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2010

Chicago Booth Case Book

The Reference Guide to Practicing Case Interviews

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Table of Contents

THE FIT INTERVIEW PROCESS

Introduction

The "Fit" part of the interview is often underestimated in importance. While its proportionate importance varies significantly among firms, for every firm there is a "Fit" element to the interview. In some firms like McKinsey, it is a formal evaluative component with up to 50% weight. For other firms the fit component may be shorter. In all cases, it will be important to convey to the interviewer that you are a well-rounded, likeable, and accomplished candidate (in a modest, unassuming and believable way, of course). We advise that you take time to prepare for the "fit" portion of the interview just as you would for preparing cases. Also, keep in mind that while you are cracking the case, your ability to fit within the firm is being evaluated.

Approach

When possible, try to apply the SOAR method to behavioral / fit questions

Situation – in a sentence or two, describe the situation / context / environment
Obstacle – briefly describe the obstacle needed to be resolved
Action – describe what action you took
Result – discuss the outcome of that action

Applying the SOAR method will help to ensure that your answer is well structured, concise and to the point. Remember, even when asked fit and behavioral questions, you are being tested on your ability to think and communicate in a logical / structured manner.

In addition to applying the SOAR framework, many Booth students have found it helpful to create a written outline of their behavioral answers, using four or five sentences. The first sentence in this approach is the newspaper headline. The next few sentences concisely summarize the main components of the story that will be discussed. The final sentence should reiterate the results / impact of your behavioral example. Approaching behavioral questions using the headline structure may prove extremely helpful for McKinsey's *Personal Experience Interview (PEI)*. Additionally, it should help you organize the major discussion bullets of any story, which will be helpful for all interviews.

Fit questions

Common fit questions include (listed in random order):

- Tell me about yourself
- Walk me through your resume
- Tell me more about [a specific bullet on your resume]
- Why did you choose consulting?
- Why did you choose firm X?
- Why did you choose Booth?
- How would you evaluate the business of one of your previous employers?
- What do you like to do for fun?
- What is your favorite book? Why?
- What books have you read recently?
- What are three qualities your friends would use to describe you?
- What accomplishment are you most proud of?
- What distinguishes you from other candidates I am meeting today?
- What is one thing you want me to remember about you?
- Tell me about a time when you set your goals too high? (too low?)
- Who do you look up to professionally and why?
- Which classes have you enjoyed the most and why?
- What does management consulting mean to you?
- What are your short and long term goals?
- What are your areas for improvement?
- Who are you?
- Make an elevator pitch on why we should hire you?
- Tell me about a time when you had to persuade someone to do something they initially did not want to do.
- Tell me about a time when you had a disagreement with your boss and how you handled it.
- Tell me about a time when you had to lead a team through significant change.
- Tell me about a time when you had to deal with a difficult teammate.
- Tell me about a time a time when you had to deal with an ambiguous situation.
- Tell me about a time when you had to work with a lot of ambiguous data and how you handled it.
- Tell me about a time when you worked with people who approached things differently from you.
- How would your co-workers / classmates describe your leadership style?
- Tell me about your biggest failure.
- What is your greatest weakness?

THE CASE INTERVIEW PROCESS

Introduction

The case interview typically begins with the interviewer describing the business situation and providing the candidate with some initial information. The amount of information given up front will vary. Always make sure that you listen carefully, take notes and identify and focus on the relevant case information. Make sure you understand what questions you are trying to answer and ask clarifying questions about the business and data provided. Take some time (about a minute) to structure your analysis. For the sake of courtesy, you may want to ask the interviewer for permission to take this time.

Framework

A framework is important because it helps ensure that your response will be structured, logical and thorough. Additionally, the interviewer will begin to draw conclusions about your candidacy based on your ability to break down the problem. Several "canned" frameworks exist which can be useful in approaching case problems. For instance, many cases can be evaluated using the structures listed below.

- Porter's 5 Forces – internal rivalry, barriers of entry, substitutes (and complements), suppliers' power, buyers' power
- 4Cs – company, competitors, customers, collaborators
- Profitability = Revenue – Cost
- Value chain analysis
- Kotler's 4 Ps – product, placement, promotion, price
- Market segmentation – size, profitability, share, growth
- Internal / external factors – internal factors that affect only the subject firm vs. environmental / external forces that also impact the firms competitors
- Microeconomics factors – market structures, supply and demand, long-run vs. short-run, price elasticity, marginal cost and marginal revenue, variable costs and fixed costs
- Financial statement analysis – income statement classification, revenue and cost analysis
- Cost-benefit analysis
- Net present value (NPV) and cost of capital

Applying the framework

Never use the popular frameworks directly. You should **customize** the framework to the question you are being asked and be creative with your analysis. Based on the framework you have developed, you should be able to identify several possible paths towards addressing the core issue. It is important to **prioritize** the issues you will investigate in the case. The case giver may steer you in a particular direction, **take cues** from your interviewer on what is important. Based on the case information received and the framework you have developed, you should formulate an **initial hypothesis** about the problem you are evaluating. In consultant speak, a hypothesis is what you believe to be the central issue of the case, or the solution to it.

Take notes during the case interview, some interviewers will keep your notes to help them remember the path you took to complete your analysis. Sketch out your thoughts on paper, use large handwriting, and tell the interviewer what you are doing. Be as structured as possible when you are giving your thoughts on an issue or performing calculations. In the analysis phase, you should ask questions, synthesize the information provided and draw conclusions based on the facts. This process helps you to test your hypothesis. If the data proves your hypothesis to be invalid, use your framework and proceed to the issue with the next highest priority. You may have to develop a new hypothesis. Asking questions, collecting information and developing and testing a hypothesis is an iterative process. Do not forget that it is important to verbalize your thought process throughout the interview. When doing calculations, tell the interviewer the steps you are taking. As you work through the case, it is a good idea to verbally summarize where you are, what you have learned, what information means in diagnosing the problem and where you are heading next.

Always end your interviews with a **succinct recommendation**. Try not to recap your path of analysis; instead, draw on key facts to give a clear answer to the central questions of the case. Given that your analysis takes less than a half an hour, it may be appropriate to **highlight next steps, additional considerations, risks and significant assumptions.**

Sample Case Framework: Growth Strategy

"Client would like help in defining a near-term (3-5 year) growth strategy"

Growth

	Mkt Ex.	Mkt New
Prod Ex	Pene	Entry
Prod New	Prod. Dev.	Div

Client's Current Business

- What is their core business?
- Which consumer segments do they serve today?
- Which geographies do they serve?
- Revenue and profitability today?
- Future revenue or profitability goals (e.g. x% increase in five years)

Market

- Customers
  - Segments
  - Growth / trends by segment
  - Channels / locations
- Competition
  - Key players
  - Core capabilities
  - Market share
- New markets
  - Research indicating attractive new locations?

Options

- Operational improvement
  - Sales force effectiveness /efficiency
- Marketing vehicles
  - New products
  - More promotion
  - New pricing
  - New distribution

  Ex

  Ex
- Enter new markets/ geographies

Please note that this is a sample framework for a growth strategy case. It is not meant to represent a 'perfect' framework. It is simply one way to approach this type of problem, and it illustrates the amount of content that an interviewee can be expected to write down in the 60-90 seconds they take to collect their thoughts after hearing the problem. Please note that the author of this framework would write abbreviations rather than complete sentences or words. For example "core bus?" Instead of "what is the core business?"

Sample Case Framework: New Market Entry

"Should the banana producer begin selling coconuts"

Market

- How big is the coconut market?
- How fast is it growing?
- What are the recent trends?
- Competition:
  - Relevant players?
  - Market share of each competitors
  - Core competencies?
- Customers
  - Key segments?
  - Channels?
  - Preferences?

retention

Financial Assessment

- Based on market data, what market share is attainable?
- Revenue based on share?
- Costs
  - Initial investment?
  - Ongoing direct costs?
  - Ongoing fixed costs?
- Net present value / break-even?

Strategic Fit

- Does product fit with core competencies?
- Fit with the brand?
- What is the opportunity cost to diverting resources to the new market?
- What is the organizational impact of entering the new market?

Please note that this is a sample framework for a new market entry case. It is not meant to represent a 'perfect' framework. It is simply one way to approach this type of problem, and it illustrates the amount of content that an interviewee can be expected to write down in the 60-90 seconds they take to collect their thoughts after hearing the problem. Please note that the author of this framework would write abbreviations rather than complete sentences or words. For example "mkt size?" Instead of "how big is the coconut market?"

Sample Case Framework: Profitability

"Despite strong historical performance, margins have been declining over the last year"

Revenues

- How do they price and has there been a change in prices?
- Have volumes changed?
- Product mix – number of SKUs and contribution margins?
- Customers
  - Key segments?
  - Preferences?
  - Distribution channels?

Costs

- Fixed costs
  - Rent?
  - Insurance?
  - Marketing?
  - Research & development?
- Variable Costs
  - Direct materials?
  - Direct labor?
  - Variable overhead?

Market

- Competitive landscape
  - Key players / new entrants?
  - Market share?
  - Sources of competitive advantage?
  - How do they compete?
  - Indirect competitors (substitute products)?
- Trends in the end-user market?
- Economic cycle – disposable income level?

Please note that this is a sample framework for a profitability case. It is not meant to represent a 'perfect' framework. It is simply one way to approach this type of problem, and it illustrates the amount of content that an interviewee can be expected to write down in the 60-90 seconds they take to collect their thoughts after hearing the problem. Please note that the author of this framework would write abbreviations rather than complete sentences or words. For example "price?" Instead of "How do they price and has there been a change in prices?"

Sample Case Framework: Private Equity

"Recommend whether or not a PE client should acquire a pest control company"

Market

- What is the size of the pest control market?
- Is it growing?
- Recent trends?
- Who are the main players?
- How much market share to they have?
- How do they compete (price / service / etc.)?
- Customers
  - Key segments?
  - Purchasing behavior?
  - Distribution channels?

competition

Target (Company)

- Core capabilities and source of competitive advantage
  - Customer loyalty?
  - Distribution network?
  - Quality of service?
  - Strength of brand?
  - Management team?
- Financial Assessment: NPV Analysis

Synergies
- source of add'l drivers for ↑ rev or ↓ cost

If regular Acq. case, not PE or Investment

Client (Fund)

- Investment strategy and style?
- Size and / or number of investments?
- Hurdle rate?
- Expertise in the pest control service industry?

Please note that this is a sample framework for a private equity case. It is not meant to represent a 'perfect' framework. It is simply one way to approach this type of problem, and it illustrates the amount of content that an interviewee can be expected to write down in the 60-90 seconds they take to collect their thoughts after hearing the problem. Please note that the author of this framework would write abbreviations rather than complete sentences or words. For example "NPV" Instead of "Financial Assessment: NPV Analysis"

ADDITIONAL POINTS FOR CASE ANALYSIS

Here are some common points to think about when building your frameworks. Please note that this list is *not exhaustive*. Additionally, not all bullet points will apply to all cases.

- **Industry Analysis**
  - Industry structure (usually one of the following)
    - Perfectly competitive
    - Oligopoly
    - Monopoly
  - Relevant conditions
    - Size
    - Profitability
    - Growth
    - Segment
    - Regulation
    - Technological advances
  - Key players and their respective market shares
  - Value chain – vertical chain of productions including suppliers and distributors
  - Barriers to entry or exit (also see *Growth Strategy* below)
    - Economies of scale
    - Learning curve
    - Access to distribution channels
    - Access to suppliers
  - Key drivers for success
    - Consumer insight
    - Technological advances
    - Brand equity
  - Current substitutes
  - Current trends
    - Cost drivers (outsourcing, new competitors, etc.)
    - Product trends
- **Profitability Analysis**
  - Revenues (Price * Volume)
    - Factors affecting prices
      - Elasticity of demand
      - Product mix
      - Differentiation
    - Factors affecting volume
      - Internal
        - Distribution logistics
          - Supply chain
          - Inventory management
        - Capacity
      - External
        - Competition
        - Customer trends

- prod. differentiation
- channels
- customer service
- marketing

- Substitutes / complements
- Market trends (declining market, regulation, etc.)

- Costs (Variable + Fixed)
  - Variable costs (Costs of Goods Sold)
    - Materials
    - Labor
  - Fixed costs
    - Property, plant and equipment
    - Operating costs: distribution, marketing, R&D, SG&A
  - Other cost considerations
    - Sunk cost fallacy
    - Capacity utilization and impact on total average cost per unit
    - Benchmark costs with key competitors
    - Relative percentage of cost components
    - Cost allocation across multiple products
    - Total costs, average variable costs (economies and diseconomies of scale)
    - Variations in costs over a period of time
    - Inventory holding costs

* Time involved

Operation

- **Growth Strategy**
  - Mapping

	Existing Market	**New Market**
Existing Products	Increased Penetration	New Market Entry
New Products	Product Development	Diversification

  - Increased penetration
    - Capacity to sustain increased volume (see *Capacity Expansion* below)
    - Increased marketing expense
  - Methods of market entry or product entry: organic, acquisition, partnership / joint venture
  - Factors for new market / new product
    - Industry structure and analysis (see *above*)
    - Localization of product / service offerings, regulations, tariffs
    - Source of volume (steal share, create new market)
    - Customer related barriers to entry
      - Switching costs
      - Access to distribution channels
      - Brand awareness
    - Non-customer related barriers to entry
      - Capital requirements
      - Regulation
      - Economies of scale
    - Quantify investment cost and risk
    - Prior experience with market / product entry – have they tried this before? If so, what was the outcome?

} look at compet.

  - Additional factors for new product entry
    - Cannibalization
    - Trading up, trading down

- **Acquisition**
  - Rationale: revenue increase and/or cost reduction
  - Resources
    - Capacity
    - Technology
    - Distribution
    - Human capital
    - Brand
    - Product line
    - Network effects
    - Complementarities
  - Cost synergies
    - Economies of scale
    - Economies of scope
    - Learning curve
  - NPV analysis: price of acquisition < revenue increase and/or decrease in cost
  - Organization considerations
    - Synergies, required changes to organizational structure, corporate culture fit
  - Vertical integration
    - Coordination costs, costs of using the market
  - Competitive reaction
- **Investment in a new business or equipment**
  - Industry analysis (if new business?)
  - Rationale
  - Financial assessment
    - NPV: initial investment, ongoing costs, projected cash flows, cost of capital, sensitivity analysis / risks
  - Property, plant and equipment
    - Useful life of equipment
    - Depreciation
    - Utilization
    - Salvage value
  - Opportunity costs / economic rent
  - Option value
- **Capacity Expansion**
  - Rational for expansion (e.g. capacity utilization, demand increase)
  - Impact on prices – increasing supply may affect demand
  - Competitive reaction
  - Options
    - Expand existing facility
    - Build new facility
      - Proximity to suppliers / distributors and transportation requirements
      - Time to build
    - Seek alternatives – lease, outsource, acquire, etc.
- **Pricing Strategy**
  - Elasticity of demand
    - Substitutes
    - Short run outcomes

- Long run effects
- Economic value analysis
    - Reference value
    - Differentiation value
- Cost-plus method
- Non linear pricing
    - Two-part tariffs
    - Bundling: complements, non-complements

CASE MATH

Here are some basic math principals or equations that you should use in your case interviews.

Round it

223 million * 21

≈ 220M * 20

= 4,400M or 4.4 billion

1,030,850 / 33 million

≈ 1/33

≈ 3%

Distributive property

23 * 51

= (20 * 50) + (3 * 50) + 23

= 1,000 + 150 + 23

3,756 / 33

= (3,300 / 33) + (456 / 33)

= 100 + (330 / 33) + (126 / 33)

≈ 100 + 10 + 4

= 114 (or 120)

Scientific notation to avoid miscounting zeros

Multiplication Example

2,000 * 300

= $(2 * 10^3) * (3 * 10^2)$

= $6 * 10^5$

= 600,000

Division Example

100,000,000 / 5,000

= $(10 * 10^7) / (5 * 10^3)$

= $2 * 10^4$

= 20,000

Rule of 72

The *rule of 72* allows you to calculate the growth rate an investment will require to **double** in a specific number of years. Conversely, it can be used to calculate the number of years it will take an investment to double in value at a given growth rate.

- For an investment to double in 5 years, it must grow at (72 / 5) = 14.4%
- An investment growing at 12% will double in (72 / 12) = 6 years

Equivalent fractions

1/2 = 50%	1/3 = 33%	1/4 = 25%
1/5 = 20%	1/6 = 16.7%	1/7 = 14%
1/8 = 12.5%	1/9 = 11%	1/10 = 10%

Business formulae

$$\text{Contribution Margin} = \text{Price} - \text{Variable Costs}$$

$$\text{Break Even Quantity} = \frac{\text{Fixed Costs}}{\text{Contribution Margin}}$$

$$\text{Time to Break Even} = \frac{\text{Fixed Costs} + (\text{Penetration in \# of units} * \text{Variable Costs per unit})}{\text{Penetration in \# of units} * \text{Contribution Margin}}$$

$$\text{Elasticity} = \frac{\%\ \Delta\ \text{Quantity}}{\%\ \Delta\ \text{Price}}$$

$$\text{Revenue Growth} = \%\ \Delta\ \text{Price} + \%\ \Delta\ \text{Volume} + (\%\ \Delta\ \text{Price} * \%\ \Delta\ \text{Volume})$$

$$\text{CAPM Discount Rate} = \text{Risk Free Rate} + \text{Beta} * (\text{Market Return} - \text{Risk Free Rate})$$

$$\text{Present Value} = \frac{\$\ \text{Amount}}{(1 + \text{Interest Rate})^t}$$

$$\text{Perpetuity Calculation} = \frac{\$\ \text{Amount}}{\text{Interest Rate}}$$

$$\text{NPV} = -\text{Investment} + \frac{\text{CF 1}}{(1+i)^1} + \frac{\text{CF 2}}{(1+i)^2} + \frac{\text{CF 3}}{(1+i)^3} + \cdots$$

$$\text{CAGR} = \frac{\text{Ending Value}}{\text{Beginning Value}}^{\left(\frac{1}{\text{\# of yrs}}\right)} - 1$$

$$\text{Gross Margin} = \text{Revenue} - \text{Cost of Goods Sold}$$

$$\text{Gross Margin \%} = \frac{\text{Gross Margin}}{\text{Revenue}}$$

$$\text{Operating Margin \%} = \frac{\text{Operating Income}}{\text{Revenue}}$$

CASE FACTOIDS

Knowing the information below is not required but it may be helpful to have a basic familiarity with some of this information.

Population Data

U.S. Population	304 million
Population of New York City	8 million
Population of Los Angeles	4 million
Population of Chicago	3 million
Population of Houston	2 million
Population of Philadelphia	1.5 million
U.S. Households	100 million
Population of People's Republic of China	1.3 billion
Population of India	1.1 billion
Global Population	6.7 billion

Economic Data

U.S. GDP Growth Rate	2%
World Nominal GDP	$55 trillion
U.S. Nominal GDP	$14 trillion
E.U. Nominal GDP	$17 trillion

Sources:
Top 50 cities in the U.S. by population, www.infoplease.com/ipa/A0763098.html, Nov. 27, 2008
CIA World Factbook, www.cia.gov/library/publications/the-world-factbook/index.html, Nov. 27, 2008

CASE EVALUATION CRITERIA

Structure and framework

a. Mutually exclusive, collectively exhaustive
b. Customized – not entirely generic
c. Easy to understand and implement
d. Referred to framework throughout to guide discussion

Analytical and problem solving ability

a. Interpreted and used data well, draw strategic insights and conclusions
b. Quick and accurate calculations
c. Able to keep complex fact base organized and structured
d. Creative in drawing conclusions, analyzing reasons

Synthesis and conclusion

a. Used framework to organize and convey conclusions succinctly
b. Conclusions were compelling and backed with evidence developed during the interview
c. Comprehensive, captured all relevant points discussed during the case

Communication skills

a. Verbalized and communicated thinking at every stage
b. Communicated in a crisp and concise manner without rambling or wandering
c. Build strong rapport with interviewer, case discussion was not a monologue

Presentation

a. Drove the case discussion, active rather than passive
b. Confident and relaxed
c. Enthusiastic and engaging

PRACTICE CASES

A. T. Kearney – Loss of a Patent

Interview Round: n/d (submitted by the firm)

Time allotted: 30 minutes

Instructions: The candidate is told everything in *italics*. The instructions for the interviewer are in normal text.

Situation:

Your client is a drug manufacture. The patent of its "blockbuster" drug, Zewal, will run out in less than a year. Zewal generates half of the client's revenues, while 10 other drugs generate the other half. Company R&D is more than 5 years away from the next blockbuster drug and mergers are out of the question. How can we help the company?

At this point, the candidate should ask several clarifying questions, develop a framework and then launch into exploratory questions. As the interviewer, you need to know that this is a primarily a cost-revenue case with product life-cycle management as a secondary theme. The answer will lie primarily on the revenue side of the cost-revenue equation.

Additional information:

The information below can be provided as the candidate asks exploratory questions.

Costs

- *The company is efficient and well run. In fact, it has been cutting costs for the last several years and its costs are generally in line (i.e., competitive) with industry standards.*

Customer

- *Company sales representatives focus mainly on selling to doctors (note: 20% of all doctors make 80% of prescriptions).*
- *Sales reps also reach out to major health insurance plans, including health management organizations (HMOs) and preferred provider organizations (PPOs), to get their drugs in those organizations' lists of preferred medicines.*

Company: Here the main area to talk about is the marketing / sales department

- *The company has a dedicated sales force of about 150 people. On average, a sales person is responsible for 100 doctors. The industry standard is one sales person for every 50 doctors. In fact the sales department is seriously understaffed.*
- *A major portion of a sales person's compensation is dependent on the contribution margin of the drugs they sell. Each sales person is responsible for a portfolio of drugs with varying levels of contribution margin. The contribution margin for Zewal is the lowest. So far this strategy has worked as there was more pull for the drug than push required from the sales people.*

Competition

- *At present there is no single drug that has a chemical composition similar to that of Zewal but doctors have been testing a combination of drug regimens from a rival company.*
- *The rival company has the advantage of a larger sales force which can reach out to 35% of all doctors in the U.S. as compared to our client's reach, which is about 10%.*
- *When the patent expires our client will have about 6 months before generic drug companies*

begin selling their version of the drug.

Data and Solution:

Quickly dismiss cost reduction initiatives, as they will not save the company since it is a well-established company and has been cutting costs for several years. The answer lies on increasing the revenue side. Some quantitative areas the candidate may explore are below. Note: this case is largely qualitative, so please see recommendations section for "solution".

Sales force

- Currently, the client is only reaching 15,000 doctors (150 sales people x 100 doctors), which is 10% of the doctors in the US, while the main competitor is reaching 52,500 doctors (15,000/10% = 150,000 doctors; 35%*150,000 is 52,500 doctors). To reach out to the same number of the doctors as the main competitor, maintaining the current ratio of sales reps to doctors, the client would need to add 375 additional sales reps.
- According to the case, the client is currently under-serving these doctors, as the industry average for number of doctors per sales person is 50, while each sales rep at the client serves 100 doctors. To reach out to the same number of doctors as the main competitor, the client would need to increase its sales force to 1,050 sales reps (52,500/50=1,050).
- The case does not provide quantitative information how the client could improve sales revenue and margins per sales rep by improving the ratio of sales reps to doctors, but one can draw a graph to represent the firm's productivity when adding additional sales people and indicate that the company should quit adding sales personnel when MR generated exceeds MC.

Recommendations:

Increasing revenues: In the current year before the patent expires and till 6 months later the company should try to increase revenues:

- This can be done by increasing the size of their sales force and send them out after more doctors (see above).
- Increase incentives to current sales people to sell more of Zewal (for example, by increasing their compensation for selling Zewal).
- Provide more Zewal samples to doctors
- Increase advertising

After the patent has expired, the company could undertake the following:

- Try patenting a specific dosage size
- Engage in more direct-to-consumer marketing
- Look at overseas markets

A.T. Kearney – Promotion Planning

Interview Round: n/d (submitted by firm)

Time allotted: 30 minutes

Instructions: The candidate is told everything in the Situation section and additional data is provided only when the candidate asks questions or gets close to discovering the additional data during the case.

Situation:

Our client is a national grocery and drug store chain, which has been steadily losing market share to its competitors. Our client utilizes a high-low pricing strategy, in which regular prices are typically slightly higher than those of an everyday low price retailer. However, periodically high-low retailers drop prices significantly. During the time period in which a product's price is decreased, the product is also promoted through print and in-store advertising. Our client expects a significant lift in sales during the periods in which a product promoted. However, benchmarks against industry averages indicate that our client does not experience as large of a lift in sales as its competitors do during promotions. What would be your approach to increase sales lift when an item is promoted?

Additional information:

- **Everyday Low Pricing vs. High-Low Pricing:** Shifting pricing strategy to an everyday low pricing model is not an option. The client has made the decision to focus on being the industry leading high-low grocer. They feel they can compete with everyday low price retailers once this goal is achieved.
- **Competition:** There are 1-2 major high-low competitors in each of the local regions in which the client operates. Our client's everyday prices, timing of promotional cycle, and percent discounts are virtually identical to their competitors in each market.

