	36%	X	10%	= \$38 M
C		2.0 M	X	1.5	X	\$200	X	40%	X	50%	= \$120 M
D		0.2 M	X	5.0	X	\$40	X	38%	X	75%	= \$11 M

*This seems quite attractive and is about triple that of segments A and B, which have the second largest profit pools. It would be helpful to look at segment growth to ensure that all segments are growing at a similar rate.*

*We can also see that the level of competition in segment C is equal to or less than that of the other segments. Segments A and C are both currently served by 2 competitors each, while segment B is served by 4 competitors. Nevertheless, we should seek to understand the offering and online shopping experience of the 2 competitors currently serving the segment.*

*Segment C also has the highest gross margin, which may suggest a wealthier segment willing to pay a premium for good service. We should check what kind of service they value and focus on those characteristics.*

*Because segment C has the largest order size and smallest order frequency, we should look for a technology solution that is tailored to large but infrequent orders. Thinking about online delivery more broadly, these larger orders are likely easier to deliver profitably as there should not be a big difference in cost between delivering a large and small order. That further supports the choice of serving segment C.*

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Exhibit 1: Summary market research

Segment	Number of households	Avg. orders per week	Avg. order size	Avg. margin	% willing to shop online	# of competitors
A	2.5 M	2.0	\$90	34%	25%	2
B	3.5 M	3.0	\$100	36%	10%	4
C	2.0 M	1.5	\$200	40%	50%	2
D	0.2 M	5.0	\$40	38%	75%	1

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**Question 3** (Judgement & Insight)

We have gotten access to additional survey data about consumer preferences (share Exhibit 2).

**Which features should Fresh Food prioritize given this data?**

**Guidance for interviewer**

Candidates should ignore the data on non-target segments and focus on segment C. The key insight is that segment C values a large selection and reliable delivery. Encourage candidates to develop the implications of the insight extracted from the exhibit.

If a candidate asks, you can confirm that:

- The survey data is reliable and accurately captures the preferences of each segment
- The proportion of respondents choosing “very important” is a good proxy for purchase behavior given the presence or absence of the feature in the offering

**Possible answer**

*Segment C, our target market, attaches the highest importance to ‘Order arrives on time’ (60% of segment) and ‘Large selection’ (50% of segment). We can expect to gain market share if our technology solution outperforms that of competitors on these dimensions:*

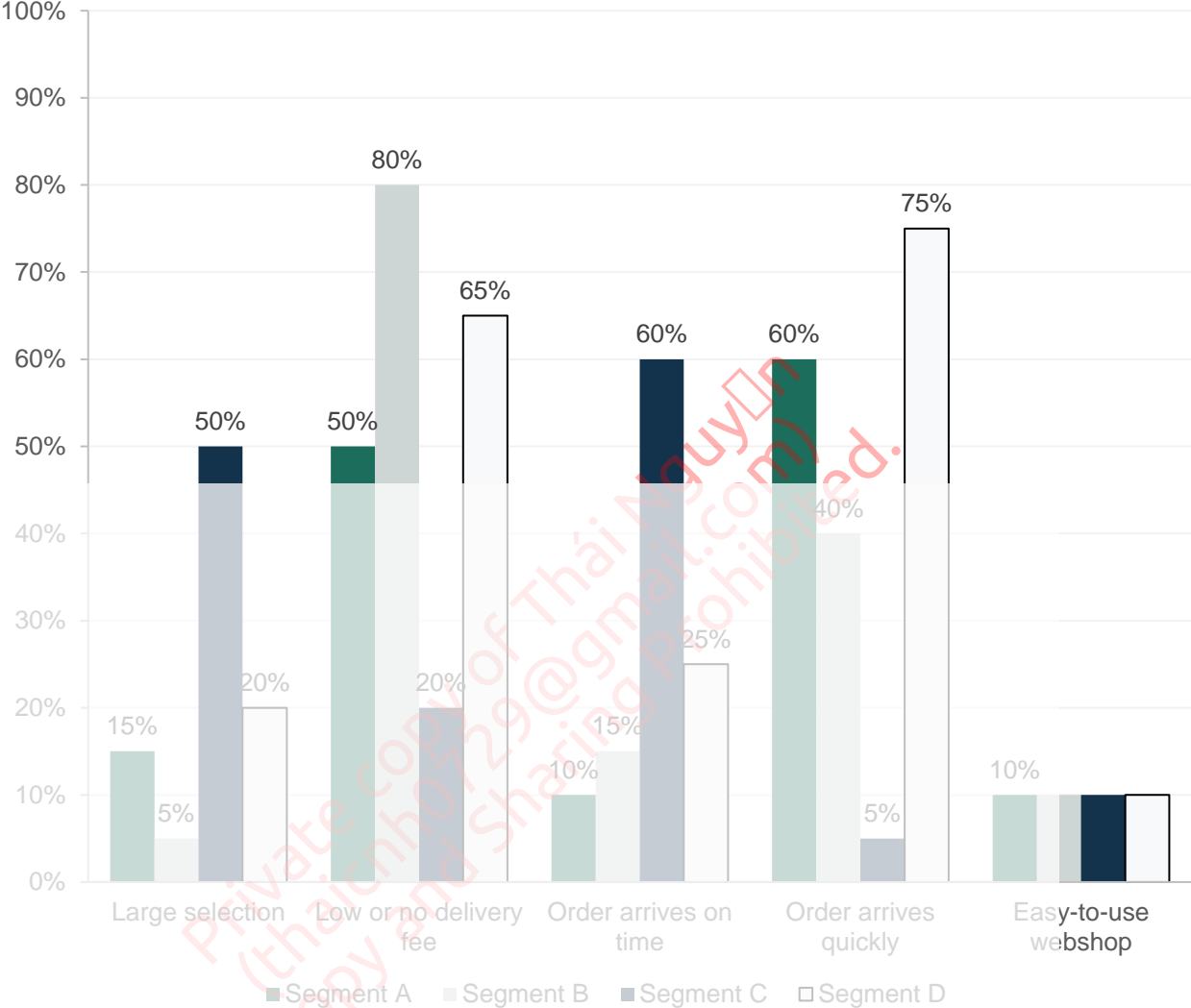
- *On-time delivery: We could look for vendors who have better routing software (e.g., incorporates live traffic data), are better at managing the delivery capacity, include additional buffer in order fulfillment operations, etc.*
- *Large selection: We could look for vendors with more sophisticated inventory management systems, designed for a larger warehouse racking system, better integration with suppliers, etc.*

