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CLUB**

Case Book | 2011 edition

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# Case 1: Food Wholesaling Case

By: Colby Maher (Kellogg Class of '03) & Professor David Besanko, Edited By: Mauricio Atri (Kellogg Class of '12)

## Case Question

- Our client is an established food wholesaler that is trying to increase profitability. The situation is that our client is a wholesaler of a variety of different food items, and has a steady stream of business and is already profitable, but is looking to unlock more profitability from its existing lines of business
- How can they can best increase profitability from their existing businesses?

## Case tracker

- Industry:**  
Consumer Products
- Level of Difficulty:**  
Medium
- Case Format:**  
Improving profitability
- Concepts being tested:**
  - Microeconomics

## Fit Questions

### Spend first 15 min on fit

- Tell me about a time when you failed.
- Share me a time when you faced a difficult situation in a team and how you solved this .
- Describe your most rewarding business school experience.

## Guide to interviewer

- The case primarily tests an understanding of microeconomic concepts. As such, it is a little bit more qualitative and less quantitative than the average case.
- The interviewee should focus on solving insights regarding elasticity and profit-improving price changes .
- The interviewee should be able to come up with these insights if they invest some effort in understanding price elasticity of demand and its relationship to changes in revenues as price is reduced.

3

Quants.

6

Structure



Micro-  
economics,  
Profit-  
ability

# Clarifying answers and case guide

## Clarifying answers to provide

### Industry Characteristics/Market Economics

- Growing at the rate of GDP
- Significant barriers to entry; no new competitors have entered the market in the last several years

### Client Characteristics

- Client is currently the industry market share leader
- Margins are good, but depend on product line
- Offers a range of high-end and low-end food products
- Consumers are high and low-end hotels and restaurants

### Competitive Dynamics

- The dynamics (duopoly vs. fragmented industry) depend on the region, but there are key competitors in each region

## Guide to case / Guide to handouts

### Exhibit 1 – Hand out after introducing case – Current business

- What observations can be made from this graph?
- Interviewee should make qualitative assessments about competitive dynamics (next slide), market positions, and make inferences about potential causes/advantages that have caused the change from 2000/2003.

### Exhibit 2 – Hand out after solving exhibit 1 – Gross margin

- If we have a graph with gross margin on the y-axis, what would go on the x-axis?
- Use to illustrate relationship with gross margin and price elasticity. Interviewee should draw a downward sloping line from the top left corner.

### Exhibit 3 – Hand out after discussing Exhibit 2 – Elasticity/GM relationship

- Demand elasticity and gross margin do not have the inverse linear relationship that we would expect.
- Push the interviewee to make observations from this graph and identify the client's optimal strategy be in each of the four graph quadrants.

# Key elements to analyze

## Competitive Dynamics

- Using Exhibit 1, have a discussion about the competitive dynamics and economics that could push the share gains from 2000-2003.

## Demand Elasticity

- Use Exhibit 2 to have a discussion about price elasticity vs. gross margin and their relationship. When this discussion concludes, use Exhibit 3 for a discussion about the actual relationship.

## Notes to interviewer

- Exhibit 1 - The client is the leader in a two-company oligopoly in North America, its biggest market. It is in a highly competitive situation in Europe, and an even more competitive one in Asia where it has similar competitors.
- There are three major points to identify: 1) given the economies of scale and distribution that are likely prevalent in this business, it helps explain the gains in their lead in North America; 2) conversely, we would expect them to lose market share in Asia and Europe for the same reasons; and 3) the increase in overall share in Asia makes sense given the high relative growth rate in Asia.
- Price competition should be softer in the U.S. than Asia due to commanding market share and fewer competitors. For bonus points, the candidate could also mention that the U.S. market may be more fertile ground for price leadership.

## Notes to interviewer

- Exhibit 2 - the candidate should identify that the x-axis should have price elasticity, and this should lead him/her to draw a downward-sloping straight line from the upper left-hand corner to the lower right-hand corner.
- Exhibit 3 - the observation from the graph is that there is no apparent effect from demand elasticity on gross margins. We should leave pricing alone in Quadrants I and III, since they are behaving according to expectations. In Quadrant II, demand elasticity is high, yet we have a high margin, indicating that there is room to cut prices and increase profits. In Quadrant IV, demand elasticity and margins are low, meaning that we can raise prices to capture additional surplus.
- These insights regarding elasticity and profit-improving price changes are the main concluding insights of this case.

# Solution and recommendations

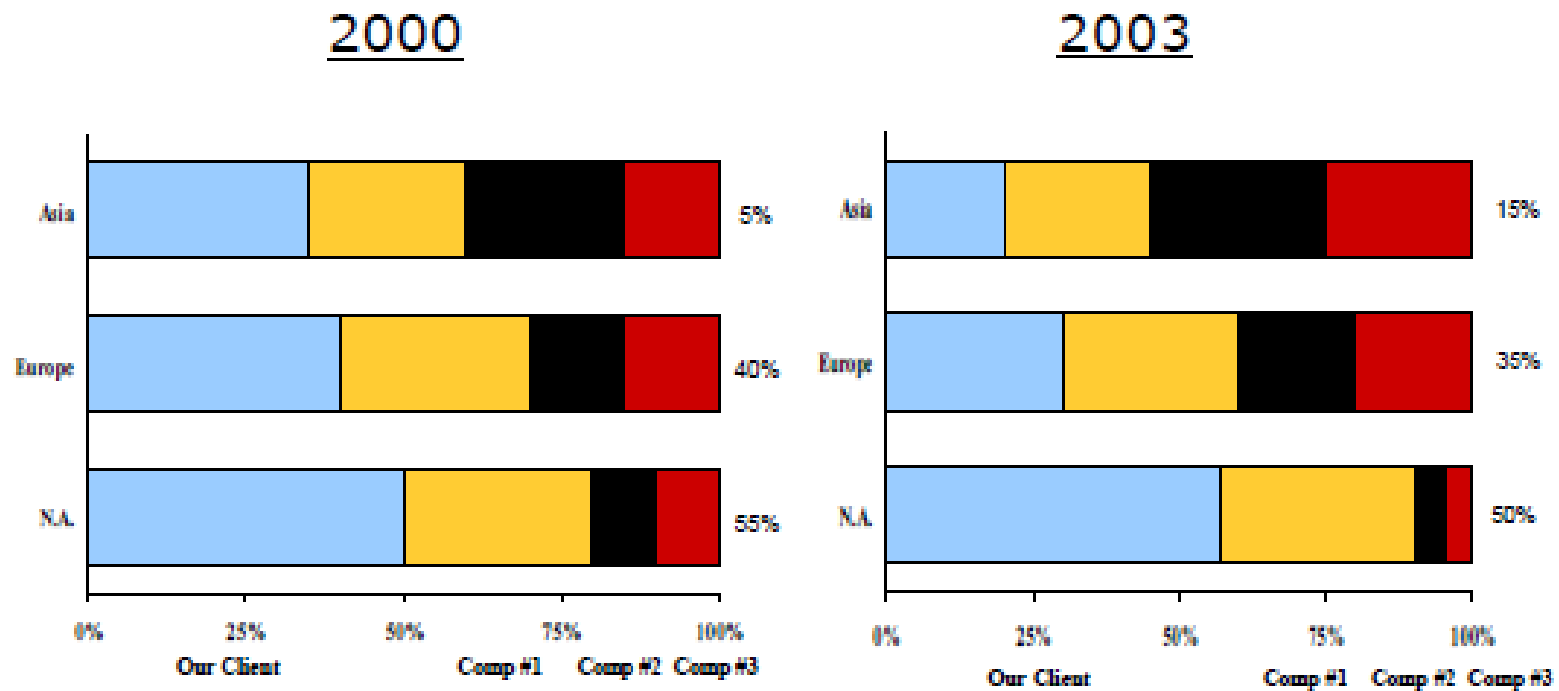
## Solution & Recommendations

- Overall, our client should engage in a number of different pricing strategies that vary according to the relationship between gross margin/elasticity that varies by market.
- The client should engage in the following changes:
  - Cut prices in Quadrant II.
  - Raise prices in Quadrant IV.
  - Maintain pricing strategies in Quadrants I and III because they are behaving according to expectations.

## Bonus/Guide to an Excellent Case

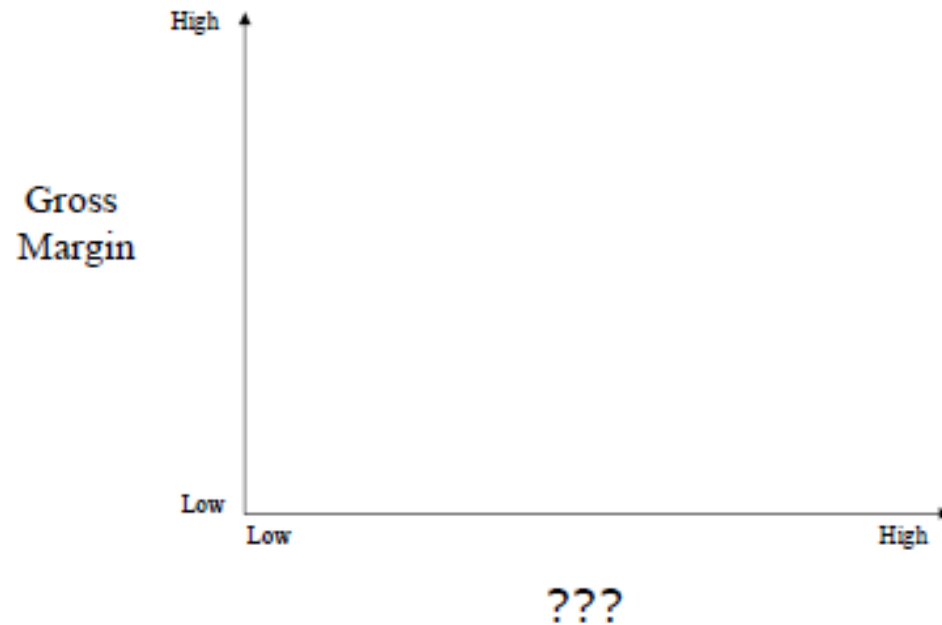
- An excellent interviewee will quickly identify the potential drivers of changing market dynamics by continent and suggest potential strategies (i.e. price leadership in North America).
- Additionally, a strong interviewee will immediately grasp the relationship between gross margin/elasticity and be able to quickly recommend related strategies from the situation shown in Exhibit 3.

# Exhibit #1: Client's share of sales by region, 2000-2003

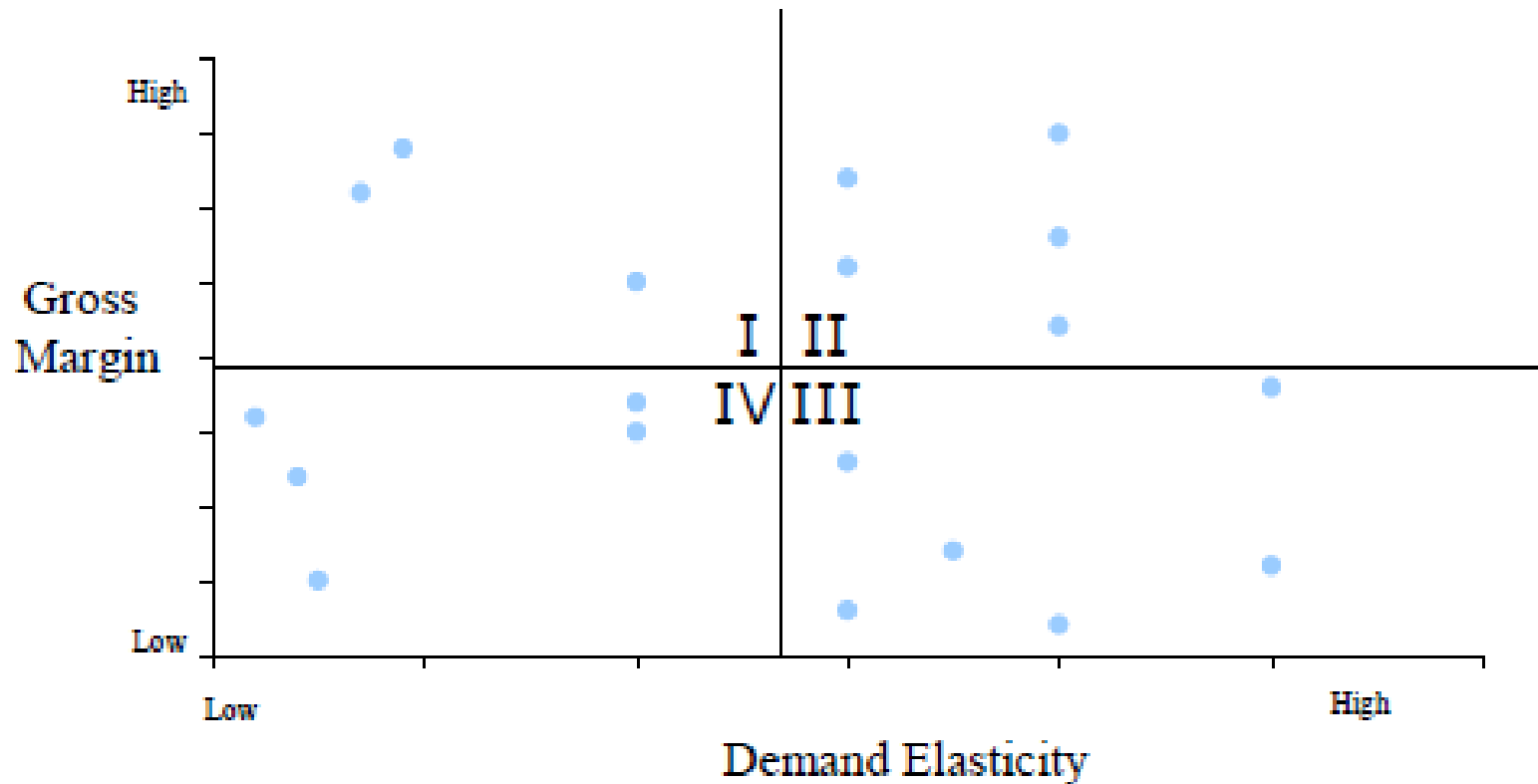




# Exhibit #2: Gross Margin



## Exhibit #3: Elasticity-Margin



# Case 2: GoNet Internet Service Provider

By: Adam Borchert and Joep Knijn (Tuck Class of '04), Edited By: Mauricio Atri (Kellogg Class of '12)

## Case Question

- Our client, GoNet, is a US-based Internet Service Provider (ISP) that is considering entering the European market. They are currently the dominant player in the US with two revenue streams: a subscription access fee and by taking a percentage of all e-commerce transactions from subscribers.
- Examining the European market, GoNet has found that the market is highly fragmented and ripe for entry. You are going into a meeting with the CEO and have been asked to perform some quick “back of the envelope” calculations to determine the potential profitability of entering Europe.

## Case tracker

- **Industry:**  
Technology
- **Level of Difficulty:**  
Medium
- **Case format:**  
Market entry
- **Concepts being tested:**
  - Market share

## Fit Questions

### Spend first 15 min on fit

- How competitive are you?
- What do you believe is the downside of
- What sorts of things irritate you the most or get you down?

## Guide to interviewer

- This is a very quantitative case that requires the interviewee to run the numbers on European profitability.
- The candidate will need to ask for additional information to solve the problem. After getting the initial calculations right, there will be a number of market changes the interviewee will have to react to.
- After the quantitative portion is completed, there are some open-ended questions for the candidate to answer.

8

Quants.

4

Structure



Market  
entry,  
market  
share

# Clarifying answers and case guide

## Clarifying answers to provide

(Provide this information on request)

Competitive dynamics

- Highly fragmented industry
- No information about market leaders or trends

European industry overview

- GoNet plans to capture a base of 10 million subscribers
- Subscriptions will cost \$20/month
- The average GoNet subscriber purchases \$1,800 of goods on the internet annually
- GoNet receives 3% commission
- Fixed costs are \$1 billion annually
- Variable costs are \$110/subscriber annually

## Guide to case

Part 1 – Quantitative discussion

- This should be the meat of the case and should be completed before discussing any general or qualitative responses.

Part 2 – Qualitative discussion

- After navigating the math, ask the candidate the following questions:
  - 1) How could we reduce the fixed costs of investment?
  - 2) Would there be any reason to continue with the investment even if it looks like it will lose money?
  - 3) Are there any other risks/benefits that GoNet should consider?
  - 4) How would you sum up the situation and what is your recommendation?

# Math questions (1 of 2)

## Math question

- 1) Please determine the annual net income (before taxes) in Europe, given the current revenue model and set of assumptions. What is the annual gross mark-up, in percentage?
- 2) GoNet just found out that a new entrant is charging \$10/month and capturing market share. Can we lower our fee to \$10/month?

## Math solution

- 1) Revenues each year will be \$2.4B for subscription (10 million subscribers X \$20/month X 12 months) and commissions will be \$540M (10 million subscribers X \$1,800/year X 3% commission) for a total of \$2.94B.
  - Fixed costs are \$1B and variable costs are \$1.1B (10 million subscribers X \$110/year) for a total of \$2.1B each year. Profits are \$840M and the annual profit margin is 40% (\$840M/\$2.1B)
- 2) Annual revenues drop to \$1.2B (10 million subscribers X \$10/month X 12 months) from subscriptions, while commissions remain constant at \$540M. Total revenues are \$1.74B. Because total costs remain \$2.1B, we lose \$0.36B by halving subscription charges, making the answer “No.”
  - At this point, ask the interviewee what the elasticity of demand is in this market and the implications for GoNet. The market should be highly elastic, meaning that GoNet will not win over enough subscribers at \$20/month.

## Math information

- 10 million subscribers
- \$20 month subscription fee
- \$1,800/year of online spending @ 3% commission
- Fixed costs: \$1 billion
- Variable cost: \$110/year per subscriber

# Math questions (2 of 2)

## Math question

- 3) With high market elasticity, GoNet will not be able to charge more than \$10/month. How much would each subscriber have to buy on the Internet to keep profits at the same level as \$20/month subscription fees?
- 4) How much would each subscriber have to buy on the Internet to enable us to break even?
- 5) Given that we cannot charge more or realistically increase shopping significantly, how many subscribers would we need in order to break even?

## Math solution

- 3) To keep profits at \$840B, we know that costs remain at \$2.1B so revenue will need to be \$2.94B. Subscription revenue will be \$1.2B, so commissions need to be \$1.74B. There are 10 million subscribers, so each subscriber need to bring in \$174/year of commission. At 3%, they will need to buy \$5,800/year in goods (\$174/3%).
  - Ask the candidate if this realistic. The answer should be no.
- 4) To breakeven, we will need commission to be \$900M over 10 million subscribers. That is \$90/year per subscriber (\$900M/10M), which means \$3,000/year in goods purchased online (\$90/3%). The candidate should identify that this is also unrealistic, representing more than a 50% increase from last year.
- 5) To find the answer here, we need to find incremental revenue per subscriber. Each subscriber brings in \$174/year (\$10/month X 12 months + \$1800/year X 3%) at a cost of \$110/year for a profit of \$64/year. These profits must cover the fixed costs of \$1B/year, so we must bring in 15.625 million customers (\$1B/\$64)
  - Note: many people forget the variable costs during the completion of this case.

# Solution and recommendations

## Solution & Recommendations

### Responses to the open-ended questions:

- 1) Some potential ways (not exhaustive) to reduce fixed cost: outsourcing capacity, leasing networks, working in specific geographies, etc.
- 2) GoNet may still be interested in this move as a way to break into Internet retailing and expanding its subscriber base. Based on the math though, this should not be an attractive option long-term either.
- 3) Very open ended and reliant on candidate's creativity.
- 4) This is very open-ended and should be evaluated based on the candidate's argument, not answer. Based on initial estimates, this is a very attractive market to enter, but with price pressures and high elasticity the market is far less attractive. If we are to undertake this initiative, GoNet needs to find ways to convert a much higher number of customers or differentiate its product, which both require market research. There is also potential to reduce costs or establish this foothold as a loss leader, but these require strong arguments from the candidate.