Promotion Planning at the Stores:

- **Timing:** Store managers place orders with their distribution center for promoted products several weeks before the promotion takes place.
- **Predicting Promotion Volume:** Typically, store managers base the size of their promotional orders on the quantities ordered in the past on a similar promotion and more subjective factors like length of time since the item was last promoted and the store manager's gut feel based on his years of experience. (Most store managers have at least 10 years experience in the grocery industry).
- **Unexpected Promotion Volume:** If an employee notices that the shelves are running low or out of stock on a promoted item, the store manager will place an order for additional product. Orders must be placed by mid-afternoon and are delivered the next morning. On occasion, the store will not know that they are out of stock on a particular item until a customer complains.
- **Distribution Center Ordering Process:** Buyers at the distribution centers do not receive enough lead-time to incorporate store orders into the orders placed with suppliers for promotions. However, buyers have access to the quantity of product sold during similar promotions in the past. Buyers typically use this data when determining how much product to purchase for a given promotion.
- **Customer Experience:** Customers routinely complain that promoted products are not on the client store shelves during promotions. Customers are typically loyal to a particular grocery store, provided that it stocks the products they consume at a reasonable price.

Data and Solution:

Determine Source of Disappointing Sales Lift: This is a great case to assess the candidate's ability to solve a problem in a structured manner. A good candidate will peel back the onion to understand the source of the disappointing sales lift on promoted items one layer at a time:

1. **Client's Promotions Generate Less Volume Than Those of its Competitors:** Our client's regular and promotional pricing is virtually identical to their competitors' pricing. Therefore, we are generating less volume on any given promotion compared with our competitors.

2. **Promoted Items Not In-Stock:** The primary driver behind the lack of sales volume is the client's inability to keep promoted items stocked on its shelves.
   a. We cannot sell what we do not have on the shelves.
   b. Customers may not come back if they experience repeated shortages on promoted items.

3. **Ineffective Promotion Planning and Execution Causing Missed Sales Opportunities:** Store managers plan volumes for promotions based on gut feel and quantities *ordered* in the past for similar promotions – not based on quantities *sold*.

Lay out Plan to Improve Process: The candidate should recognize that we need to devise a way to utilize data on quantities sold during past similar promotions.

A good answer will lay-out a strategy to include past sales on similar promotions in the planning process as detailed above. A great answer will also note that stores must have better visibility on the inventory of promoted items on their shelves.

Access to data that illustrates real-time movement of promoted items would give stores more lead-time in the event that items are selling faster than expected. A simpler non-technical solution, which could be implemented immediately, is to institute scheduled stock updates throughout the day, especially just before the daily store order deadline. This would help avoid products being out of stock for multiple days. A good candidate should be able to prioritize the recommendations in terms of ease of implementation.

Accenture – Canada Cable Co. Case

Interview Round: 1, First Year

Time allotted: 20 minutes

Instructions: The candidate is told everything in *italics*. The instructions for the interviewer are in normal text.

Situation:

Your client is a Canadian cable company. It is one of the leading providers of television and internet access to Canadian consumers. However, it has been looking for ways to expand its business and has contracted Accenture to help it evaluate potential options. Specifically, the firm is contemplating an entry into the wireless telephone space, particularly as the Canadian government is preparing to auction valuable spectrum that could be used for a national wireless service. The client would like your help in determining the maximum it should be willing to bid at the auction.

At this point, the candidate should begin exploring how the company should value the spectrum. Beyond any initial clarifying questions, the candidate should establish that there will be three major components to the valuation:

1. Upfront costs of building a wireless network, in addition to the spectrum purchase
2. Annual variable costs that will occur over the life of the network
3. Revenues from selling wireless services to customers

Additional information:

As the candidate explores the opportunity, he/she may ask for more information to ascertain the different elements of the valuation. When asked, the interviewer may provide the following:

Spectrum Data

- *The spectrum would be perfect for any wireless voice/data service and covers the entire country*
- *The client currently does not have any spectrum assets*
- *The spectrum will be useful for six years (although it will take the first year to build-out the network) before new technologies render it obsolete*

Market Data

- *Canada currently has 10 million wireless customers*
- *The client estimates that with the spectrum and a built-out network, leveraging its brand, it can achieve 10% penetration upon launch of the service*
- *That 10% penetration will remain constant over the life of the network*

Cost Data

- *The company estimates it will cost a quarter of a billion dollars to build a network with capacity to service all the potential customers*
- *Once the network is operational, it will require significant maintenance as well as ancillary marketing/billing/other costs. These aggregate costs are estimated at $180 million annually*

Revenue information

- *The average Canadian wireless user spends $40/month on their cell phone service*

Data and Solution:

After the initial prompt, the candidate may think of several elements that would need to be considered in valuing the spectrum. Although this may lead to many reasonable questions (e.g. How many other bidders are there? What other options does the client have for growth?), guide the candidate to consider the wireless opportunity as a stream of cash flows.

What types of costs could the Cable company encounter in launching a wireless network?

The candidate may then ask questions regarding the estimated costs of building and operating the network.

Ideally, the candidate will quickly sketch out a six year series of cash flows:

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Build Out Costs	(250M)					
Operating Costs		(180M)	(180M)	(180M)	(180M)	(180M)
Revenue		480M	480M	480M	480M	480M
Total Profit (Cost)	(250M)	300M	300M	300M	300M	300M

Revenue per year calculation = 10M customers * 10% penetration * $40/month * 12 months/year = $480 million

A good candidate would then look to discount the stream of cash flows to arrive at a present value that can be attributed to the spectrum. However, instruct the candidate to ignore time value of money for the purposes of this exercise. Given that, the candidate should arrive at a valuation of **$1.25 billion** for the spectrum.

Recommendations:

The client has asked us for our recommendation. What would you tell the client?

Given the assumptions laid out, I would recommend bidding no more than $1.25 billion on the available spectrum, given that the firm can realistically achieve 10% market penetration and generate $40/month in revenue from the average customer.

Candidate should realize that if the company bids exactly $1.25 billion, it is not making any profits. Outstanding candidates should have asked upfront what the company expectation on ROI (or the hurdle

rate) is. This will help determine the optimal amount to bid. Company ROI requirements can be based on historical figures or given by the management team for this specific project. For example, if the required ROI is 20%, then the maximum bid amount should be \$1.25 billion / 1.2 = \$1.04 billion.
Additional Concerns: At this point, ask the candidate if he/she has any additional concerns that have not been taken into account. These can include any number of issues, such as the following: • *Are the firm's assumptions accurate?* • *Does the cable company have any other options beyond wireless?* • *Can the firm look to bundle its new wireless service with its existing service offerings to increase revenue or enhance customer stickiness?* • *Are there any regulatory concerns with regard to purchasing spectrum?* • *What are potential competitive responses to entering the wireless space?* • *Are there strategies for entering the wireless market that don't require purchasing spectrum? (i.e. partnering with wireless companies, become a virtual network operator)*

Bain & Company – International Airlines

Interview Round: 2

Time allotted: 30 minutes

Situation:

One of our clients, a leading international airline, has come to us with a problem. Over the last three years they've noticed that while their business has been doing well, their profitability seems to be stagnant. They have come to Bain to try to determine what the issue is and how they can correct the problem.

The candidate should take 1-2 minutes to draw out a framework, outlining the possible issues. Then candidate should use his/her framework it to ask clarifying and exploratory questions geared towards identifying those issues that are key to this particular case.

Additional information:

This additional information can be provided as the candidate asks exploratory questions.

Business segments: A first step for the candidate could be to find out in which business segments the client operates.

- *The two main areas of business for the airline are its passenger business and its freight business.* Further questioning should establish that the airline has had the following financial results (note that you should only provide the following results once the candidate has established that the freight and passenger businesses are the two main businesses for the airline).

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Table 1

	2000	2001	2002
Passenger Revenues	$300 million	$375 million	$450 million
Profits from Passenger Business	$140 million	$165 million	$190 million
Freight Revenues	$212.5 million	$225	$275 million
Freight profits	$200 million	$190 million	$120 million

It should now become clear to the candidate that the problem the airline is facing lies in the freight business and not the passenger business. If the candidate continues to press with the passenger business the interviewer can allow him/her to continue down that road, but eventually should inform them that the client essentially believes the passenger business is growing both on the revenue side and the profitability side and is not a major issue.

Data and Solution:

Once the candidate has established that the freight business is the issue, the interviewer should provide the candidate with the following information when asked for more information about the freight operations:

Info provided to the candidate by the interviewer:

- *There are two main types of freight: belly freight, which is carried in the bays of the planes that are operating as passenger jets, and freighter freight, which is carried on specially-designed freighters*
- *With the exception of live animal freight, which is an inconsequential portion of this airline's overall business, all types of freight can be carried on either freighters or passenger planes*
- *Passenger planes typically have about 35% of the room of the freighters*

After the provision of this information the candidate should begin to recognize that there might be a problem with the usage of freighters and passenger jets to carry the freight. He or she should begin to see that the belly freight is a substitute for freighters themselves. After coming to that realization (or before) the candidate should ask for some information about the profitability of belly freight versus freighter freight.

Info provided to the candidate by the interviewer:

- *The cost per ton of belly freight (i.e. the incremental cost to the airline) is approximately 20% that of freighter freight*
- *The time to deliver belly freight is approximately 10% longer than that of freighter freight*
- *The destinations served are actually greater with belly freight flights than with freighter freight*
- *They operate out of the same airports, although separate personnel are required to operate freighter freight flights*
- *If belly freight or freighter freight capacity goes unoccupied, it is non-revenue generating (i.e. nothing else is carried in that space)*

At some point the candidate should begin to inquire as to what has happened over the past couple of years.

Info provided to the candidate by the interviewer:

- *As it turns out, the airline has quadrupled their number of freighters from 3 to 12 over the past 3 years. Further they have added new freighter flights. This has led to the usage of the freighters' capacity on each flight to drop from 85% to 35%.*
- *At the same time, the number of passenger flights has doubled and the number of destinations served via passenger flights has increased by 1/3. Belly freight capacity usage however has dropped from 85% to 60%.*

If the candidate asks about profit margins, the interviewer can tell the candidate that:

- The total cost for a freighter freight flight averages $400,000 per flight and for passenger flights they are $600,000 (regardless of the freight carried). Further, revenues for each flight from the freight move on a sliding scale based upon how full the planes are:

Table 2

Freight usage:	25%	50%	75%	100%
Passenger (freight revenues per flight)	$150,000	$300,000	$450,000	$600,000
Freighter (freight revenues per flight)	$200,000	$400,000	$600,000	$800,000

Although the candidate can go ahead and put numbers to paper, the clear conclusion from this is that the airline has engaged in a costly freighter expansion project when it wasn't truly necessary. In fact the airline is now only making approximately $80,000 per freighter flight on average whereas it used to make $280,000 per flight. Further, much of this freight could be carried in the belly of the planes and would result in a cost free incremental profit to the airline.

Recommendations:

The candidate's recommendations could include:

- The airline should refocus its freight operations on belly freight.
- It should charge a premium for express packages for which the 10% additional time savings gained by using a freighter is crucial.
- It should sell off or terminate the leases of some of its freighters.
- It should consider adding more passenger flights as the demand seems to be picking up for these. Further, by adding more belly freight the profitability per flight should increase.
- If it can trim its freighter operations the airline facility/personnel costs should decline.
- The candidate should raise the point that the airline could try and go out and become a leader in the express freighting business, but that this would be an expensive endeavor and is risky.
- The airline should consider entering into agreements with other freighter companies in order to share usage of planes and personnel in an effort to cut costs/maximize usage.

International Airlines (Profitability)

Table 1

	2000	**2001**	**2002**
Passenger Revenues	$300 million	$375 million	$450 million
Profits from Passenger Business	$140 million	$165 million	$190 million
Freight Revenues	$212.5 million	$225	$275 million
Freight profits	$200 million	$190 million	$120 million

Table 2

Freight usage:	25%	50%	75%	100%
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Freighter (freight revenues per flight)	$200,000	$400,000	$600,000	$800,000

Bain & Company – Midwest Machinery Co.

Interview Round: 1, First Year

Time allotted: 45 minutes

Instructions: The candidate is told everything in *italics*. The instructions for the interviewer are in normal text.

Situation:

- *Midwest makes a wide variety of machines designed specifically for the medium to heavy industrial sector that are used in everything from factories, farms, tractors and industrial buildings.*
- *Revenue is $3B, with net profit margins around 12%.* (Note to interviewer: net profit is $360M)
- *The CEO had demanded that management look for new ways to find cheaper ways to produce machines. This search has pushed management to comb the globe for alternate suppliers in faraway places such as Colombia, Shanghai and India.*
- *The CEO has also been very demanding with regard to the processes that support all of the operations. In particular he wants to ensure basic activities that do not involve intellectual capital are performed at the lowest cost possible. In particular, he does not want to overpay for labor when it is not necessary. He respects Midwest's traditions and the strong sense of community it has with the local town, but he knows that profitability must come first for him and his shareholders.*

Pressing Issue:

- *The Six Sigma team* (Note to interviewer: a business management strategy aiming to improve manufacturing process) *has come up with a proposal to move to India the manufacturing process for the XL292 machine, a critical machine for many of Midwest's end products. Also, these results may affect Karl's decision on whether to outsource other processes totaling over $300M worth of costs. But before the CEO looks at the financial data he wants to have a clear understanding of the pros and cons of outsourcing.*

Case Question:

- *Develop a structure for thinking through the pros and cons of outsourcing this process to India. Your structure can only cover 5 topics that may or may not concern the business. You can only ask two questions before creating your structure. Explain this model and what you would advise the CEO to consider as he reviews the data.*
- After discussing the model, the interviewer will share the financial data with the candidate and will ask him/her to *calculate the profitability of staying local vs. going abroad to India.*
- *Using the data, return to your model and explain how it has affected your thinking. You may ask three more questions at this point before concluding with your final advice to the CEO.*

Additional information (If asked):

- **Community** – Midwest is located in a small town in Midwest USA and has been the largest employer in that town for over 30 years.
- **Unions** – Midwest is unionized but the union and management have typically been on friendly terms.
- **CEO Personal Incentive** – If he saves the company over $50M this year, he will receive a $1M bonus.

- **Competitors** – They have been outsourcing for years and benefiting by getting their costs down

Framework:
Let the candidate drive the case. The candidate should, at this time, draw out a framework. The framework should include most of the major discussion topics in the chart below. Use a simple structure to stay logical.

		Pre-calculation discussion	
		Stay Local	**Go to India**
PROS	1. People	Loyalty, best people stay, morale will be up	Eliminate low level jobs may force some people to try to advance and build their skills
	2. Plant operations	Capacity should remain steady	Unnecessary production may be streamlined resulting in more savings long term
	3. Community Relations	Unions and community leaders will continue to support Midwest management	None
	4. Technology	By producing locally, Midwest can keep on top of technical changes quickly	By going abroad, Midwest will be exposed to better technology and may grow as a result
Cons	1. Financials, revenue, cost, TT	Midwest will continue to waste profit dollars	Hidden costs in terms of handling product and dealing with a foreign country may be higher than expected
	2. People	Good employees still may leave as personal opportunities diminish	Fearing for their jobs, good people may leave
	3. Plant operations	Operations are not going to change and costs remain high	Idle capacity may cause further expense in local

			plants
	4. Community Relations	No problem	Backlash from community may destroy value of company
	5. Technology	No problem	Cheaper prices may require cheaper technology as a result, higher CAPEX.

Data and Solution:

For the XL292 machine:

	Stay Local	India
Total units	10,000	10,000
Labor and benefits per hour	$22	$7
Hours to product a unit	12	4
Materials cost per unit	$400	$250
Holding cost per unit	$30	$20
Shipping per unit	$12	$44
Import duty per unit	$0	$150
Made in USA credit per unit	$85	$0

Cost = (Labor X Hours) + Materials + Holding cost + Shipping + Import Duty – Made in USA credit

Cost per unit	$621	$492
Total costs	$6,210,000	$4,920,000

Cost savings from outsourcing are about $1.3M ($6.21M - $4.92M), or 20.8%.

Using this to extrapolate: assuming Midwest can achieve similar savings (i.e. 20%) on the other processes of $300M worth of costs, it can save $60M. $60M is 17% of Midwest's bottom line ($3B * 12% = $360M of profit).

Additional questions if time permits:

1. What would happen if Indian labor costs doubled?

	Stay Local	India	
Total units	10,000	10,000	
Labor and benefits per hour	$22	$14	
Hours to product a unit	12	4	
Materials cost per unit	$400	$250	
Holding cost per unit	$30	$20	
Shipping per unit	$12	$44	
Import duty per unit	$0	$150	
Made in USA credit per unit	$85	$0	
			Savings
Cost per unit	$621	$520	**16%**
Total costs	$6,210,000	$5,200,000	
If outsource all $300M:		**$48.8**	**million savings**
New profit margin		**14%**	

2. US production goes to 8 hours?

	Stay Local	India
Total units	10,000	10,000
Labor and benefits per hour	$22	$7
Hours to product a unit	8	4
Materials cost per unit	$400	$250
Holding cost per unit	$30	$20
Shipping per unit	$12	$44
Import duty per unit	$0	$150
Made in USA credit per unit	$85	$0

				Savings
Cost per unit	$533	$492		**8%**
Total costs	$5,330,000	$4,920,000		

If outsource all $300M: **$23.1** **million savings**

New profit margin **13%**

3. US credit goes to $125?

	Stay Local	India
Total units	10,000	10,000
Labor and benefits per hour	$22	$7
Hours to product a unit	12	4
Materials cost per unit	$400	$250
Holding cost per unit	$30	$20
Shipping per unit	$12	$44
Import duty per unit	$0	$150
Made in USA credit per unit	$125	$0

			Savings
Cost per unit	$581	$492	**15%**
Total costs	$5,810,000	$4,920,000	

If outsource all $300M: **$46.0** **million savings**

New profit margin **14%**

4. Import duty goes up to $200?

	Stay Local	India
Total units	10,000	10,000

Labor and benefits per hour	$22	$7	
Hours to product a unit	12	4	
Materials cost per unit	$400	$250	
Holding cost per unit	$30	$20	
Shipping per unit	$12	$44	
Import duty per unit	$0	$200	
Made in USA credit per unit	$85	$0	
			Savings
Cost per unit	$621	$542	**13%**
Total costs	$6,210,000	$5,420,000	
If outsource all $300M:		**$38.2**	**million savings**
New profit margin		**13%**	

Recommendations:

The client has asked us for our recommendation. What would you tell the client?
Here is a possible response:

The savings for going abroad of about $1.3 million for XL292 machine is reachable. Based on the discussion of pros and cons of outsourcing to India, it may be a good idea to perform a pilot using the XL292 machine and make sure this part is successful before moving the additional processes of $300 million worth of costs to India. It will be important to invest time in communicating frequently and openly with employees in order to keep motivation high. As for next steps, the CEO can begin to craft a proposal for the XL292 machine pilot and to begin forecasting costs.

Additional Considerations:

What are some of the risks?
Here are some examples:

- Supplier charge – large savings may disappear
- Government changes – will the taxes and credits shift
- Hourly rate – may see a big shift in hours for India

<u>Bain & Company – Typep Drug Manufacturer</u>
Interview Round: 1, First Year
Time allotted: 30 minutes
Instructions: The candidate is told everything in *italics*. The instructions for the interviewer are in normal text.
Situation: 1. *Our client, Typep, is a manufacturer of over-the-counter stomach medicine, a $2.5 billion market. Typep has traditionally enjoyed great success as a major brand in their market holding steady at 15% of market share. However, they have recently faced competition from a private brand which has gained 20% share over the last few years and is continuously gaining 2 share points per year.* 2. *Calculate how much Typep would lose if you did nothing next year.* 3. *What do you recommend as next steps for Typep?*
Additional information, Data, Solution: **<u>Step 1:</u>** If you do nothing, how much will you lose in revenue (in dollars) to this private label next year? Candidate should calculate that Typep's current dollar share in the market is $2.5 billion * 15% = $375 million. The private brand will gain a total of $2.5 billion * 2% = $50 million of new business next year. Private brand's gain will come from the 80% of the market share that it doesn't own currently. Typep's share in this "new to private brand sector" is 15% ÷ 80% ≈ 20%. So, Typep's corresponding loss next year will be approximately $50 million * 20% = $10 million, if Typep does nothing. **<u>Step 2:</u>** What do you recommend as next steps for Typep? - Let the candidate drive the case. The candidate should, at this time, draw out a framework. **Framework:** The candidate should draw out a 3Cs framework considering factors similar to those outlined below:

Private Label	Typep
Product Mix Considerations: • Differences in product offerings • Profitability of offerings • Share gains of specific products over the past few years	Customers: • What are our product lines? • Who specifically are we losing? • Have customers' preferences / tastes changed?
Pricing and Cost Structure	Company:

• What are their margins compared to ours?	• Where are we lagging behind? • What is our cost structure? • Consider marketing effectiveness

Here is the information that can be provided to the candidate if asked:

- *Typep currently specializes in two main product lines. One is a simple, upset stomach remedy, while the other is a multiple symptom product.*
- *Each product line comprises 50% of Typep's production*
- *There are no private label competitors for the Multi-symptom product, only for the simple, upset stomach product.*

A good candidate will probe more on the profitability of the simple product line versus the multi-symptom product where we don't face a threat from private brands.

If asked about the pricing differences, tell the candidate that the Multi-symptom line is priced higher than the one-symptom product.

If probed about the cost structure differences, ask the candidate what he/she thinks the differences might be.

Other than marketing expenses, which you can say are currently equal for both brands, a good candidate should conclude that given the nature of the drugs industry, the marginal costs of production are very low and essentially the same for both product lines. Thus, given the higher prices of the multi-symptom brand, Typep earns higher margins on that product line, and given the lack of private brand competition, Typep should focus efforts on that line.

Recommendations:

What would be your suggestions to Typep for expansion of the multi-symptom line?
A possible response:
Consider expansion into regional areas that Typep does not currently have a presence in. Also, Typep can look to expand multi-symptom line into a similar product for children, if one doesn't currently exist. Typep can also look to increase marketing efforts through additional advertising of multi-symptom product and extend deeper into specific channels such as doctors and hospitals.

Additional Considerations:

What are some of the potential risks?
Some possibilities include:

- Private brand introduces a multi-symptom line
- Threats from other brand name competitors
- New breakthroughs in upset stomach medications after investments in marketing and expansion have already been made

Bain & Company – White Boards

Interview Round: 1

Time allotted: 30 minutes

Instructions: The candidate is told everything in *italics*. The instructions for the interviewer are in normal text.

Situation:

Our client is a manufacturer of white boards. The client ships the boards from its factories to its distribution center and then from the distribution center to all of its retail locations. To meet their shipping needs, the client presently uses in-house trucking services. They have approached Bain & Company asking for advice as to whether they should look to outsource their trucking services instead.

Additional information:

If the candidate asks for any more information, do not provide any further information:

- *It does not matter whether the company's retail outlets are their own or franchises.*
- *The logistics of how the trucking industry works is not important.*

Framework:

The basic question boils down to doing a cost-benefit analysis to compare in-house trucking services with outsourced trucking services. The candidate could come up with a structure similar to as shown below:

		In-house trucking services	**Outsourced trucking services**
Costs	Fixed Costs	Truck fleet costs Insurance costs	None
	Variable Costs	Maintenance costs (trucks) Fuel costs Salaries to employees	Charge per lb of load (*the candidate can be told that the average price is calculated irrespective of the distance between factory and distribution center/retail shops to keep things simple*)
	Other Costs	Union costs (if unions exist)	Dependency on outsourcing vendors
Benefits		Better control on distribution (vertical integration exists)	Lower fixed costs Lower # of employees required

When the candidate comes up with this structure push him/her to think further about the costs. There is a key cost component that is left out. Let him/her try to figure it out for a couple of minutes. If s/he does not get it, then give it to him/her. This is the "damage to goods during transit" costs. During transportation some of the white boards get damaged. These need to be included in the equation.

After giving the candidate this information, push the candidate to find out why these need to be included. After all if transportation damages stem in both cases, they need not be included in the costs on both sides.

<u>The key here is that when outsourced, the external contractors/contracting company will not be as careful while loading/un-loading thus changing the ratio of the whiteboards that get damaged.</u>

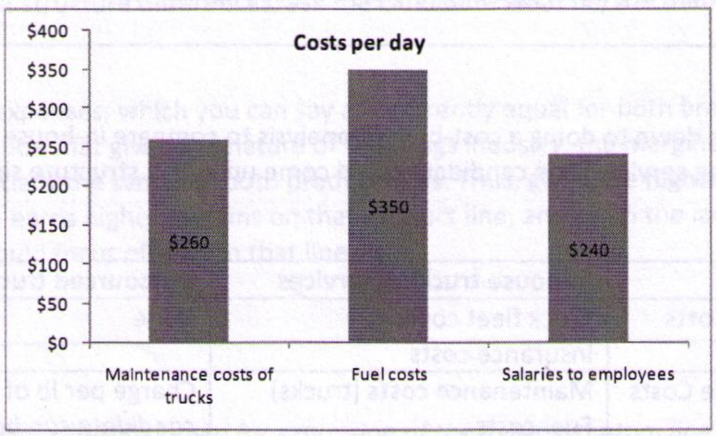
*Once the candidate has gotten this, give him/her the below information –

The transit damage is 15% of the load when in-house trucking services are used. On the other hand the transit damage is 25% of the load when outsourced trucking services are used.