*The feature with the lowest level of support among segment C respondents is ‘Order arrives quickly’ (5%). We should try to understand how respondents interpreted the word ‘quickly’ in this case. As a starting point, let us deduct that our segment includes people that plan their grocery shop one or more days in advance. We can take advantage of this by planning out optimal routes with costs and reliability in mind.*

*We can also notice that only 10% of consumers in each segment value an ‘easy-to-use web shop’. That likely means that we will not need to prioritize the web shop in our vendor selection. However, consumers are still likely to expect a pleasant online experience. It would be wise to test this further to understand exactly how much investment is appropriate.*

Exhibit 2: Consumer survey results

% of respondents who said the feature is "very important" to them



**Question 4 (Judgement & Insight)**

Our team members have researched the key features and cost of each potential technology vendor and provided their assessment in the following report (share Exhibit 3).

**Which solution is the best fit for the Fresh Food Company?**

**Guidance for interviewer**

If asked, please share that:

- The largest Fresh Food supermarkets carry 15K SKUs.
- Additional market research with Segment C shows that consumers consider on-time delivery within a 60-min timeslot to be reliable. Competitors are currently offering delivery slots with lengths between 60 and 120 min.
- Hybrid solutions (different vendors provide different parts of the solution) are possible, the client prefers to stick to a single vendor at this time given it is difficult to integrate different solutions.

If needed, remind the candidates to analyze the features through the lens of the target segment. If a candidate does not proactively cover both pros and cons, ask candidates about areas of concern with their preferred vendor.

**Possible answer**

*Overall, Darkea appears to be the best solution for Fresh Food, considering both the features offered and the overall risk profile.*

*In terms of features offered, Darkea meets the needs of our target segment C in terms of offering a large selection of products, reliable delivery, and handling large, infrequent orders.*

*Both AutoMoat and Darkea meet the core performance requirements of segment C, including:*

- Large selection: Both AutoMoat and Darkea meet the number of unique items available in Fresh Food's largest stores (15K), with AutoMoat being able to handle as much as 50K items
- On-time delivery: Both AutoMoat and Darkea are able to deliver reliably within a 60mn window, with AutoMoat offering the shortest delivery slots (30 min)

*However, Darkea has a substantially lower risk profile than AutoMoat:*

- Time to market: Darkea would allow us to launch in 8 months instead of 2 years, and projects of this scale are often delayed further. By waiting several years to launch, we would give our competitors

time to further build their position, and consu  
ready to ship the first order.

- Development uncertainty: Darkea's web shop is homegrown and ready to go whereas AutoMoat's web shop is still in development. This means it is yet unclear whether AutoMoat's ultimate solution will meet Fresh Food's needs and choosing AutoMoat would make us reliant on their continued investment. There could be unforeseen delays impacting our launch timeline.
- Fixed cost structure: Darkea has moderate fixed costs while AutoMoat has the highest fixed costs and will require higher order volume to be operated profitably. Gaining market share and developing the online grocery market could take more time than anticipated, which would greatly hurt the AutoMoat IRR but impact Darkea's much less. Once at capacity, it will be easier to add capacity with Darkea as a second warehouse could be hard to justify, effectively limiting the total order volume we serve.
- Concentration: Darkea has several sites per city while AutoMoat has just one. Having a single warehouse per city implies no redundancy in case an unforeseen event halts operation at the site. A warehouse outage would likely completely disrupt our ability to serve our customers.