## Bonus/Guide to an Excellent Case

- This case tests two things – the interviewee's comfort with numbers and ambiguity. An excellent case interview will result in an intuitive grasp on what is being asked quickly and solid execution on the quantitative portion of the case.
- Ultimately, the best interviewees will make a very strong argument using the facts provided and support the decision to invest/not invest with a strong business sense about the costs and implications of the project.
- Creative solutions beyond those listed are possible and encouraged, though should be done within the framework of the information available.

# Case 3: Maine Apples

By: Adam Borchert and Joep Knijn (Tuck Class of '04), Edited By: Peter Manoogian (Kellogg Class of '12)

## Case Question

- Our client is a Korean conglomerate named Danut that has acquired a small Boston-based biotechnology firm
- The biotech firm acquired has developed a chemical that helps control the ripening of produce. After testing, this chemical appears to work especially well with apples: it allows apple orchards to harvest earlier and it improves the overall quality of the harvest.
- Danut would like to know if they should attempt to commercialize this chemical.

## Case tracker

- **Industry:**  
Consumer Goods
- **Level of Difficulty:**  
Medium
- **Case format:**  
Developing a new product
- **Concepts being tested:**
  - Market sizing
  - Investment
  - Pricing Strategy

## Fit Questions

### Spend first 15 min on fit

- Tell me about a recent positive team experience
- How would you describe your learning ability? In what kinds of situations are you fast or slow to learn?
- Describe the last time you “put your foot in your mouth.”

## Guide to interviewer

- State the information above, the interviewee should be able to develop a variant of the following question:  
*Is the market size large enough and the estimated profitability high enough for Danut to attempt to commercialize this chemical?*
- Ideally, the interviewee should be able to break down the question into two parts:
  1. The minimum required market size
  2. The need for profitability
- Key case steps:
  1. Confirm market attractiveness by sizing opp.
  2. Evaluate orchard revenue and cost structures
  3. Project Danut’s profitability
  4. Identify qualitative issues to consider

8

Quants.

6

Structure



Mkt. Size  
Price Stgy  
Invest.



# Clarifying answers and case guide

## Clarifying answers to provide

### Client Characteristics

- Only concerned about a “test-market” in the state of Maine

### Competitive Dynamics

- No other competitive products on the market currently

### Local industry Characteristics/Economics

- Growing at the rate of GDP

### Product benefits:

- Reduced costs through earlier harvesting
- Improved apple yields
- Sweeter apples yield more juice per apple (less apples required to make juice)

## Guide to case / Guide to handouts

**Confirming market attractiveness** – Share with interviewee after probing questions are received (do not share product benefit 1 yet)

- Is the market large enough to continue?

**Evaluate orchard cost structures** – Do not share “Product benefit 1” until the above section is determined

- How much incremental profit does our product create for an apple orchard owner?
- After this, the conversation should turn to whether Danut should commercialize given its costs of production

**Commercialization considerations** – Guide the interviewee to then consider Danut’s production costs and determine how much can profit Danut could capture in its pricing

***NOTE TO INTERVIEWER: Orchard revenue structures (next page) may be shared first if the interviewee asks for them prior to the cost structure***

# Key elements to analyze

## Market sizing

- How big is the apple market in Maine?
- Does this seem potentially large enough to continue investigating this product?

## Cost savings

- What are the cost savings from using the chemical?
- The chemical allows the farmer to harvest 10 days sooner

## Revenue increase

- How much additional revenue will farmers be able to generate?
- What is the total profitability increase (including cost savings)?

## Note to interviewer

- When asked, provide the following:
  - Maine has 200 orchards
  - Avg. annual orchard revenue is \$30K/acre
  - Avg. orchard has 100 acres of land
  - Only one apple harvest per year
- Interviewee should calculate the market size based on info provided: ( $\$30\text{K/acre} \times 200 \text{ orchards} \times 100 \text{ acres/orchard} = \text{\$600M}$ )
- This is a significant market and warrants further investigation.

## Notes to interviewer

- When asked to quantify the improvements, provide the following:
  - It costs \$1.5K/night to maintain crops for 100 acre orchard
  - With the chemical, farmers are able to harvest crop 10 days sooner
- Interviewee should calculate cost savings per year using this information:
  - ( $\$1.5\text{K/day} \times 10 \text{ days} / 100 \text{ acres} = \text{\$150/acre/year}$ )

## Qualitative Assessment

- When asked to quantify additional revenue, provide the following:
  - Our client's product improves the consistency of red apples and improves the yield by 10%
  - The sweetness factor is estimated to improve the juice yield by 5%
  - 25% of revenue comes from whole apple sales, 75% from juice sales
- Improved yield: ( $\$30\text{K/acre} \times 25\% \times 10\% = \text{\$750/acre/ year}$ )
- Improved sweetness: ( $\$30\text{K/acre} \times 75\% \times 5\% = \text{\$1,125/acre/year}$ )
- Total improvement (with cost reduction) = **\$2,025/acre/year**

# Key elements to analyze (cont.)

## Product Profitability

- If our product costs \$100K per 200 acre farm, what will the farmer's profit margin be if they buy it at cost?
- What should our client sell the product for? Is a 50% margin realistic?

## Note to interviewer

- Farmer's incremental revenue/cost savings = \$2,025/acre
- Product costs = \$100K/200 acres = \$500/acre
- Profit margin =  $(\$2025 - \$500) / \$2025 = 75\%$
- The interviewee should note that this is an extremely high profit margin for the farmer and realize that there is a significant opportunity for profits with this product.
  - How much of this benefit can we capture in our pricing?
  - Interviewee should provide a percentage between 25% and 50%. Anything higher than 50% should be questioned due to the novelty of the product and resulting lack of social proof.
- A 50% profit margin for our client would also realize a 50% profit margin for farmers. This is absolutely a realistic price to set, if not a little low.
  - Given the costs provided, will we make a profit? **Yes**
  - Interviewee should calculate profit:  $(\$100,000 / 200 \text{ acres} = \$500/\text{acre})$ . Assuming \$1,000 price per acre, gross margin will be **50%**.  $[(\$1,000 - \$500) / \$1,000]$

# Solution and recommendations

## Solution & Recommendations

- Overall, our client should commercialize this chemical and price it at approximately \$1,000 per acre to make a 50% margin.
- Ask the interviewee if there are other non-financial risks/benefits that our client should consider.
- A potential answer would note that the client should consider several qualitative issues:
  - Differentiation: What is our positioning?
  - Environmental issues: Is there a risk of backlash and/or boycott from the general public? Could the U.S. government attempt to regulate our product?
  - Operational reality check: Does the company have the resources to do this?
  - Patenting: Is the product already patented? If yes, then when does it expire? If no, then is it possible to patent? If not, then can we patent the manufacturing process?
  - Representativeness of test market: Does it cost less to cover apples in other states?
  - Strategic fit: Is this opportunity too small relative to the size of the client?

## Bonus/Guide to an Excellent Case

- Excellent interviewees need to address value-based pricing: the need to quantify added profits that our client's product will make for *its* clients and how much of that money our client can capture.
- Additionally, a strong interviewee will share several qualitative issues listed above to supplement the recommendation to enter the market.

# Case 4: Orrington Office Supplies (OOS)

By: Andy Grieve (Kellogg Class of '01), Edited By: Peter Manoogian (Kellogg Class of '12)

## Case Question

- Our client, OOS is a leading manufacturer of office products in 1992, with sales of \$275M in 1991. They have strong brands, invest heavily in marketing / advertising, and have grown through prod. line extensions and four key acquisitions
- OOS is organized into 5 autonomous divisions, but shares manufacturing and marketing functions. Shared costs (45% of total) are allocated on a % of sales method. There are three plants running at a current capacity utilization is 50%
- Analysts predict OOS is a potential acquisition target given its strong balance sheet but weakening earnings. They are publicly traded and have little long-term debt. As a potential investor, how would you improve its profitability.

## Case tracker

- Industry:**  
Consumer Products
- Level of Difficulty:**  
Medium/Hard
- Case format:**  
Improving profitability
- Concepts being tested:**
  - Capacity expansion /contraction

## Fit Questions

### Spend first 15 min on fit

- Name a time when you have caved under pressure. How did you recover?
- Describe a time you have disagreed with your supervisor.
- How do you keep abreast of current events?

## Guide to interviewer

- This case combines public math with key qualitative insights. At it's core, this is a case about rapidly declining profitability and finding ways (i.e. plant consolidation) as a way to improve its future performance.
- The interviewee should recognize that this is a performance improvement case and will look for ways to improve profitability. They will have to use the information provided up front to determine that capacity contraction is the prime means to improve profitability.
- Because there are many potential avenues to explore, the interviewer may need to nudge along the interviewee.

6

Quants.

7

Structure



Profit Imp.  
Cap. Exp.

# Clarifying answers and case guide

## Clarifying answers to provide

### Industry trends

- U.S. Office supplies market grew at 5% CAGR historically. In 1990 and 1991, the market declined at 5%/yr.
- Superstore channel is becoming increasingly critical
  - Gained 10 share pts in past 2 yrs
  - Typically discount products 30% to small retailers/dealers
- Superstores are aggressively substituting private label products for traditional brand names

### Client Characteristics

- Broader product line than competitors (12.5K SKUs vs. 4-5K for competitors)
- Distribution: 75% wholesalers, 15% superstores, 10% end customers
- Most profitable product is a high-end branded stapler
- Staples, Inc. is OOS's largest customer

## Guide to case / Guide to handouts

A sample case structure would include the following:

- 1) Examination of OOS's recent performance to deep-dive declining profits.
- 2) Discussion of potential for potential for plant consolidation.
- 3) A profitability analysis of plant consolidation.

**Exhibit 1**– Hand out after interviewee asks about profitability

**Exhibit 2**– Hand out after interviewee concludes that plant consolidation is a worthy area for a “deep-dive.” This should be evident from the case introduction, but provide hints if necessary.

**Exhibit 3**– Following the discussion of plant closures, the interviewee should ask about the cost structures about the various plants.

- If interviewee asks about revenues, gently suggest to calculate on a per SKU basis (*e.g.*, total sales / total SKUs = \$22K / SKU).

# Key elements to analyze

## Profitability

- Using Exhibit 1, have a discussion about why the slopes for sales and profits differ as time elapses

## Capacity utilization

- Using Exhibit 2, qualitatively discuss the potential options for plant consolidation.

## Plant closures

- Using Exhibit 3, crunch the numbers on the profitability of a possible plant closure?

## Notes to interviewer

- Exhibit 1 - interviewee should not only be able to interpret the data on this slide, but also come up with two insights:
  - 1) the fact profits have been declining more steeply than sales reflects the fixed-cost nature of this business, and
  - 2) the reason that sales did not grow at a faster clip than profitability during the 1980s likely reflects a strategy to grow through acquisitions, which prevented OOS from seeing the gains through economies of scale that one would normally expect in a business such as this

## Notes to interviewer

- Interviewee should recognize the Chihuahua plant is close to having capacity to produce OOS's 12.5K SKUs. Either OOS can close that plant and move all production to the US, or it could close the US plants, discontinue 500 SKUs and move production to Chihuahua.
- Insightful interviewees will note that Chihuahua is the most feasible strategy, but will ask to see fixed and variable cost data; if so, then produce Exhibit 3.

## Notes to interviewer

- They should have identified that the Chihuahua plant is the most feasible, but there are some key considerations.
- **Key questions to ask:**
  - How would this change revenues? (currently \$275M / year)
  - How would this change production costs? What are they now?
  - How would this change pre-tax profits (currently \$25M /year?)

# Calculations

## Math questions

1. How would consolidating to Chihuahua change revenues? (currently \$275M / year)
2. How would this change production costs? What are they now?
3. How would this change pre-tax profits? (currently \$25M /year)

## Calculations

1. Revenues: Each SKU earns annual revenues of \$22K (\$275M divided by 12,500 SKUs)  
therefore, eliminating 500 SKUs will decrease annual revenue by \$11M, or 4%
2. Prod. costs: Each plant currently has the following annual costs, totaling to \$136M  
Chihuahua:  $\$20M + (\$4K * 4.5K \text{ SKUs}) = \$20M + \$18M = \$38.0M$   
Michigan:  $\$15M + (\$7.9K * 5K \text{ SKUs}) = \$15M + \$39.5M = \$54.5M$   
New Jersey:  $\$18M + (\$8.5K * 3K \text{ SKUs}) = \$18M + \$25.5M = \$43.5M$   
Consolidating revenues to Chihuahua will reduce annual costs by 50% to:  
Chihuahua:  $\$20M + (\$4K * 12K \text{ SKUs}) = \$20M + \$48M = \$68.0M$
3. Profits: We have reduced costs by \$68M and lowered revenues by \$11M, thus increasing profits by \$57M, to a total of \$82M, which more than triples them.



# Solution and recommendations

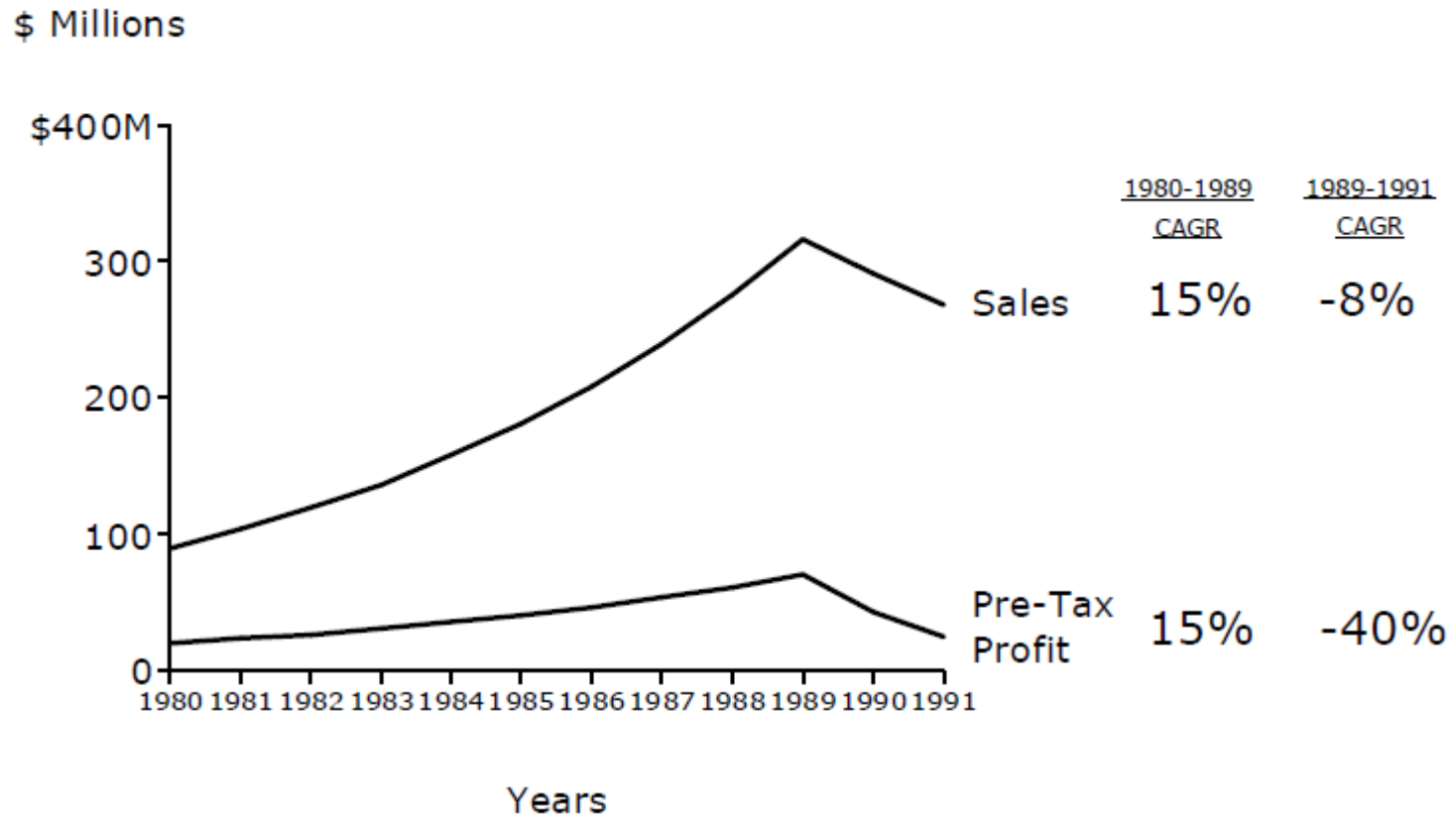
## Solution & Recommendations

- Overall, our client should eliminate 500 SKUs and consolidate all production to the Chihuahua plant to raise annual profits from \$25M to \$82M.
- The client should also consider several qualitative issues:
  - Implementation Timeframe: Will not be done tomorrow.
  - Relationships with Union: If organized labor is part of our production employee pool in the two plants that we are going to close, we will need to address that situation.
  - Changes in Distribution and Warehousing: We will need a carefully-developed transition plan.
  - Purchasing: We will need to transition to a strong central purchasing department, rather than smaller local ones.
  - Culture: Communicating the change properly is key, and we will need to ensure that morale does not take a nosedive.