Data and Solution:

Provide the candidate with the following graph and let him/her do some math and do the cost benefit analysis.

The company ships 50 lbs of white boards a day to the distribution center and the distribution centre ships the same amount to the retail stores every day.



The candidate should proceed to do the following –

1. Estimate the total marginal cost when in-house trucking is used on a per day basis:
   - Total variable costs –
     Maintenance costs of trucks = $260
     Fuel costs = $350
     Salaries to employees = $240
     Total = $850/day
   - Total loss in damages –
     # of lbs of white board transported daily = 50 + 50 lbs = 100 lbs
     # of lbs of white board damaged = 15% of 100 lbs = 15 lbs
     # of lbs of white board that can be sold = 100 – 15 lbs = 85 lbs
   - **<u>Transportation cost per lb of saleable white board per day</u>** = 850/85 = **<u>$10</u>**

2. Estimate the total marginal cost when trucking is outsourced:
   - Total variable costs –
     Price charged by vendor = $8.50 /lb

Total cost per day = $8.50*100 lbs = $ 850

- Total loss in damages –

  # of lbs of white board damaged = 25% of 100 lbs = 25 lbs

  # of lbs of white board that can be sold = 100 – 25 lbs = 75 lbs
- Transportation cost per lb of saleable white board per day = 850/75 = $11.33

3. Potential savings:
   - Daily savings at the least = $11.33-$10 = $1.33
   - Add to this the margins on each of the additional white boards that the company can sell that is not damaged i.e. 15% vs 25% boards damaged i.e. 10% of 100 lbs = 10 lbs, the company has more to lose with outsourcing.

Recommendations:

Based on the cost benefit analysis it is better for the firm to continue with keeping the trucking services in-house because –

1. Potential savings could be approximately a dollar a day
2. Additional margins on the boards that would not be damaged when the company keeps trucking in-house versus outsources would also results in more benefits per board.

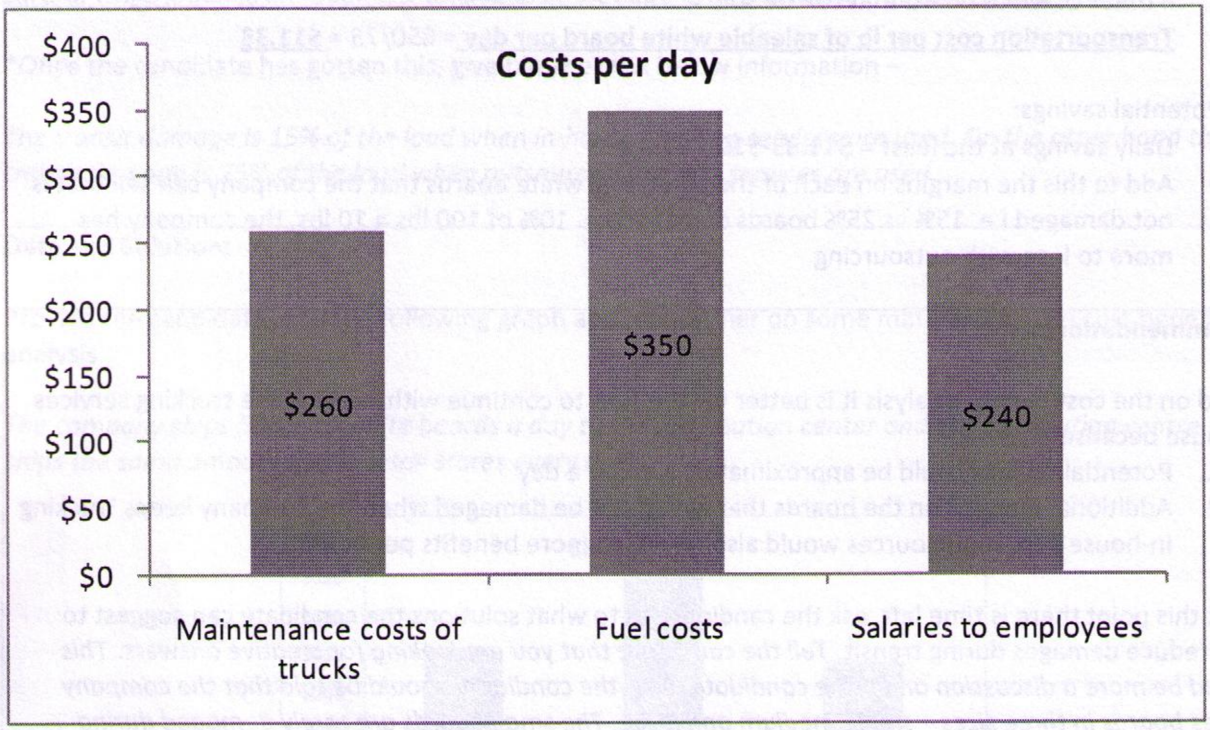
*If at this point there is time left, ask the candidate as to what solutions the candidate can suggest to help reduce damages during transit. *Tell the candidate that you are looking for creative answers. This should be more a discussion and if the candidate asks, the candidate should be told that the company makes boards in three sizes – small, medium and large. The small boards are rarely damaged during transit while the rate of damage is highest for the large boards. The large boards are bulky and hence their likelihood of getting damaged during transit is much higher.*

The candidate can come up with answers such as –

1. Make the white boards modular and transport them in smaller parts and assemble them later in the retail shops.
2. Use better packaging and cushioning to reduce damage during transportation.
3. Negotiate with outsourcing firm for them to bear losses during transit.

White Boards

Exhibit 1 – Costs per Day



Bain & Company China – Railroad Co.

Interview Round: 1, First Year

Time allotted: 45 minutes

Instructions: The candidate is told everything in *italics*. The instructions for the interviewer are in normal text.

Situation:

Our client is considering investing in a high-speed railroad between Beijing and Shanghai. Should they go ahead with the investment?

Framework:

Primary Model:

Profits = Revenues – Costs

Revenue = Volume X Price

Cost: Fixed and Variable Costs

Other Considerations:

Different revenue streams besides ticketing, like advertising, food sales, etc.

Brand impact

Tax breaks for infrastructure projects

Competitive response

Additional information:

Note to interviewer: for this case, we expect passenger fare to be the major source of income

Candidate should ask what the purpose of the project is, the answer is:

The client wishes to run the railroad for the purpose of making profits from this project.

The candidate must look at sizing the total market.

Ways to determine this:

1. Population of these two cites:
   The candidate should have a general sense of the population of Beijing and Shanghai. *But for simplicity, let's say 10 million people in each city. But not everyone can afford our service, since we will probably charge a premium over regular railroad services.*

2. Size of competitive services:
   a. *Regular railroad*
      The current size is 4,000 people each way per day
   b. *Airlines*
      There are 20 flights each way per day. Each flight holds on average 100 people.

Information on competitors:

- *It takes 10 hours to travel between Beijing and Shanghai by regular railroad.*
- *The flight time between Beijing and Shanghai is 1.5 hours.*
- *Our high-speed train will take 2 hours to go between Beijing and Shanghai. But with security and everything else, we estimate that our high-speed train will be 1 to 1.5 hours faster than planes.*
- *If someone is willing to spend 10 hours, they are unlikely to be our target customer!*

For discussions on pricing:

1. *Look at our cost to see what margins we need:*
Fixed (Infrastructure) cost: US$2.5 billion
Variable (Operational) cost: $50,000 per train each day

2. *Look at people's willingness to pay:*
Round trip flights cost about $500. Can we charge $500?
One way to determine this is through customer survey.
Based on our study, the #1 criterion of our target customers (business travelers) is speed, followed by flexibility of the schedule, i.e. we need to be servicing as frequently as the flights. We also found that we cannot charge more than $500 as corporate clients are unlike to reimburse.

For discussion on what was the penetration rate for similar projects for this Client?
The penetration rate was 15% after three years for the last project completed in Thailand. i.e. after 3 years they could only convert 15% of the airline customers into their railroad customers

Data and Solution:

If we want to have at least 20 departures each way, matching the airlines, given our one-way travel time of 2 hours and say, another hour for cleaning, unloading, etc., we need at least six trains for hourly departure, i.e. $300,000 per day in variable cost.

Further breakdown:

- 20 round trips per day needed to meet same service level as planes
- 6 hours per round trip → 4 round trips maximum per train per day
- At least 5 trains needed (20 round trips/4 round trips per train) → more realistically, 6 trains needed to allow some buffer

If we capture 100% of the airline market and charge $500 each round trip, we have $500 per round trip x 20 round trips x 100 passengers per round trip = $1 million in revenue per day.

But is it realistic for us to capture 100% of the airline market?

Candidate should ask for penetration rate for similar projects. We built a similar railroad system in Thailand before. *The penetration rate was 15% after three years* (i.e. $150,000 per year in revenue for our case, which is less than our daily cost of $300,000!)

Recommendations:

Ask candidate to present a summary and recommendation at this point. Based on financial considerations, this should be a no go. Candidate can also explore other use of the new railroad, e.g. transportation of perishable goods, express mail, etc.

Other interesting points, expected growth of market, national pride, etc.

Bain & Company – Mom and Pop Grocery

Interview Round: 1, First Year

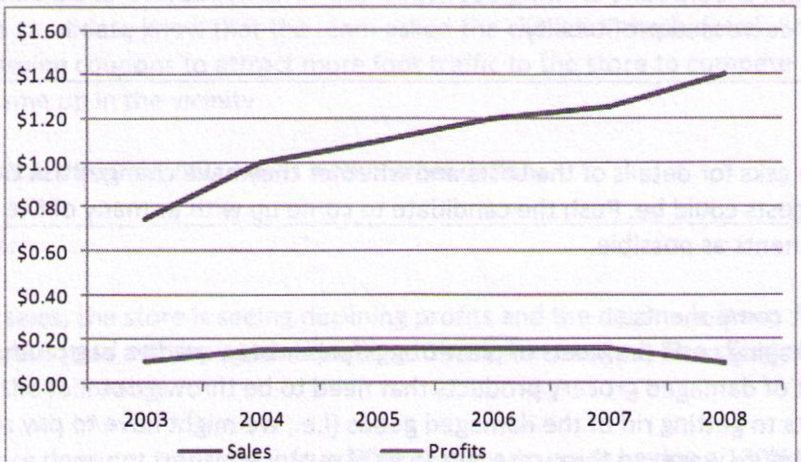
Time allotted: 30 minutes

Instructions: The candidate is told everything in *italics*. The instructions for the interviewer are in normal text.

Situation:

Our client is a mom-and-pop grocery/convenience store that is in Chicago. They have approached Bain & Company with the following problem.

All numbers are in $ millions. What do you think is the issue?



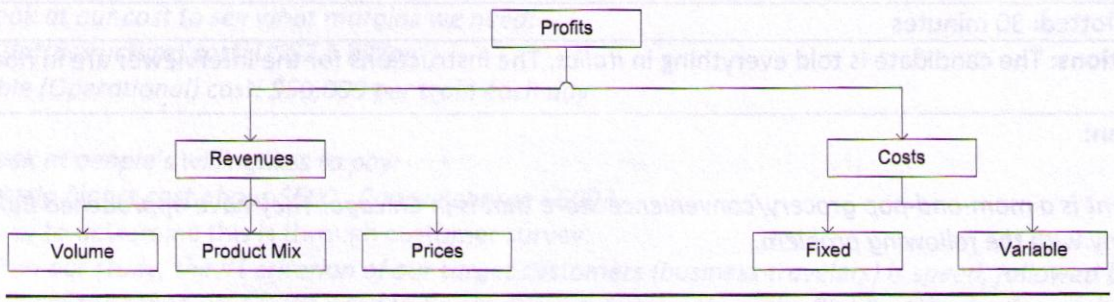
At this point the candidate should mention that the issue seems to be that despite a jump in sales, the shop is seeing declining profitability and s/he would like to analyze why that might be the case.

Additional information:

If the candidate asks pointed questions provide the information below when asked. Do not provide any of the information if the candidate does not ask for it. If the candidate asks about whether product mix has changed, challenge the candidate to ask what s/he thinks the product mix of a grocery/convenience shop would be and how it could change in his/her mind.

- *The grocery shop is in Chicago in the Lakeview area. It is not a chain and is a pop-and-mom store that has been there for the last 50 years.*
- *There has not been any jump in prices at the store i.e. prices have stayed relatively constant over the last three years.*
- *Two new shops – Jewel Osco and Dominick's have sprung up within 2 miles radius of the shop in the last year.*
- *The shop acquires fresh produce directly from the farmers. While this helps keep costs low it also helps differentiate the shop from other competitors.*

Framework:



With this the candidate should start drawing out hypothesis. One hypothesis could be that costs have increased leading to decreased profitability.

Data and Solution:

When the candidate asks for details of the costs and whether they have changed ask the candidate to detail out what the costs could be. Push the candidate to come up with as many of the fixed and variable cost components as possible.

- Variable cost components:
  - Packaging costs (i.e. costs of plastic bags/paper bags used to bag products)
  - Cost of damaged grocery products that need to be thrown out
  - Costs to getting rid of the damaged goods (i.e., we might have to pay somebody minimum wages to throw the rotten stuff out)
  - Costs of acquiring produce
  - Taxes
- Fixed cost components:
  - Rent and utilities
  - Labor costs

When the candidate asks if there have been any of these components that might have changed dramatically over the last couple of years, ask the candidate what s/he thinks might have changed the most. Most likely the costs that could have gone up dramatically could be:

- Packaging (if plastic became super expensive)
- Utilities (if energy costs went up due to gas and oil prices spiking)
- Labor costs (if there was some big change in government warranted minimum wages)

Once the candidate gets to this stage of the analysis, let him/her know that the team did an analysis of the costs and found that there were no major shocks to costs over the last 3-4 years and the costs have been stable.

Now the candidate should refine his/her hypothesis to decide that the problem must be on the revenue side and some component of the revenue stream is leading to distortion of profits. Since prices have not changed and product mix has to be fairly stable for a grocery cum convenience store, the candidate should start looking at volumes closely.

If the candidate asks how the volume of transactions looks provide the following information:

- The volume of transactions has gone up almost 100% over the last 6 months.

The candidate should question why this is the case. If the candidate asks this question, ask the candidate to reflect on the reasons why this might be possible.

- Transactions can go up when:
  1. People prefer to eat at home (perhaps because of an economic recession) and keep expenses down; hence they are buying more from grocery/convenience shops vs. spending on restaurants.
  2. The store is artificially creating demand through promotions or something similar.

At this point let the candidate know that the team asked the client for these details and found that the store has started issuing coupons to attract more foot traffic to the store to compete against the big competitors that came up in the vicinity.

Ask the candidate that the client CEO wants a recommendation.

Recommendations:

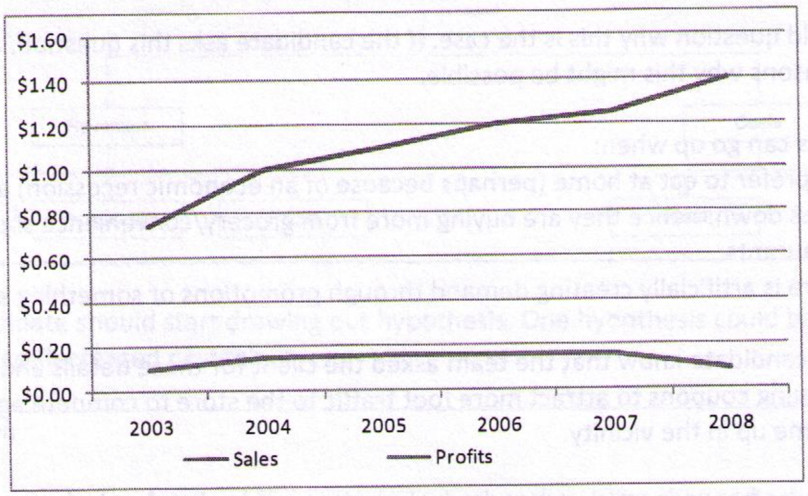
Despite increasing sales, the store is seeing declining profits and the decline is steep. The main reason for this decline is promotion activity which is leading to very low margins. The client should re-think strategy driven by the following:

1. Market share does not translate into profits; there is no point having a 100% market share and no profits. It might be instead better to cater to certain segments of the market and charge a premium. The segment that would most value the client's offerings most are people who prefer fresh farm produce. The client should focus on serving them and charging a premium.
2. Spending on coupons to acquire price-sensitive customers could be useless since these customers will migrate to lower priced shops when those shops have discounts. It might be instead better to spend in retaining customers who are loyal and who value the client for what they offer.
3. Instead of promotions, the client could look to spend the money earmarked for coupons in advertisements in the neighborhood to educate more people about their fresh produce. This would help increase both sales and profits.

While some of the strategies mentioned above could lead to decrease in sales in some instances, the profits overall will not be so out of sync with sales numbers and overall profitability will rise.

Mom and Pop Grocery

Exhibit 1



Bain & Company Shanghai – Super Jr. Baby Formula

Interview Round: 2, Second Year

Time allotted: 30 minutes

Instructions: The candidate is told everything in *italics*. The instructions for the interviewer are in normal text. The interviewer will need to review the slides prior to giving the case.

Situation:

The client is a private equity firm looking at the baby formula market in China. In particular they are looking at a company called Super Jr., which is a local Chinese company that brands itself as a foreign company (it is considered a "local specialty company"). Super Jr. advertize their products to be made and imported from Australia (which is true!). The PE firm would like your help in determining whether Super Jr. is worth investing in.

Additional information:

If the candidate asks for more information on the product, provide the following:

- Super Jr. is a startup begun in 2006
- They currently have no manufacturing capabilities and source their product, "Super Jr. Formula", from an Australian manufacturer
- Super Jr. has spent a lot on marketing and has gained reputation in the Chinese market as a "decent" brand
- Super Jr. primarily distributes to regional and local supermarkets. The supermarkets currently charge them a fee for stocking their product (for shelf-space usage)
- The management team at Super Jr. is composed of people who have previously worked in the food sales and distribution industry
- The current growth strategy is to continue expanding distribution to large-format, national retail chains (such as, Walmart), while investing further in marketing to penetrate the high-end segment, allowing them to price at a premium

Data and Solution:

This is a slide-based case. Provide slides as the candidate requests the appropriate information (see the end of the case for slides). Ask the candidate to interpret the information on each slide and its implication for the client. On slides 1 and 2 the candidate should answer the questions posed on the bottom of the slide.

- Slide1: Market Growth Rate from 2001 – 2006
  - This graph shows that there has been steady growth annually at 20% a year. This is not bad for industries considering that annual GDP growth in fast-growing countries like China is around 9%.
  - At 20% CAGR a year, by 2012, the market should be at (1 + CAGR) ^ (Num Years) * Initial Amount or (1 + .2)^6 * 9 = 27, or by estimate, it should be greater than (Growth Amount Per Year * Num Years) + Initial or (.2 * 9 * 6) + 9 = 19.8 or approximately 20.
- Slide2: Projected Growth Chart from 2006 – 2012
  - The chart indicates the Super Jr. is projected to grow from approximately $5MM to $60MM

in the span of 6 years. From an estimation of CAGR, this is roughly (60 – 5)/6 = $9MM a year or almost 150%. Extra points if the candidate writes out the CAGR formula of (Ending Value/Beginning Value)^(1/# years) – 1).

- The candidate should notice that overall, Super Jr. is projecting very rapid growth and their outlook is very optimistic compared to overall market growth. This means Super Jr. will have to outgrow the market by stealing share from competitors. How likely is this? From this graph, there is not enough information to tell. The candidate should ask for more information regarding to the following:
  - What are the core competencies of Super Jr. and how do they compare to competitors (sales, distribution, production)?
  - What particular segment does Super Jr. play in and is that segment easy to penetrate/steal shares?
  - What do customers demand? Does Super Jr. do anything that meets / exceeds customer expectations?

- Slide3: Market Share by Company Type
  - Upon asking for more information about customer segments or competitive landscape, this slide should be given. It shows the following insights:
    - Super Jr. plays in the mid and mid – low market.
    - The premium markets are dominated by very few players, whereas the local established market Super Jr plays in is quite fragmented.
    - Momentum is not on Super Jr.'s side as it is in the premium segment
    - In this slide, the candidate can use his/her intuition to argue for or against the future of Super Jr. For example:
      - Pro: Super Jr. has an established brand so can try to move upstream to premium market
      - Con: There are very few players in the premium market, it might be difficult for Super Jr. to compete in that segment

- Slide 4: Key Stats by Company Types
  - As you can see, Super Jr. spends most of its resources on marketing and none on R&D. Candidate can argue both ways in the following manner
    - Pro: Super Jr. has an advantage because the baby formula market is all about image and brand. With an emphasis on marketing, perhaps Super Jr. can make a good reputation for themselves
    - Con: Super Jr. really doesn't have any core competence and their model is probably not sustainable given that they really don't have any R&D to compete in this market, especially in the premium market where parents may pay a lot of attention to R&D

Recommendations:

This case is very open ended and good arguments can be made either way as long as the candidate supports and sticks with his/her perspective. A strong candidate would argue and stick with their choice using solid support and wrap up the case in a clean and effective manner, without second guessing their choices while also listing potential risks.

The Boston Consulting Company – Beer Co. Broadcasting Rights
Interview Round: 2, First Year
Time allotted: 30 minutes
Instructions: The candidate is told everything in *italics*. The instructions for the interviewer are in normal text. This case is structured more as a discussion of various issues vs. actually doing the numbers. It touches on market sizing and investment decision.
Situation: *The client is one of New Zealand's largest beer manufacturers. The client has been contacted by an Australian broadcast company regarding the sale of exclusive broadcasting rights for a pre-determined TV program in New Zealand. The client has come to us and wonders how that is related to their business.*
Additional information: As the candidate asks for more information, the following can be provided. <u>TV program details</u> • *The pre-determined TV program is to broadcast a popular sport in New Zealand. Currently, there is no program like that in New Zealand. The TV program is pre-determined and our client cannot change it.* • *The exclusive broadcasting right for the program can be purchased $10M. If our client wants to advertise on the TV program, they would have to buy advertising time separately like everyone else (i.e., the exclusive broadcasting right is not advertising time).* <u>Beer industry</u> • *The New Zealand beer industry is dominated by our client who has 50% of the market. Its closest competitor has the remaining 50% of the market. The beer industry is a mature industry, growing roughly at the rate of GDP.* • *Bars in New Zealand can only source beer from one brewer, namely either our client or its competitor. A bar cannot buy beer from both vendors.* • If asked, the interviewer can also tell the candidate the profit margin of beer, which is approximately *50 cents per beer.*

Framework:
 	
Figure out why the TV program is relevant to the beer company. We can use the investment framework. Calculate sources of income and NPVs.
• Market/Customer:
    o How will the market react?
• Valuation:
    o Sources of revenue
    o Costs
    o NPV/cash flows
• Strategic Fit:
    o How does this fit with the company
    o What alternatives exist for investment

- Competition:
  - Reaction

Data and Solution:

Sources of revenue:

Let the student make estimates for the different sources of revenue and guide them on how to validate these estimates.

- It turns out that the beer manufacture can purchase the TV program and play them exclusively in those bars which carry its beer. This way, they will attract more people to the bar and keep people in the bar for longer.

At this point, the interviewer may ask the candidate to do a market sizing, to estimate how much more revenue would come in from this source.

- Then you have to realize that this is not the only source of revenue. Another channel is beer consumption at parties or at home. Because of the popularity of the client's bars and TV program, people would like to buy more of its beer to drink at home as well. I was asked to estimate this source of revenue as well.

The candidate may be asked to verify his / her estimates on increases of beer sale in the bar. It's a creative question and you can come up with as many as you can think of. For example:

- Test market: measure the increase in the test bars
- Interview waiters in the bar and see what they think

Investment decision:
Lastly, the candidate can use its estimated sources of additional revenue and expense information to calculate the NPV of investing in the program.

Recommendations:

Make sure you talked about both the pros and cons about the deal. This is typical of expansion strategies. Think about the benefits and how well this aligns with the company's core business. Does this help with entering the Australian market?

The Boston Consulting Group – Contrivedville

Interview Round: 1, First Year

Time allotted: 30 minutes

Instructions: The candidate is told everything in *italics*. The instructions for the interviewer are in normal text.

Situation:

You are working on a project in the small town of Contrivedville. The town is an outpost in the middle of the desert, 100 miles away from its nearest neighbor to the West (Westown) and 100 miles away from its nearest neighbor to the East (Eastown). Contrivedville has two gas stations, Station A and Station B, with each one located on opposite ends of the town. Station A's owner has engaged BCG to help grow his/her business.