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**Exhibit 3: E-commerce technology vendor asse**

	AutoMoat	Darkea	Storely
<b>Web shop</b>	<ul style="list-style-type: none"> <li>• Still in development, beta version available in 6 months</li> </ul>	<ul style="list-style-type: none"> <li>• Homegrown platform already in use in several markets, with grocery-specific features</li> </ul>	<ul style="list-style-type: none"> <li>• Standard E-commerce platform based on Shopify for Enterprise</li> </ul>
<b>Order Preparation</b>	<ul style="list-style-type: none"> <li>• Uses a large, highly automated warehouse</li> <li>• Warehouse can handle up to 50K unique items</li> <li>• Very high fixed costs</li> <li>• Very low per item costs (at capacity)</li> </ul>	<ul style="list-style-type: none"> <li>• Uses several mini-warehouses called a “dark store”</li> <li>• Can handle 15K unique items given small size</li> <li>• Moderate fixed costs</li> <li>• Low per item costs</li> </ul>	<ul style="list-style-type: none"> <li>• Packing is done in existing stores (impacts in-store experience)</li> <li>• Most stores carry ~10K unique items, large stores carry up to 15K</li> <li>• Low fixed costs</li> <li>• High per item costs</li> </ul>
<b>Delivery</b>	<ul style="list-style-type: none"> <li>• Earliest delivery slot: 24 hours after checkout</li> <li>• Performance guarantee: 30 min window</li> <li>• Low per order cost</li> </ul>	<ul style="list-style-type: none"> <li>• Earliest delivery slot: 2 hours after checkout</li> <li>• Performance guarantee: 60 min window</li> <li>• Moderate per order cost</li> </ul>	<ul style="list-style-type: none"> <li>• Earliest delivery slot: 1 hour after checkout</li> <li>• Performance guarantee: 90 min window</li> <li>• Moderate per order cost</li> </ul>
<b>Timeline to launch</b>	<ul style="list-style-type: none"> <li>• 2 years</li> </ul>	<ul style="list-style-type: none"> <li>• 8 months</li> </ul>	<ul style="list-style-type: none"> <li>• 4 months</li> </ul>

**Question 5 (Creativity)**

Darkea's web shop is a homegrown platform with grocery-specific features, allowing for considerable flexibility. The development team is soliciting our input on additional features based on our knowledge of the online grocery industry and our target segment.

**Which additional web shop features should Darkea consider adding?**

**Guidance for interviewer**

Encourage the candidate to brainstorm potential features without fully developing the rationale for each. The candidate's answer should focus on the website and online shopping experience specifically, not warehouse or delivery operations. If stuck, encourage the candidate to reflect on profit drivers.

**Possible answer**

To help sign-up customers (growth is critical to making fixed costs work):

- Integrate our in-store loyalty data to target outreach and promotions
- Easily offer one-time / personalized offer codes to drive trial
- Widget to integrate our online grocery website with existing online recipe content
- Simple sign-up to remove friction (create full account later)
- "Unlimited" pass with free delivery for a year (at an upfront cost)

To increase order size (large orders are more profitable to prepare and deliver):

- "Checkout walk" with additional product reminders and offers to drive last-minute cart additions
- "You may also like..." product recommendation engine at the bottom of each item listing
- Ability to "add recipes to cart"
- Excellent item search engine
- Multi-buy promotions (e.g., "buy one, get one free" or "three for the price of two")

To increase gross margins:

- Support for banner, pop-up adds and featured items that can be sold to suppliers
- Personalized product recommendations and offers
- Support for loyalty program covering online purchases

Facilitate operations (reduce uncertain and load balance to unlock capacity):

- Modulate delivery fees to drive price-sensitive customers to less popular slots
- Web shop reflects dark store inventory position and orders in-progress to avoid stockouts
- Website shopper behavior (search, page visits) integrated into forecasting engine

### Question 6 (Synthesis)

**What is your overall recommendation at this stage?**

#### Possible answer

*We were asked by Fresh Food's Chief Investment Officer to recommend a technology vendor for their new online grocery business.*

*We recommend to select Darkea's solution, because it offers an attractive feature set at an acceptable risk level.*

*Darkea can handle the same range as our larger stores (15K unique items) and deliver orders in precise 60-min timeslots. These features are valued by segment C, which offers the largest profit pool (\$120M per week) and is the most attractive to serve. Although AutoMoat is able to offer a larger selection and more precise delivery slots, research showed that consumers do not require these incremental benefits.*

*Darkea's proposition is considerably less risky than that of AutoMoat, the second most viable option to serve segment C, in several areas: it offers a much shorter launch timeline (8 months vs. 2 years), a client-ready web shop (AutoMoat's is still in development) and a moderate fixed cost structure (AutoMoat's is very high).*

*As next steps, Fresh Food should benchmark the offering of the 2 competitors serving segment C to validate the competitive advantages resulting from the choice of Darkea as technology vendor. We also recommend to further work with the vendor to reduce implementation risks and best meet the needs of our target segment.*