## Bonus/Guide to an Excellent Case

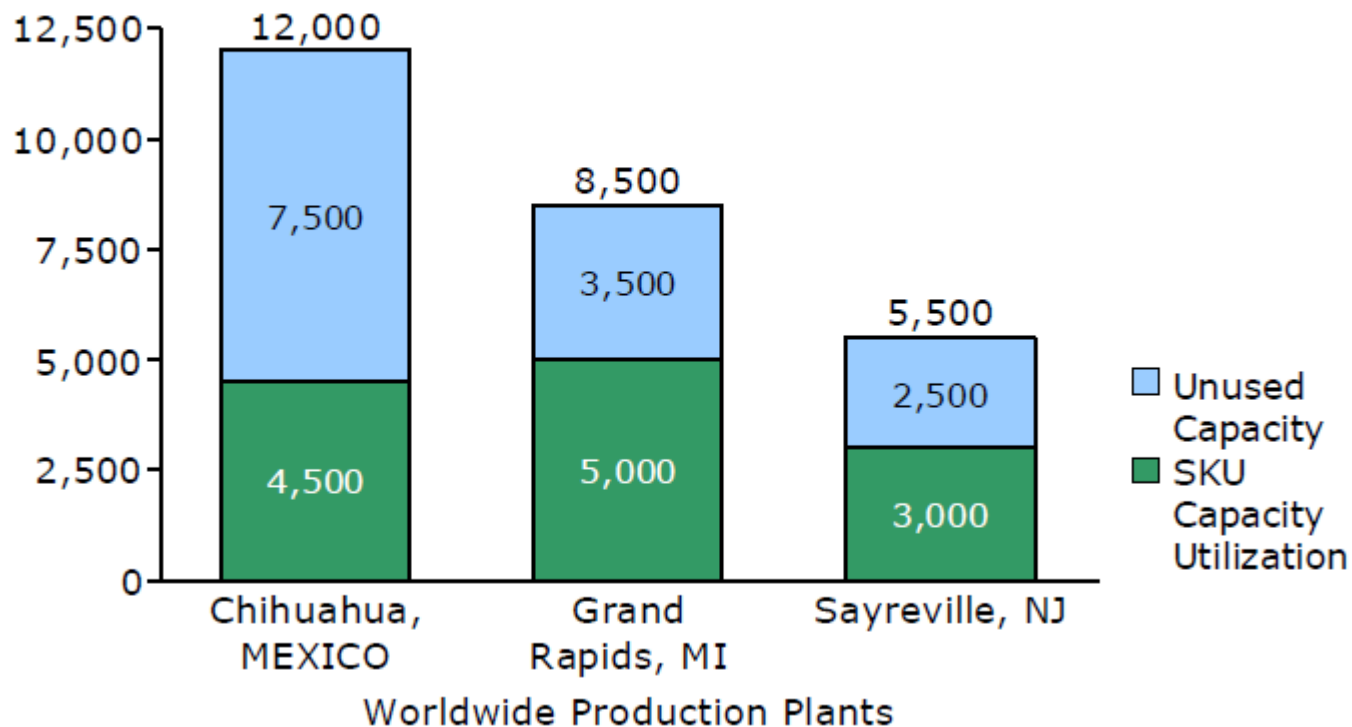
- Excellent interviewees need to recognize what macroeconomic issues are beyond the scope of the client's control and then quickly dive into the plant consolidation, then analyze the cost structures
- Additionally, common sense and basic familiarity with manufacturing operations should guide the successful interviewee to some or all of the qualitative issues provided

# Exhibit 1: OOS Sales / profit trend

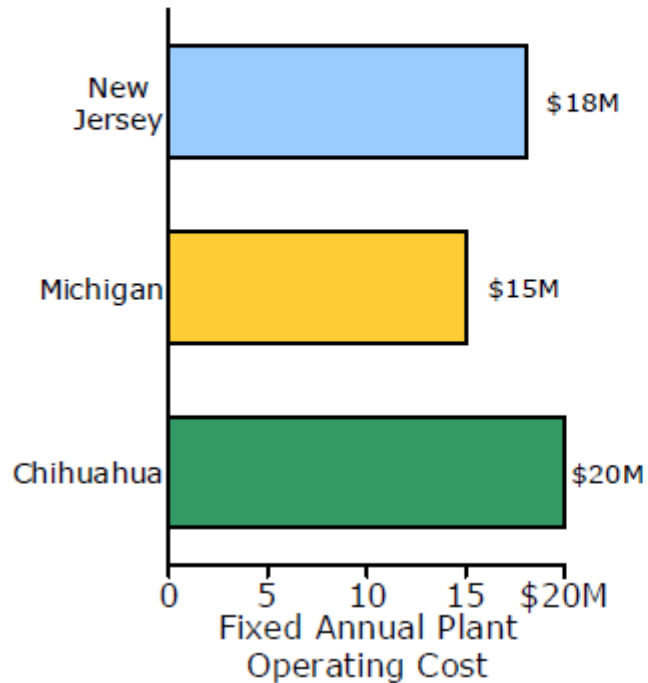


## Exhibit 2: Overview of OOS production plants

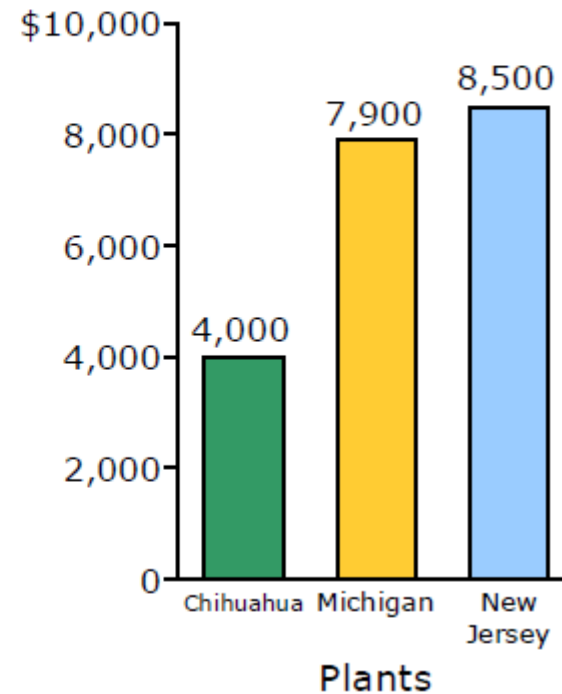
# of SKUs That Can Be Produced



## Exhibit 3: Plant operating costs



Variable Annual Cost Per SKU



# Case 5: Syzygy Supercomputers

By: Edwin Van Dusen, Brian Fox and David Welch (Kellogg Class of '04), Edited By: Uri Kalir (Kellogg Class of '12)

## Case Question

- Syzygy Supercomputers is a large international fully-integrated computers and communications company with annual revenues of approximately \$20 billion U.S.. In the past several years, the company has seen a steady decline in profits.
- The CEO has asked us to look into this problem. How can Syzygy Supercomputers get back on track?

## Case tracker

- **Industry:**  
Tech & Telecom
- **Level of Difficulty:**  
Hard
- **Case format:**  
Improving profitability
- **Concepts being tested:**
  - Competitive analysis
  - Operations

## Fit Questions

### Spend first 15 min on fit

- What is the single most important detail in your resume?
- What is the least important detail in your resume?
- Why is the lifestyle of this job right for you?

## Guide to interviewer

- This case is about a tech company undergoing a decline in profitability, despite a strong competitive position. Syzygy has been overinvesting in R&D relative to its returns and performance has suffered as a result.
- The interviewee is expected to go through these general steps while presenting a solution:
  1. Confirm profitability issues and ask to see historical revenue and cost information.
  2. Ask to see market position and related data.
  3. Realize that this case is going to be decided based on information regarding the products.
  4. Identify the main issue affecting profitability – the company's R&D spending

3

Quants.

7

Structure



Profit Imp.  
Comp. Anl  
Ops.

# Clarifying answers and case guide

## Clarifying answers to provide if Asked

### General Information on Syzygy

- Only the information that has already been given. Other information currently unavailable.

### Competitive Dynamics

- There are several players in the market, but everything has remained stable from a competitive standpoint.

### Profitability drivers

- COGS, SG&A, and other profitability factors are on-par with Syzygy's competitors (except for R&D, about which the candidate should ask specifically).

## Interviewer Guide to Case

A sample case structure would include the following:

- 1) Examination of historical performance to deep-dive declining profits.
- 2) Discussion of market dynamics and competitive positioning.
- 3) Deep-dive into drivers and profitability, ultimately leading to a discussion of SG&A

**Necessary Information that should be given only when specifically asked for by interviewee:**

- Historical costs, revenues and profits – exhibit 1
  - Note that the interviewee should be asking for historical trends in the company's profitability. If they are asking only for current profitability, interviewer should point them in the direction of historical trends
- Market data – exhibit 2 followed by exhibit 3
  - Interviewer should give the interviewee a few seconds to understand slide 2 and then handout slide 3. Interviewer should ask interviewee which product in slide 3 is which (on slide 2).
- R&D spending data – exhibit 4 and exhibit 5
  - The candidate will naturally ask about potential drivers of profitability (S&GA expense, COGS, etc.).
  - These exhibits should only be given once the candidate has identified R&D as a driver of Syzygy's profitability.

# Key elements to analyze

## Interpreting Exhibit 3

- The X axis represents absolute market share (AMS), which correlates with the height of Syzygy's rectangles in exhibit 2.
- The Y axis represents relative market share (RMS), calculated as Syzygy's market share divided by the market share of the closest competitor. If Syzygy is the market leader, this number is greater than 1. If Syzygy is not the market leader, its market share divided by the market leader's share will be lower than 1. This correlates with the ratio of the height of Syzygy's rectangles to that of competitors' rectangles for each product in exhibit 2.
- The diameter of the bubbles is driven by Syzygy's total revenues in that category, comprised of its market share in the category multiplied by the category's size.

## Notes on Exhibits 2 & 3

- Correctly interpreting slides 2 and 3 will lead the candidate to correctly identify the products on slide 3:
  - Product #1 is custom applications
  - Product #2 is supercomputers
  - Product #3 is telecom equipment
  - Product #4 is satellites
  - Product #5 is operating software

## Notes on Exhibits 4 & 5

- The key insight in exhibit 4 is that Syzygy is the only major competitor in this industry whose R&D spending is below the "normative band"
- We would expect each company's degree of technical leadership to go up as it invests in R&D, but Syzygy, with slightly more R&D spending than Cray Research and Sonic Wave, enjoys less of a perception of technical leadership from its customers
- Exhibit 5 builds on this point. The key insight is the absolute expense (not percentage) Syzygy is spending on R&D. Correct analysis will show that Syzygy is spending money on features that do not generate customers' "willingness to pay". Syzygy is spending money to develop features that consumers are not willing to pay for.

# Solution and recommendations

## Solution & Recommendations

- The candidate should be able to produce one of the following insights:
  - Cut R&D to eliminate spending on unnecessary customer features.
  - Keep R&D spending the same, but switch the work to developing features that consumers will be willing to pay for at a level that is higher than the R&D expense itself.
- A second-order insight from the case is that Syzygy should exit the operating software business (product #5 in this case) since it's small market share will continue to erode as a result of economies of scale, network economics and the experience curve all working against it.

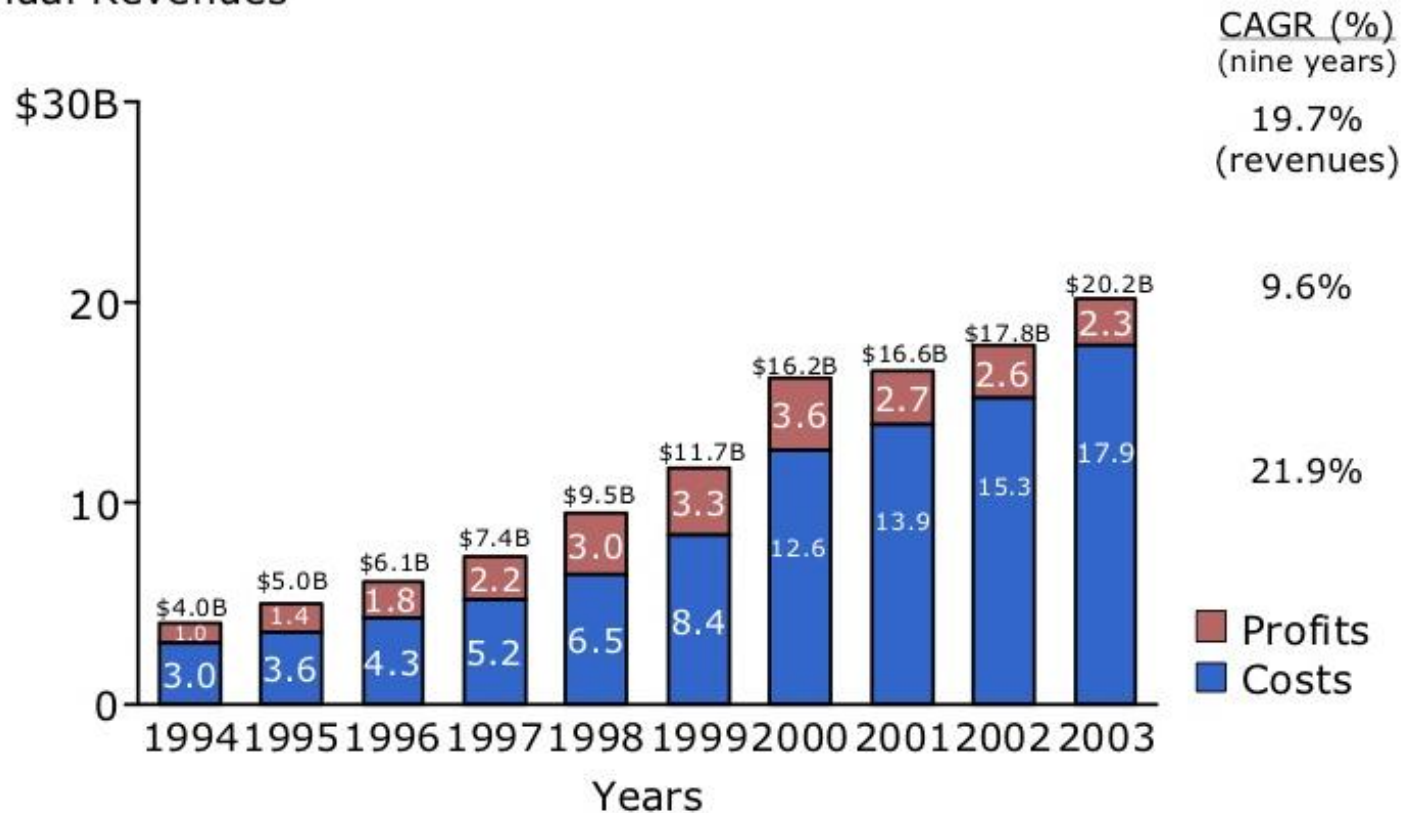
## Bonus/Guide to an Excellent Case

- An excellent interviewee will –
  - Take a few seconds to fully understand each of the complex graphs he/she is given before giving an answer.
  - Immediately ask about R&D spending and not go through COGS or SG&A first (this is a hi-tech company, so R&D spending should be looked-at before other drivers of profitability).
  - Conclude their recommendation by not only stating that Syzygy should exit the operating software business, but also focus on the categories in which it is the market leader in order to get some or all of those economies to work for it and against its competition.



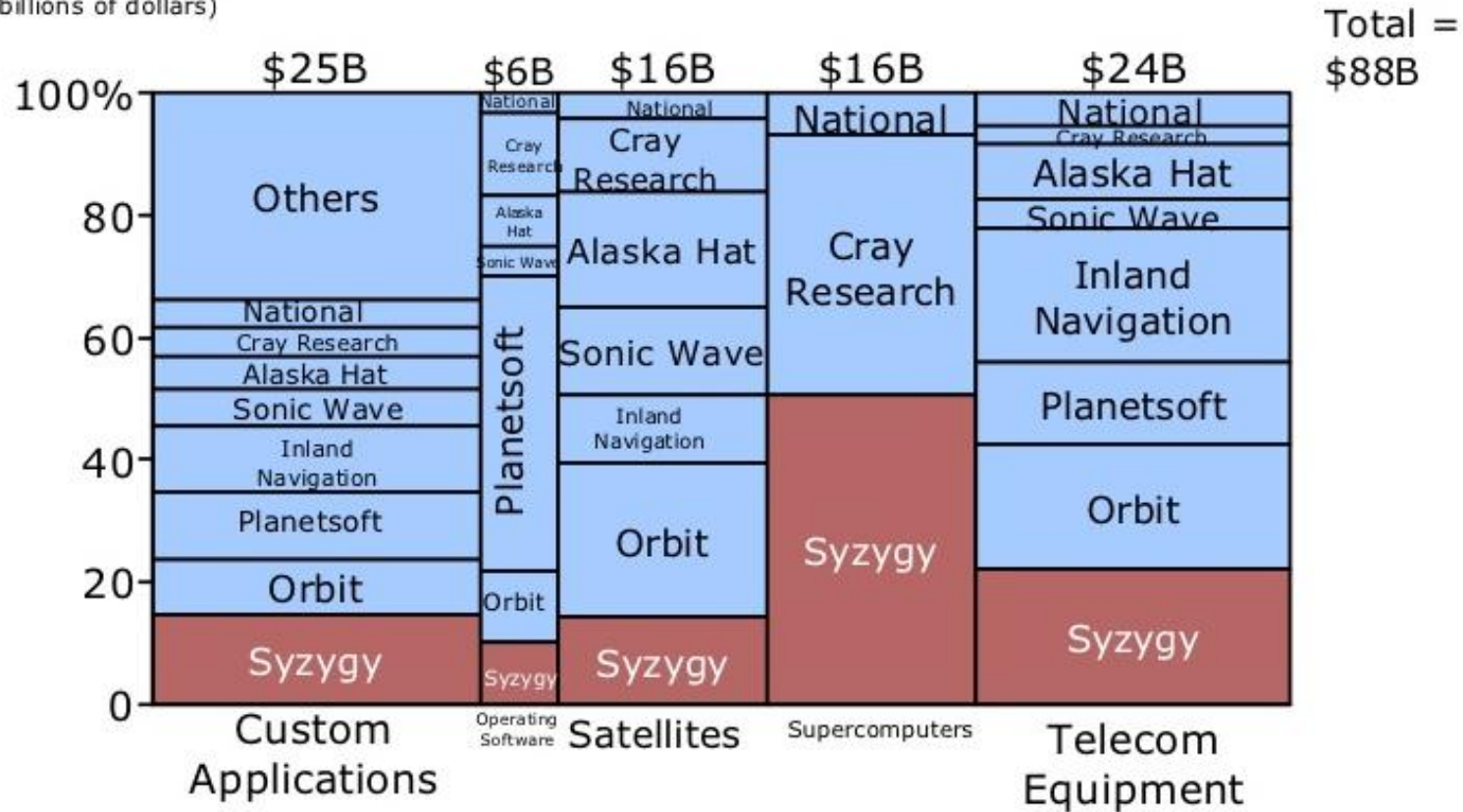
# Exhibit 1: Syzygy's Historical Costs, Revenues and Profits

## Annual Revenues



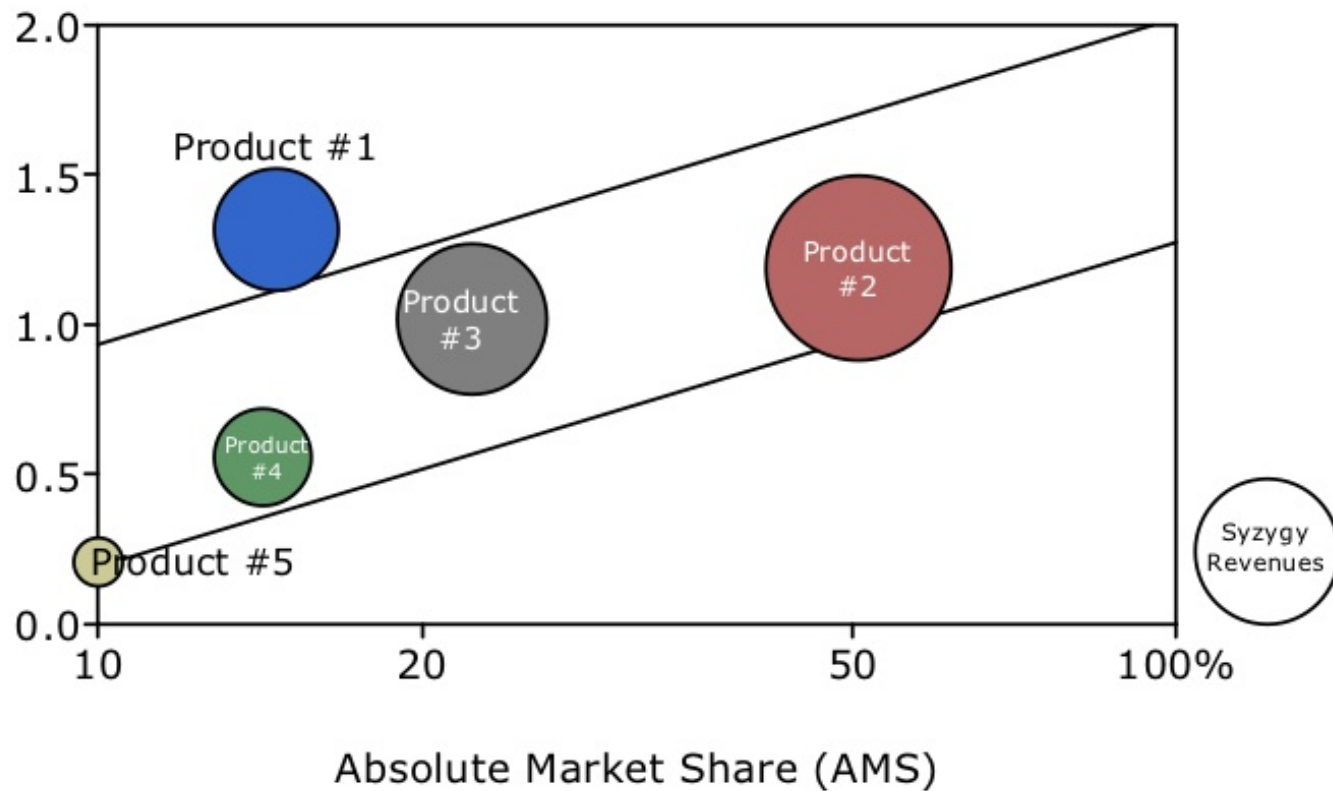
## Exhibit 2: Worldwide Telecom Computing Market (Today)