1. *Without any additional information, what are some potential strategies Station A's owner might be able to employ to grow?*
2. *What types of information would you like to know to better understand strategic options?*

In the early part of the case, let the candidate think about how a gas station could potentially increase revenues/profits without giving away additional information. Utilizing a framework is not necessary, but may be helpful for the candidate to generate ideas.

Potential ideas may include:

- Raising fuel prices
- Cutting direct labor costs
- Cutting fuel costs (long-term contracts, hedging against fuel prices)
- Advertising
- **Expanding beyond selling gas to sell other things (convenience store food/drink items)**

Once the candidate hits on the idea for selling products beyond gasoline, provide the following information: If the candidate does not immediately recognize the idea, guide him/her towards it. *Station A's owner has been approached by a snack foods manufacturer. The manufacturer would like Station A to expand its station to accommodate a convenience store-type section that would sell junk food snacks and drinks (like a Mini-Mart). The manufacturer offers to construct the addition for $1.25 million. The owner would like your help in assessing the opportunity.*

Additional information:

As the candidate explores the opportunity, he/she may ask for more information on the town, the station's financials, etc. When asked, the interviewer may provide the following:

Market Data

- *The town currently has a population of 200 people.*
- *The town's population is not increasing or decreasing. It will remain flat at 200 forever.*
- *There is no traffic flowing past the Stations from outside Contrivedville, so there are only 200 potential customers in the market.*
- *Currently, people purchase gasoline from whichever station is closer, and we can assume that*

the town's 200 residents are distributed evenly across the town.

- *There are two types of people who live in Contrivedville. Fit people and lazy people.*
    - *Fit People Details*
        - *There are 100 fit people among the 200 Contrivedville residents.*
        - *They are equally distributed across the town.*
        - *They would never buy junk food, but they do buy gas.*
    - *Lazy People Details*
        - *There are 100 lazy people among the 200 Contrivedville residents.*
        - *They are equally distributed across the town.*
        - *They love junk food, and would go all the way across town to find it (because no stores currently sell junk food).*

Addition Offer Details

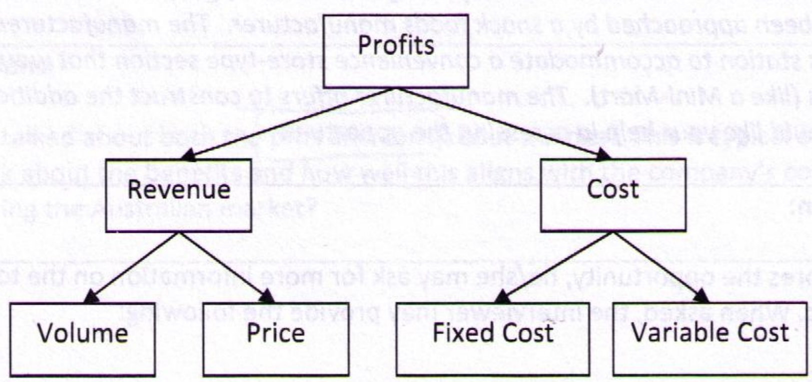
- *The $1.25 million encompasses all fixed costs of building and stocking the addition.*
- *There are no variable costs to maintaining the addition, the manufacturer re-stocks the addition every week, and there are no incremental labor costs.*

Financial Data

- *All Contrivedville residents spend an average of $30/week on gasoline.*
- *Certain residents may spend $10/week on junk food products that could be sold through the new addition.*
- *For the sake of this exercise, we can ignore the Station's margins and assume all the revenues are profits.*
- *Station A's owner has a personal discount rate of 10%.*

Framework:

The candidate may initially draw out the profitability framework:



Data and Solution:

After the initial prompt, the candidate should brainstorm several potential ideas on how Station A can increase its revenue. These ideas may include pricing, marketing, and product changes. Once the candidate suggests the possibility of adding additional products to the station, the opportunity is presented for the candidate to analyze.

A good candidate will begin to gather information about the town and opportunity in an effort to calculate whether the future cash flows of the addition outweigh the initial $1.25M expense.
In the course of asking for the information included above, the candidate should conclude that Station A currently has half the market, earning $3,000/week from 100 customers purchasing gasoline only. With the addition, Station A will attract junk food spending from all 100 lazy Contrivedville customers. A good candidate will calculate the following:

- 100 lazy customers * $10/week in junk food spending = $1,000/week, or $50,000 in annual income (assume a 50 week year)

However, this ignores the gasoline spending of the 50 lazy customers now attracted to Station A. If the candidate does not initially recognize this, work to draw it out:

- *The addition would attract the lazy customers to buy junk food. But is that all they would buy?*
- The candidate would then calculate the incremental revenue from the new 50 lazy fuel customers:
    - 50 customers * $30/week = $1,500/week, or $75,000 in additional annual fuel income
    - $50,000 in annual junk food income + $75,000 in incremental annual fuel income = $125,000/year
- A good candidate would recognize the $125,000 as the annual cash flow, which would be constant every year given our assumptions. At this point, the interviewer may remind the candidate how to value such a perpetual income stream:
    - *So the addition would net Station A $125,000 per year. How would you value that stream of cash flows?*
- Some candidates may remember the valuation of perpetuity is simply the annual cash flow divided by the discount rate (10% as stated above). The candidate should then calculate:
    - $125,000 / 10% = $1.25 million
- If the candidate doesn't know the valuation formula, provide them with it. The end result, with a present value equal to the value of future cash flows, may confuse the candidate. At this point, ask them for a recommendation.

Recommendations:

The client has asked us for our recommendation. What would you tell the client?

- The candidate may or may not recommend building the addition. He may recommend building the addition to capture more customers, but they may also recommend avoiding the addition due to the execution risk of construction, potential cost overruns.
- Regardless of the recommendation, interviewer should bring up Station B as a competitor and ask about competitive response to building or not building the addition:

So based on your recommendation, how do you think Station B would respond if it had the same opportunity.

- **If the decision is made to build, press the candidate on what will happen if Station B builds an addition to gain its lazy customers back (which it will, because this is Contrivedville). If the candidate recommends against building, ask what will happen to Station A if Station B opens an addition and takes lazy customers from Station A.**

<u>The Boston Consulting Group – German Telecom Company</u>
Interview Round: 1, First Year
Time allotted: 30 minutes
Instructions: The candidate is told everything in *italics*. The instructions for the interviewer are in normal text.
Situation: *Our client is a large German telecom company. It is considering making a bid for one of 5 licenses to operate a new generation of mobile phone network (3G) in the United Kingdom. It has engaged us to help with the issue and determine the appropriate strategy for the auction.*

Additional information:

If the candidate asks for more information on the auction, provide the following:

The auction will be a sealed bid auction with all bids received simultaneously. The licenses will go to the highest 5 bidders. Each bidder can attain only one license. The British government intends for the auction to open the mobile phone market to competition to help control consumer prices. As a result, one license has been reserved for a new entrant, but the other four are open to both new entrants as well as established competitors. Because it is a sealed bid auction, our client will not know the true bidding strategies of its competitors with any certainty. The auction is the first of its kind for 3G networks in Europe. ***The licenses will be valid for 5 years.***

If the candidate asks for more information on the technology, provide the following:

The most important characteristics of the new network are the high data speeds and increased capacity for service that it offers. 3G networks will enable data speeds of up to five times greater than the most advanced 2.5G networks available today. These high data speeds could enable applications such as speedy access to corporate networks and the Internet, video-on-demand, online shopping, and video conferencing, all via a mobile device. More importantly, however, the additional 3G spectrum enables incumbent wireless companies to build out their capacity in order to support more customers and to enable high-bandwidth services in an environment that is increasingly becoming capacity-constrained. Following the introduction of 3G technology, old technology networks will be phased out by the government over the span of 3 years.

Let the candidate drive the case. The candidate should, at this time, draw out a framework. Here is some of the information that a candidate may ask for. Provide this only if the candidate asks:

More about our client:

- *Market leader in Germany*
- *Has large presence in rest of Europe, but no presence in the United Kingdom currently*
- *Has been experiencing stagnating growth*
- *Looking for opportunities to expand*
- *Has the financial capability to bid what is needed, but does not want to overpay for license*
- *Has the financial capability to build network that will be needed to operate in UK*

The competition:

- *Unclear how many competitive bids will be received or who will bid*

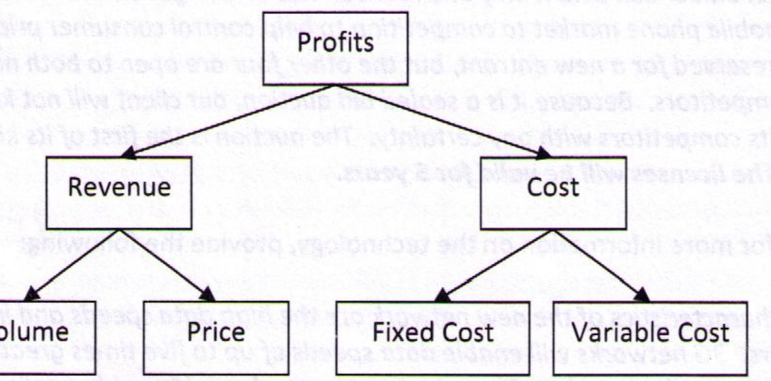
- *4 major operators exist in the current UK market*
  - *They roughly split the market equally*
  - *Already have established networks as well as retail outlets that they can leverage for the introduction of 3G technology*

The market:

- *Approximately 30 million people have a mobile phone in the UK*
- *Growth has been slow recently (3-5% per year)*
- *Converting to the new network will require the purchase of a 3G network-enabled device*
- *Customers pay £30 per month for their current mobile phone plans*

Data and Solution:

The candidate should approach this case in two sections. **First,** the candidate must assess if the market is attractive for our client. To do this, they must assess the profitability when considering entry into this market:



Do not provide the candidate with any information about the framework above. Rather, push them to make assumptions about each factor. Some of these qualitative considerations should include:

Volume:

- Some potential for growth beyond current market due to new services
- Must consider that conversion of customers will be critical and that client is at a disadvantage compared to established competitors
- A likely outcome is that our client will receive less than 1/5 of the total customers due to new entrant status

Price:

- Likely able to charge more than what customers currently pay
  - Could charge additional fees for additional services and allow customer to pick and choose what they want
  - Could charge more for a fixed plan with all services included
- However, there will also be increased competition in the market
- Candidate should consider both the factors that will increase the price (new services) and decrease the price (increased competition)

Fixed Cost:

- Significant up-front cost for our client as they must set up network and retail chains

- Up-front costs not as significant for established competitors
  - This is a key disadvantage to our client
- Once network is established, fixed costs consist of:
  - Network operation
  - Maintenance
  - Retail operations, etc.

Variable Cost:

- Minor once network is established (i.e. one extra customer costs very little)

If candidate struggles to provide quantitative estimates of the above issues, provide the following:

Volume:

- *Increase of 33% in customers* (to 40M) *overall*
- *Client will receive 1/8 of market annually* (5M total)

Price:

- *Average prices will increase to £50 due to new service adoption among key customer segments*

Fixed costs

- *£740M to build network*
- *£50M to run network annually*

Variable costs:

- *£50M to run network annually*

At this point, instruct the candidate not to worry about discounting future cash flows (or that the discount rate is 0%).

Second, after assessing the profitability, the candidate should come to a conclusion about the attractiveness of market entry. If the candidate concludes that it is a profitable venture for our client, he or she must next develop a methodology for the bid recommendation. Points to consider when making the bid recommendation include:

Competitors' strategies

- Established competitors are willing to pay far more as their fixed costs are significantly lower
- It is unlikely that our client would be willing to outbid the established competitors as a result

The client's real competition comes from other new entrants for the licenses reserved for them

Our client's bid is based on our assessment of the profitability:

- The bid could be as high as the total value of the cash flows from the license (i.e. at break-even)
- However, the candidate should consider if the bid should be lower to realize some profits from the venture

If the candidate uses the above assumptions, their calculations should appear as the following:

	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5
Price per Customer	£50	£50	£50	£50	£50
Volume of Customers	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000
Revenues	£250,000,000	£250,000,000	£250,000,000	£250,000,000	£250,000,000

Total Revenue:	£1,250,000,000

Fixed Costs:

Build Network	£740,000,000	£0	£0	£0	£0
Run Network	£50,000,000	£50,000,000	£50,000,000	£50,000,000	£50,000,000
Variable Costs:	£50,000,000	£50,000,000	£50,000,000	£50,000,000	£50,000,000

Total Costs:	£1,240,000,000

Profit (no discounting)	£10,000,000

As a result, the bid will be no higher than £10M.

Recommendations:

The client has asked us for our recommendation. What would you tell the client?

Here is a possible response:

The 3G mobile network in the United Kingdom is a profitable market for our client. Although our client will face significant competition from established players, I believe they will be able to operate profitably over the life of the license. As a result, our client should enter a bid in the auction. Based on my calculations, the most our client should bid is £10M to breakeven on the license. However, there are considerable risks surrounding this bid that should also be considered.

Additional Concerns:

What are some of the potential risks and potential upsides?

Here are some potential answers for risks:

- Customer adoption of new services may not be strong
- Competitive response is unclear and could drive prices down
- Estimates are unclear at this point and could swing the bid either way very easily

Here are some potential answers for upsides:

- May be able to attain a greater share of the market with good entry strategy
- Entry into market could provide platform for continued presence in UK
- Winning one of the first 3G licenses in Europe might be important and set the tone for the remaining auctions

<u>The Boston Consulting Group – Hawaiian Smoothies</u>
Interview Round: 2, First Year
Time allotted: 30 minutes
Instructions: The candidate is told everything in *italics*. The instructions for the interviewer are in normal text.

Situation:

The year is 1990 and one of your good friends, Dan, has come to you with the following issue: He was recently at a party and was approached by a serial entrepreneur, called Jim. Jim wanted to discuss the possibility of your friend investing in one of his new ideas. Now Jim has a history of successfully launching new businesses, but your friend is concerned that this new business is half-baked and just overall not a very good idea. He wants your help in trying to determine whether or not he should invest.

The idea Jim is proposing is to open a new "smoothie" shop, a type of drink he saw when he was recently in Hawaii. He thinks that smoothies could be a big business and he wants to get the first store opened up soon so that he can start rolling out franchises if they are successful. Jim has asked Dan to invest $30,000 in the concept, for which he will get a 50% ownership stake in the business (i.e., 50% of the profits). Dan wants to know what you think he should consider at this point.

Data and Solution:

The candidate should draw out a framework. The candidate should then ask for information about the smoothie store.

This is essentially a profitability/break-even problem, but in order to get there the candidate should begin to explore the major costs of opening the smoothie store and then running it on a daily basis. Among the information that you should provide when asked are the costs to open the store:

- Prompt the candidate to ask what he thinks the major fixed costs would be in opening the store.
    - Real Estate
        - Get the candidate to estimate what he thinks it should cost for a smoothie store (the store will be located in a suburban strip mall). Then provide the candidate with the rent figure of $6,000/month = $200/day.
    - Equipment
        - Ask what kind of equipment would be required (juicers, cash registers, freezers, refrigerators, etc. Then provide the candidate with a figure of $20,000 at the outset, which will have to be repaid at the end of the first year.
    - Insurance
        - Some candidates tend to forget this item; make sure the candidate does not miss this cost item of $10,000/year = $28/day.
- Ask the candidate what types of variable costs might be involved in running the store:
    - Employees
        - How many should a store expect to have? How much would you expect them to cost? The candidate should recognize that the employees are likely to be high-school or college age kids making the minimum wage. Further, two employees will be needed. The minimum wage is $6.00/hour.

- Raw materials
  - The candidate should recognize that the raw materials include the fruits, milk, juices, etc. Get the candidate to provide an estimate of the raw materials cost and to rationalize them. Then provide him with a cost of $1 per smoothie
- There are other critical bits of information that a good candidate should ask for. If the candidate does not ask the information below, provide the information before the candidate begins to make calculations:
  - The store will be open 7 days a week from 11 AM – 10 PM. Therefore, employment cost per day is 11 hours * 2 employees * $6 = $132.
  - The store is expected to sell the smoothies for $4.00. There will only be one size at the outset.
  - Dan would like to recover his investment within 2 years.

The candidate should now begin with a break-even analysis:

- At this point you should ask how many smoothies the store needs to sell each day in order to break even:
  - Total cost to run the store per day: $200+$132+28 = $360 (rounded).
  - Total profit margin per smoothie: $4 - $1 = $3.
  - Total number of smoothies needed to break even per day: ~~117~~ 120 (equal to ~~10.6~~ 11 per hour)
- Ask the candidate if he thinks that is a reasonable amount to expect the store to sell per hour. The candidate should recognize that 10.6 is a reasonable amount as that is about one every 5-6 minutes.

Next let the candidate know that he should anticipate the store will sell approximately 15 smoothies on average per hour and compute the store's profits accordingly:

- Number of smoothies sold per day: 15 * 11 = 165.
- Profit per day: ($3 * 165) - $360 = $135.
- Assuming a 360 day year, the total yearly profits are $52,200.

The candidate should remember that at the end of the first year he will have to repay the $20,000 in equipment costs which means first year profits will be $32,200. In addition, the candidate should recognize that Dan will receive approximately $16,000 in returns in the first year and $26,000 per year on an ongoing basis in returns from the store. Therefore, he will in fact achieve his goal of recovering his money within the first two years (in fact, he should recover it during the second year).

Now prompt the candidate to ask for other ways the store could increase revenues. Some of the answers that the candidate should come up with are as follows:

- Could open for additional hours and serve "breakfast" smoothies
- Could sell food items
- Could add premium drinks with "boosters"
- Could sell athletic supplements
- Could enter into partnerships with local gyms, etc.
- Could consider franchising the stores

At this point the candidate should wrap-up and recommend Dan to invest in the smoothie store.

The Boston Consulting Group - Katrina

Interview Round: 1, First Year

Time allotted: 30 minutes

Instructions: The candidate is told everything in *italics*. The instructions for the interviewer are in normal text.

Situation:

Our client, a school district has been completely devastated by hurricane Katrina. The school district is in New Orleans and they saw most of their students leave and relocate to nearby states after the hurricane. 2 years into the disaster, the students are now slowly returning back. The school district has hired us to advise them on two things:

a. What are the number of schools they need to immediately reopen and
b. What can be done to better the quality of education?

Additional information:

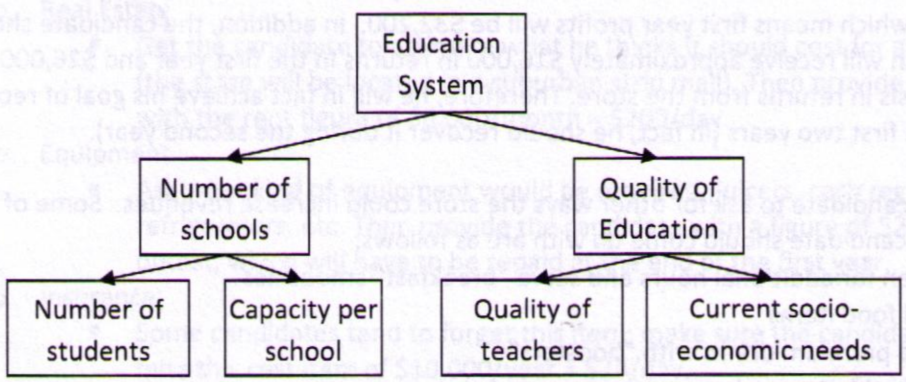
Let the candidate drive the case. The candidate should, at this time, draw out a framework. Here is some of the information that a candidate may ask for. Provide this only if the candidate asks.

More about Public School System in New Orleans:

- *Before Hurricane Katrina, New Orleans Public Schools ranked as one of the lowest performing school districts in the country.*
- *The district faced significant financial problems and was on the verge of bankruptcy.*
- *There were 64,000 students that got displaced due to the hurricane.*
- *There were 64 schools before the hurricane struck, 18 have been reopened since.*
- *Approximately 24,000 students have already returned to the state.*
- *About 1600 students are returning every month.*

Framework:

The candidate should, at some point, draw out the framework:



Data and Solution:

The candidate at this point should be asked to calculate the number of schools that need to be re-opened.

Before the hurricane, there were 64 schools accommodating 64,000 students. Assuming the new schools can have the same ratio of students per school, there would be 64,000/64 = 1,000 students per school.

18 schools have reopened since => 18 * 1,000 = 18,000 students can be accommodated.
However, number of students who have returned = 24,000

=> Under-capacity for 24,000 – 18,000 = 6,000 students currently.
Also, every month 1,600 students are returning.
=> By next month there will be an under-capacity for 6,000 + 2*1,600 (current month + next month) = 8,200 students
=> By end of next month, the school district should target to reopen 9 new schools (to accommodate 8,200 students).
=> Beyond that, the school district would need to open approx. 2 schools per month to accommodate the 1,600 students that are returning every month.

The candidate should then move to the next half of the question about what can be done to improve quality of New Orleans schools. If the candidate is still working on the number of schools to be reopened, guide the candidate towards the question.

The candidate can be provided with the below information if asked:

Before the hurricane, the school district statistics were the following –

- *For every 10 students who enroll in schools, fewer than 6 make it to graduation*
- *Only 2 enroll in college*

Good candidates will want to go deeper into understanding this. There are no set answers here. The objective of this exercise is to see if the candidate can break down a problem statement to analyze the different causes that might be resulting in the problem.

The candidate should deduce that the school district should –

1. Attract, develop and retain quality teachers, principals and school administrators.
2. Improve the student teacher ratio to allow more individual attention
3. Engage students better by catering to courses that are more pertinent to today's world. For example, look to introduce courses like computer education etc. that can give the students an edge in getting jobs in high-paying sectors. Also, offer education in areas like carpentry, masonry, nursing etc. that can allow students to learn skills that can prove helpful to find jobs in the market.
4. Ensure adequate capacity in the schools.
5. Experiment with new school models by setting up a Charter system allowing private groups and corporations to be involved.
6. Benchmark best practices with other school districts.
7. Get the community involved and have parental involvement in school activities. They could also be encouraged to volunteer time that could help especially in the early days when the system is being revamped.
8. Make information about the new changes available and advertise to ensure that the community supports and participates in the changes for the better.
9. Grant some amount of autonomy to the schools in exchange for increased accountability,

encouraging sharper focus on student achievement. This will also allow the schools the incentive to find creative ways to decrease spending in utilities and instead invest the money in instruction.

10. Get local and national non-profit and/or corporate involvement. This will allow for funding to achieve the goals set.

Any other creative ideas are also to be rewarded. The idea is to see that the candidate can think on the fly and think of the potential resolutions that the school district can investigate.

Recommendations:

The client has asked us for our recommendation. What would you tell the client?

Here is a possible response:

1. The number of students who have returned to the state far exceeds the capacity of the 18 schools that have reopened. Investments should be made to reopen 9 more new schools on an urgent basis.
2. With the rebuilding, there exists a potential to revamp the education system to make it more engaging and useful to find jobs. This can be done while ensuring the quality of education is improved by attracting and retaining high quality teachers and principals.

Additional Considerations:

What are some of the potential risks?

Here are some **possible answers:**

- For a community that is rebuilding itself, costs can be a constraint. However, it can be also viewed as an opportunity to get endowments to fund the plans.
- The possibility that media and community might focus on the negatives especially if the school district cannot provide adequate capacity in the schools quickly enough for the returning student body. In such a case, students might be dissuaded from returning causing more harm to the school district. Forging relationships with the local media to cover the advancements and achievements of the schools will be a way to mitigate the risks.

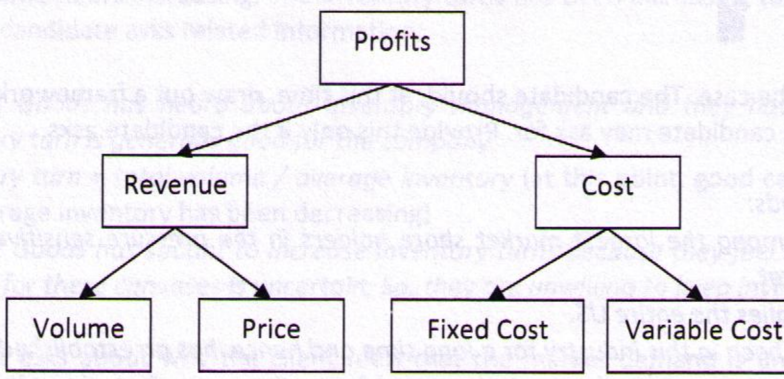
The Boston Consulting Group – Skylight Goods
Interview Round: 1, Second Year
Time allotted: 30 minutes
Instructions: The candidate is told everything in *italics*. The instructions for the interviewer are in normal text.