Annual Worldwide Market  
(in billions of dollars)



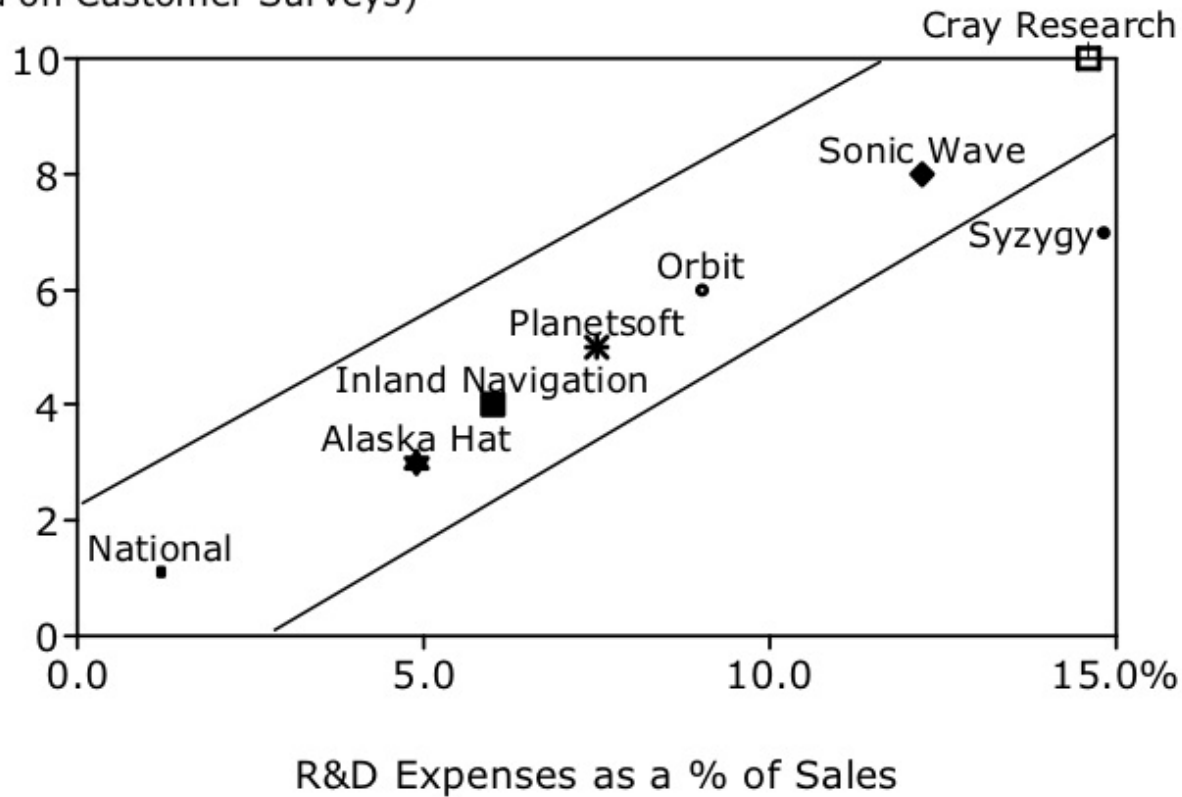
## Exhibit #3: Syzygy's Absolute vs. Relative Market Share

Relative Market Share (RMS)

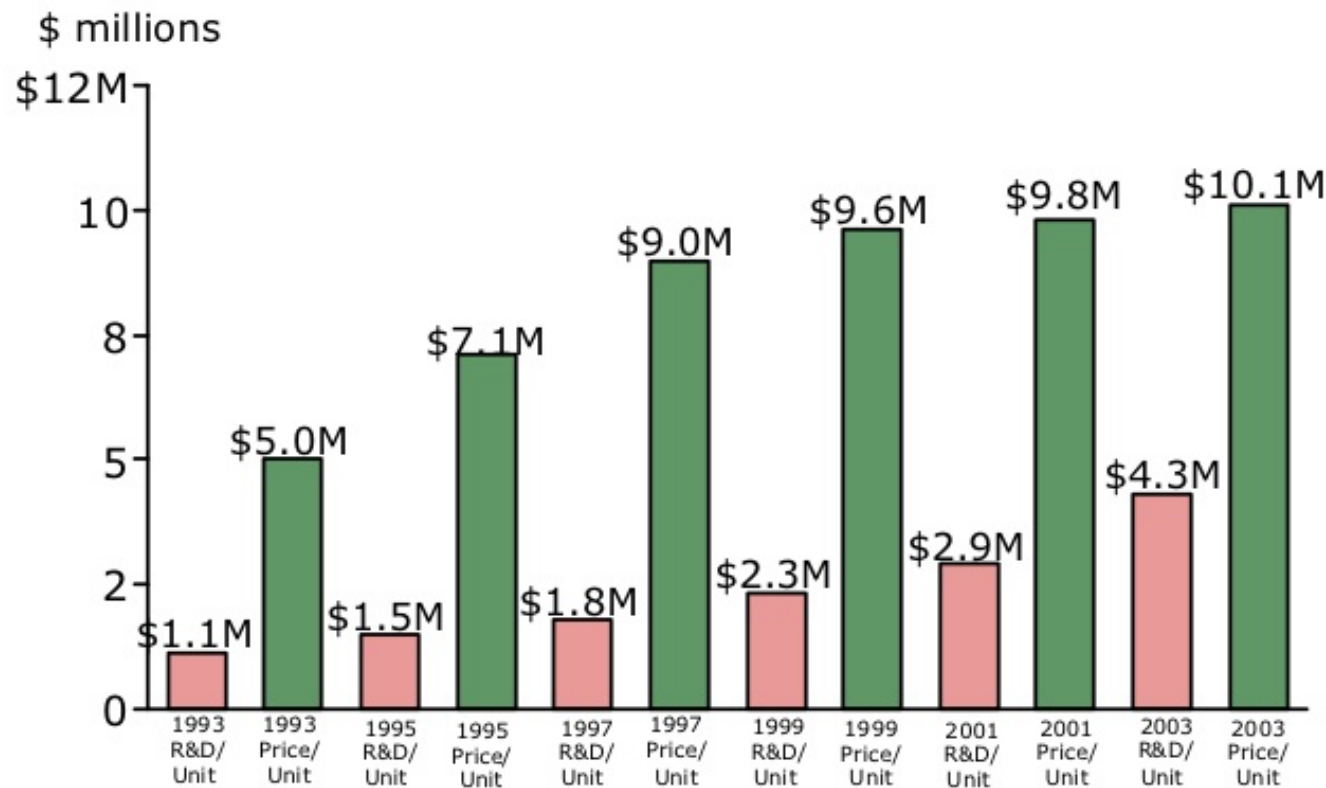


## Exhibit #4: Companies' R&D vs. Degree of Technical Leadership

Technical Leadership  
(Based on Customer Surveys)



## Exhibit #5: Syzygy's R&D Expenses and Selling Prices for Supercomputers



# Case 6: Winter Olympics Bidding

By: Chris Dupre (Kellogg Class of '03), Edited By: Uri Kalir (Kellogg Class of '12)

## Case Question

- Our client is a major US television network that is trying to figure out how much to bid for the 2018 Winter Olympics and has brought you into to help us figure out the right bid. The Winter Olympics are a huge deal and will require a significant amount of capital to secure the rights. Before our network bids on the Winter Olympics, we want to make sure that we've considered all the right things.

## Case tracker

- Industry:**  
Media & Entertainment
- Level of Difficulty:**  
Medium
- Case format:**  
Opportunity Assessment
- Concepts being tested:**
  - Basic NPV
  - Breakeven analysis

## Fit Questions

### Spend first 15 min on fit

- How would you describe your problem solving skills?
- Do you consider yourself a more visionary or more pragmatic thinker....and why?
- What did you like least about your last job?

## Guide to interviewer

- This is a very quantitative case that requires the interviewee to run the numbers on an Olympics bid. The candidate will have to decide potential ad revenue/cost information, as well as the NPV, to determine bid size.
- The candidate will need to ask for additional information that is necessary to solve the problem, rather than relying on the interviewer to dispense it. After getting the initial calculations right, there are a lot of implications that may change the level of the bid.
- Especially for less finance-minded interviewees, you may have to help nudge candidates through the math.

8

Quants.

4

Structure



Basic NPV  
B/E

# Clarifying answers and case guide

## Clarifying answers to provide

### Winter Olympics schedule (16 days)

- Day 1 – Friday - Opening ceremonies – 3 hours of programming from 8-11 PM
- Day 2-15 – Games – 10 hours/day
  - Weekday (9 – 12, 2 – 5, 7-11)
  - Weekend (11 AM – 9 PM)
- Day 16 – Saturday - Closing – 3 hours of programming from 8-11 PM

### Revenues

- No subscription revenue, but can keep 100% of advertising revenue
- Ad rates are \$400K/30 second ad for prime time (M-F 7-11 PM, all weekend) and \$200K/ad for non-prime time
- Market research has shown that you can include no more than 10 minutes of advertising per hour.

### Costs

- \$428,000,000 of total costs
- Opportunity cost: \$1M/hour
- Time value of money: 6 year lag for receipt of revenue

## Guide to case

### Part 1 – Quantitative discussion

- Some of the numbers are assumptions here are difficult, so nudge the candidate along if necessary.
- First of all, the candidate should find the revenues from hosting the Olympics.
- Then, the candidate will have to figure out if this is a good investment. They should identify 3 costs (production costs, opportunity costs, and time value of money). By factoring in these costs, the candidate will find out if the Olympics are worth the investment.

### Part 2 – Qualitative discussion

- After finding the NPV of \$177M, ask the candidate about intangible factors, benefits, and risks. Some critical factors:
  - Might give network access to new viewers
  - There is prestige associated with hosting this event
  - We can the air time to promote other programming
  - Opportunities for product tie-ins, supplemental revenue
- After finishing the discussion, ask the candidate for a recommendation.

# Math questions

## Math question

- 1) Calculate the revenue from broadcasting the Winter Olympics.
- 2) Factoring in costs, is this a good investment? Find the NPV.

## Math solution

- 1) Total revenues should be equal to \$928M for the project.
  - Primetime: Weekdays (M-F): 10 weekdays x 4 hrs/day x 10 min/hr x 2 slots/min x \$400,000/ad = \$320M
  - Non-prime: Weekdays (M-F): 10 weekdays x 6 hrs/day x 10 min/hr x 2 slots/min x \$200K/ad = \$240M
  - Weekend: 4 days x 10 hrs/day x 10 min/hr x 2 slots/min x 400K/ad = \$320M
  - Opening/Closing: 2 days x 3 hrs/day x 10 min/hr x 2 slots/min x 400K/ad = \$48M
- 2) Using the “Rule of 72,” we know that 72/rate of return means the number of years to double our money. With a six year lag and a 12% WACC, we know that all future cash flows must be halved.
  - Revenues \$928M - \$428M of total costs - \$146M of opportunity cost (2 days x 3 hours x \$1M/hr + 14 days x 10 hours x \$1M/hr) = \$346M
  - $\$346/2 = \$177\text{M}$  in present value (NPV)

## Math information

### Revenues

- \$400K/ad for prime time (M-F 7-11 PM, all weekend) and \$200K/ad for non-prime time
- 10 minutes/hour of advertisements

### Costs

- \$428,000,000 of total costs
- Opportunity: \$1M/hr
- WACC: 12%



# Solution and recommendations

## Solution & Recommendations

- While the NPV of the project is \$177M, the fact that there are other intangibles (new viewers, plugging our programs, and prestige) the bid should just be \$177M. While there is no one correct answer, most answers should be in the range of \$200M. If there is significant fluctuation from \$200M, the candidate will have to provide in-depth justifications and make a concrete argument.

## Bonus/Guide to an Excellent Case

- This case tests the interviewee's comfort with numbers and understanding of how intangible factors may influence financial value. The bid process requires another level of understanding around game theory and what dynamics will ultimately determine the value of the bid beyond NPV.
- Ultimately, the best interviewees will make a very strong argument using the facts provided and support their bid and explain why they moved their bid from the NPV figure.
- There is also a lot of room for creativity for the interviewee to discuss other factors, including supplemental streams of revenue, intangible factors, and things to consider during the bid process.

# Case 7: Rotisserie Ranch

By: Brian Fox (Kellogg Class of '04), Edited By: Adam Louras (Kellogg Class of '11)

## Case Question

- Our client is Rotisserie Ranch, a poultry farming company that specializes in growing chickens for rotisserie roasting. Its main line customer segment is comprised of large grocery chains, who buy its chickens to fresh roast in the meat departments of their grocery stores. Market research has revealed to Rotisserie Ranch that more and more consumers have begun buying flavored rotisserie chickens recently.
- Rotisserie Ranch is thinking of pre-flavoring some of its chickens for grocers. Should Rotisserie Ranch begin selling this new product?

## Case tracker

- Industry:**  
Consumer Goods
- Level of Difficulty:**  
Medium
- Case format:**  
Developing a new product
- Concepts being tested:**
  - Microeconomics
  - Elasticity
  - Customer strategy

## Fit Questions

### Spend first 15 min on fit

- What are your top 9 weaknesses? (Stress Test – If interviewee gets 9, ask for 9 more until they cannot answer)
- Ok, what are 9 of your strengths?
- Imply that interviewee answered the strengths much faster than the weaknesses and ask, why?

## Guide to interviewer

- This case is similar in style to a McKinsey & Company 1<sup>st</sup> round case in that the *Interviewer* should drive the case.
- The case is primarily tests the ideas behind a new product introduction and forces the interviewee to consider market testing, profitability, etc. before rolling out a new product.
- Because this is a “Market Introduction” case, the interviewee **SHOULD** ask questions about *competition*.
  - For the purposes of this case, assume that Rotisserie Ranch will only compete against existing Private Label brands at grocery stores.

6

Quants.

5

Structure



Micro  
Prc. Elas.  
Cust. Stgy

# Clarifying answers and case guide

## Clarifying answers to provide if Asked

### Industry Characteristics/Market Economics

- *Perishability*: Predicting demand for cooked chickens is difficult for grocers; any leftover cooked chickens at the end of the day are thrown out; unfrozen chickens cannot be re-frozen

### Client Characteristics

- *Competitive Advantage*: Client has patented process for sterile packaging chicken, so that it will remain fresh for 30 days, making freezing unnecessary
- Client is currently the industry *market share leader* in rotisserie-ready chicken
- Four New “Flavored” Products to be introduced concurrently: Barbecue, lemon herb, tandoori and teriyaki

### Competitive Dynamics

- No competition in new product market due to patented process

## Interviewer Guide to case and handouts

**Case Structure** – Interviewee’s structure should include:

- *Value to customers (grocery chains)* – Will they buy it?
- *Revenue and Cost implications of new venture*
  - Cost increase to client is offset by price increase to grocers
- *Competition*
  - None. Competition freezes chicken so can’t be pre-seasoned.

**Prompt 1 & 2** – After Interviewee walks through structure, ask them:

- *Do you think that grocery retailers would be interested in pre-seasoned chickens from Rotisserie Ranch?*
  - No correct answer; however, should be logically defended
- *After several interviews, it turns out that the grocers are very interested in Rotisserie Ranch’s proposed new product, but first they want to be sure that the Rotisserie Ranch chickens will sell well. How would you make sure?*
  - The correct answer is to run a test market.

**Prompt 3** – After discussing Prompt 2, discuss the results of the market test:

- Assumes that the demand function for Rotisserie Ranch chickens is linear.
- Store 1 is comparable to test store A and store 2 to test store B

# Key elements to analyze

## Value to Grocers

- Do you think that grocery retailers would be interested in pre-seasoned chickens from Rotisserie Ranch?

## Market Testing

- After several interviews, grocers are interested in Rotisserie Ranch's proposed new product, but first they want to be sure that the chickens will sell well. How would you make sure?

## Demand Elasticity

- A test market launch for the new Rotisserie Ranch BBQ chicken was administered (Hand out Exhibit 1).
- Should the grocers carry our product?

## Prompt 1 Sample Answers

- Sample "YES" response:
  - Labor Cost Reduction:** Meat department workers; don't need to spend time seasoning the chickens.
  - Economies of Scale:** Seasoning centralization; lower cost.
  - Product Consistency:** Centrally managed; able to spend more on R&D.
- Sample "No" response:
  - Loss of Differentiation:** Grocery chains differentiate by value-added.
  - Attune to Local Needs:** Likely to be better at gauging consumer tastes.
  - Increases Inventory & SKUs.**

## Prompt 2 Answer

- The correct answer is to run a test market for the new products.
  - The candidate may begin going into detail on how this test would be run. Cut him or her off as soon as you are comfortable that they understand that:
    - A pilot test should be run.
    - The pilot needs to have some control or comparison group.

## Notes on Exhibit 1 & 2

- Using Exhibit 1, interviewee should calculate:
  - Retail Margin (\$):
    - Store A:  $25\% \times \$4 = \$1$  Per Unit
    - Store B:  $25\% \times \$3 = \$0.75$  Per Unit
  - Gross Profit:
    - Store A:  $\$1 \text{ Per Unit} \times 400 = \$400$
    - Store B:  $\$0.75 \text{ Per Unit} \times 1000 = \$750$
- Cannot answer with Exhibit 1 alone, so they should ask for "Control Group" information: Hand out Exhibit 2 when this is asked
- Interviewee should calculate (NOTE: Answer is the same for both chicken types):
  - Variable Margin (\$) Rotisserie:
    - Store 1:  $30\% \times \$3.33 - \$0.20 = \$1$  /Unit
    - Store 2:  $30\% \times \$2.50 - \$0.15 = \$0.75$  /Unit
  - Gross Profit Rotisserie:
    - Store 1:  $\$1 \text{ Per Unit} \times 300 = \$300$
    - Store 2:  $\$0.75 \text{ Per Unit} \times 800 = \$600$

# Solution and recommendations

## Solution & Recommendations

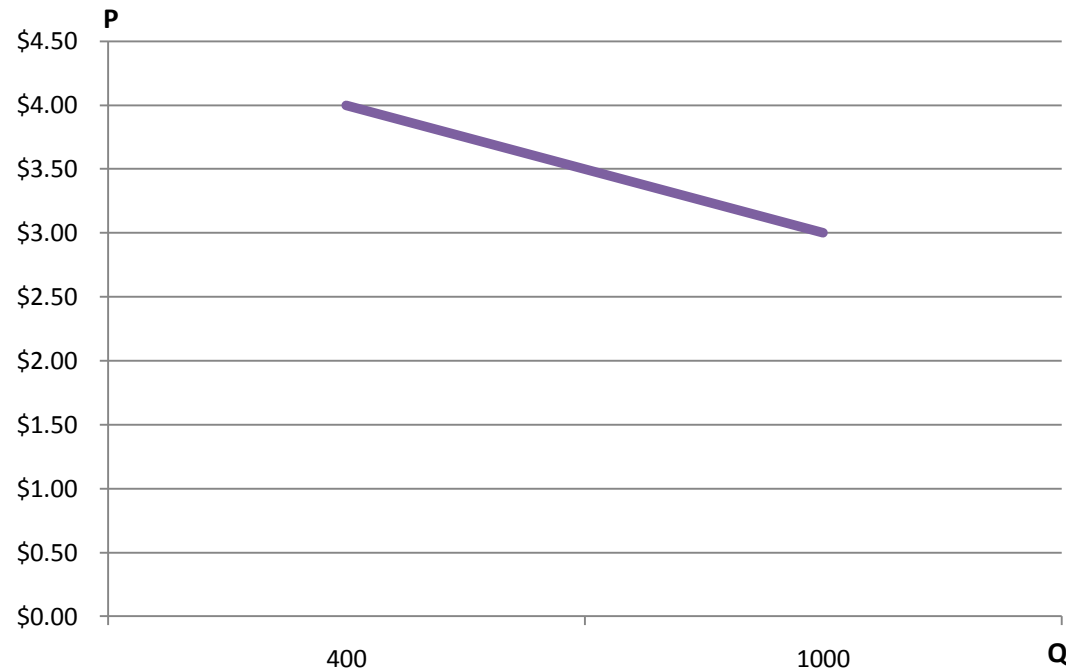
- Overall, our client should launch the Pre-Seasoned BBQ Chicken product and test other products because:
  - *Competitive Necessity*: Consumers are spending more money on seasoned rotisserie chicken than traditional rotisserie chicken and the market is shifting in this direction
  - *Benefit to Grocers*: Assuming test market was representative, Grocers can expect to earn \$100 to \$150 more gross profit using our client's product relative to their own "Private Label"
    - Cannibalization is not an issue because the variable margins and gross profits are the same on standard and seasoned rotisserie chicken, i.e. shifting from either of these products to our clients is a net benefit
  - *Benefit to Client*: Assuming that the increased price to the Grocers offsets the increased cost of production, our client will make more money due to increased sales of the new chicken

## Bonus/Guide to an Excellent Case

- An excellent interviewee will note:
  - The benefit to the Grocers based on a linear interpretation of Demand, i.e. At a \$3.50 price point, sales are expected to be 700 units. This give a variable margin of \$0.875 /unit and total operating profit of \$612.50
  - The benefit to the Grocers as percentages, i.e. Store 1 would gain 33.3% and store 2 would gain 25% to their operating profit by shifting to our client's product.
  - Potential scale benefits to our Client over time as more pre-seasoned chickens are sold
  - Potential labor reductions by grocers as the workload is "Outsourced" down the value chain to our client

# Exhibit #1: Market Test of Pre-Seasoned BBQ Chicken

Rotisserie Ranch Market Test of Pre-Seasoned BBQ Chicken



Store:	A	B
Retailer Margin:	25%	25%

# Exhibit #2: Control Group Stores

## Standard Rotisserie

	Store 1	Store 2
<b>Chicken Type</b>	<i>Standard</i>	<i>Standard</i>
<b>Weekly Sales</b>	\$1,000	\$2,000
<b>Retail Price</b>	\$3.33	\$2.50
<b>Seasoning Cost</b>	\$0.00	\$0.00
<b>Retailer Margin</b>	30%	30%

## Seasoned Rotisserie

	Store 1	Store 2
<b>Chicken Type</b>	<i>Store Seasoned</i>	<i>Store Seasoned</i>
<b>Weekly Sales</b>	\$1,200	\$2,400
<b>Retail Price</b>	\$3.99	\$2.99
<b>Seasoning Cost</b>	\$0.20	\$0.15
<b>Retailer Margin</b>	?	?

# Case 8: Tarrant Fixtures

By: David Welch (Kellogg Class of '04), Edited By: Adam Louras (Kellogg Class of '11)

## Case Question

- Our client, Tarrant Fixtures, is a low-intensity manufacturing company that produces display fixtures for retail clients. The company's financial performance has deteriorated in each of the last three years. Specifically, they are concerned with the company's falling Return on Investment (ROI).
- The CEO has asked us to look into this problem. How can Tarrant Fixtures get back on track?

## Case tracker

- **Industry:**  
Industrial goods
- **Level of Difficulty:**  
Medium
- **Case format:**  
Improving profitability
- **Concepts being tested:**
  - Operations
  - Accounting

## Fit Questions

### Spend first 15 min on fit

- What do you see as the most challenging aspect of this job?
- Tell me about your written communication skills.
- What are a couple of the best and worst decisions you have made in the past year?

## Guide to interviewer

- This case is about improving profitability and requires a real understanding of finance to solve. There has been a massive increase in working capital due to inventory build-up from an increase in the number of SKUs.
- This is a short case, designed to be solved in approximately 15-20 minutes. There are no slides.
- The important steps are:
  - Establishing a viable structure (Using ROI formula)
  - Breaking down the problem into component parts
  - Continuing to examine issues until the correct ones are identified.

8

Quants.

7

Structure



Opps.  
Acct.



# Clarifying answers and case guide

## Clarifying answers to provide if Asked

### Industry Characteristics/Market Economics

- The market has grown at 25% over the past three years

### Client Characteristics

- Client has remained the industry *market share leader* in displays over the past three years and has maintained 25% market share

### Competitive Dynamics

- There are several players in the market, but everything has remained stable from a competitive standpoint

## Interviewer Guide to Case

A sample case structure would include the following:

- 1) Start with the definition of ROI and identify the potential areas for problems
- 2) Identify differences in profits over the last few years
- 3) Identify capital employed and deep dive increase in working capital

### Necessary Information that should be given only when specifically asked :

- Product Types:
  - *Custom displays* (50% of Sales)- Produced only when an order is placed and the payment is received
  - *Standard displays* (50% of Sales)ⓂManufactured to “open standard” for display sizes/types and stored in inventory (Built-to-stock)
    - 5 standardized products account for 80% of sales in standardized products; Number of standardized products increased from 5 to 12 over last 3 years
- Past Three Years of Financial Performance:
  - *Total Revenues*: Grew by a 25%, from \$100M to \$125M, equally across both types
  - *Costs of production* (COGS, labor, SG&A, etc.): Remained stable as a percentage of revenue [80%]
  - *CAPEX*: The company has no new investments in Property, Plant, & Equipment
  - *Working Capital*
    - Total Working Capital Employed three years ago = \$80M
    - Total Working Capital Employed today = \$130M
    - Inventory levels have increased by 300% (primarily in finished goods), from \$25 million to \$75 million

# Key elements to analyze

## Definition of ROI

- To begin this case correctly, the interviewee must understand the components of ROI
- If the interviewee doesn't know the formula for ROI, the case is dead; however, you should guide the interviewer to help them practice

## Net Profits

- The interviewee will likely begin by discussing the "top line" of the ROI equation
- Net Profit is not the cause of the ROI issue as shown from the calculation below

## Capital Employed

- The interviewee should examine Capital Employed to find that PP&E is constant as no CAPEX was employed, Inventory is the culprit
- Once identified, follow up with, "What can management do to improve the Inventory Problem?"

## Notes to Interviewer

- The formula for ROI:

$$\text{ROI} = \frac{\text{Return}}{\text{Investment}} =$$

$$\frac{\text{Profits}}{\text{Capital Employed}} =$$

$$\frac{f(\text{price, quantify, fixed costs, variable costs})}{f(\text{PPE, working capital})}$$

## Notes to Interviewer

- Net Profit can be calculated based on the information from the prior page as follows:

	Year 1	Year 3
Revenue	100M	125M
Cost of Production \$	80M	100M
<i>Net Profit</i>	20M	25M
Cost of Production % of Revenue	80%	80%

- The company's absolute level of profits have increased 25% during the last three years, so this is not the cause of the ROI issue

## Notes on Exhibit 1 & 2

- A line-by-by line examination of a typical Working Capital statement will indicate all of the relevant categories of capital for purposes of calculating ROI.
- Based on the data from the prior page, following conclusion may then be drawn:
  - Total Working Capital increased by \$50M because Inventory levels increased by \$50M
  - PP&E, AR, AP, Cash etc. are all stable
- Potential Causes/fixes for Inventory Increase:
  - Proliferation of standardized product lines
  - Inaccurate demand forecasts resulting in excess safety stock
  - Obsolete inventories of out-dated product lines.

# Solution and recommendations

## Solution & Recommendations

- The client's ROI has fallen over the past three years due to a \$50M increase in Working Capital caused by a 300% increase in inventory. Inventory has grown because of:
  - The increase in the Total number of standardized product SKUs from 5 to 12
  - Inaccurate demand forecasts resulting in excess safety stock
  - Obsolete inventories of out-dated products
- To correct this issue, the client should work to reduce its inventory by:
  - Write-off or work-down obsolete inventory (this will cause an immediate hit on profits, so management may be reluctant)
  - Improve demand forecasting to set more realistic safety stock levels
  - Reducing the "Standard" product-line down to the top 5 products (80% of current sales)

## Bonus/Guide to an Excellent Case

- An excellent interviewee will:
  - Provide creative, logical reasons for the inventory increase
  - Provide creative, logical solutions to reduce Inventory
  - Detail a cohesive demand forecasting plan that would improve accuracy
  - Provide a plan to limit future product proliferation in the "Standard" product lines

# Case 9: Vindaloo Corporation

By: Ben Walter (Kellogg Class of '03), Edited By: Ameer Mallick (Kellogg Class of '12)

## Case Question

- Our client, Vindaloo Corporation, is a small biotechnology company that has developed a new seed for sugar beets, which produces twice as much sugar as the seeds that are currently in use. They now want to sell the company, and wonder how much it is worth.

## Case tracker

- Industry:**  
Consumer products
- Level of Difficulty:**  
Medium
- Case format:**  
Developing a new product
- Concepts being tested:**
  - Basic NPV
  - Marketing Strategy
  - Operations

## Fit Questions

### Spend first 15 min on fit

- What do you read?
- What is the most important issue facing the industry of your last job?
- Describe your methods of diagnosing client's needs.

## Guide to interviewer

- This is a valuation case and, as such, has a lot of number crunching. To calculate the NPV, the interviewee will have to size its impact up and down the value chain and determine its value using assumptions about market penetration and growth rates.
- There are also several important qualitative insights for the candidate to make, the main one of which is that the new technology will halve the land rather than doubling production, which would cause an immediate worldwide sugar glut and rapidly falling prices.

8

Quants.

4

Structure



Basic NPV  
Mkt. Stgy  
Opps.

# Clarifying answers and case guide

## Clarifying answers to provide if Asked

### Industry Characteristics/Market Economics

- The market has grown at GDP over the last few years. It is predicted to grow at 2% annually.
- Sugar is a mature commodity. The wholesale market is \$2 billion worldwide per year.

### Competitive Dynamics

- We can assume a 100% market penetration, since there are no competing products, and the efficacy of the product is proven.
- There is no imminent threat of competition and a patent would protect the investment for a number of years

## Interviewer Guide to Case

A sample case structure would include the following:

- 1) Start with understanding of product benefits and potential impacts
  - 2) Identify cost structure and places in value chain where costs would drop
  - 3) Calculate NPV of product to value Vindaloo's product
- Beets grown from the new seeds will produce sugar in a 1:2 ratio rather than the current 1:1 ratio. Now 100 beets produce 100 pounds of sugar. 100 beets grown from the new seeds will now produce 200 pounds of sugar, or 2 lbs/beet.
  - The elasticity of demand for sugar is 1.
  - The value chain can be broken down into four primary processes:
    1. Farming (planting, harvesting, and selling beets), which is 40% of cost
    2. Trucking, which is 10% of the cost
    3. Refining, which is 30% of the cost
    4. Distribution, which is 20% of the cost.
  - Farmland that is not used for sugar can be repurposed to grow cabbage, which is currently one fifth as profitable as sugar.
  - Trucking costs for sugar are 5% fixed and 95% variable, with the variable costs directly related to the weight of what is being trucked.
  - Refining costs are all variable, and it will cost 25% more per beet to refine the new beets than it cost to refine the old beets.
  - There are no cost savings in distribution from the reduced volume.

# Calculations

## Math question

- What are the cost savings/increase in profits from farming?

## Math solution

- **Solution - Farming**

- The product allows farmers to grow the same amount of sugar on half of the land. So we can assume that farmers will keep half of their land for sugar and repurpose the rest of the land for growing cabbage. Previously, one acre of land produced “X” profits of sugar - now half an acre can produce profits of “X” while the other half produces profits of “.1X” of profits from cabbage. Recall that cabbage is a fifth as profitable as sugar currently - this means that it will be only a tenth as profitable as the “new” sugar. Since profits per acre go from X to 1.1X, there is a 10% increase in profits from farming.

- **Common mistakes:**

- Candidates who think that farmers will just use the same amount of land and produce twice as much sugar have not thought the question through. If everyone in the world produced twice as much sugar as they were producing before, there would be far more supply than demand.

# Calculations (cont.)

## Math question

- What are the cost savings from Trucking, Refining, and Distribution?

## Math solution

- **Solution - Trucking**
  - Variable trucking costs, which represent 95% of the total cost structure, will decrease by 50%, leading to an overall costs savings of  $95\% \times 50\% = 47.5\%$ .
- **Solution - Refining**
  - Refining costs drop by half because only half as many sugar beets are being refined. However, then there is a 25% increase in costs per beet. So the costs go from “X” to “.5X” to “.625X”, an overall savings of 37.5%.
- **Solution – Distribution**
  - There are no cost savings in distribution.

# Calculations (cont.)

## Math question

- What are the total cost savings in the value chain?

## Math solution

Step	A – Cost Portion	B – Cost Savings	Weighted Cost Savings (A x B)
Farming	40%	10%	4%
Trucking	10%	47.5%	4.75%
Refining	30%	37.5%	11.25%
Distribution	20%	0%	0%
Total	100%		20%



# Calculations (cont.)

## Math question

- How valuable is this product?

## Math solution

- **Solution – Net present value of cost savings**
- Our client's product will save 20% a year in sugar costs - multiplied by \$2 billion, that cost savings comes out to \$400 million per year. The final question then, is how valuable is that? Here, it would be valuable for the candidate to know the perpetuity formula, which is:
  - $\text{Value} = \text{Annual Cash} / (r - g)$
- We are given the growth rate,  $g$ , as 2%. " $r$ " or the discount rate is not given, but we can go with the standard assumption of 10%. Therefore the company can be valued at:
  - $\text{Value} = \$400\text{M} / (10\% - 2\%)$   
 $= \$5\text{B}$

# Solution and recommendations

## Solution & Recommendations

- This product will only allow our client's clients (sugar growers) to produce sugar more efficiently. It won't cause the sugar to taste any better or cause consumers to demand more of it. Therefore the product cannot be expected to grow revenue, but it will reduce costs. The value of Vindaloo Corporation is directly related to cost savings.
- After running the NPV analysis, Vindaloo Corporation should be valued at \$5B.
- The interviewee should also identify a number of risks and potential benefits (i.e. adoption rates, competitive response, other uses etc.) before making their final recommendation.

## Bonus/Guide to an Excellent Case

- This is a quantitatively heavy case. Look for the interviewer that is quickly able to identify the important drivers of cost and can crunch numbers quickly and with little error.
- Additionally, an excellent case will require less guidance from the interviewer, particularly on next steps on getting through calculations.

# Case 10: Zephyr Beverages

By: Edwin Van Dusen, Brian Fox and David Welch (Kellogg Class of '04), Edited By: Ameer Mallick (Kellogg Class of '12)

## Case Question

- Our client, Zephyr Beverages, is a division of a large consumer products company. The division produces fruit juices in three forms, all under the Zephyr name: chilled, juice boxes, and frozen concentrate. Zephyr had sales of \$600 million last year, about 3% of the company's overall sales of \$20 billion.
- The chilled segment represents \$120 million in sales per year. While juice boxes and frozen concentrate have been consistently profitable, chilled juices are only breaking even in good quarters and are losing money in bad quarters. Zephyr has received a proposal from upper management to sell the chilled juices business. We need to help them decide whether or not this is a good idea.

## Case tracker

- Industry:**  
Consumer Goods
- Level of Difficulty:**  
Easy
- Case format:**  
Opportunity assessment
- Concepts being tested:**
  - Competitive analysis
  - Capacity contraction

## Fit Questions

- Spend first 15 min on fit**
- What do you do for fun?
  - What did you contribute in your last job that made a difference to the organization?
  - Outside of school and work, what is your greatest personal accomplishment?

## Guide to interviewer

- This is a relatively short case that requires the candidate to create a holistic structure for solving the problem: what does Zephyr do with an underperforming business? It can divest chilled juices, sell its whole juice division, or remain in all its business. Any of the three possible solutions listed at the end can be argued, but the third solution makes the most economic sense.
- The candidate will need to ask for additional information that is necessary to solve the problem, rather than relying on the interviewer to dispense it all at once.

1

Quants.

8

Structure



Comp. Als.  
Capacity

# Clarifying answers and case guide

## Clarifying answers to provide if Asked

### Industry Characteristics/Market Economics

- It has been growing at GDP the last few years and is projected to continue that growth rate.
- The market for chilled juices is dominated by mothers with young kids.
- Brand name is important in this market, as mothers tend to prefer reliable products. However, the brand premium must be in line with other branded products and all branded juices sell in the same price range.
- This is a highly price sensitive market that loves coupons, promotions, etc.

### Competitive Dynamics

- This is a highly concentrated market. There has not been a lot of change, technological or otherwise, recently and there are no obvious entrants.

## Interviewer Guide to Case

A sample case structure would include the following:

- 1) Identifying the options: sell chilled juice, sell all juice businesses, continue on with all businesses
- 2) Qualitative discussion of competitive dynamics
- 3) Discussion of product selection/components, as well as ways to cut costs

**When asked, the interviewer can reveal the following additional information:**

- Chilled beverages are a \$5 billion worldwide industry
- The two largest players have market shares of 40% and 25%, respectively. Zephyr's market share, 12% makes it third in the industry.
- The two market leaders are able to do more advertising, couponing, promotion, and trade than Zephyr is able to do. We do not know about their profitability, but assume it is positive.

# Key elements to analyze

## Competitive Dynamics

- Using basic information provided, interviewee should deep dive the competitive dynamics in further detail.

## Product selection

- Using information about our products vs. our competitors, the interviewee should focus on discussion about how to cut costs.

## Notes to interviewer

- Relevant info:
  - Bad market position: 12% vs. 40% and 25%
  - Assumed profitability differences
  - Disadvantage on trade promotions
- Interviewee should be able to see that Zephyr is at a serious disadvantage on all fronts as a smaller company that is both less profitable and less engaged in the kinds of trade promotions that key customers covet. The overall conclusion should be that this is a weak competitive position.

## Notes to interviewer

- Relevant info (when asked):
  - The market leaders produce pure orange juice/blends based on citrus juices. Zephyr uses more elaborate blends, usually with a base of pear or peach juice (95% of inputs) and flavor with cranberries, bananas, mangoes, etc. (the other 5%). Pear and peach juice are a similarly price to orange juice, but the other flavorings cost about twice as much.
  - A plant in California produces all products; chilled, juice boxes and frozen. It would be difficult to find another use for the plant without a major conversion.
- This indicates that, despite a disadvantage, divesting is not realistic and there may be room for cost reduction based on reformulation to make Zephyr profitable.

# Solution and recommendations

## Solution & Recommendations

**There are three possible solutions, with no right answer. The recommendation should be well-reasoned, comprehensive, and include as much relevant information as possible.**

- Sell the chilled juice business. This would, however, affect the juice and frozen concentrate businesses, as there are both advertising and manufacturing synergies.
- Sell all of the juice business. This may be more feasible, as the buyer could capture the synergies, but would not be too likely to turn the business around. The selling price is likely to be low.
- Keep the chilled juice business and rework the ingredients and costs. This is the most feasible option, as evidenced by the success of the competitors. We are probably developing extra features in our ingredient mix that the market does not want and is not willing to pay for. Eliminating or scaling back those features will probably allow us to cut costs without affecting revenue.

## Bonus/Guide to an Excellent Case

- Prospects who do well on this case will have to be comfortable with ambiguity and with a lack of perfect information. They will quickly grasp the issues and delve into the underlying qualitative discussions, coming up with a lot of additional risks/potential benefits for each option.
- Creative solutions beyond those listed are possible and encouraged, though should be done within the framework of the information available.