Situation:

Our client, Skylight Goods, is a $12B industrial goods manufacturer. They have various divisions and the division we are working with makes pressure sensitive self adhesive canvases for sign boards. This division has seen revenues stagnate over the past few years and profitability has declined. Skylight has engaged BCG to help them with this issue. The two questions facing them are:

1. *How to restore profitability*
2. *Should we improve our delivery channel?*

Framework:



Here is the information that can be provided to the candidate for the above framework:

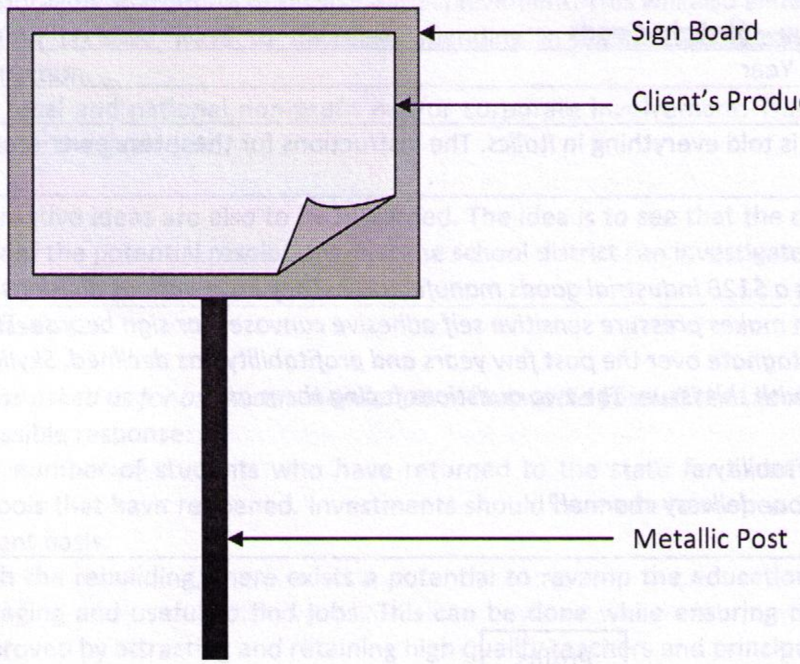
- *The Revenue has stagnated at about $100M*
- *The price has not changed. There are no opportunities to increase or decrease price.*

Additional information:

If the candidate asks for more information on the product, provide the following:

To understand what the product is, think of any signboard that you see. One part of the signboard is the metallic post that holds the board up, and upon that board you can stick our client's product. Skylight's customers buy blank canvases from Skylight, print their signs onto the canvas and then simply paste the canvas over sign boards, just like you would paste a normal sticker.

The graphic below is only for the interviewer's understanding. This should NOT be shared with the candidate.



Let the candidate drive the case. The candidate should, at this time, draw out a framework. Here is some of the information that a candidate may ask for. Provide this only if the candidate asks.

More about Skylight Goods:

- *Skylight is among the largest market share holders in the pressure sensitive self adhesive canvas market.*
- *Skylight supplies the entire US.*
- *Skylight has been in this industry for a long time and hence, has an established brand.*
- *Skylight has grown through acquisitions and has a few manufacturing plants that it has acquired.*
- *Assume that there is only one kind of product in the client's product mix. There are no opportunities to change this.*
- *As far as distribution goes, the client has already asked us whether we should look at improving our distribution channels.*

The Market:

- *There are 2 other big players. Skylight, and each of the two big players have about 25% of the market each. The rest is fragmented.*
- *The market is growing at 3%* (A good candidate should be able to figure out that this must be an industry that is growing as fast at the GDP)
- *Our competitor's products are very similar to ours and are priced similarly too. Our competitors do not have any differentiation when it comes to the product, promotions, or price.*

Data and Solution:

When the candidate discusses costs, provide Exhibit 1.

If, after seeing exhibit 1, the candidate asks about the manufacturing costs, provide Exhibit 2. If the candidate does not ask about manufacturing costs, drive the candidate towards manufacturing costs and then provide Exhibit 2.

Along with Exhibit 2, provide the following information:

The product is sold by the yard. The way the process works is that the raw materials are fed into the machine for a pre-set run length (run-length = length of canvas produced in the run). The machine runs for that period, generates the pre-set amount of canvas, and then stops and needs to be set up again for the next run.

A good candidate will notice that Skylight Goods has produced the same length of canvas per year. However, their average run length has been decreasing, number of employees increasing and the employee overtime hours increasing. The inventory turns has been increasing too. You may provide the following if the candidate asks related information:

- *Skylight Goods has heard about inventory management and they have learned that a high inventory turn is generally good for the company*
- *Inventory turn = total volume / average inventory* (at this point, good candidates will infer that the average inventory has been decreasing)
- *Skylight Goods has sought to increase inventory turns because they feel that the demand in the market for these canvases is uncertain. So, they are unwilling to keep inventory indefinitely.*

If the candidate asks about why the client feels that the market demand is uncertain, say that that's what a different consulting firm has told them. Good candidates will want to go deeper into understanding this.

Tell them that the product can be kept in inventory for long periods and Skylight Goods already has the capability to store them.

Candidates should infer that the decrease in run lengths was done to reduce inventory, but it has in turn caused inefficiencies in the manufacturing process.

Question for candidate: *How inefficient is Skylight Goods today in comparison to 2004?*

The candidate should calculate this: unit : time / resource

In 2004, an average run took 1000/25 = 40 mins. The set up time was 20 mins. Thus, total time = 60 mins to produce 1000 yards. → 1000/60 yards per minute = 16.67

In 2006, an average run took 500/25 = 20 mins. The set up time was 20 mins. Thus, total time = 40 mins to produce 500 yards. → 500/40 yards per minute = 12.5

i.e. to produce 1000 yards in 2006, Skylight will need 80 minutes, i.e. 33% more than that in 2004. So, Skylight's efficiency has gone down 33% as a result of the 'supposed' improvements in inventory turns.

If a candidate asks if it is possible to produce at more than 1000 yards run lengths, tell them that it is possible to go up to 1500 yards per run. At 1500 yards per run, an average run will take 1500/25 = 60 mins. The set up time is 20 mins. Thus, total time = 80 mins to produce 1500 yards. → 1500/80 yards per minute = 18.75 (which is a 50% improvement over our 2006 results and a 12.5% improvement over our 2004 results)

At this point, candidates should move into the question on distribution channels. If the candidate is still working on profitability, guide the candidate towards the distribution issue.

Provide this information if asked:

- *Currently, Skylight Goods works with two distributors who sell the canvases to end customers. One distributor is based on the west coast and another on the east coast. Customers generally prefer distributors close to them in terms of time zone.*
- *Our competition uses several distributors.*
- *The distributors (be it for Skylight or for competition) work on standard percentage of sales.*
- *Most distributors are open to stocking multiple brands.*

The candidate should deduce that Skylight Goods should engage more distributors in other regions in the US to ensure that sales grow at the rate of growth of the industry.

Recommendations:

The client has asked us for our recommendation. What would you tell the client?
Here is a possible response:

Our profitability has gone down because we have reduced our average run length from 1000 yards to 500 yards. This has reduced our efficiency by 33%. To restore profitability, Skylight Goods should aim to increase run lengths to the maximum of 1500 yards per run. This will increase their efficiency by 50% over 2006 results and by 12.5% over 2004 results. Further, we should also engage more distributors in geographically diverse regions of the US so our customers may be able to source the canvases more easily. This will allow us to regain our growth and start growing at the market growth rate again.

Additional Considerations:

What are some of the potential risks?

Here are some potential answers:

- We will need to fire some employees. This may result in a loss of goodwill and may create some bad press.
- Running machines at capacity may result in more wear and tear, resulting in added maintenance expenditure.
- Engaging new distributors may make our existing distributors unhappy.
- Skylight Goods will need to spend resources to find new distributors and to find ways to get the canvases to them.

- Skylight Goods can also explore reductions in their inventory holding costs (less manpower, less inventory storage space) to realize the benefits of increased inventory turns. The reduction of these costs may be enough to compensate for increases in manufacturing costs, but we need further analysis to confirm this.

Skylight Goods

Exhibit 1: Skylight Goods Income Statement (in $ m)

	2004	2005	2006
Revenue	100	101	101
COGS	40	42	42
Contribution	60	59	59
Manufacturing Cost	40	44	49
SG&A	15	14	15
Net Income	5	1	(5)

Exhibit 2: Skylight Goods Manufacturing Cost Details

	2004	2005	2006
Total Volume (Yards)	50M	50M	50M
Average Run Length (Yards)	1000	750	500
Yards of material produced per minute	25	25	25
Average Set-up time for each run (Minutes)	20	20	20
# of employees	100	110	120
# of overtime hours per employee per year	100	200	300
Inventory Turns	8	9	10

Booz & Company – Casa Construction
Interview Round: 1, First Year
Time allotted: 20 minutes
Instructions: The candidate is told everything in *italics*. The instructions for the interviewer are in normal text.

Situation:

Our client, Casa, is a constructions material producer in North West Mexico. They produce cement like materials that are used in constructions. Casa has recently researched a new product which is a special cement to be used in construction for single storey low income houses. It cannot be used for multiple storey houses and it has a coarse finish, so it cannot be used in high quality houses. However, there is a strong market for single storey low income houses and Casa says that the product will sell like hot cakes. We trust Casa's judgment on this.

The client has been approached by Oxe Constructions Company about this new product and Casa has to respond to Oxe within a week. The options that Oxe has given Casa are:

A. *Casa and Oxe will be partners. Oxe will help Casa in selling and distributing the new material.*
B. *Casa will sign Oxe as the exclusive supplier of this new material.*
C. *Oxe will buy over the rights to the formula for the new material and will contract Casa to further improve the formula.*

Booz is to help the CFO of Casa to decide which of the three options to take.

Data and Solution:

A simple framework assessing the pros and cons of each option can be used for this case.

Among the first questions that a good candidate will ask is: Why look at Oxe at all? Can't Casa not worry about Oxe's offer and just do everything by itself? The answer is that Oxe has great capabilities in sales and distribution. They are the 2nd largest supplier of such products in Southern US and in Mexico. They have a reach that is much farther than that of Casa and Casa will benefit from the alliance.

The following table lists the merits and demerits of the three approaches. Candidates can be given the information in the table, but ONLY if the candidate asks for it. The information should not be supplied as a table. Instead, supply bits and pieces as and when the candidate asks for it. For example, if the candidate asks:

- "What's the price that Oxe will pay for option A?"

Reply:

- "We do not know the exact price, but we know it's lower than what they will get for option B."

	Merits	Demerits
Option A	- Casa can sell through other channels/distributors as well. - Casa can reach the markets that it would not be able to without Oxe.	- Oxe will pay a lower price for this than that for option B.

Option B	- Oxe will pay a higher price than that for option A. - Casa can reach the markets that it would not be able to without Oxe.	- Casa will not be able to sell through any other distributor.
Option C	- There will be a one-time payment that is mutually agreed upon. It is believed that Oxe is willing to pay a really high price for the formula because of its "will sell like hot-cakes" nature. - Casa can continue to work on the formula. Casa will get the recognition for being the inventors of the formula. - Casa Does not have the capability to manufacture enough of the new material to supply the southern US and Mexico. It's a small company, specializing in R&D and can only supply to North West Mexico.	- Casa will lose rights to the formula. - NPV analysis may be difficult to do because of the immense future of this formula.

The key bit of information above is that last bullet in Option C merits. It shows that Casa will not be able to supply to a large market and so, the best option for it is to sell the rights to the formula to Oxe and to focus on its core competency, R&D.

Booz & Company – IT Redundancy
Interview Round: 1, First Year
Time allotted: 25 minutes
Instructions: The candidate is told everything in *italics*. The instructions for the interviewer are in normal text.

Situation:

Our client is the CIO at an IT Organization. He feels that there are some redundancies in his organization. So he wants to find out the following:

- *Where are the people?*
- *What are they doing?*
- *What are their skill sets?*

To help with this, he got help from Booz & Company to make a survey that will contain all this information for all the company's employees. He also got Booz & Company to write an instruction sheet on how to fill-out the survey.

There are 9 layers in the CIO's organization:

Layer 1: CIO

|

Layer 2: VPs

|

Layers 3-8: Other Managers

|

Layer 9: Employees

There are 10 VPs and 1800 people in all in the organization. Assume it takes 30 minutes to read the instruction sheet and 3 minutes to complete the information about each person in the survey.

There are three options for the CIO to conduct the survey:

1. *Send the survey and instructions to the 10 VPs who will complete the survey and send it back to the CIO*
2. *There are 360 people with people management roles in the organization. These 360 people will complete the survey for all their direct reports*
3. *Choose 60 managers who will fill-out the information for 30 people each*

This is just a starting point for the complete redundancy study. Which of these 3 ways do you recommend the client to use?

Additional information:

All relevant information is provided in the outlining of the situation.

Data and Solution:

The candidate should calculate the total time required for each option. For purposes of this case all individuals' time is considered equally valuable, although a strong candidate will point out that some adjustment should be considered for the fact that managers time is more valuable then workers.

Option 1: Send the survey and instructions to the 10 VPs who will complete the survey and send it back to the CIO:

- Each VP spends 30 minutes reading the instructions.
- Total time to read instructions: 10 x 30 = 300 minutes
- There are a total of 1800 employees, and for each employee, 3 minutes are required on the survey.
- Total time to fill the survey: 1800 x 3 = 5,400 minutes
- Total time required: 300 + 5,400 = 5,700 minutes = 95 hours

Option 2: There are 360 people with people management roles in the organization. These 360 people will fill-out the survey for all their direct reports:

- Each person with people management responsibility spends 30 minutes reading the instructions.
- Total time to read instructions: 360 x 30 = 10,800 minutes
- There are a total of 1800 employees, and for each employee, 3 minutes are required on the survey.
- Total time to fill the survey: 1800 x 3 = 5,400 minutes
- Total time required: 10,800 + 5,400 = 16,200 minutes = 270 hours

Option 3: Choose 60 managers who will fill-out the information for 30 people each:

- Each manager spends 30 minutes reading the instructions.
- Total time to read instructions: 60 x 30 = 1,800 minutes
- There are a total of 1800 employees, and for each employee, 3 minutes are required on the survey.
- Total time to fill the survey: 1800 x 3 = 5,400 minutes
- Total time required: 1,800 + 5,400 = 7,200 minutes = 120 hours

At this point, candidates may jump to the conclusion that option 1 is the best. Stop them from concluding and get them to think further. Ask:

Is time the only factor that will decide which method you will use?

Candidates should, at this point, start thinking on the lines of why this survey was being done. Time is a good factor, but it's also important to get the right data from the study. Once the candidate mentions the data quality issue move on to the recommendation and conclusion.

Recommendations:

So let's talk about the pros and cons for the three methods to help us decide which method to pick. Let's find 2 pros and 2 cons for each method.

A good candidate will draw a table similar to the one shown below. Get the candidate to think of the pros and cons and write them down.

	Method 1	Method 2	Method 3
Pros	- Minimum Overhead of 95 Hours - Easy to communicate the reasons and instructions for the survey	- People have great knowledge about the people that they are writing for, therefore great accuracy - There is no chance of cooking the books	- People have good knowledge about the people that they are writing for, therefore good (albeit not the best) accuracy - There is no chance of cooking the books
Cons	- VPs have limited knowledge about people several levels below them. Thus, accuracy is limited - There is a chance that the VPs will cook the books to get data that they prefer	- Maximum Overhead of 270 hours. - Difficult to communicate the reasons and instructions for the survey - Difficult to gather the collected information back in a timely fashion	- Difficult to communicate the reasons and instructions for the survey - Difficult to gather the collected information back in a timely fashion, but not as difficult as method 2 - Higher overhead of 120 hours

Based on these pros and cons, which recommendation would you give the client?

Possible response: I recommend the client to choose method 3. This method, while about 25% more time consuming than method 1, is far better (about 60%) than method 2 in terms of turnaround time. Method 3 gives us a good understanding of what the people in the organization are doing. Given the problem at hand is just a starting point for finding where some redundancies may lie, it is sufficient to have a good idea and not the deepest detail as method 2 would provide. Method 3 also removes the risk of the books being cooked. So, this method is the most efficient way to get to the information needed.

If time allows ask the candidate to list additional considerations.

<u>Booz & Company – Truck Battery Manufacturing Co.</u>
Interview Round: 1, First Year
Time allotted: 30 minutes
Instructions: The candidate is told everything in *italics*. The instructions for the interviewer are in normal text.
Situation: *Our client is a manufacturer of battery-operated portable generator sets. The client has come up with a new product which lasts 20% longer than existing generators in the market and wants us to help them evaluate if there is a demand in the market and what kind of volumes can they be expected to sell.*
Additional information: Let the candidate drive the case. The candidate should, at this time, draw out a framework. Here is some of the information that a candidate may ask for. Provide this only if the candidate asks. Please note that some of this information is key to solving the case and if the candidate does not delve into it, this information should NOT be provided willingly at all. *More about the new product:* • *The product is typically used by the trucking industry.* • *When the trucks are powered off, i.e. they are in the rest areas and the engine is idle, the trucks use generators to cool the inside of the cabin when the driver naps or relaxes. The generators typically power portable refrigerators, air-conditioning/heating of the driver cabin, TV/entertainment units etc.* • *The existing options in the market include diesel powered generators.* • *Diesel generators run using diesel and give out the familiar strong smelling stench. They are definitely not environment friendly. They also run making a large amount of noise.* • *Our product is better than diesel generators on both the above respects. Our generators are silent and because we don't run on diesel, our generators have no smell. Our generators however need to be charged prior to use and typically need 4 hours of truck running to charge fully.* • *The drivers can also choose to leave the engine running and use the engine to cool the cabin, power entertainment units etc. However, in this case the truck will be consuming gas.*

Framework:
 	
The candidate should, at some point, draw out the framework:
 	
Note: this is just an example and is not intended to be comprehensive.
Here are some things to consider:
• Market Sizing/Demand:
  o Trucks sold that would require a generator
  o Customer segments
  o Customer needs
  o Growth rate
• Competition/Substitutes:
  o Substitutes
  o Cost/benefit analysis
  o Market share of competitors

- External considerations:
  - Environmental issues
  - Patent protection??
  - Competitive reaction

Data and Solution:

The candidate at this point should be asked to calculate the market size.
You can either provide the data below or let the candidate make assumptions (that you can validate) depending on stage of case preparation*:*

There are 10,000 trucks being sold in the US on an average daily. Of these 60% of the trucks are designed and used for long-distance travel. The generators will be a feature that will be wanted by the long-distance drivers since they will be making the rest area stops and needing power during the break. *Of the old trucks sold, there are none that can have this product installed in now, so they are not a potential market.*

Thus, average market size in the US = 60% * 10,000 * 30 = 180 K trucks/month
Since there is no other company that has the same product we can safely assume that we can capture this entire market if a) we can meet demand estimates with production capacity and b) we conclude that the entire potential market will appreciate and value our product features and not take to any of the substitutes.

depends on the relative cost of the options available

The candidate should then move to address if the second assumption is indeed true. Guide the candidate towards the question.

Good candidates will want to go deeper into understanding this. The objective of this exercise is to do a cost-benefit analysis of the options and see which option the truckers would prefer.

The candidate can be provided with the below information if asked:

- *The battery operated generator will be sold –*
  - *For $15,000 a unit*
  - *It is costless to charge the generator since it charges during the run time of the truck and does not cost gas or any other resources*
  - *The generator has a useful life of 5 years and a zero salvage value*
  - *The generators are used for 40 hours a month on an average.*
  - *Generators can run for a stretch of 10 hours when fully charged.*
- *The diesel sets –*
  - *Cost 12,000 a set and have zero salvage value. They last for 5 years as well.*
  - *Every hour of the diesel generator costs a gallon of diesel that sells for $2.50 a gallon*
- *Leaving the truck on is also an option –*
  - *It would cost a gallon of gas on an average to power the standard units for .5 hrs. Gas costs $4 a gallon.*

One possible approach to the cost-benefit analysis is shown below:

- Assume that the trucker makes a rest area stop for 10 hours and compare the cost-benefit of each option around that.
- We break the costs into fixed and variable costs. We amortize the cost of the unit over the

number of hours it will last and calculate the fixed costs.

- **We use the run time of 10 hours to find what the variable costs will look like. You could also do this on a per hour basis. The key is to pick a simple basis for comparison and add the fixed cost to the analysis.**
- We compare the total cost for each of the options and note that the client's generators are financially the cheapest option available to the truckers.

One possible approach to the cost-benefit analysis is shown below –

- Assume that the trucker makes a rest area stop for 10 hours and compare the cost-benefit of each option around that.
- We break the costs into fixed and variable costs. We amortize the cost of the unit over the
number of hours it will last and calculate the fixed costs.
- **We use the run time of 10 hours to find what the variable costs will look like. You could also do this on a per hour basis. The key is to pick a simple basis for comparison and add the fixed cost to the analysis.**
- We compare the total cost for each of the options and note that the client's generators are financially the cheapest option available to the truckers.

	Fixed Cost (per 10 hours)	Variable Cost (per 10 hours)	Total Cost
Option 1 – Leaving the truck running	$0	10/.5*$4= $80	$80
Option 2 – Using diesel generators	$[12,000/(12months/yr*5yrs*40hours/month)]*10 hours = $50	10*2.50 = $ 25	$75
Option 3 – Using the client generators	$[15,000/(12*5*40)]*10 = $62.5	$0	$62.50

Any other creative ideas are also to be rewarded. The idea is to see that the candidate can think on the fly and think of the potential benefits and cost that might impact the recommendation.

Recommendations:

The client has asked us for our recommendation. What would you tell the client?

Here is a possible response:

1. There is a steady demand for the product at about 180K units per month and we can capture a large share of the demand with the right advertising and manufacturing capacity.
2. We should look to educate the buyers of the benefits of our product – clearly both financially and environmentally we are much better than our competition/substitutes.
3. Risks include competitors copying the concept and the high upfront cost of purchasing the product.

McKinsey & Company – Cleaning Products

Interview Round: 1, First Year

Time allotted: 20 minutes

Instructions: The candidate is told everything in italics. The instructions for the interviewer are in normal text. This is a "McKinsey"-style case in that the interviewer will prod the candidate to answer specific questions in an interactive manner throughout the case.

Situation:

Our client is a prominent manufacturer of household cleaning products such as soap. They feel that an opportunity exists for them to do better in the market. They have tasked McKinsey to help them with this.

- *What will be some of the first things that you will ask the client?*

There can be many possible answers here. Drive the candidate to ask: What is meant by 'doing better in the market'? At this point, ask:

- *What do you think that may mean?*

Possible replies may include 'have stronger growth', 'occupy more market share', 'be more profitable', etc. The interviewer can choose to ask deeper questions ("*What else?*") to judge the depth of the candidate's understanding of the problem. Possible questions may include:

- *What is a good growth rate in this industry?*
- *What can a company do to increase market share?*

Framework:

Eventually, drive the candidate to draw out the profitability framework:

Profits = Revenue – Cost
Revenues: made up of Volume and Price
Cost: made up of Fixed Cost and Variable Cost
There may be many products in the client's product mix.

Additional information:

Once the candidate presents a framework, say:

This looks like a good place to start our analysis. What questions will you ask our client to help you get the information you require?

Give the following information (It is preferred that the candidate asks for this information. If not, drive the candidate towards the information. Give it away as a last resort to ensure progress in the case.)

- *Revenues in the last year: $3Billion*
- *Client's product mix: Dish washing powder, Clothes detergent powder, Hand wash liquid, Shower gel, All-purpose soap*

- *There are no opportunities in cost savings or in adding new products to the product mix.*

Data & Solution:

By this time, the candidate should realize that the only way to increase profitability is to get an increase in revenues. If the candidate does not realize this even after getting the above information, tell the candidate to focus on the revenue side of the framework.

- *How can we increase revenues?*

The candidate should figure out that this can be done by altering prices or increasing volumes. Good candidates will talk about price elasticity at this point. Show the candidate the following table:

Based on your ideas, you conducted a market research study. Your research has shown that if the prices of their products are changed all at once in the percentages shown in the following table, the volumes of the products sold will remain unchanged. It is important to note that the changes in price either happen all at once or none at all.

Table 1: To be given to the candidate (Separately included on last page of case)

Product	Price change % that can be implemented without changing volume	% of revenues (Current)
Dish Washing Powder	-2	5
Clothes Detergent Powder	1	20
Hand Wash Liquid	0	30
Shower Gel	2	30
All-Purpose Soap	4	15

The client has told us that they will be happy with a 1% increase in revenues. Should they go ahead with the price change as the table above recommends?

Candidates will use the information in this table and the information about last year's revenue ($3Billion) to calculate the following figures:

Table 2: Interviewer's guide to Candidate's calculations

Product	Price change % that can be implemented without changing volume	% of revenues (Current)	Current Revenue ($mil.)	Revenue after price change ($mil.)
Dish Washing Powder	-2	5	150	147
Clothes Detergent Powder	1	20	600	606
Hand Wash Liquid	0	30	900	900
Shower Gel	2	30	900	918
All-Purpose Soap	4	15	450	468

Based on the above, after the price change, the revenue will be $3.039 billion, i.e. an increase of $39 million. The client's target was 1%, i.e. $30 million. So, the candidate should recommend that the client go ahead with the price change as reflected by McKinsey research.