# Case 11: A+ Airline Co.

By: Adam J. Louras (Kellogg Class of '11)

## Case Question

- Our client is A+Airline Co., the third largest airline in the United States by passengers carried. This week, we have been flying on our primary competitor, Gamma airline, and we noticed something interesting; they stopped accepting cash for in-flight food and beverage services and they now only accept major credit cards.
- *The CEO of A+Airline Co. wants to know, why did Gamma Airline switch from a Cash & Card system to a credit card only system, and should we follow them?*

## Case tracker

- **Industry:**  
Airline
- **Level of Difficulty:**  
Hard
- **Case format:**  
Opportunity Assessment
- **Concepts being tested:**
  - Basic NPV
  - Operations
  - Market Sizing
  - Customer Strategy

## Fit Questions

### Spend first 15 min on fit

- Tell me about a time when you had to adjust a project schedule because you didn't have all the resources that you needed
- Describe a situation in which you had to change your communication style to influence stakeholders from different groups

## Guide to interviewer

- This case will force an interviewee to rely on logic, business acumen, and structure
- Commonly, the interviewee will ask a lot of questions about historical costs, revenues, etc. **This is not the correct approach to this question.**
- The savvy interviewer will realize that this is a BEFORE vs. AFTER comparison of switching from a CASH & CARD system to a CARD ONLY system. Therefore, the questions asked should focus on the DELTA, or the cash changes that occur when the switch is made.

8

Quants.

8

Structure



Basic NPV  
Opps.  
Mkt. Size  
Cust Styg

# Clarifying answers and case guide

## Clarifying answers to provide if Asked

### Industry Characteristics/Market Economics

- *Card Use*: Roughly 99% of all consumers purchase their airline tickets using a credit card, i.e. all consumers on an airplane have a credit card available to them.

### Client Characteristics

- *Items Sold*: Only food and alcoholic beverage items are sold on A+Airline flights
- *Locations*: This is a US Domestic decision only. Ignore international.

### Competitive Dynamics

- Gamma is the only airline that has made the switch; however all other airlines are evaluating the switch.
- For the purposes of this case, Gamma and A+Airline should be considered to be exactly the same in all regards.

## Interviewer Guide to case and handouts

**Case Structure** – Interviewee's structure should be a BEFORE vs. AFTER comparison of the switch from CASH & CARD to CARD only and should include:

- *Revenue Changes*: Loss of Cash Only customers vs. Increase in Credit Card customers
- *Cost Changes*: Benefit of Cash Management Cost Removed vs. Incremental Cost (Fee) of Credit Card
- *Cash Flow Changes*: Interest and Time Value of Money (TVM), and Working Capital impacts due to an increase in collection speed

**Exhibit 1** – After Interviewee walks through structure, they will likely ask questions about consumer purchase behavior on airplanes. Once you feel that they have identified the need to do a market sizing, hand out Exhibit 1. **(DO NOT ALLOW ROUNDING)**

- *Ask the interviewee to determine the Total Market Size in (\$)* for food and beverage purchases on an average flight
  - *The interviewee should calculate the CURRENT allocation of purchases (Cash Vs. Card) for an average flight.*
  - *The interviewee should correctly identify that some of the current "Cash" customers will not convert to Card. **Tell them we will lose 1/3.***

**Exhibit 2** – The interviewee should recognize that there might be a cost savings due to the change. Most interviewees know that there is a Credit Card processing fee but do not realize that there are many costs associated with cash management. Ask them about the types of costs A+Airline might face under both processes before handing out the exhibit. When asked, explain that **the total, per flight, savings from eliminating overhead due to Cash Management Operations is \$35/flight**



# Key elements to analyze

## Changes in Revenue

- Interviewee will likely begin with the correct assumption that revenue will be lost due to unhappy, cash-only passengers
- Once asked about how many are lost, hand out **Exhibit 1** to do a market sizing

## Changes in Costs

- Interviewee should make mention of Cost changes due to the shift to a Card Only strategy.
- Ask the interviewee to detail the types of costs that might be involved before handing out **Exhibit 2**

## TVM & Working Capital

- Exhibit 2** also shows that there is a 30 day time benefit to collecting payment via Credit Card vs. Cash
- Prompt 1:** Ask the interviewee to qualitatively explain the impact this time savings will have

## Notes on Exhibit 1

- Using Exhibit 1, interviewee should calculate:

### 1. Total Number of Passengers per Plane

	Seats	Occupants	Business	Leisure
First Class	16	16	16	0
Economy	144	108	43	65
<b>Total</b>	<b>160</b>	<b>124</b>	<b>59</b>	<b>65</b>

### 2. Total Number that Purchase & Total Spend (\$)

	# that Purchase	Total Purchase (\$)
Business	26	\$285
Leisure	16	\$97
<b>Total</b>	<b>42</b>	<b>\$382</b>

### 3. Cash vs. Card Spend + LOSS

	Cash	Card	Total
Inflight \$	\$105	\$420	\$525

Lose 1/3 of Cash Customers			
	#	\$	New Total
Business	3	(\$30)	\$420
Leisure	1	(\$5)	\$70
<b>Total</b>	<b>4</b>	<b>(\$35)</b>	<b>\$490</b>

## Notes on Exhibit 2

- Exhibit 2 shows the current operations for Cash Management and Card Management at A+Airline.
- The interviewee should notice the following information:
  - Cash Management & Card Management both have 2% fees associated, so this is a “wash” in terms of savings.
  - Cash Management requires additional overhead, 7 total employees per airport, that could be eliminated for further savings.
- When asked, explain that the total, per flight, savings from eliminating overhead due to Cash Management Operations is **\$35/flight**
- Interviewee should notice that the \$35 savings offsets the \$35 loss in Revenue** (Slightly more because this impacts bottom line, but ignore margin)

## Qualitative Assessment

- The interviewee should qualitatively mention that there are benefits to eliminating the longer cash management process:
  - Time Value of Money:** A+Airline will receive their money 30 days sooner, and this money could be used to:
    - Invest in interest earning accounts or growth projects
    - Pay off suppliers early and take advantage of discounts
    - Pay down lines of credit faster
  - Working Capital Improvement:** \$50 per flight in change can be eliminated, thus freeing up cash flow. Additionally, there will be a reduction in loss of cash due to theft and damage
  - Happier Customers:** The majority of customers will be able to place and receive their order faster on the plane which will also increase sales

# Solution and recommendations

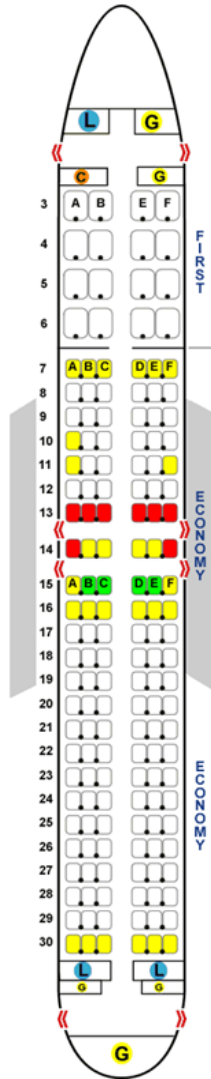
## Solution & Recommendations

- Overall, our client, A+Airline, should switch to a Credit Card only system for in-flight food & beverage because:
  - *Quantitative Benefits:* We calculated that there would be a loss of 3 business customers and 1 economy customer per flight which amounted to a Revenue loss of \$35. We also found that we could save \$35 in overhead expenses by eliminating the Cash Management process. In sum, the decision to switch is in favor because the savings are to the bottom line and the revenue losses are top line.
  - *Qualitative Benefits:* We also found that we will receive payment 30 days sooner by only accepting credit cards. This improves our cash flow and could allow us to earn interest, pay down creditors, or invest in projects. Additionally, by reducing cash losses and eliminating “Change” tied up on airplanes, we can improve our Working Capital and also put this money to work for us. Finally, it appears as though customers, in general, might actually be happier because the speed of transactions on the airplane will improve.

## Bonus/Guide to an Excellent Case

- An excellent interviewee will note:
  - Due to the increased transaction speed, probability of purchase for both Business and Economy passengers in the AFTER state should go up due to a reduction in frustration. The people on the back of the airplane often abandon a purchase if it takes too long to place an order. Making change takes a lot of time!
  - Average purchase amount should also increase. There is a proven psychological phenomenon that shows how consumers who do not carry cash purchase less when a cash option is offered because they feel guilty using their card. A card-only option eliminates this guilt and consumers don't mind using the card.
  - *Business Acumen:* The fact that Gamma Airline has already switched is a clear indication that this is a logical idea.

# Exhibit #1: An Average A+Airline Flight



## A+Airline Boeing 737-800 Vers. 2 (738)

Total Seats 200

	% of Seats	Load Factor	% Business	% Leisure
First Class	25.0%	100%	100%	0%
Economy	75.0%	80%	50%	50%

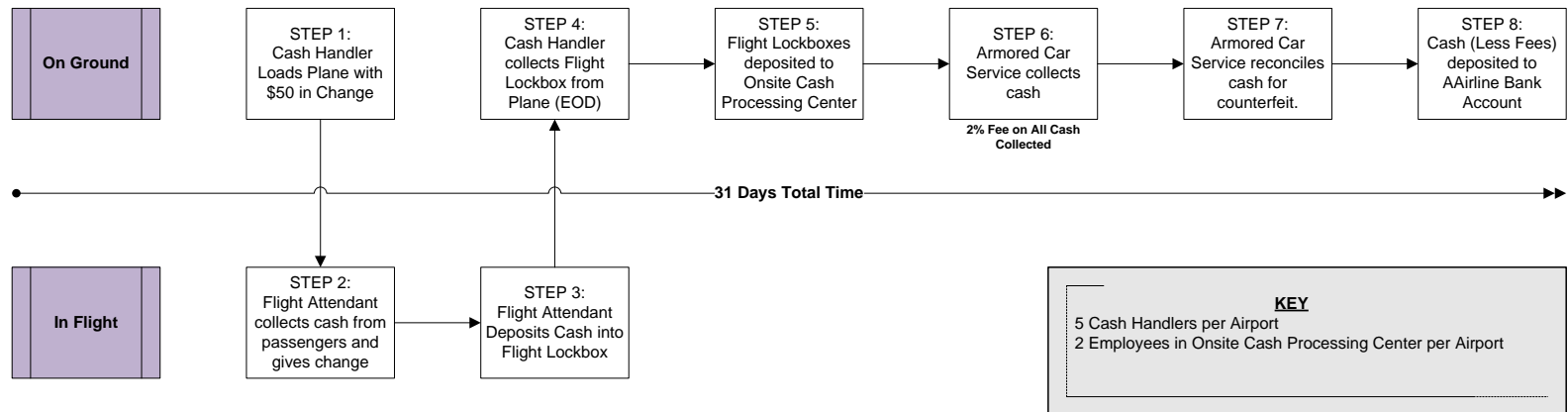
	% that Purchase	Avg. Spend (\$)
Business	75.0%	\$10
Leisure	25.0%	\$5

\*Note: First Class Passengers Receive Free Food & Beverage

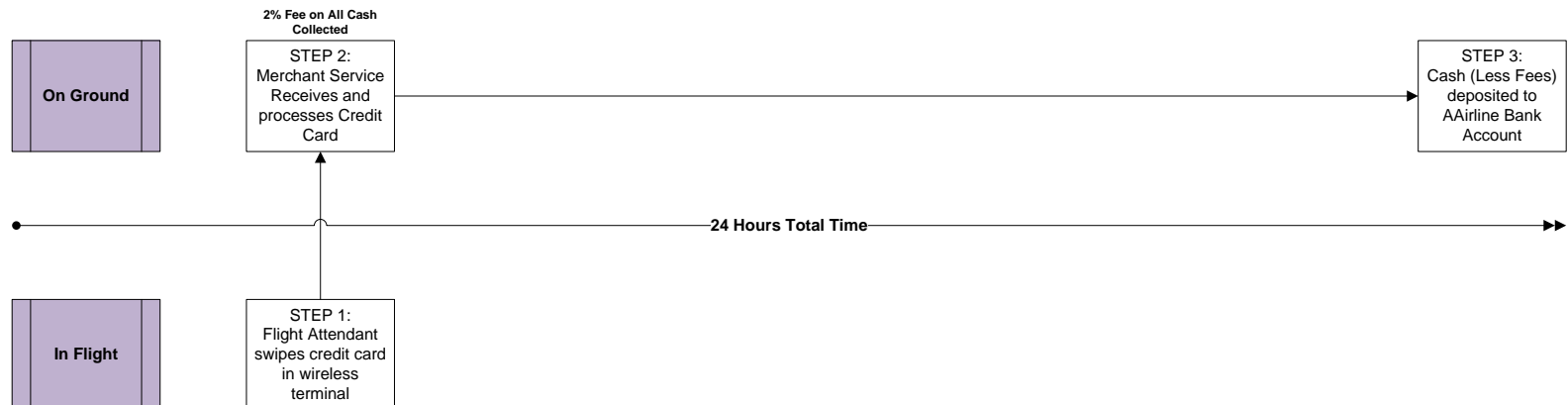
	% of In-flight Purchases
Cash	20%
Card	80%

# Exhibit #2: A+Airline Cash & Card Operations

## AAirline Cash Management Process



## AAirline Credit Card Process



# Case 12: Bell Computer Inc.

By: Adam J. Louras (Kellogg Class of '11)

## Case Question

- Our client, Bell Computer Inc., is the second largest PC manufacturer, by unit sales, in the United States. Over the past 5 years, Bell has been gaining market share and growing revenue, but at the same time, their net income is eroding.
- The founder of Bell has returned to the company and taken over as CEO. He has hired us to determine:
  - Why have our profit margins declined?
  - What can we do to improve our profitability and reach our “Full Potential”?

## Case tracker

- **Industry:**  
Tech/Telecom
- **Level of Difficulty:**  
Hard
- **Case Format:**  
Improving profitability  
+ Reducing Costs
- **Concepts Tested:**
  - Marketing Strategy
  - Competitive Analysis
  - Supply/value chain

## Fit Questions

### Spend first 15 min on fit

- What skills can you bring to this position?
- Give me an example of a business problem your company faced and tell me how you solved it.
- What other types of jobs are you considering? Why and how did you choose the companies? How do they compare to consulting?

## Guide to interviewer

- This case is primarily about product mix changes in the PC industry combined with Average Selling Price (ASP) Declines resulting in lower overall revenues for the industry. Competitors that did not keep up with cost reductions are faced with tighter margins
- The interviewee should recognize that this is a “Profit Equation” style question and use a version of the following equation in their “Framework”:
  - $\text{Profit/Unit} = \text{Price/Unit} - \text{Variable Cost/Unit} - \text{Fixed Costs/Unit}$
- Various terms from the PC industry are used throughout the case and it is not expected that the interviewee knows these terms. Help as needed.

8

Quants.

10

Structure



Mkt. Stgy  
Comp. Als  
Sup Chain

# Clarifying answers and case guide

## Clarifying answers to provide if Asked

### Industry Definitions

- **ASP:** ASP or Average Selling Price is the term used for the average price sold by the company for a computer. Multiplying units sold by ASP will give you total revenue.
- **Client Segment:** PCs designed for, and sold to, retail consumers either direct or through a retailer like Best Buy.

### Client Characteristics

- **Items Sold:** Assume that only hardware is sold as shown in Exhibit 1. Interviewee could suggest selling additional items such as printers, software, warranty service, etc. to improve profit
- **Locations:** This is a US Domestic decision only. Ignore international.

### Competitive Dynamics

- All competitors face the same ASPs and sell comparable products.

## Interviewer Guide to case and handouts

**Case Structure** – Interviewee's structure should be structured as a comparison of Bell Computer's financials from Before, i.e. 2005, and After, i.e. 2010. The interviewee should note the "Profit Equation" and they should make the following inferences from the question setup:

- *Revenues are going up and Market Share is Increasing AND Net Income is going down*
- *Thus: Prices (ASPs) are being reduced to buy market share. This is causing more units to be sold, but, with Net Income going down, it is clear that **costs have not reduced to keep up with the reduction in ASPs.***

**Exhibit 1-3** – After Interviewee walks through structure, they should ask questions about the components of Net Income, i.e. Revenue and Costs.

- *Have a conversation with the Interviewee to force them to talk through the essential components of the Profit Equation that are needed to answer the question.*
- *Let the Interviewee drive the case. When you feel that they have asked enough information about the following topics, give them the exhibit that shows this information:*

– Sales Units	→	Exhibit 1
– Prices	→	Exhibit 2
– Costs	→	Exhibit 3

**Answer** – The interviewee cannot solve this case without all three exhibits. Once they have given you sufficient reason to hand them each exhibit, they should drive through the case to answer both questions.

# Key elements to analyze

## Marketing Strategy

- Using Exhibits 1-3, the interviewee should be able to determine that margins are falling due to product mix shifting and price declines

## Competitive Analysis + Supply Chain

- Using Exhibit 3, the interviewee should identify a “Full Potential” improvement for Bell to improve its margins by copying the strategy of its direct competitors.

## Notes to interviewer

- The Interviewee should be able to answer the question, “**Why have our profit margins declined?**” with the following rationale:
  - Exhibit 1: Shift in Client preference towards Laptops & Netbooks
  - Exhibit 2: Declining ASPs for Laptops and Low ASPs for Netbooks
  - Exhibit 3: Cost position has remained unchanged
- The interviewee could answer the question qualitatively by interpreting Exhibits 1-3. To make this case more quantitatively focused, ask the interviewee to calculate various metrics for 2005 and 2010.
- The interviewee should be able to calculate the following using Exhibits 1-3 (**Math calculations on following page**):
  - Net Income per Unit by product type
  - Revenue by product type and Total Revenue
  - Cost by product type and Total Cost
  - Net Income by product type and Total Net Income

## Notes to interviewer

- The interviewee should be able to answer the question, “**What can we do to improve our profitability and reach our “Full Potential”?**” with the following COST REDUCTION strategy:
  - Copy Haysus' strategy for part procurement to reduce the build cost of PCs
  - Copy Racer's strategy for Direct Labor to reduce the labor cost of producing PCs
  - Copy HC's strategy for G&A to reduce the total company overhead
- The interviewee could answer the question qualitatively by interpreting Exhibits 3. To make this case more quantitatively focused, ask the interviewee to calculate various metrics for “Full Potential”.
- The interviewee should be able to calculate Bell's “Full Potential” using Exhibits 1-3 (**Math calculations on following page**):
  - Net Income per Unit by product type
  - Revenue by product type and Total Revenue
  - Cost by product type and Total Cost
  - Net Income by product type and Total Net Income

# Math Solutions

## Math Part I

BELL FY2005						
	Desktop PCs	Laptop PCs	Netbook PCs	Servers	Other	TOTAL
Units Sold (K)	20.0	10.0	0.0	5.0	5.0	<b>40.0</b>
ASP	\$1,000.0	\$2,000.0	\$0.0	\$3,000.0	\$250.0	
CPU	800.0	800.0	0.0	800.0	200.0	
<i>NI/Unit</i>	<i>\$200.0</i>	<i>\$1,200.0</i>	<i>\$0.0</i>	<i>\$2,200.0</i>	<i>\$50.0</i>	
Revenue (\$M)	\$20.0	\$20.0	\$0.0	\$15.0	\$1.3	<b>\$56.3</b>
Total Cost (\$M)	16.0	8.0	0.0	4.0	1.0	<b>\$29.0</b>
<i>NI (\$M)</i>	<i>\$4.0</i>	<i>\$12.0</i>	<i>\$0.0</i>	<i>\$11.0</i>	<i>\$0.3</i>	<b>\$27.3</b>
<i>Profit Margin</i>	<i>20.0%</i>	<i>60.0%</i>		<i>73.3%</i>	<i>20.0%</i>	<b>48.4%</b>

BELL FY2010						
	Desktop PCs	Laptop PCs	Netbook PCs	Servers	Other	TOTAL
Units Sold (K)	30.0	30.0	5.0	10.0	5.0	<b>80.0</b>
ASP	\$1,000.0	\$750.0	\$500.0	\$3,000.0	\$250.0	
CPU	800.0	800.0	800.0	800.0	200.0	
<i>NI/Unit</i>	<i>\$200.0</i>	<i>(\$50.0)</i>	<i>(\$300.0)</i>	<i>\$2,200.0</i>	<i>\$50.0</i>	
Revenue (\$M)	\$30.0	\$22.5	\$2.5	\$30.0	\$1.3	<b>\$86.3</b>
Total Cost (\$M)	24.0	24.0	4.0	8.0	1.0	<b>\$61.0</b>
<i>NI (\$M)</i>	<i>\$6.0</i>	<i>(\$1.5)</i>	<i>(\$1.5)</i>	<i>\$22.0</i>	<i>\$0.3</i>	<b>\$25.3</b>
<i>Profit Margin</i>	<i>20.0%</i>	<i>(6.7%)</i>	<i>(60.0%)</i>	<i>73.3%</i>	<i>20.0%</i>	<b>29.3%</b>

## Math Part II

BELL Full Potential						
	Desktop PCs	Laptop PCs	Netbook PCs	Servers	Other	TOTAL
Units Sold (K)	30.0	30.0	5.0	10.0	5.0	<b>80.0</b>
ASP	\$1,000.0	\$750.0	\$500.0	\$3,000.0	\$250.0	
CPU	350.0	350.0	350.0	350.0	200.0	
<i>NI/Unit</i>	<i>\$650.0</i>	<i>\$400.0</i>	<i>\$150.0</i>	<i>\$2,650.0</i>	<i>\$50.0</i>	
Revenue (\$M)	\$30.0	\$22.5	\$2.5	\$30.0	\$1.3	<b>\$86.3</b>
Total Cost (\$M)	10.5	10.5	1.8	3.5	1.0	<b>\$27.3</b>
<i>NI (\$M)</i>	<i>\$19.5</i>	<i>\$12.0</i>	<i>\$0.8</i>	<i>\$26.5</i>	<i>\$0.3</i>	<b>\$59.0</b>
<i>Profit Margin</i>	<i>65.0%</i>	<i>53.3%</i>	<i>30.0%</i>	<i>88.3%</i>	<i>20.0%</i>	<b>68.4%</b>

### Results:

	Desktop PCs	Laptop PCs	Netbook PCs	Servers	Other	TOTAL
NI (\$M) Improved	\$13.5	\$13.5	\$2.3	\$4.5	\$0.0	<b>\$33.8</b>
Cost Per Box Reduced	\$450.0	\$450.0	\$450.0	\$450.0	\$0.0	



# Solution and recommendations

## Solution & Recommendations

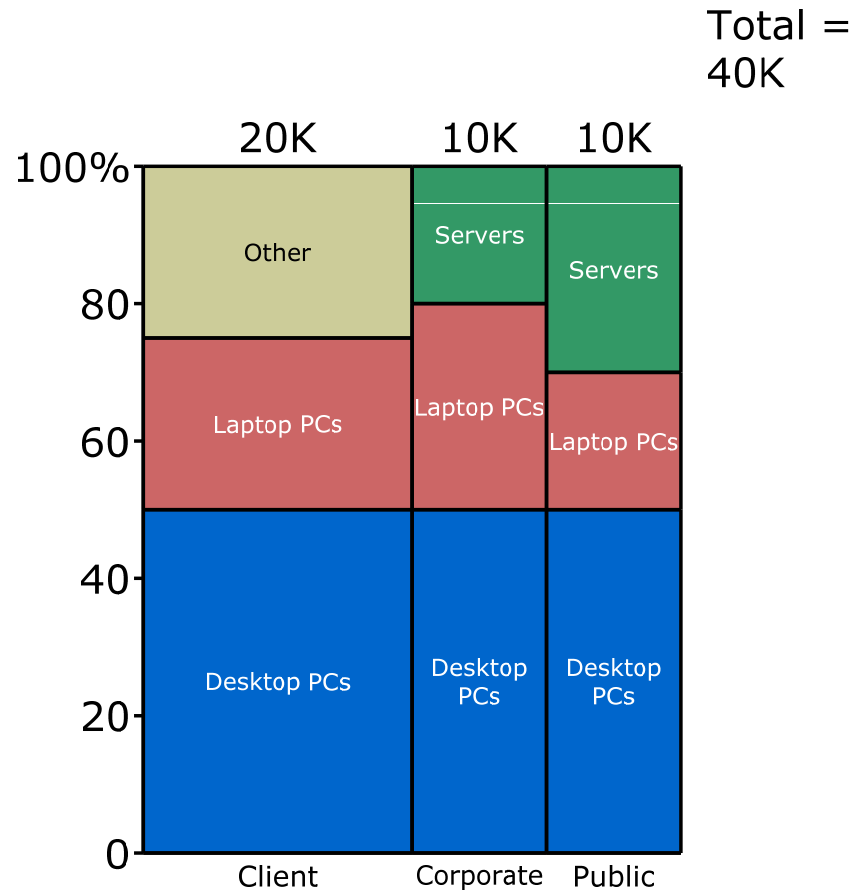
- Bell Computer Inc., and the PC industry, have faced five years of Average Price declines in the Laptop product segment. At the same time, “Client” or retail consumers have shifted their preferences towards Laptops, and a new product segment called Netbooks. Because Bell Computer has not reduced their costs over this same timeframe, profit margins and net income have deteriorated despite increases in Revenue.
- In order for Bell Computer Inc. to return to profitability, they must reduce their cost per unit sold. The best approach we identified was through an analysis of our competitors. Using our competitors line-item costs as a benchmark, we could potentially reduce our cost per box by \$450. This amounts to a total Net Income improvement of roughly \$34M.

## Bonus/Guide to an Excellent Case

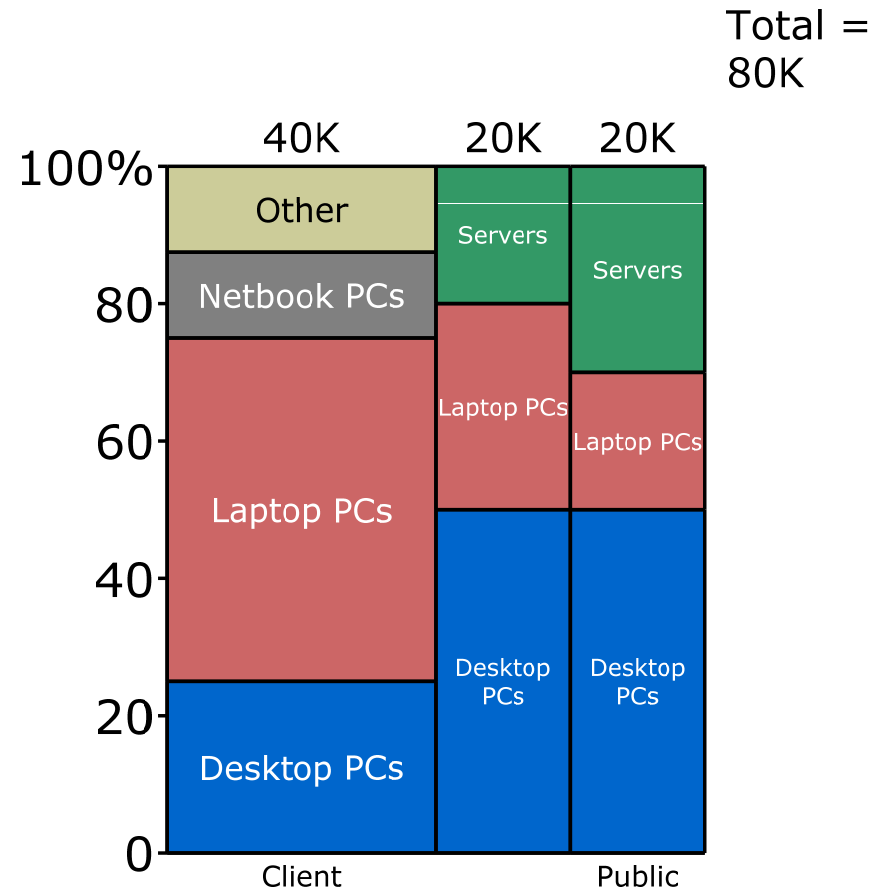
- An excellent interviewee will note:
  - Additional ways to improve net income by selling complimentary, high margin products such as:
    - Printers
    - Software
    - Parts upgrades
    - Warranties
  - Additional ways to cut costs, such as:
    - SKU Rationalization (Reducing the number of product models)

# Exhibit 1: Product Mix breakdown by Business Segment for 2005 and 2010

PC Units(K) Sold in 2005

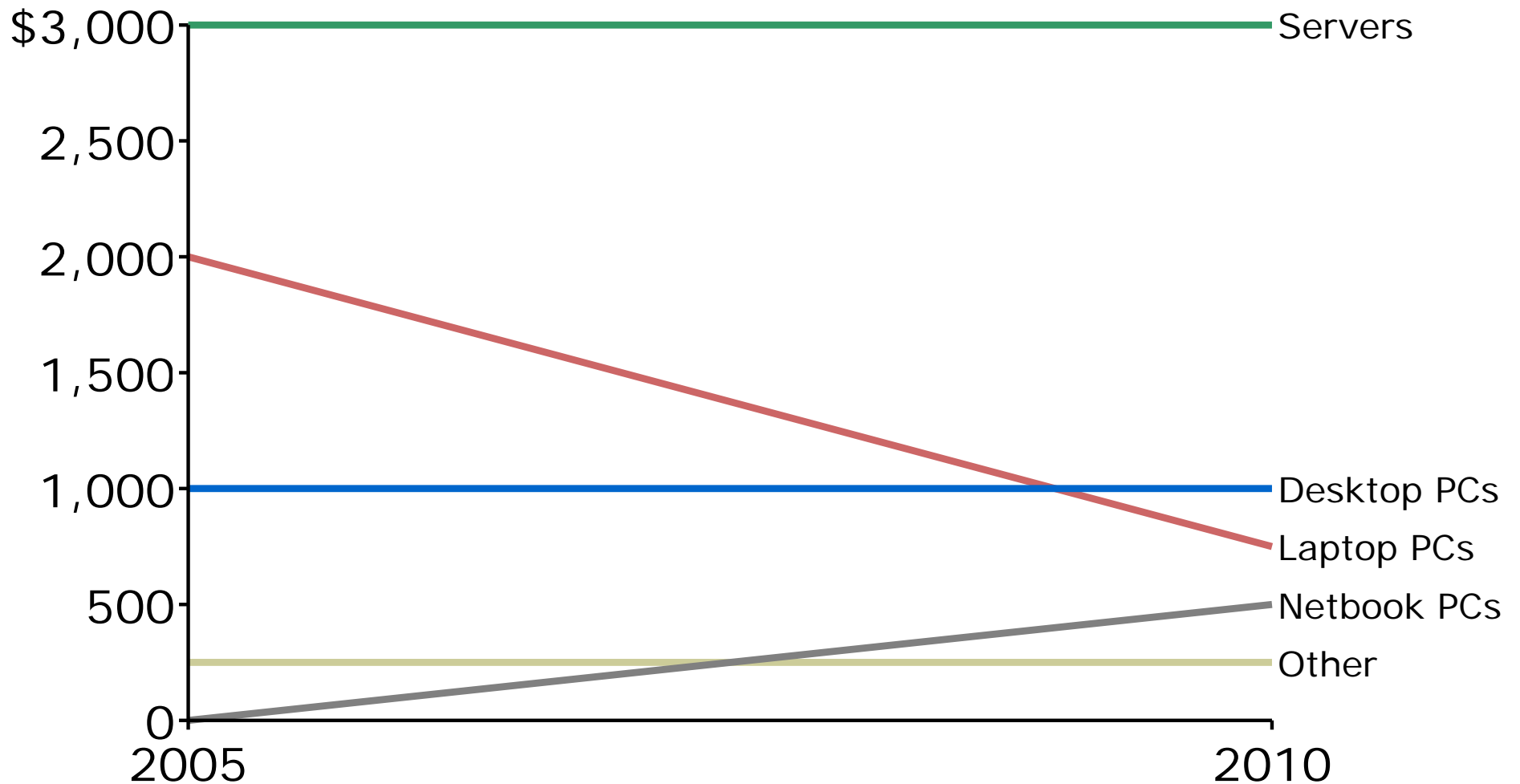


PC Units(K) Sold in 2010



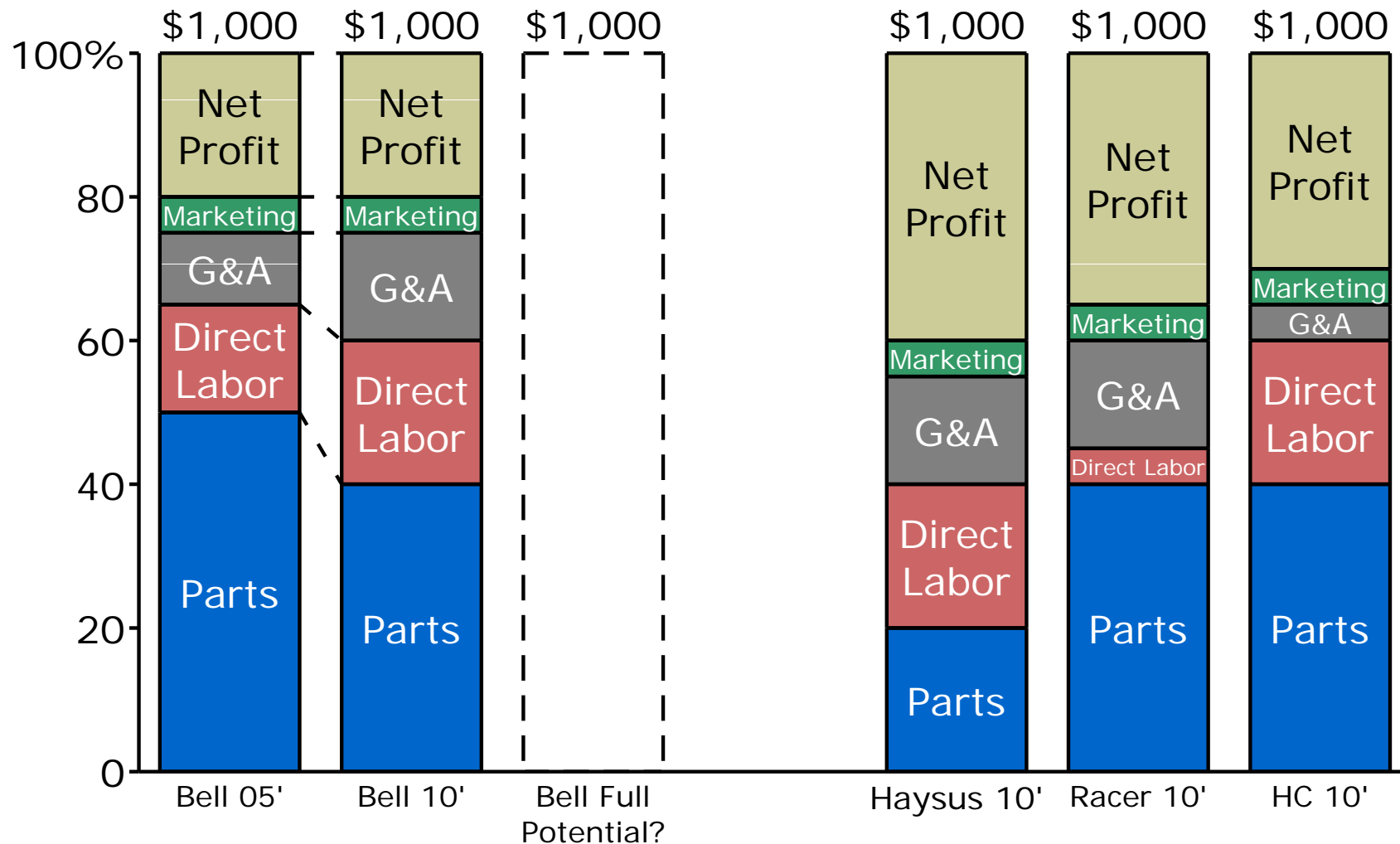
\*Note: Netbook PCs did not exist in 2005; "Other" products include Pocket PCs and Calculators

## Exhibit #2: ASPs by Business Segment 2005 and 2010



\*Note: Netbook PCs did not exist in 2005

# Exhibit 3: Avg. Per Unit Cost Breakdown of a Desktop PC for Bell (05',10') and Top 3 Competitors



\*Note: Servers, Laptops, and Netbook Product types have the same costs per unit; however, Net Income will vary based on ASP.

“Other” products have a total CPU of \$200

# Case 13: Arbor Housing

By: Ameer Mallick (Kellogg Class of '12)

## Case Question

- Our client, Arbor Housing, is a leading provider of short term and temporary corporate housing. Profits have remained steady the past few years, and Arbor was recently purchased by a private equity firm that has brought in new management. The new CEO has been charged with increasing sales in order to meet managements growth targets for the next few years.
  - What can Arbor Housing do to increase revenues, while remaining profitable?

## Case tracker

- Industry:**  
Leisure
- Level of Difficulty:**  
Medium
- Case format:**  
Increasing sales
- Concepts Tested:**
  - Creativity
  - Investments
  - Marketing strategy

## Fit Questions

### Spend first 15 min on fit

- Tell me about a time you made an unpopular decision.
- What role do you play on a team?
- Tell me about a time in your life when you have made a difference.

## Guide to interviewer

- This case is designed as an assessment of several competing options to generate growth
- The interviewee should set up a structure to identify several sources of new revenue:
  - Increase penetration with existing customers
    - Rewards Program
    - Advertising
  - Gain new customers
- The interviewee should get creative, there are a few answers for which there is structured questions but we should allow the interviewer ample opportunity to develop creative options

5

Quants.

5

Structure



Creativity  
Invest.  
Mkt. Stgy

# Clarifying answers and case guide

## Clarifying answers to provide if Asked

### Industry Definitions

- Corporate Housing are fully furnished short term or temporary apartment style accommodations

### Client Characteristics

- Arbor owns many of their locations, and leases vacancies in other apartment buildings – Though it is a valid point to raise capacity questions, assume that capacity needed for growth is leased and major investment is not required
- This is a US based case, Arbor has locations in all major cities
- Nights Stayed is a common metric our firm uses as a proxy for Revenue

### Competitive Dynamics

- We compete against hotels and apartment buildings that offer short term leases. For this case we can ignore the effect of competitors that also offer corporate housing

## Interviewer Guide to case and handouts

**Case Structure** – Interviewee should be looking to brainstorm several ideas for growing sales in the first half of the case. As the discussion continues, we should look to provide specific exhibits and ask targeted questions about the tradeoffs between new options

**Exhibit 1** – After discussing the potential current customers and industries (should be left up to creativity of interviewer), provide exhibit 1:

- *What trends do you see in our mix of clients?*
- *What percentage of 2008 nights stayed/revenue comes from Professional Services?*

**Exhibit 2** – The second half of problem presents several options that can be pursued. Given the constraints of the business, the interviewee must choose the optimal course of action for increasing internal growth (setting aside growth opportunities with new customers)

- Provide clarifying data as requested (listed in solutions)
- *Which option should we pursue?*

There is an opportunity to have a discussion at the end of the case to identify new customers with new industries.

**Answer** – The final question to be posed is: “Summarize the case and suggest a course of action for Arbor Housing’s CEO to take.” The interviewee should stick with their proposed internal growth option, and also as a bonus identify the potential of moving into new industries

# Key elements to analyze

## Current Revenues

- Using Exhibits 1, interviewee must identify current business mix, notice trends in the chart, solve some math questions, and identify future opportunities.

## Penetration with existing customers

- Using Exhibit 2, interviewee should select the best option based on the numbers provided:

## Notes to interviewer

- The first part of the answer to this question should be qualitative, you should probe the candidate as to why they think certain industries have seen a declining nights stayed while others have remained steady
- Some suggested answers, not necessarily right or wrong
  - Professional Services: due to an economic slowdown firms had less projects in 2008 and 2009 but have been recovering in 2010
  - Energy: has remained steady, potentially due to longer term projects client needs fluctuate less
  - Travel & Leisure: has decreased with disposable income
  - Relocation: steadily increasing, potentially families are moving to new cities to find new jobs or contracts
- What percentage of our business is Professional Services in 2008?  
*ANSWER: 40%.*
- As a follow up question: What industries are not represented in this chart, where you think there is opportunity?