Is there anything that our client should watch out for?

Some possible responses:

- Competition's moves may undermine our price changes.
- Are we a monopoly producer? If so, we may invite anti-trust suits by price increases.
- There is a risk that the research was not reflective of all the geographies that our client supplies its products.
- This is a one-time increase in revenues. The client cannot expect to continue raising prices to keep a steady top-line growth.
- We have only analyzed revenues. There may be some additional cost associated with the price increase (such as advertising to explain the price increase) that may eat into the profits generated through the $39million additional revenue.

geog

time

Cleaning Products

Table 1

Product	Price change % that can be implemented without changing volume	% of revenues (Current)
Dish Washing Powder	-2	5
Clothes Detergent Powder	1	20
Hand Wash Liquid	0	30
Shower Gel	2	30
All-Purpose Soap	4	15

McKinsey & Company – Contact Lenses

Interview Round: 1, Second Year

Time allotted: 30 minutes

Instructions: The candidate is told everything in *italics*. The instructions for the interviewer are in normal text. In this case, the interviewer leads the case i.e. asks the interviewee the questions. The questions to be asked are listed in **Bold** text within the Frameworks and Data and Solution sections.

Situation:

Your client is a well-known contact lens provider called BB. BB manufactures and distributes contact lenses in the U.S.

*While BB is one of the largest players in the US market, and has been for quite some time. However, the company feels that **compared to its main competitor, it is not doing as well as it could.***

BB had called in McKinsey to find out how to solve this problem and to recommend a solution

Additional information, Data, Solution:

If the candidate asks for more information on the product, provide the following:

- *For the scope of this case BB manufactures and distributes only in the US.*
- *Demand for contact lenses has been growing steadily at about 3% annually.*

The problem of the case as read is intentionally very vague. Interviewee should clarify what is meant by "compared to its main competitor, not doing as well as it could", not just assume that it means lack of growth, etc.

- *BB completed a benchmark study of itself versus its biggest competitor and discovered that its profits are not growing as fast as the competitors'.*
- *Two main players in market: BB and Competitor. Other, smaller firms exist, but for scope of case are negligible.*
- *Competitor is also a US-only manufacturer & distributor.*
- *Market is equally divided between BB and Competitor.*
- *BB and Competitor are of roughly equal size.*
- *BB and Competitor sell same products.*

Framework:

Question: How would you go about structuring an analysis of this problem?

Note: If the interviewee hasn't clarified the purpose of the case (i.e. what problem does BB want them to solve?), push them to do so. A lot of people automatically assume that BB's sales aren't growing at industry rate, or that BB isn't satisfied with its market share. If they do, I usually read back the statement of the issue in the introduction ("is not doing as well as it could") and ask them to explain to me what that could mean. If they still don't get it, I point out that the statement is very subjective (as in, could be interpreted to mean many different things) and by then, they usually figure it out.

This is a profitability problem, so classic profitability framework.

The best candidates will be specific about their bullet points, giving concrete examples and eliminating certain areas based on their communicated hypotheses.

Most students don't do this, so after the framework is laid out, I usually push back and ask them.

Data and Solution:
Question: "Based on the information I've given you so far, and based on what you know about the contact lens industry, where do you think the problem lies?"
What answer they end up with doesn't matter, but they should concretely and rationally eliminate certain options.

Easiest way to reason out possible problem area is by thinking about current, established major contact lens players – Bausch & Lomb, Johnson & Johnson.

This is an example of how to analyze the situation:

Industry is defined by high barriers to entry (since high R&D outlay necessary); also, industry is mature (20 years plus) & dominated by two players, so can expect players to be equal in most things. Thus

Cost side
- Variable costs
    - Raw Material: inputs will be plastic, saline solution (water, salt), packaging (paper, aluminum foil, plastic). These are all commodities. Any issues BB has with raw material costs are likely also experienced by the Competitor. **Thus not an issue.**
    - Labor: will be unskilled, wage rate probably set by minimum wage standards. Unless unionized and competitor not, nothing here to put BB at disadvantage to Competitor. **Thus not an issue.**
- Fixed costs
    - Plant, Property & Equipment: given US contact lens industry, probably no difference between BB and Competitor (think Bausch & Lomb or Johnson & Johnson). There should be no major difference in plant costs or plant efficiency. Probably no major equipment differences.
    - R&D: big cost factor, but probably equal between BB and Competitor.
    - Overhead (People): Again, no major differences as companies are of similar size.
    - Marketing/Distribution: Probably no differences.
    - Legal issues? Possible, but BB is probably big enough that even a huge class action settlement shouldn't affect its bottom line too much.
    - Etc.

Sales side
- Pricing
    - Contact lenses are fairly commoditized. Minor differences in pricing may exist, but probably nothing major.
    - Customers may be price sensitive, but given that lenses are fitted to a person by their doctor, customers do not purchase lens purely on price. Comfort/fit and compatibility is a big issue.
- Product mix: Maybe competitor is selling more profitable mix of lenses?

- Distribution/Sales channels: Competitor may be selling through more profitable channels?
- Volume:
  - Substitute goods: May be substituting away from BB? However, any substitutes (Lasik, glasses, etc.) will likely hit Competitor equally.
  - Competitor may capture more of market – better branding, better distribution, better price, better products? Could be possible.

Question: After analyzing BB's cost structure, McKinsey is confident that BB's costs are extremely competitive. Knowing this, where do you think the problem could lie?

Sales Side

Question: McKinsey analyzed the distribution channels of BB and its competitor, and came up with the following information. (show Customer Mix slide)

Slide is vague. Interviewee should immediately walk through and clarify what is being shown. Most students won't do this. If they don't, start pointing things out to them.

- Slide shows customer mix in terms of volume. Competitor and BB sell equal volume annually (10,000,000 lenses per year or whatever).

→ So big takeaway is that Competitor sells more via Doctor's offices; BB via Optical Retailers.

- Big Box Discounter = Walmart; Sam's Club
- Doctor's Offices = your local mom & pop non-chain doctor's office
- Optical Retailer = Lenscrafters, etc.

→ So obviously, varying degrees of buying power. Walmart purchases in large volume; Doctor's office is purchasing in small quantities, probably also not super business savvy (no procurement department). Lenscrafter is in the middle.

In addition, different differentiation: Walmart is known for cheap prices; Doctor's office is specialized & high on service; Lenscrafter in the middle.

- BB and Competitor charge same prices for same products (as established earlier in framework).

→ At this point, great students will remember the problem at hand (less profitable than competitor), combine it with the new information and realize that there must be a pricing difference between the different sales channels.

Once difference in pricing is established, ask:

Question: Does this Surprise You?

Student should make some sort of intelligent comment about how, given the types of retailers, no, it does not surprise him/her.

(Now show student Profitability by Customer slide)

Question: Can you tell me what you see here, does any of this surprise you? (Show profitability by customer slide)

Student should point out that prices are in line with what was expected. Walmart is lowest, Rx offices highest. Given purchasing power, makes sense. Also, customers generally are willing to pay a premium at a Doctor's Office, since service is more individual.

COGS: makes sense that equal in all channels, as same product in each channel.
Sales, Distr: interesting that different. Could be because Walmart requires more advertising, cash for shelf space?

Fixed costs: makes sense that equal. Again, same product.

Question: Ask student to calculate profit and percent profit margin. Ok to estimate on margin.

Big Box Discounter: $1.50 (9%)
Doctor's Office: $16.00 (57%)
Optical Retailer: $8.00 (36%)

Question: Does any of this surprise you?

Comment.

Question: Given this information and given the initial problem you're solving for, what would you want to look at now?

How can we sell more lenses via the Doctor's Office channel?

Excellent students might also comment that they're curious as to why BB is even bothering to sell in the Big Box Channel – why not pull out and focus resources/attention on improving sales in Doctor's Offices, instead?

Question; Like its Competitor, BB relies on sales reps to distribute its contact lenses to the Doctor's Offices. Currently, BB has 5 reps in its call center dedicated to reaching out to the Doctor's Offices and doing whatever is necessary to get them to sell as many BB lenses as possible.

Interestingly, McKinsey has discovered a relationship between call frequency and sales generated:

- **For every 2 calls made to a customer per month, our client sees a 5% increase in revenue from that customer**
- **For every 3 calls made, our client sees a 15% increase in revenue over revenue for 1 call**

Currently, each B&B sales person has 100 customer accounts. Each account must be called at least once a month, as B&B does not want to lose any customers. Assume that sales per customers, when the customer is called once a month, is $100.

Given these findings, what should BB do?

To maximize profits, student must consider how to best distribute phone calls.

Additional information to be given if asked:

- Each sales call takes 30 minutes.
- Each sales rep works 20 days per month, 8 hours a day.
- Each sales rep spends approximately 3 hours of each work day on administrative work, lunch break, etc.

Calculation:

8 hours a day less 3 hours a day for admin = 5 hours a day for sales calls.
5 hours divided by 30 min per call = 10 calls per day.
10 calls per day times 20 days total = Max. capacity is 200 calls per month per rep.
200 calls max less 100 calls necessary = 100 "free" calls.
You have already called all customers once, so to reach 3 calls per month, must only call customer 2 more times. 100/2 = 50 customers you are able to call 3 times per month.
However, B&B could also call 100/1 = 100 customers 2 times per month.
1 call = $100
2 calls = $100 * 1.05 = $105.
3 calls = $100 * 1.15 = $115.
If all customers are called twice then sales = 100 customers * $105 per customer = $10,500
Otherwise, sales = 50 customers * $100 + 50 customers * $115 = $10,750

Recommendations:

The company should call 50 customers once and 50 customers three times

Primary Takeaways From Case:

- Make sure you understand what problem you're trying to solve. If the problem is vague, clarify it before you start your framework, otherwise, how do you know what you're solving for?
- Don't jump to conclusions on slides. Even if you think you understand everything on it, verify with the interviewer to make sure your understanding is correct.
- Take every sub-conclusion back to the main question.
- Sanity check everything you conclude and/or see. Does this make sense? Is this what I expected to see?

Contact Lenses

Exhibit 1 – Customer Mix

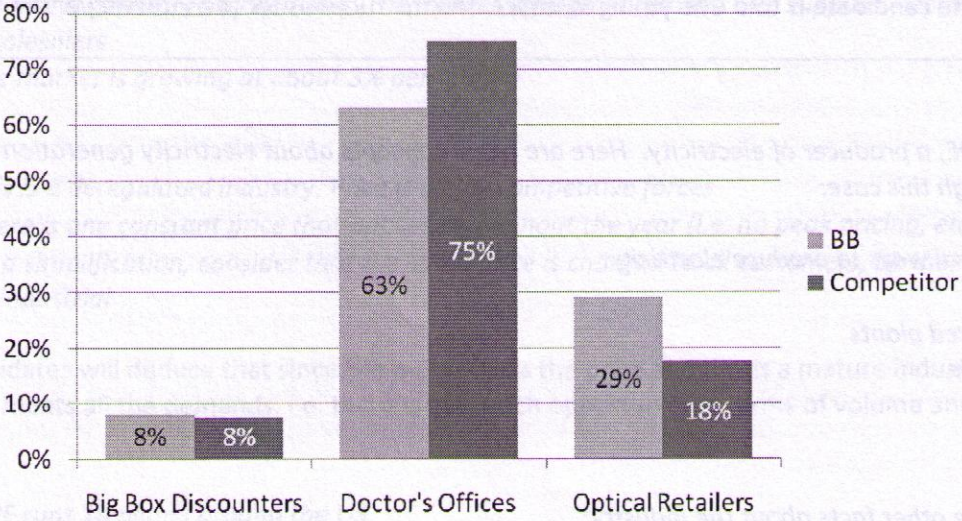


Exhibit 2 – Profitability by Customer

Per box of contacts (6 lenses)	Big Box Discounter	Doctor's Office	Optical Retailer
Revenue	$16.50	$28.00	$22.00
COGS	$8.00	$8.00	$8.00
Sales, Distribution	$5.00	$2.00	$3.50
Other Fixed Costs	$2.00	$2.00	$2.00
Profit			

McKinsey & Company – Electric Utility
Interview Round: 2, Second-Year
Time allotted: 30 minutes
Instructions: The candidate is told everything in *italics*. The instructions for the interviewer are in normal text.

Situation:

Our client is GPE, a producer of electricity. Here are a few concepts about electricity generation that will help you through this case:

There are several ways to produce electricity:

- *Water*
- *Coal fired plants*
- *Nuclear*
- *Wind*
- *Etc.*

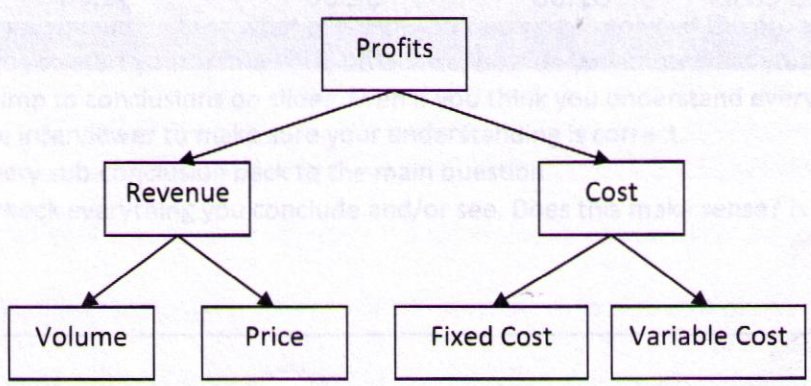
These are some other facts about the industry:

- *Electricity can be supplied to a wholesaler or to consumers directly*
- *Electricity transmission is highly regulated (because the wires used to transport electricity are mostly government controlled). However, electricity usage is mostly deregulated, i.e. the government does not set the price. Instead, the price is set by competitive forces*

Our client has 10 plants that produce electricity using coal. The client obtains coal partly from its own coal mines and partly from 3rd-party providers. Of late, the client has seen the profitability from its coal generated electricity decline. What could be causing this?

Additional information, Data, Solution:

The candidate should take some time to summarize the issue and to process the above information. The appropriate framework to address this issue is the profitability framework.



As the candidate goes through the various parts of the above framework, share the following information. Wait for the candidate to ask for this, but share the information even if the candidate does not explicitly ask.

Volume:

- *GPE supplies electricity to over a million customers (a customer is a household or a business) in deregulated markets through wholesalers*
- *Volume is generated by demand. The market is fragmented and GPE supplies electricity through wholesalers*
- *The market is growing at about 3% per annum*

Price:

- *This is a deregulated industry. Price is set by competitive forces*
- *There is one constant price that applies throughout the year (i.e. no peak pricing, etc.)*
- *As a simplification, consider that the same price is charged to all customers, be they residential or industrial*

Good candidates will deduce that since the market sets the price and this is a mature industry, currently the supply meets all the demands. i.e. there is not much opportunity in terms of volume and price.

Fixed Cost:

- *GPE runs 10 plants around the US*
- *GPE pays a fixed cost to lease transmission lines to transmit the electricity produced*

Variable Cost:

- *As a simplification, consider the main raw-material to be coal*

The candidate should consider looking deeper into the cost side (because it was already deduced that there aren't any opportunities in the revenue side).

Lets explore the cost side in more detail. A simplified supply chain for electricity consists of 3 parts:

1. *Acquiring the coal*
2. *Generating the electricity*
3. *Transmitting the electricity*

What potential issues may lie in each of the above?

Allow the candidate to brainstorm at least 3 potential issues for each of the above issues. Prompt the candidate to brainstorm more by persistently asking "What else?" after each response till the candidate provides at least 3 issues for each part of the supply chain.

Note that this case is about brainstorming and generating ideas and not about numbers.
Here are some possible responses that candidates may provide:

1. Acquiring the coal:
   - The coal may have to be transported across some distance. This could be done through rail or road. There are potential savings here in optimizing the transport channel
   - The coal is received from several sources: GPE's own coal mines and 3rd-party mines. The quality of coal (its energy content) is likely to be different in different mines. Hence, processing different types of coal probably takes different processes and machines. This diversity could be a potential cost generator and this could be handled by sourcing for more similar coal varieties
   - The coal mines could be in a geographically separate region, subjecting GPE's coal supply to

other regions' risks (for e.g., climatic factors such as hurricanes, political turmoil, etc.)
- The coal mines are probably unionized, and that may add to volatility in our coal supply

2. Generating the electricity
   - The electricity generators may be old and not functioning as efficiently, inducing waste in the system
   - There are 10 different plants in the client's company. Differences in operations of these plants may induce volatility in the system
   - The availability of labor may have changed by the arrival of other industry or competitors in our plants' vicinity
   - Given that GPE generates electricity through coal, some new environmental laws may have come into force increasing the cost of electricity generation
3. Transmitting the electricity
   - Transmission could be streamlined by finding more customers closer to the electricity plants themselves
   - GPE could look into a bandwidth sharing contract so that their lease may be cheaper
   - GPE can look into checking the transmission lines for repairs, etc. that may be required so that there is less electricity loss in transmission

GPE is primarily an electricity generating company. Do you think they should keep the coal mine?

Here is some information that can be shared with the candidate if the candidate asks for it:

- *GPE gets a 30% cheaper rate on coal from its own coal mines than compared to 3rd-party coal mines*
- *There is a large market for coal. Coal customers are diverse, electricity producers are just one of many. As a simplification, assume that all coal customers pay the same market price for coal when they purchase coal from coal mines*

With the above, candidates may be tempted to deduce that GPE should keep the coal mine because they get coal cheaper from their own coal mine. If candidates say this, remind them that:

Yes, GPE is getting coal cheaper from their coal mines. But they can also sell the same coal to other customers and make the same profit. So what is the advantage of using the coal for their electricity generation operation?

Potential responses are:

- Having their own coal mine reduces supplier power for GPE. GPE's electricity generation operations have the advantage of encountering lesser volatility in the supply of their core raw material, coal. GPE can control the coal production and can hence have lesser volatility in coal quality and labor issues
- GPE's business is more diversified through the coal mining operation

On an average, GPE operates at 80% utilization. GPE's CEO saw this statistic and asked McKinsey if he should look into increasing this from 80% to 90%. How would you approach this problem? By the way, the industry average is to operate at 77% utilization.

Tell the candidate that *the demand for electricity is cyclical*. Ask the candidate what that might imply. Candidates should point out that that means that there are peaks and troughs in electricity demand (e.g. air conditioners working over time during summer). As an electricity company, GPE is committed to meet the peak demand and so, it is normal to operate at less than 100% utilization. GPE is already operating at close to the industry average and it may be unrealistic to expect the utilization to increase to 90%.

Recommendations:

Good candidates will take a minute to gather their thoughts. The initial question was about what might be causing the decline in profitability. Candidates should be able to point out that this is a cost issue. Specifically, candidates should talk briefly about the supply chain analysis, showing potential issues and cost saving opportunities. Candidates should also recommend continuing the use of GPE's coal mine and ignoring pressure to increase utilization to 90%.

McKinsey & Company – Army Hotel

Interview Round: 1, Second Year

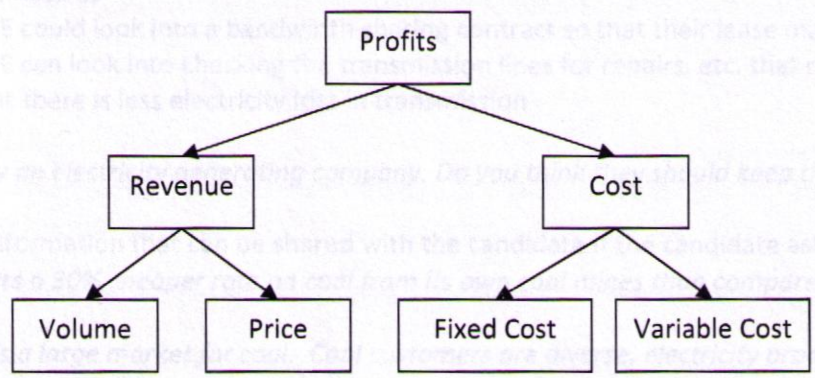
Time allotted: 30 minutes

Instructions: The candidate is told everything in *italics*. The instructions for the interviewer are in normal text.

Situation:

Your client is a PE firm that has the opportunity to invest in building a 400 room hotel on an Army base. The idea was given to the PE firm by the army. The government has decided to give your client the land for free – Your client can build the hotel and keep all of the profits. Your client has hired you to find out what they need to know to determine if they should build it or not.

Framework:



Additional information:

If the candidate asks for more information on the product, provide the following:

Existing hotels near the base. Each is approximately 20 miles away:

Hilton - $110/night
Hampton Inn - $75/night
Days Inn - $40/night

Purpose of the hotel:

The hotel is for the use of soldiers at the base for training as well as temporary housing for those who have been relocated to the base. There are two training classes held at the base:

- *Basic Officer Training: 200 soldiers per class. Class lasts 10 weeks. Class held 5 times per year.*
- *Advanced Officer Training: 50 soldiers per class. Class lasts 4 weeks. Class held 10 times per year.*
- *With respect to temporary housing: soldiers are transferred every 3 years and are given 15 days to find a permanent place to stay. There are 9,000 active duty soldiers subject to this rotation.*

Data and Solution:

The Army will reimburse soldiers $75 per night (per diem). How much would you charge at the hotel?

- If candidate asks then clarify that this per day reimbursement is also intended to cover the soldiers dinner and breakfast.
- Probe the student to determine how much per night the hotel will charge and what services should be included. Assume for purposes of the rest of the case that the client decides the hotel will charge a fee of $60/night.

Assuming that the classes and relocation of soldiers are the only sources of revenue what is the total potential revenue per year for the hotel?

Type of Training	People, #	Time Period	Times/year	Total Rooms per year
Basic	200	10 weeks	5	70,000
Advanced	50	4 weeks	10	14,000
Temporary	3000	15 nights		45,000
				129,000 (round to 130,000)
				At $60 / night $7.8 million

Having addressed the revenue side lets talk about costs. What are the costs associated with operating a hotel?

After the candidate lists relevant fixed and variable operating costs such as labor, supplies and utilities tell them to assume that total operating costs are $4 million per year.

What is the other costs associate with running a hotel?

Here we are looking for the student to talk about investment costs. We determined that the Hampton Inn made an initial investment of $50,000 per room. We will assume the same costs for our hotel. The student should calculate a total initial investment of $20 million to build a 400 room hotel.

Are there any issues that may keep the hotel from attaining the calculated revenue?

We are looking for the candidate to touch on capacity issues.

After the candidate mentions capacity state that during their business part of the year, which lasts four months, the hotel runs a capacity shortage of 80 rooms.

As the candidate to recalculate the revenue projection created earlier.

They will be short of 80 rooms x 4 months x 30 days per month = 9600 rooms per year (tell the student to round this to 10,000 rooms) So, the new number of rooms are 120,000 x $60 per night = $7.2M/ yr - $4M (Operating Cost) = $3.2M per year (profit).

What is the breakeven period for the PE Firm?

$20M / $3.2M = 6-7 years.

Is this a good rate of return? Why do you think so?

Let's assume the client wants to break even by 4-5 years.

What else can you do to bring down the break even time?

Probe the student to come up with ideas

Some suggestions:

- Add a restaurant to the hotel
- Find ways to decrease costs
- Decrease number of hotel rooms and keep utilization up

Recommendations:

Ask the candidate to summarize the findings of the case.

McKinsey & Company – Online Video

Interview Round: 1, Second Year

Time allotted: 30 minutes

Instructions: The candidate is told everything in *italics*. The instructions for the interviewer are in normal text.

Situation:

Your client is a VC firm that is interested in investing in a profitable venture - videos.com. The company provides home delivery of rental DVD/VCDs which are ordered online. The venture would serve only the Manhattan area in NYC. Should our client do this? What do we need to know?

Data and Solution:

Estimate the size of the market in two years.

Assume the population of New York is 1.5 million and 2/3[rds] of the population has internet access. Assume that 10% of households currently rent videos online and that this is expected to grow at 10% per year.

1.5M people * 66% = 1M people
1M people = 500K households
500K households * 10% = 50K

Households renting videos online:
Today = 50K
Year 1 = 55K
Year 2 = 60.5K *[this is what the student should get to]*

Right now, we know that people who rent movies online rent 1 movie a month. But we know that this number will decrease to 8 videos a year in two years. What is the change in our market?

The student should calculate the following:
Total rentals:
Today = 50K * 12 = 600K videos a year
Year 2 = 60K * 8 = 480K videos a year
This is a 20% decrease in market size.

What does this mean for your client? What ways can our client mitigate this issue?

Potential answers could be to sell complimentary goods along with videos. Video games, gift certificates, popcorn etc.

Suppose Blockbuster charges $3.50 per movie. Our focus is to make a profit of $30 per hour. Since our client is going to hand deliver movies, our delivery cost is $22 per hour with 5 deliveries per hour and an average of 3 movies are included per delivery. The prepaid envelope to return the movies is 50 cents each. Can we match Blockbuster's price?

Our cost should be:

$22 / (3*5) = $1.50 + $0.50 (envelope) + $2.00 (required profit) = $4.00. No, we will not be able to match Blockbusters price.
Recommendations: *What are your recommendations to our client?*
Additional Considerations: If time allows ask the candidate the list other risks and considerations.

Roland Berger – Technologic Inc.

Interview Round: 2, First Year

Time allotted: 30 minutes

Instructions: The candidate is told everything in *italics*. The instructions for the interviewer are in normal text.

Situation:

Our client, Technologic Inc., is a large manufacturer and seller of office appliances and peripherals. They are the leading firm in the market, with significant penetration and a devoted customer base that likes the firm for its advanced technology and great technical support staff. However, the firm has failed to meet its profitability goals, and is being criticized by investors and industry analysts. Technologic has engaged Roland Berger to help them with this issue. The two questions facing them are:

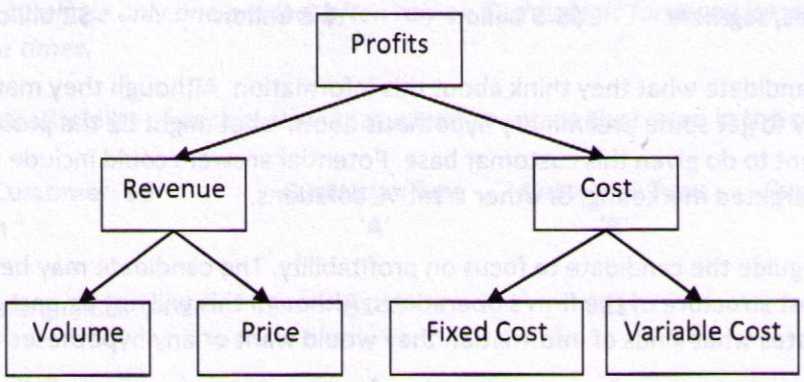
1. *What is/are the main driver(s) of poor profitability?*
2. *What possible steps could the company take to address these issue(s)?*

Additional information:

If the candidate asks for more information on the firm's products, provide the following:
The firm specializes in making three products, printers, scanners, and fax machines, as well as peripherals for those machines, such as power cords, toner cartridges, etc. They currently sell their products directly to consumers, mostly small business users. Currently, each of their three products sells for $150, while each peripheral sells for $50.

Framework:

Let the candidate drive the case. The candidate should draw out a profitability framework and flesh out potential causes of poor profitability. Guide the candidate to the cost side of the equation, and eventually get them to focus on customers.



While the candidate may use the framework to generate ideas and hypotheses as to why profitability is declining, it may not be specifically useful in this case.

Data:

The company isn't sure why it can't meet profitability goals, but they think it may have something to do with their customer base. They conducted a survey that's given them a better sense of their 50M global *customer base.*

- *60% of all their customers buy at least two products (meaning a scanner and a fax machine, or a printer and a scanner)*
- *Of the portion of customers that purchases at least two products, one-third purchase all three products.*
- *The remaining customers buy only one product.*
- *With regard to peripherals, they are pretty integral to the machines. Every customer who buys at least two products also buys two peripherals, while a customer who purchases only one product only buys one peripheral*

The candidate should use this survey information to build a matrix of the different customer 'types' as illustrated in the chart below. Feel free to ask the candidate to compute any of the numbers included in the chart, as it will be helpful during the remainder of the case.

Total Customer: 50 Million	**Customer Type 'A'**	**Customer Type 'B'**	**Customer Type 'C'**
Customers, #	10 million	20 million	20 million
Products Purchased, #	3	2	1
Price/product	$150	$150	$150
Product revenue	$450	$300	$150
Peripherals Purchased, #	2	2	1
Price/product	$50	$50	$50
	$100	$100	$50
Total Revenue/customer	$550	$400	$200
Total Revenues/segment	**$5.5 billion**	**$ 8 billion**	**$2 billion**

At this point, ask the candidate what they think about this information. Although they may try to jump right to profitability, try to get some preliminary hypothesis about what might be the problem or what the company might want to do given this customer base. Potential answers could include upselling 'C' customers, bundling, targeted marketing, or other creative solutions.

With this information, guide the candidate to focus on profitability. The candidate may begin asking questions about the cost structure of the firm's operations. Although this will not be part of the solution, feel free to ask candidates what kinds of information they would want or any hypotheses they may have.

We don't have a lot of information on the cost structure of the firm's manufacturing operations. The firm is a global leader in the space, so it's safe to assume they have the most efficient manufacturing and distribution operations. We do know that the firm earns a 20% margin on each product it sells, as well as a 50% margin on peripherals.

The candidate may jump to the conclusion that the firm should sell more peripherals than products based on the margin discrepancy. But guide them to calculate the profits earned on each unit sold, as well as the profits for each customer type. The results of their calculations are illustrated in the table below:

Total Customer: 50 Million	**Customer Type 'A'**	**Customer Type 'B'**	**Customer Type 'C'**
Customers, #	10 million	20 million	20 million
Products Purchased, #	3	2	1
Price/product	$150	$150	$150
Margin earned (20%)	$90	$60	$30
Peripherals Purchased, #	2	2	1
Price/product	$50	$50	$50
Margin earned (50%)	$50	$50	$25
Total Margin/customoer	**$140**	**$110**	**$55**

At this point, the candidate may think the problem is clear, that a large percentage of customers aren't very profitable. However, press the candidate to think if there are any possible costs that haven't been accounted for. Remember, the firm is known for its great technical support. This support comes at a significant cost.

The firm maintains call centers with support personnel. These employees are well trained and skilled. Unfortunately, they are also expensive. The firm estimates that each call answered and addressed by the staff costs the firm $25. The number of calls for each customer type also varies. Customers who purchase two or more products are generally more sophisticated and typically call support once. However, customers who purchase only one product often rely on Technologic for many issues, calling them an average of three times.

This makes the profitability of each customer much different, as illustrated in the chart below:

Total Customer: 50 Million	**Customer Type 'A'**	**Customer Type 'B'**	**Customer Type 'C'**
Total Margin/Customer	$140	$110	$55
Service Calls/Customer	1	1	3
Total Service Costs	($25)	($25)	($75)
Total Profit/Customer	**$115**	**$85**	**($20)**

Solution:

A good candidate will take the initial information regarding product lines and work to figure out how many units are sold and how profitable the firm is. With the customer survey information, he/she should be able to ascertain the total firm revenues ($15.5 Billion) and revenues by segment as illustrated in the matrix presented above.

Following this information, the candidate may look to learn about the cost structure of the firm and whether that has changed significantly. With only the margins to go on, the candidate should be able to calculate margins for each customer segment, but may be unsure how to proceed.

It is important to ask the candidate if they have considered all potential costs, particularly if they begin to make recommendations. Once the service costs are given, the candidate should have no problem arriving at the conclusion that the 'C' level customers actually cost the firm money due to their service needs. At that point, the interviewer may ask the candidate for possible solutions.

Recommendations:

The client has asked us for our recommendation. What would you tell the client?
Here is a possible response:

The firm's profitability issues stem from customers who don't generate substantial revenue but impose substantial costs through their service needs. Although they generate $2 billion in revenue, ultimately the firms lose $400 million on these customers. There are a number of potential solutions to the problem, which include increasing their revenue, decreasing their service costs, or changing the service model.

The candidates may think of many options, such as:

- Charging customers to receive technical support
- Creating other service options (web knowledge base, email) that are more cost effective for simple problems
- Replace expensive customer service representatives with cheaper alternatives for the low profitability segment
- Bundle products to make low-value customers profitable

Additional Considerations:

What are some of the potential risks?

Here are some potential answers:

- Any change to the company's service model may hurt the brand identity
- Would customers switch providers if they know service will cost them?
- Would changes to cater to low-value customers hurt the higher value customers?
- Working to increase revenue from low-value customers may not succeed
- Survey data that we've based these assumptions on may not be accurate

There may be other reasons behind profitability concerns that we have not yet explored

ZS Associates – Heavy Attrition

Interview Round: 2

Time allotted: 45 minutes

Instructions: The candidate is told everything in *italics*. The instructions for the interviewer are in normal text.

Situation:

Our client has asked us to look into why there is such heavy attrition amongst the junior sales people in the organization. Where do you think we should start?

Additional information:

This is an open-ended case typically provided by partners. Do not answer too many of the candidate's questions. Also, let the candidate drive the case.

The candidate should ask clarifying questions around the qualitative "heavy attrition" verbiage. If s/he does, reveal the following:

1. *The average time that a newly hired salesperson is staying in the organization is less than one year. This is worrisome since it takes about 6 months for the salesperson to learn and come up to speed.*
2. *On the other hand, experienced salespersons (people with experience in the organization greater than 3 years) are staying on with the organization with almost zero attrition.*
3. *The organization is a fairly new medical devices company which has been operating for the last 10 years.*

Framework:

The ideal candidate should be quick to hypothesize that there seems to be an incentive problem. Somehow the junior salespersons incentives seem to be very different than the more experienced salespersons incentives. Keep pushing the candidate to get to this kind of a thought process before proceeding further. This is the crux of the case.

The incentives could be a variety of things including kind of work, compensation, perks etc. Since the primary work of sales people is to sell, we can assume that the nature of work is similar to both types of sales people. So we focus on the monetary aspect of the incentive structure.

Sales people are typically paid a small fixed salary and a commission which is based off the sales they accomplish. Thus:

- Commission for a sales person = Function (volumes sold (kind of clients, kind of product sold), distance travelled)

We should investigate to see how commission varies between the junior and more senior sales people.

Data and Solution:

Look at each attribute of the function determining incentives.

1. Type of product sold
   - The candidate should try to delve deeper into understanding the company's product line. (*Do not provide any details but ask the candidate why that is important. The candidate should show an understanding that it is important if the company sells multiple products of differing margins and price ranges and if the junior salesperson does not have access to entire range of products.)
   - By way of an example: Apple iPods priced in the $100-300 range practically sell themselves, i.e they require little effort on the part of the salesperson. Apple iMacs, on the other hand, are priced in the range of $2000-3000 and require a greater effort on the part of the salesperson to sell.
     - The candidate should investigate whether the incentives at the client firm are aligned such that the salesperson's commission is in such an example as above, far more for selling an iMac than for selling an iPod.
     - If the commissions are structured as above, then the candidate should investigate whether junior salespeople are allowed to sell the higher margin, higher commission products or whether they are forced to sell the lower-priced end of the product line.
     - Improper incentives could lead to lower morale among junior sales people and motivate them to leave quickly.

2. Kind of clients in territory
   - Typically sales people are assigned territories so that one salesperson is not stepping competing with another salesperson for the same customers.
   - The candidate should want to know how the salespersons are assigned territories territories. If the territories are geographically marked then there could be a problem is junior sales people are provided territories with lower income neighborhoods, while senior sales people command coveted higher-income neighborhoods. Such an allocation of territories could skew a junior salesperson's compensation as accomplishing sales in a higher-income neighborhood might be easier (greater disposable income per person) and might even result in higher volume sales (able to buy more).
   - If, on the other hand, the territories are based on industries of customers, for example, a few salespeople sell to higher education, a few sell to businesses, few to retail, etc. and if the junior sales people are assigned to a client-group where they have to acquire new customers and where customers don't know the client product well, it might again have an impact on their compensation.
   - Another issue could be that typically big customers for the firm are considered its most important customers. It is possible that the client is earmarking these big customers to be serviced by its senior sales team. Both the customer and the client might be more comfortable with this kind of an interaction. However, this might hurt the junior sales person if s/he cannot see themselves as being trusted enough to ever participate in those transactions. Also because big customers by definition are big spenders on the client's goods, it is highly likely that the commissions of the senior salesperson is inflated even though s/he does not have to make the extra effort to sell to the big customers.

3. Distance to customer location

A salesperson's commissions could be heavily impacted especially if his/her customers are geographically separated by large distances and s/he is forced to spend a lot more time on the road traveling than with customers. This could be a problem if the junior salespersons are getting the new potential customers who are far-apart from each other.

Recommendations:

After investigating the cause for the high attrition amongst the junior sales people, we could recommend to the client to look to restructure the incentive compensation system to include the following -

1. Align incentives of the senior sales person to the success of the junior sales people – Every senior sales person can be a mentor to a junior person and his/her incentives could have a component linked to the junior person's success and staying on with the client firm.
2. Clear growth path for the junior sales person – If the junior sales person can see what milestones s/he can meet to ensure that s/he can get to sell to the big customers (i.e., if there were more transparency and clarity in the allocation process), they might be more encouraged to stay on with the client.

Any other creative suggestions the candidate comes up with should also be rewarded.

Unknown – American Express Case
Interview Round: 1, Second Year
Time allotted: 30 minutes
Instructions: The candidate is told everything in *italics*. The instructions for the interviewer are in normal text.
Situation: *American Express (Amex) is a consumer services company providing a variety of services to its card holders. Its primary service is its well-known charge card that enables "members" (i.e., card holders) to purchase goods and services from millions of merchants that accept the card. Unlike other credit cards, cardholders are required to pay off their accrued balances each month, and interest is not charged.* *Recently, Amex has faced strong competition from new credit cards entering the market. They have considered dropping the $55 annual fee. Amex has engaged our firm to answer two questions:* 1. *What are the economics of such a decision, and* 2. *Should the fee be dropped or not?*
Framework: Determine how American Express makes money. Evaluate the pros and cons of dropping the annual fee. Explore options for replacement revenue. Make a recommendation.
Additional information: Data should be given to interviewee when they ask. Encourage the interviewee to establish estimates. *The number of cardholders is approximately 14 million (you can round to either 10 or 20 to simplify the math) – Encourage the interviewee to estimate this number on their own.* *Annual fee per card holder - $55 (round to $50 for simpler math)* *No additional revenues from consumers, since balances are paid monthly. (Amex doesn't enforce late fees)* *1% merchant fees for transactions from merchants honoring Amex card.* *Est. annual transactions are $1,000.00 per cardholder. ($1,000 x 1% x 10mm = $100 million)*

Data and Solution:

The candidate should reach the following conclusions:

- If the annual fee is dropped, Amex loses $55 x number of cardholders.
- Candidate to calculate: Amex would have to generate new or additional revenues to overcome the loss of annual-fee revenue. Using a conservative estimate, lost revenue will be 10mm x 55 = $550 million.

Question: Will consumer spending increase sufficiently to generate merchant-transaction revenue?

- Not likely, since cardholders must still pay-off balances at the end of the month. Therefore, must increase number of cardholders to increase merchant-transaction revenue.

Question: Is it possible to increase the number of cardholders enough to offset the lost revenue?

- The average annual transaction revenues are $1,000 x 1% = $10 per member.
- Therefore, the number of new customers required to overcome the revenue loss would be 550mm/10 = 55 million. Is it possible for Amex to gain 55 million new members this year? Not likely!
- Also possible to raise transaction fees: more revenues, but must address consequences for vendor relations.

Question: Should Amex charge interest and allow card-members to hold a balance? What would the impact be?

- Prior to making such a change the company should consider the impact of the change on the brand.

Question: Would the new revenues from interest off-set losses from dropping the annual fee?

- Depends on rate of interest and average balance (estimate 10% and $500). If average balance = $500 at 10% APR = $50 per member x 10 million members = $500 million annually.

Recommendations:

Based on economic analysis, don't drop the fee. It is difficult to replace the lost revenue. While some options exist (i.e., charging interest on balances) the consequences should be explored. Amex could issue an interest-driven credit card under a new brand name (in fact, Amex did so with the Optima card).

Additional Considerations:

The client specifically inquires about the economics of aborting the annual fee. Good answers should focus on this issue, and should provide recommendations based on the analysis.

Good answers should explore the issue of rival credit cards entering the market, how their product offering is similar or different from the American Express card, and the strengths and weaknesses of American Express's position. Alternative revenues should be explored. One option is charging interest and allowing cardholders to hold a balance. Answers should address how this would this affect the AMEX brand, i.e., the consequences of becoming a just another ordinary credit card. Another is enforcing late fees, or raising merchant fees. The consequences of these should be addressed also.

Outstanding answers should also explore the effects of competition among credit cards and recommend how Amex could increase revenues without dropping the $55 fee. For example, comment on the quality of new members acquired, since competition is forcing many credit card companies to issue cards to riskier consumers.

Unknown – Boozy Co. Case

Interview Round: 1, Second Year

Time allotted: 30 minutes

Instructions: The candidate is told everything in *italics*. The instructions for the interviewer are in normal text.

Situation:

Our client, Boozy Co. produces commodity widgets. Profits have declined over last three years. Boozy has engaged us to help them with this issue. The two questions facing them are:

1. *Determine why profits have declined*
2. *How can Boozy Co. restore profitability*

Additional information, Data, Solution:

The candidate should, at this time, draw out a framework. Here is some of the information that a candidate may ask for; provide only if the candidate asks.

More about Boozy Co:

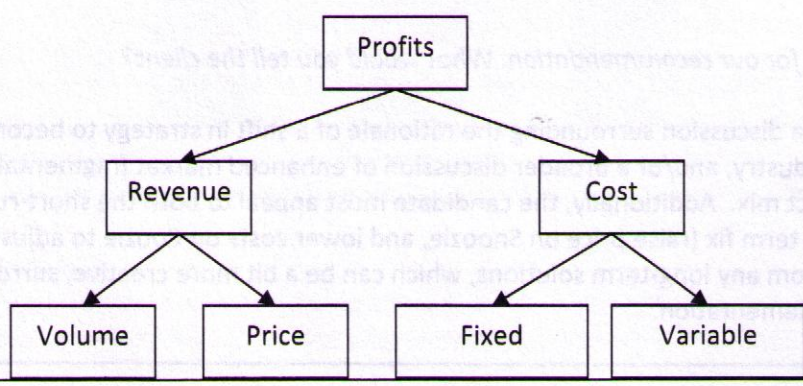
- *True commodity products, no ability to differentiate*
- *Pricing has held constant for each product line*
- *Overall quantity has remained constant at 100% effective capacity*

The Market:

- *No substitutes in market (make it clear this is not a "five forces" case)*
- *Overall market demand has remained constant*
- *COGS and SG&A should be allocated pro rata across total units produced*
- *There are 2 other big competitors in the market*
- *Our competitor's products are very similar to ours and are priced similarly too*
- *Our competitors have limited differentiation when it comes to the product, promotions, or price*

Framework:

The candidate should, at some point, draw out or at least speak to the profitability framework:



When the candidate discusses revenue/historical company performance – ***provide Exhibit 1.***

Data and Solution:

Basic P&L framework (Revenue = Price * Volume; Rev – Costs = Profits)

If, after seeing exhibit 1, the candidate asks about the product mix, provide Exhibit 2. If the candidate does not ask about different products under the Boozy portfolio, drive the candidate towards factors that drive revenue – ***provide Exhibit 2***. The candidate must ask about product mix before being given Exhibit 2.

Explain to the candidate that the Snoozie and Coozie are manufactured interchangeably with the same machines. Let the individual drive forward on calculations of individual product profitability. This can only be accomplished if, after seeing exhibit 2, the candidate recognizes that the cost component is still outstanding – ***provide Exhibit 3***.

a. The candidate should recognize that on a fully-loaded basis, we lose money on each Snoozie ($6 total cost, $5 price). Management didn't realize this because they failed to allocate SG&A.
b. If demand has remained constant, and price is the only differentiator, Coozie is overpriced and Snoozie is under-priced. Upon reviewing relative cost position slide, the student should attack SG&A first and raw materials second and offer thoughtful, specific ideas about how to reduce costs.

<u>Other Exhibit 3 Considerations</u>:

Higher performed candidates will also consider that higher materials/lower labor costs may be related. For example, some locations may have low cost of labor, but be far away from raw materials. Or, a highly automated manufacturing process may require less labor, but more materials, etc. It may even be that competitors define each category differently – some costs we put in SG&A may be in Festive's "labor." People say some pretty smart things looking at that very simple graphic.

Instruct the candidates to recalculate or speak to changes in the income statement given a mixed change. Higher performed candidates should address the reality that over the long term, commodity prices converge to costs, so Boozy Co. must lower costs to compete.

Recommendations:

The client has asked us for our recommendation. What would you tell the client?

Responses will include a discussion surrounding the rationale of a shift in strategy to become the low-cost producer in the industry, and/or a broader discussion of enhanced market fragmentation to take advantage of its product mix. Additionally, the candidate must appeal to both the short-run and long-run options. The short term fix (raise price on Snoozie, and lower costs on Coozie to adjust product mix) should be distinctive from any long-term solutions, which can be a bit more creative, surrounding strategy shifts and implementation.

Additional Considerations:
What are some of the potential risks?

Here are some potential answers:

- Is our labor cost component lower, and sustainable? Will there be significant capital expenditures due in the near future to maintain/upgrade facilities?
- Any change in operations may result in modest product deficiencies and/or distribution issue – what is our recourse under this scenario? This may result in a loss of goodwill.
- Running machines at capacity may result in faster wear and tear, resulting in incremental maintenance expenditure.

Boozy Co

Exhibit 1 - Boozy Co. Summary Income Statement

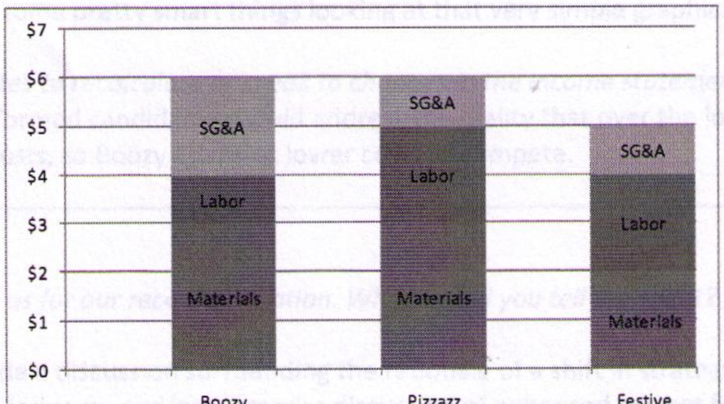
$ in millions	2004	2005	2006
Net Sales	$100	$90	$80
Cost of Goods	$60	$60	$60
Gross Profit	$40	$30	$20
SG&A	$30	$30	$30
Operating Income (EBIT)	$10	$0	($10)

Exhibit 2 – Boozy Co. Product Mix

Price	2004	2005	2006
Snoozie	$5	$5	$5
Coozie	$10	$10	$10

Quantity (millions)	2004	2005	2006
Snoozie	10	12	14
Coozie	5	3	1

Exhibit 3 – Boozy Co. Unit Costs vs. Competitors



Unknown – Burger King Palace

Interview Round: 1, Second Year

Time allotted: 30 minutes

Instructions: The candidate is told everything in *italics*. The instructions for the interviewer are in normal text.

Situation:

Our client is Burger Palace, a Chicago area fast food restaurant with 20 locations. They have been approached by Midway airport about opening a new location inside the main terminal. They have asked us to come to a meeting in 20 minutes and tell them if we think this would be a profitable venture. What do you think we should tell them?

Additional information:

If the candidate asks for more information on the product, provide the following (one piece of information at a time):

Facts about Burger Palace – assume these will hold for the new location

– Average transaction size	$10
– Variable Costs	Run 80% of sales
– Fixed Costs	$250,000 royalty fee paid to Midway annually $200,000 in rent and fixed operating costs

Midway airport information we know

– Assume all passengers who come through the airport would have the opportunity to eat at the BP location (there is one main food court for the whole airport)

– Midway is open every day of the year

– Burger Palace will be open the same hours/days that the airport is open

– Gates at Midway	25
– Hours of operation	4am – 12am (20 hours per day)
– Average planes per hour	1 per hour per gate
– Average plane size	150 pass…think Southwest (6 across X 25 rows)
– Average load factor	66% (number of seats filled on average)
– People who will eat at Midway	5% of passengers will eat at Midway
– Number of employees	2,000
– Employees who will eat each day	50%

Competition at the airport

– There are currently 4 restaurants at Midway. They each have an equal market share. If BP were to open a restaurant we expect that each of the 5 restaurants would gain an equal market share (20%). We would not expect the number of customers to increase because of the new BP location. The share of employee business is also spread out evenly over all restaurants.

What we don't know

– Anything about the profitability of the other Burger Palace locations

– We don't know anything about the types of restaurants currently at Midway

Framework:

Let the candidate drive the case. Given the simple nature of the case, a cost/benefit framework with detail expanding the revenue calculation should help the interviewee work through the problem.

Data and solution:

This is a simple cost/benefit analysis with a market sizing component needed for the revenue calculation. There are many different ways to size the market, but this case is designed to go down a specific path based on the case facts that are available. Specifically, the estimate starts with the number of gates, then planes per gate, people per plane, etc. Some interviewees will have trouble starting the market sizing and may need a little nudge to begin thinking in that manner. That is OK; it isn't about whether or not someone can read the mind of the instructor, it's about how logically they think about the problem as they go. Do they make realistic assumptions about how many people are on a plane? Do they account for the fact that the planes won't all be full? Do they simplify the math to make it easier for themselves?

There are two big insights in the case. First, can the interviewee keep the big picture in mind later in the case? If you concentrate just on the passengers, the math shouldn't work to make the venture profitable. If you remember that there are other people at the airport (employees), it turns profitable. Also, the location would be great advertising for Burger Palace's other locations. How would the interviewee value that advertising?

Revenue from Passengers

	25	gates at Midway
x	1	plane per hour per gate
x	20	hours day
	500	planes per day
	6	seats across on a plane
x	25	rows per plane
	150	passenger capacity
x	66%	average load factor
	100	passengers per plane
x	500	planes per day
	50K	passengers per day
	5%	passengers that will eat at the airport per day
x	20%	share of total passengers per day that will eat at BP
	1%	passengers per day that eat at BP
x	50K	passengers per day
	500	passengers that are BP customers
x	$10	average transaction size
	$5K	passenger revenue per day
x	20%	profit margin
	$1K	profit per day
x	365	days per year
	$365K	profit per year

Note: at this point the profit of $365K < $450K in fixed costs, but who else will be eating at Burger Palace *every day? Employees.*

Revenue from Employees

	2K	Midway employees
x	50%	share of employees who eat at the airport each day
	1K	employees who eat at the airport each day
÷	5	restaurant options
	200	Midway employees that will eat at BP each day
x	$10	transaction size
	$2K	staff revenue per day
x	20%	profit margin
	$200	staff profit per day
x	365 days per year	
	$146K	profit from staff

Yearly Revenue from both sources

	$365K	profits from passengers
+	$146K	profits from employees
	$511K	Total revenue
-	$450K	total fixed costs per year
	$61K	Total profit

By including the staff, the project should generate about $60K in additional profits to Burger Palace per year.

What else should Burger Palace consider when evaluating this opportunity?

This would be a huge advertising opportunity for BP's other locations. If the interviewee comes up with that answer, ask how they would value that advertising. Remember, we believe in market economics at Chicago: think about what it might cost to buy a similar amount of ad space at the airport to get a baseline of what that might be worth to BP.

Recommendations:

Ask the candidate to summarize their findings for the client.

<u>Unknown – The Guggenheim Spiral</u>

Interview Round: 1

Time allotted: 15-30 minutes

Instructions: The candidate is told everything in *italics*. The instructions for the interviewer are in normal text.

This case is an interesting case that is unique in that it is challenging for both those new to the case interview process as well as those who have had substantial experience with cases.

<u>For new case takers:</u> This case presents an interesting challenge but does <u>not</u> require the case taker to have memorized any particular framework. It can thus be used as a very early case in someone's case prep regardless of their level. It combines critical thought, analysis and some rudimentary mathematics.

<u>For experience case takers:</u> The case is intended to be somewhat frustrating – forcing the candidate to think through a rather exhaustive list of possibilities. Candidates looking to practice the MECE concept (similar to a McKinsey interview of "What else?") will find this challenging. It is also a challenging case because no framework is likely to fit well.

Situation:

Our client, the Guggenheim museum, is looking for help understanding why they are experiencing big problems with visitor congestion in their museum. You have been hired to resolve the issue. You need to identify the cause of the problem and recommend a solution.

Framework:

The beauty of this case is that there is no single appropriate framework. Let the candidate attempt to build one, but they are likely to find themselves stuck quickly. A typical framework might look like this:

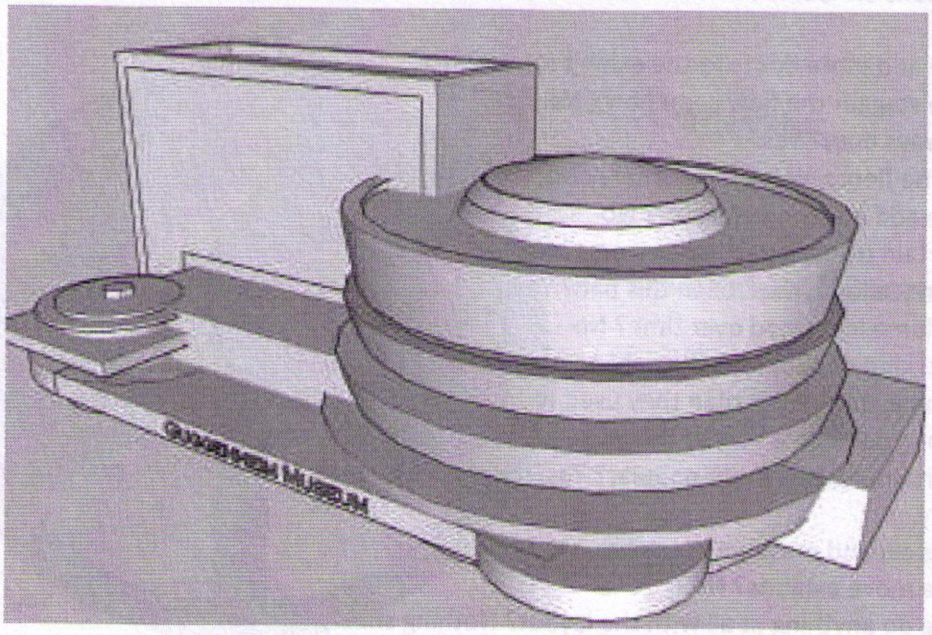
- Customers
  - Number of visitors
  - Length of stay
  - Seasonality of demand
  - Demographic shift
- Museum
  - Lower price
  - New, more popular exhibits
  - Logistics and flow through the museum
  - Change in advertizing, marketing efforts
- External environment
  - Other museums (renovation, closures, price increases, etc.)

Additional information:

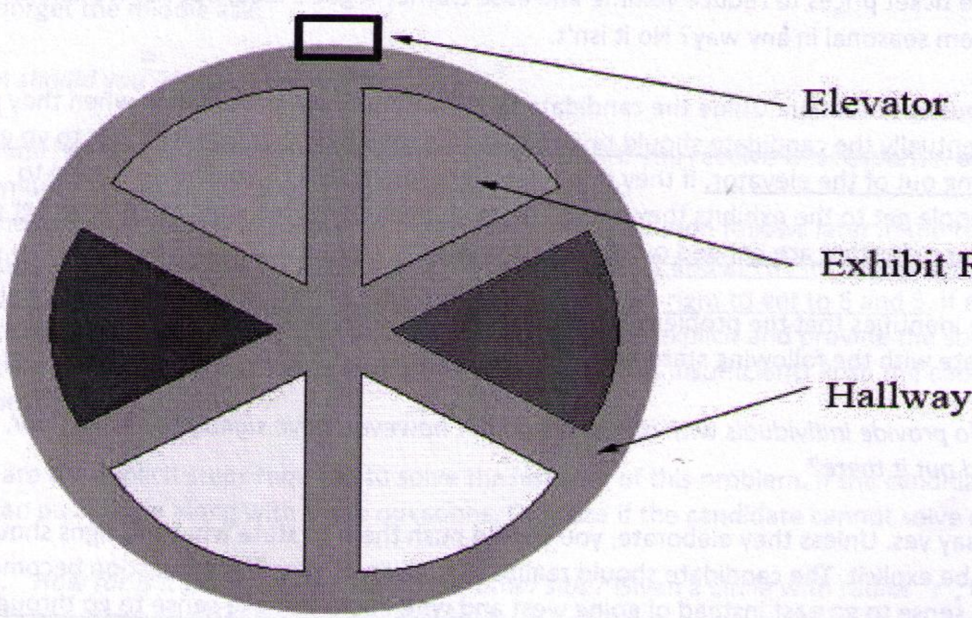
When the candidate asks about the layout of the museum should you provide the below. If the candidate doesn't ask, let them probe around a bit and then provide.

There are a total of 6 Exhibit rooms per floor. There is a hallway that goes around the room and through the center (in gray). Each exhibit room has only door leading into it. There is one elevator that leads to the entrance at the front. People exit the elevator and move to their desired exhibit room. What next?

Here is the Guggenheim:



The exhibits are held in the circular dome like shape. The layout of the exhibits is in a pie like format as follows:



Data and Solution:

Ask the candidate: What should we look at?

Often the candidate will list off many obvious things. The point is to drive them to a very specific solution. Give them the chance to exhaust ideas. In general, the answer is "no that's not it". Some common questions are below:

- Can we add more doors to the exhibit rooms? No.
- Can we stagger the flow somehow? No.
- Is it always busy? Yes.
- Are some floors worse than others? No, they are all bad.
- Can we add a second elevator? No.
- Are certain parts of each floor worse? No.
- Has congestion always been this bad? Yes.
- Has volume increased over time? No.
- Has the kind of people visiting changed? No.
- Do people stay longer than they used to? No.
- How long do people stay at the museum? Doesn't matter, congestion is always bad.
- Are certain exhibits more popular? Yes, but it doesn't matter. And no, we can't move them anyway.
- Can we expand museum hours? No we cannot.
- Can we move exhibits? No.
- Can we do anything at all with the layout? Nothing substantial no.
- Are there stairs somewhere? No, and you can't add them.
- Can we put in timers in the rooms that limit amount of time? Yes, but customers would backlash, so no.
- Can we raise ticket prices to reduce volume and ease traffic? A good idea, but no, we cannot.
- Is the problem seasonal in any way? No it isn't.

The case is now about optimization. Guide the candidate to think about how people flow when they get off the elevator. <u>Eventually the candidate should realize that someone has to decide whether to go east or west when walking out of the elevator.</u> If they don't get there (many don't), you can ask them to think about how people get to the exhibits they want. <u>The next question they should ask is whether or not there are signs or maps that are handed out to the visitors.</u>

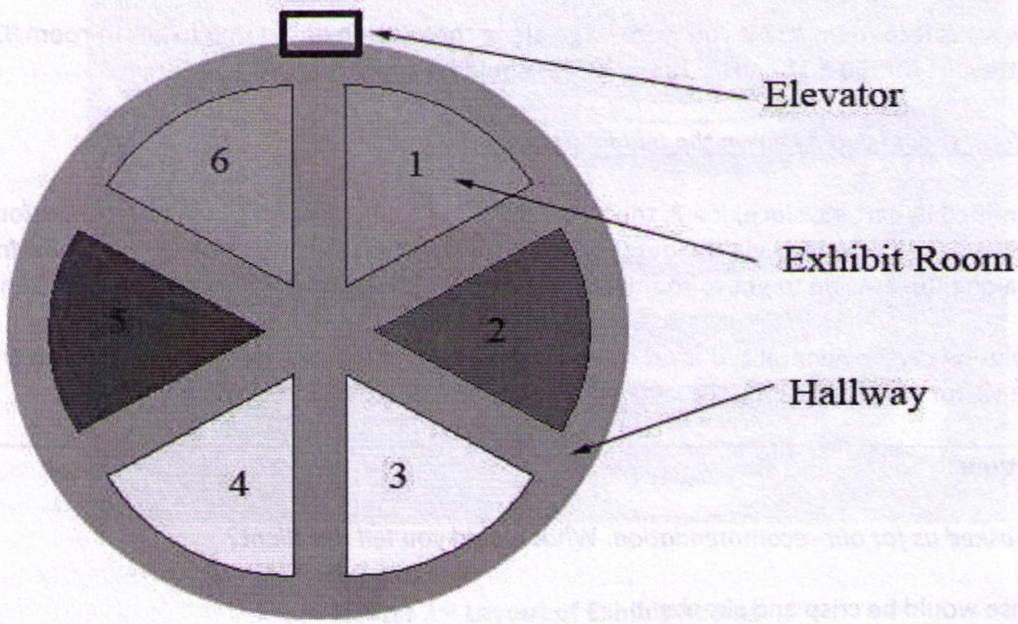
Once the candidate identifies that the problem deals with flow, and specifically, signage or maps – provide the candidate with the following statement.

As it happens, we do provide individuals with maps. We do not however, have signage on each floor. Do you think we should put it there?

All candidates will say yes. Unless they elaborate, you should push them to state what the signs should say. Force them to be explicit. The candidate should realize that given 6 "slices" the question becomes <u>when does it make sense to go east instead of going west and when does it make sense to go through the middle? If the candidate does not realize this, help them by asking:</u>

Ok so we put signs up near the elevator and exhibit rooms and in the middle. Pretty much everywhere. But what should they say?

Show the candidate a slide with the rooms numbered:



A typical candidate response is usually "the signs should say the right for 1,2,3, to the left for 4,5,6". If they forget the middle ask:

When should you go down the middle?

They will typically reply "when it's shorter". Insufficient! If you receive this response, ask the candidate to demonstrate when it is shorter to go down the middle.
In general, the answer is as follows (A detailed complete solution follows later in the text): The individual should go left (as they got off the elevator) to get to rooms 1 and 2. The individual should go down the middle to get to rooms 3 and 4, and the individual should go right to get to 6 and 5. If a candidate says this, ask them to explain why that is. They should, again, be explicit and provide the solution similar to that below. Simply stating "cause that's the shortest path" is insufficient! Push the candidate to demonstrate why that is.

Here are the explicit steps required to solve the last part of this problem. If the candidate needs help, you can push them along with these questions. Only use if the candidate cannot solve on their own.

1. *How far is it from the elevator to the other side?* Given a circle with radius "r", the distance down the middle to the other side is: 2r.

2. *What is the circumference of a circle?* The circumference of the entire circle is 2πr.

3. *So how far is it to room #1?* The degrees to one room away (in either direction), moving along the edge is 60/360. Thus, the circumference of that distance is $1/6 * 2\pi r = (1/3)\pi r$. This can be approximated as roughly 1r.

4. *So how far is it to room #2?* The distance two rooms away moving along the edge is $120/360 * 2\pi r = 1/3 * 2\pi r = (2/3)\pi r$. This can be approximated as roughly 2r.

5. *So how far is it to room #3?* If you were to go along the outside of the ring to get to room #3, you'd travel $180/360 * 2\pi r = ½ * 2\pi r = \pi r$. This could be approximated as 3r.

6. *Therefore, should you go down the middle for room #4?*

   As identified in part #5, since, $\pi > 2$, then by definition πr must be greater than 2r. Therefore the distance to get to room #3 via the outer ring is 3r. The distance via the middle is 2r. Therefore: going along the outside to get to rooms #3 or #4, rather than down the middle, is inefficient.

7. The solution can be generalized for N rooms. If the arc length of the outer passage is less than 2r, the visitor should go along the outside, if not, they should go along the middle.

Recommendations:

The client has asked us for our recommendation. What would you tell the client?

A good response would be crisp and simple:

"The problem may be that people are not finding what they need or are getting to their locations in an efficient manner. We need to optimize how an individual gets to an exhibit once they get off on a given floor. Based on our current configuration, I would recommend that

1. We optimize movement by directing flow down the middle of the rooms for rooms 3 and 4, to the left for 5 and 6, and to the right for 1 and
2. We should add appropriate signage when you get off the elevator to direct individuals."

The Guggenheim Spiral

Exhibit 1 – The Guggenheim

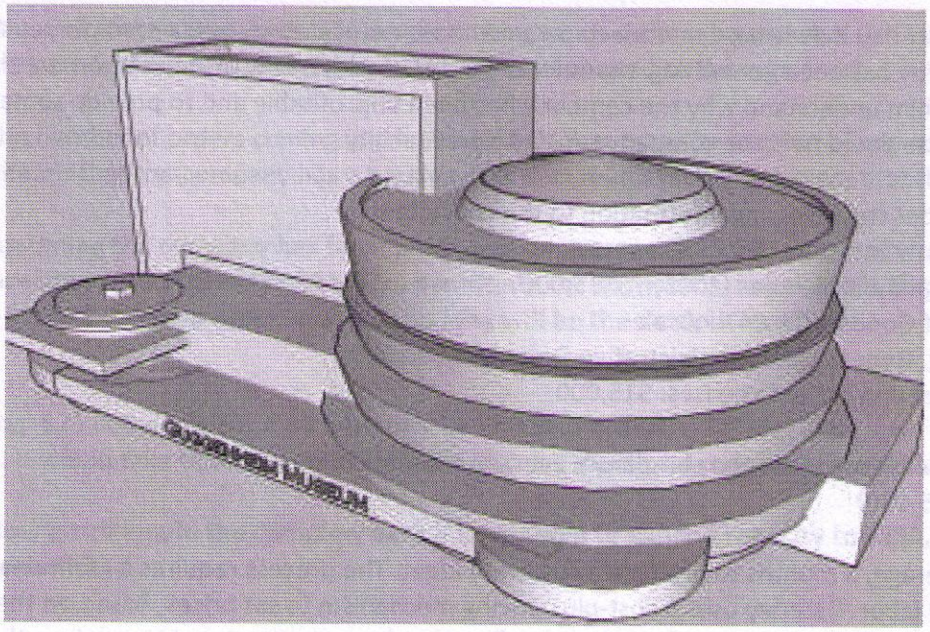
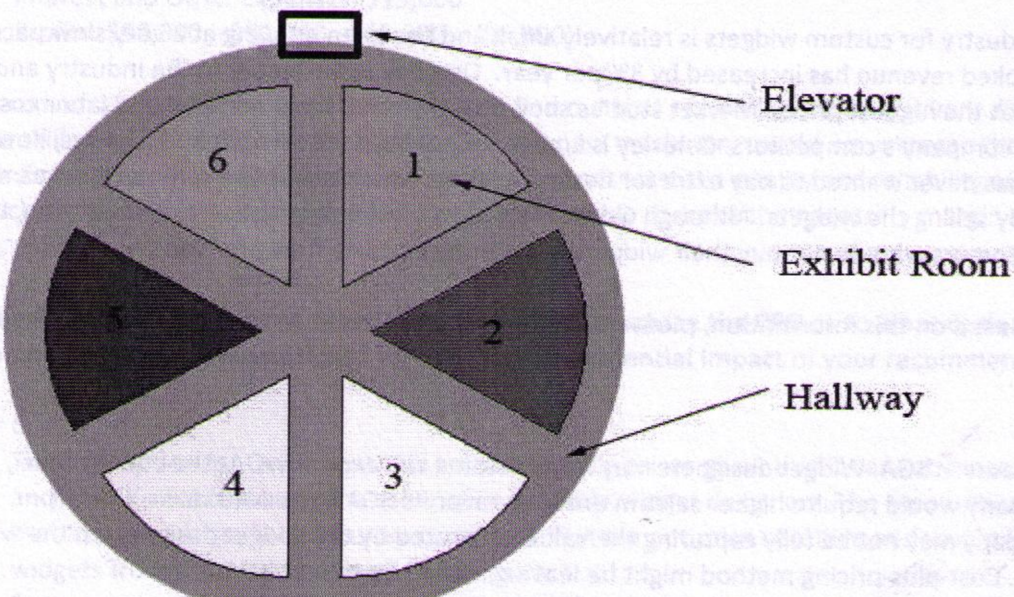


Exhibit 2 – Layout of Exhibit Rooms



Unknown – Osterley Industrial

Interview Round: 1, First Year

Time allotted: 45 minutes

Situation:

Our client is Osterley Industrial, a manufacturer and retailer of high-end, made-to-order, custom widgets. Osterley has been generating losses for 3 years. Osterley's new CEO has hired Booth Consulting Group to help him understand why the company has been unprofitable and to provide some suggestions that would help the company return to profitability.

The CEO provides the following information to the consultants:

Average monthly sales (2008): $225,000
Cost of Goods Sold: 64% of sales
Selling, General, and Administrative Expenses: $81,000
Interest and Other Expenses: $15,000

Question 1: Please calculate the company's average monthly losses.
Answer 1: ($15,000)

It takes on average, 3 months to produce a custom-widget. The process requires a great deal of highly-skilled manual labor. Osterley uses a cost-plus pricing mechanism to set prices. Based on the custom specs required by each individual client, Osterley first calculates the total cost to produce the widget by estimating the expected labor and raw material costs and then multiplies the total cost by 1.5 to calculate the retail price. The average price of a widget is $25,000. 100% of Osterley's sales are made-to-order and are delivered immediately once the widget reaches finished goods inventory.

The overall industry for custom widgets is relatively small and has been growing at a very slow pace. Osterley's booked revenue has increased by 3% per year. Osterley is the leader in the industry and typically sells at the highest prices. Market studies show that Osterley's raw material and labor costs are similar to the company's competitors. Osterley is known for having the best widget designers; however, the industry has never wanted to pay extra for design services, which is why the company makes all of its revenues by selling the widgets. Although Osterley's widgets last longer than the competition, there are many customers who do not buy their widgets at Osterley because they are "too pricey."

Question 2: Based on this information, please provide three reasons as to why Osterley may be losing money?

Answer 2:

a. Increases in SGA. Widget designers may have become too expensive. At the current level, the company would require higher sales in order to cover its SGA costs AND make a profit.
b. Company may not be fully capturing the value generated by the widget designers in the widget's price. Cost-plus-pricing method might be leaving money on the table.
c. Company is too highly levered and cannot cover the high interest expenses.

From looking at the company's sales data, you discover that Osterley has been generating $250,000 in new orders per month. Osterley's accountant explains to you that Osterley cannot book a sale until the widget has been produced AND shipped to the customer. You also discover that the factory has been producing per month on average $225,000 worth of orders, which is the same amount that the company's income statement shows in sales per month. You also uncover from customer interviews that customers across the board are complaining about missed delivery times, although some customers were much more "frustrated" than others.

Question 3: Given that the company has been generating more orders than what it has been producing for 36 straight months, what do you think has happened to those orders?

Answer 3: If the number of orders coming in the system is higher than the number of orders leaving the system, that means that the company has a backlog of orders that is increasing every month.

Question 4: Assuming the company has been producing on average $225,000 worth of widgets per month and receiving $250,000 worth of orders per month for 36 months, how large is the backlog? If Osterley sold $225,000 in new orders today, how long will be the delay in months?

Answer 4:

a. Backlog: $25,000 per order X 36 months = $900,000 of orders
b. Delay: It would take Osterley $900,000 / 225,000 per month = 4 months to cover the backlog

Question 5: How much would the company earn if it was able to expand capacity to $250,000 worth of orders per month?

Answer 5:

Average monthly sales: $250,000
Cost of Goods Sold: $160,000
Selling, General, and Administrative Expenses: $81,000
Interest and Other Expenses: $15,000
Profits: $90,000 – $81,000 - $15,000 = ($6,000)

From a conversation with the plant manager, you find out that expanding capacity is very difficult because skilled widget designers are hard to find and new machinery would not increase the capacity. Outsourcing is also not possible because Osterley does not trust the quality and reliability of other manufacturers and are too expensive for Osterley to be able to make the necessary margin to cover its costs.

Question 6: Based on all the previous information, please advise the CEO as to what to do next. Please explain and detail your assumptions. Please show the potential impact of your recommendations.

Answer 6:

a. The best option for Osterley at this point is to raise prices given that it cannot expand capacity and that it's not capturing the value of its valuable widget designers. The assumption here is that there is a large % of Osterley customers that are not price sensitive and would still purchase widgets from Osterley at a much higher price.
b. For example, if Osterley increases prices by 30% and 22% of customers do not purchase widgets due to the price increase, Osterley would have roughly the same revenues ($32,500 X 7 widgets = $227,500) but much lower costs of goods sold ($112,000 vs. $144,000). With this price increase, the company could swing to a $19,500 monthly profit, despite losing some customers.
c. Osterley could also consider trying to reduce some of its SGA costs and interest costs.

Unknown – Vitamin Universe

Interview Round: 1, Second-Year

Time allotted: 30 minutes

Instructions: The candidate is told everything in *italics*. The instructions for the interviewer are in normal text.

Situation:

Your client is a financial investor and is interested in purchasing Vitamin Universe – a chain of health stores. The chain has over 1000 stores in shopping malls, strip malls etc. They sell vitamins, herbs, dietary supplements, food products, diet drinks etc. Should your client purchase Vitamin Universe?

Additional information, Data, Solution:

We want to find out what the annual impact on profit is if we increase the percentage of young men who are heavy users (ages 18-24) who shop at Vitamin Universe from 30% to 35%.

The student should start by determining the market size of young men ages 18-24.

Their analysis/thought process should look like this:

Population	300M
Male (50%)	150M
Ages 18-24 (10%)	15M
Heavy Users (1/3)	5M
From 30%	1.5M
To 35%	1.75M

When the student asks what our revenue streams look like, you can tell them the following:

Each person spends $50/month

Their calculations should look like:
.25M * $50 = $12.5M (incremental revenue per month)
$12.5M * 12 = $150M (incremental revenue per year)

The student should ask what our cost are? Ask the student what types of costs would you expect a health store to have?

After they answer, tell them:

Lets assume that their cost margin is 50%.

The student should calculate annual profits to be $75M per year

Walmart begins to sell the products that Vitamin Universe currently sells and is under pricing 75% of our products. Do you think this will affect Vitamin Universe's performance?

Potential answers could include – It depends on the type of customers that shop at vitamin Universe – if they are price sensitive they will go to Walmart, but if they like Customer Service, they will continue to shop at Vitamin Universe.

What other ways can we suggest our client to cut costs?

Suggested answers include:

- Change suppliers – find low cost supplier
- Minimize labor costs

Recommendations:

Ask the student to wrap up the case.

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