## Notes to interviewer

- The interviewee should notice that they need to know how much revenue the company currently has and how much an additional night Costs
  - Assume each Night Stayed is worth \$200 in revenue and costs \$150
  - Therefore, based on 100MM nights stayed in 2010, a 1% increase in nights stayed is worth \$200MM in revenue and \$50MM in profit
- There is a 50% chance of a good or bad economy. The interviewee should not assume their own number but should ask for this number.
- Given the information provided, a case can be made for competing options:
  - The Ad campaign has the highest expected return, but a 50% of no benefit (with a \$100MM up front lost)
  - Key Accounts is the safest move, with no possibility of a loss
  - Special Incentives is the riskiest option, and with the same payoff as Rewards is not a safe bet
- Assuming Risk Neutrality, we would employ the ad campaign, though qualitative answers can tip the scales towards other options.

# Math Solutions

## Exhibit 2 predicting 2011 profit, assuming \$100MM nights stayed in 2010

	Up front program Cost	Good Economy	Bad Economy
Rewards/Points Program	\$50MM	5% increase = \$1B Revenue, \$250MM Contribution	1% increase = \$200MM Revenue, \$50MM Contribution
Advertising Campaign	\$100MM	10% increase = \$2B Revenue, \$500MM Contribution	No effect
Hire Key Account Representatives	\$1MM	1% increase = \$200MM Revenue, \$50MM Contribution	1% increase = \$200MM Revenue, \$50MM Contribution
Create special Sales Force incentives to focus on growth	\$25MM	10% increase = \$2B Revenue, \$500MM Contribution	5% decrease = \$1B Revenue lost, \$250MM contribution decrease

- If Economy is 50% likely to be good (50% times expected value of each outcome):
  - Rewards = \$100MM expected profit ( $250 \times 50\% + 50 \times 50\% - 50$  cost)
  - Advertising = \$150MM expected profit ( $500 \times 50\% + 0 \times 50\% - 100$  cost)
  - Key Account Rep = \$49MM expected profit ( $50 \times 50\% + 50 \times 50\% - 1$  cost)
  - Special incentives = \$100MM expected profit ( $500 \times 50\% + (-250) \times 50\% - 10$  cost)



# Solution and recommendations

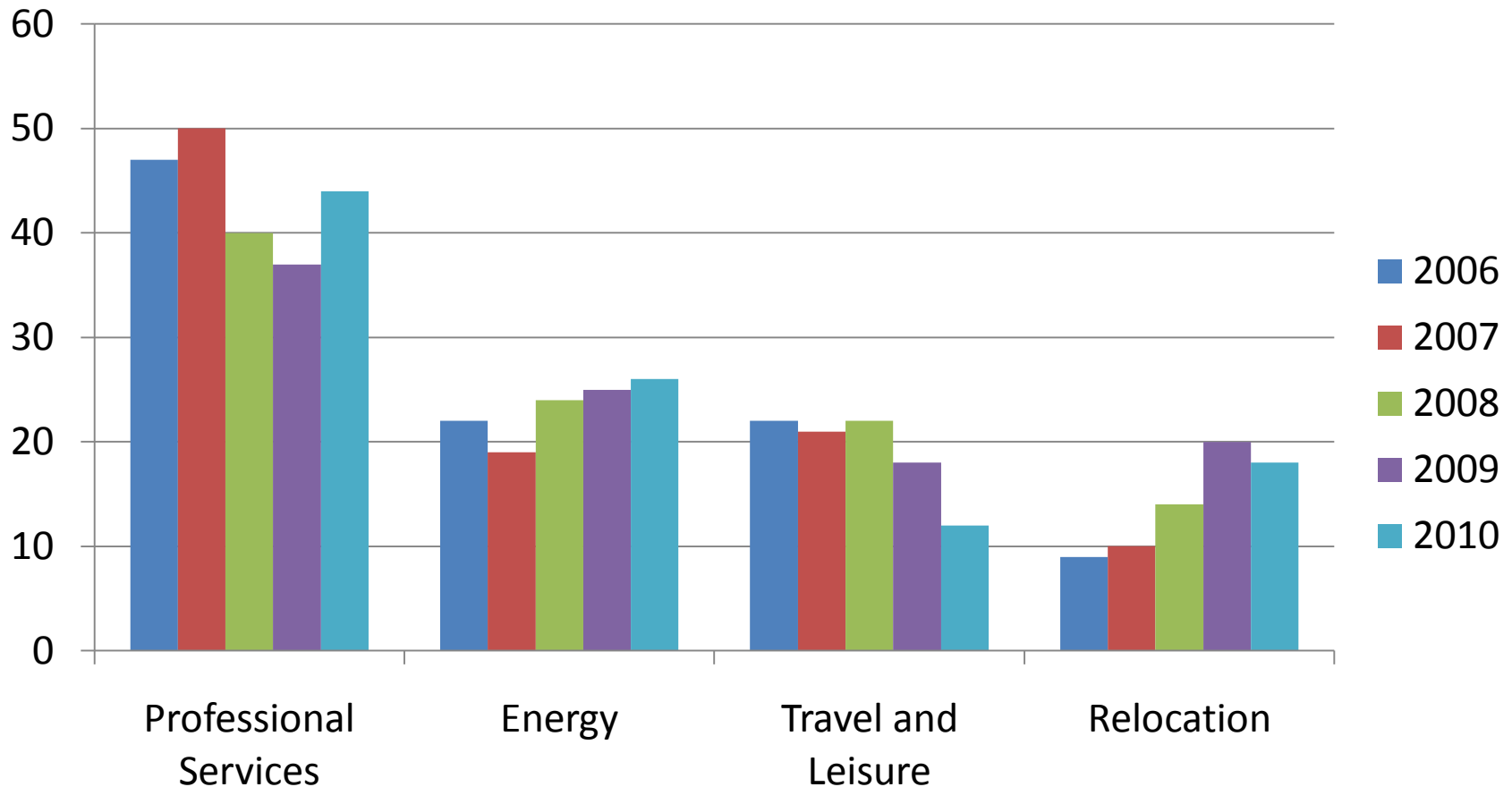
## Solution & Recommendations

- The first part of the case doesn't have a real answer, it should simply be a conversation about potential options for our client
- Exhibit one is a basic math warm up, and another opportunity for the interviewer to display qualitative creativity
- Finally, depending on the risk profile of the client (which the interviewer can either assume or ask for) there can be a case made for all the competing options
  - If we need the highest return possible and we are risk neutral, the ad campaign still is the best option despite the higher up front cost compared to Key Incentives
  - If we are risk averse, Key Accounts are the best option with low cost and no downside
  - The Rewards program offers a modest return but does not offer as favorable returns as the ad campaign, it would be a viable option if we don't think we can raise the capital required for higher cost options

## Bonus/Guide to an Excellent Case

- An excellent interviewee will note:
  - This is a loosely structured case and encourages creative responses.
  - There are markets that we could move into not mentioned: Government, Education (Higher Ed), Entertainment (TV & Movies), Construction, Healthcare etc.
  - Some of the proposals will gain new customers in addition to increasing existing customer sales. For example, Advertising and a Rewards program could be appealing to potential customers that don't use our product.

# Exhibit 1: Annual nights stayed (MM) 2006-2010



Professional Services include Consulting, Accounting/Audit, Insurance, Law,

## Exhibit 2: Increasing penetration in current clients

	Up-front program Cost	Good Economy	Bad Economy
Rewards/Points Program	\$50M	5% increase in revenue with existing customers	1% increase in revenue with existing customers
Advertising Campaign	\$100M	10% increase in revenue with existing customers	No effect
Hire Key Account Representatives	\$1MM	1% increase in revenue with existing customers	1% increase in revenue with existing customers
Create special Sales Force incentives to focus on growth	\$10MM	10% increase in revenue with existing customers	5% decrease in revenue with existing customers

# Case 14: Shermer Pharma

By: Ameer Mallick (Kellogg Class of '12)

## Case Question

- Our client, Shermer Pharma, is a venture backed start-up Pharmaceutical company. Over the past 15 years, Shermer has been developing a molecule that has been approved by the FDA to cure Alzheimer's with 90% efficacy.
- Shermer's owners have hired us to determine:
  - How should we sell our product?
  - Is our product going to be profitable?

## Case tracker

- **Industry:**  
Health Care
- **Level of Difficulty:**  
Medium
- **Case format:**  
Market entry
- **Concepts Tested:**
  - Break Even analysis
  - Marketing strategies
  - Organizational changes

## Fit Questions

### Spend first 15 min on fit

- Give me an example of a time you had to change someone's mind.
- What are the most difficult or challenging decisions you have made recently?
- In what kind of work environment are you most comfortable?

## Guide to interviewer

- This case is focused on 2 questions, can you determine what it takes to launch a new product profitably through a cost benefit analysis, and can you think through the implications of starting a Sales & Marketing organization from scratch
- The interviewee should be guided towards 2 primary options for the Sales & Marketing question
  1. Start your own sales force
  2. Contract sales
- Bonus sales force answer is sell Shermer to a larger firm
- Profitability will center on the interviewee's ability to read tables and data on the market and our market share.

7

Quants.

8

Structure



B/E  
Mkt. Stgy  
Org. Chg.

# Clarifying answers and case guide

## Clarifying answers to provide if Asked

### Industry Definitions

- Our product is a pill that cures Alzheimer's, an illness that currently has no treatment that cures or stops the progress of this disease
- Alzheimer's is a degenerative, terminal disease that causes senility and dementia. 30 MM people suffer worldwide
- Sales would be focused on Neurologists and Geriatric psychiatrists (not the consumer of the product)

### Client Characteristics

- We don't have a Sales or Marketing organization, the company has purely been a research firm to this point.
- FDA approval, etc has been granted

### Competitive Dynamics

- We will not focus on competitive response during this case as we are the only firm that has a cure for this illness and will be for the next 5 years

## Interviewer Guide to case and handouts

**Case Structure** – Interviewee should focus on the questions separately. First we will brainstorm how to sell our product and ask questions to get after the costs of a sales force (Exhibit 1). An optional middle step is a brain teaser to determine the size of the Alzheimer's market. (provide answer of 5MM at the end of the exercise. They then need to ask about the costs and revenues from our new product (Exhibit 2).

**Exhibit 1-3** – After Interviewee walks through structure, they should ask questions about the costs of sales and then ultimately the profit equation.

- *If the interviewee isn't getting to the question on the 3 Sales Force options, guide them back toward this and provide exhibit 1.*
- *Have a conversation with the Interviewee to force them to talk through the essential components of the Profit Equation that are needed to answer the question.*
- *Let the Interviewee drive the case. When you feel that they have asked enough information about the following topics, give them the exhibit that shows this information:*

- |                       |   |           |
|-----------------------|---|-----------|
| – Sales force options | → | Exhibit 1 |
| – Revenues vs Costs   | → | Exhibit 2 |

**Answer** – The numbers reveal that our product will be profitable. However, a critical question will be the sales channel, which is why they need to determine to use contract sales in order to be profitable. It is also correct to state that Shermer should sell the product to a larger firm, but the second half of the case should be under the assumption that the owners decide to do contract sales.

# Key elements to analyze

## Market Entry

- Using Exhibits 1 the interviewee should be able to determine that contract sales is the best financial option

## Profitability

- Using Exhibit 2, the interviewee should determine that our product will be profitable utilizing either type of sales force.

## Notes to interviewer

- The question boils down to realizing that our client's competencies are rooted in developing a product, not Sales and Marketing. The correct approach is therefore to contract sales or sell the company
- The qualitative approach to the answer is appropriate, but once the interviewee has discussed enough of the inputs, **exhibit 1** should be shared:
  - There is missing data in the chart that should be easy to calculate (solutions provided)
- A third option with no attached data would be to sell the company to a larger firm, this is an appropriate discussion to have and if prompted the interviewee should discuss the tradeoffs of this more qualitatively
- A contract sales organization is typically less effective than internal sales, though most interviewers won't pick up on this and simply giving the financial answer is appropriate

## Notes to interviewer

- You should let them size the market as a first step, but then provide the actual number of 5MM.
- The firm requires that R&D costs be recovered by Year 5 of the product (a window before which there will be no competitive response)
  - We can ignore NPV for this question and just assume a straight line amortization...interviewee should come to this conclusion on their own, but course correcting is okay if they get stuck
- Critical information on the exhibit should be provided as the interviewee asks, though should only be volunteered if the interviewee is stuck
- We can ignore tax, however a good interviewee will ask about it, and doing so would realize we still hit our profit targets by year 5
  - Manufacturing & Packaging costs are included in the Gross Margin

# Math Solutions: Exhibit 1

	Develop own Sales Force	Contract Sales Force
Percent of visit focused on our product	100%	50%
Annual fully loaded cost per Sales Rep	\$200k	n/a
Cost per sales call	<b><math>\\$170 ((\\$200k * 85) / 100)</math></b>	\$60
Total calls required	<b><math>100k</math> (should be asked/given)</b>	<b><math>200k</math> (<math>100k * 2</math>)</b>
Total Sales Reps needed	85	<b><math>170</math> (<math>85 * 2</math>)</b>
Total annual Selling Cost	<b><math>\\$17MM</math> (<math>\\$200k * 85</math>)</b>	<b><math>\\$12MM</math> (<math>\\$60 * 200k</math>)</b>

# Math Solutions: Exhibit 2

<b>Total Market</b>	<b>5MM</b>
Annual gross margin per user	\$1000
R&D Cost	\$1.5B
G&A cost	\$25MM

\*Data at left to be provided as the questions are asked by interviewee

	Year 1	Year 2	Year 3	Year 4	Year 5
Projected Market penetration	5%	10%	25%	40%	60%
Total Users	<b>250k (5%*5M)</b>	<b>500k (10%*5M)</b>	<b>1.25MM (25%*5M)</b>	<b>2MM (40%*5M)</b>	<b>3MM (60%*5M)</b>
Total Gross Margin	<b>\$250MM (250*\$1000)</b>	<b>\$500MM (500*\$1000)</b>	<b>\$1.25B (1.25MM*\$1k)</b>	<b>\$2B (2MM*\$1k)</b>	<b>\$3B (3MM*\$1k)</b>
Amortized R&D Costs	<b>\$300MM (\$1.5B/5)</b>	<b>\$300MM (\$1.5B/5)</b>	<b>\$300MM (\$1.5B/5)</b>	<b>\$300MM (\$1.5B/5)</b>	<b>\$300MM (\$1.5B/5)</b>
Selling Costs	<b>\$12 MM (from ex.1)</b>	<b>\$12 MM (from ex.1)</b>	<b>\$12 MM (from ex.1)</b>	<b>\$12 MM (from ex.1)</b>	<b>\$12 MM (from ex.1)</b>
G & A Costs	\$25 MM	\$25 MM	\$25 MM	\$25 MM	\$25 MM
Net Income	<b>(\$87MM)</b>	<b>\$163MM</b>	<b>\$913MM</b>	<b>\$1.663B</b>	<b>\$2.663B</b>



# Solution and recommendations

## Solution & Recommendations

- Shermer Pharma's core competency is their research focus. The plausible argument can be made that they should sell the company to a larger firm that has the appropriate capabilities that it takes to market and sell a product. Though this might be the right answer, the client isn't always going to do take the optimal approach, particularly when it comes to ownership of the firm. We need to be flexible to account management's wishes
- Assuming the owners decide not to sell the company, contract sales is the next best option, that gives us the best scenario when determining overall profitability of our product.
- The latter half of the case is simple math, determining a P & L for our product and coming up with the correct answer that Shermer can be profitable.
- Ask for high level analysis at the end of the case, what else should be consider before engaging this plan?

## Bonus/Guide to an Excellent Case

- An excellent interviewee will note:
  - There is an option to sell the company, even though there is no data provided to support this conclusion
  - Some of the numbers give an obvious answer before needing the exact calculations
  - Challenging the interviewer on the effectiveness of a contract sales organization is a bonus. A qualitative argument can be made that for an additional \$5MM a year, we can realize the benefit of a more effective sales force, this isn't the financially correct answer but may be the right tradeoff given the relatively minimal impact to the bottom line vs. revenues of \$3B
  - \$1000 per year for a life saving cure for a currently incurable ailment is definitely under priced!

# Exhibit 1: Sales force options

	Develop own Sales Force	Contract Sales Force
Percent of visit focused on our product	100%	50%
Fully loaded annual cost of 1 sales rep	\$200k	n/a
Cost per sales call		\$60
Total calls required		
Total Sales Reps needed	85	
Total annual Selling Cost		

## Exhibit 2: Annual Net Income

	Year 1	Year 2	Year 3	Year 4	Year 5
Projected Market penetration	5%	10%	25%	40%	60%
Total Users					
Total Gross Margin					
Amortized R&D Costs					
Selling Costs					
G & A Costs					
Net Income					

# Case 15: Hospitality Co

By: Craig DePriester (Kellogg Class of '12)

## Case Question

- Our client owns a large hotel chain and is thinking about investing in an add-on for a waterpark on one of its properties. This has been tested in some places and has a lot of potential benefits: family friendly, year-round availability, and potential to bring in new clientele. They have done a lot of work surveying their chain and believe that they have found the right hotel to experiment with a waterpark add-on. Currently, this hotel has a lot of business travelers, but our client believes it would also be attractive for families.
- Our client is nervous about the capital required to build the add-on and wants to make sure that they are making the right investment. That's why we brought you on board. What do you think?

## Case tracker

- **Industry:**  
Leisure
- **Level of Difficulty:**  
Medium
- **Case format:**  
Opportunity Assessment
- **Concepts Tested:**
  - Investment
  - Breakeven analysis

## Fit Questions

### Spend first 15 min on fit

- Tell me about a time when you've had a conflict with a teammate.
- How would your friends describe you?
- How would you compare our industry with others you are interested in?

## Guide to interviewer

- This case forces the interviewee to focus on the right issues and can be tricky. The candidate will need to ignore competitive positioning and focus on the profitability of the waterpark. The waterpark should recoup its investment and can even charge a premium.
- They will need to ask the right questions about the investment, its buyback period, and make assumptions about vacancy.
- There are also lots of potential risks and benefits that a great interviewee will recognize that allow them to consider the case on another level of detail.

5

Quants.

5

Structure



Invest.  
B/E

# Clarifying answers and case guide

## Clarifying answers to provide

(Ignore any discussion of competition or market dynamics)

### Competitive dynamics

- There are no competitors immediately nearby for a waterpark
- We have no information about competitors
- There is no possibility for a competitive response in the short run

### Market information

- Our client has done proper diligence and has determined that this is the
- We do not have any specifics about the market and are unable to conduct additional survey data

### Hotel characteristics

- Hotel's normal clientele is business travelers, but we believe that this waterpark will bring in families as well

## Interview guidelines

This is a simple profitability calculation ( $\text{Profit} = \text{Revenue} - \text{Costs}$ ) for the investment of a water-park add on. Many candidates will focus on the revenue side, but we need to back into the minimum amount the hotel *has* to charge to break-even on its investment in the payback period.

A sample case structure would include the following:

- 1) Cost structure - Identify the costs (fixed and variable) as well as the relevant payback period for the investment.
- 2) Breakeven analysis - Based on the estimated room rates and payback period, identify how much the hotel would have to charge (fixed + variable costs) for each room to breakeven over the life of the investment.
- 3) Additional risks and benefits – Qualitative assessment of other potential benefits/issues that may arise from the investment.

# Math question and solution

## Math question

- How much will the hotel need to charge per room to recoup its costs?

## Math solution

The math is about backing into how much the hotel needs to charge per room over the course of the three years to recover its investment. The interviewee needs to ignore the variable cost and focus on how to spread the fixed cost of the investment over the payback period.

$\$6 \text{ million investment} / 3 \text{ years} = \$2 \text{ million} / \text{year in revenues}$

$400 \text{ rooms} \times 50\% \text{ vacancy} \times 350 \text{ days (don't use 365) year} = 70,000 \text{ rooms per year}$

(Many candidates will struggle with this, try to combine costs, and will make the difficult on themselves. Let them struggle for a few minutes before helping).

$\$2 \text{ million/year divided by } 70,000 \text{ rooms/year} = 28.6, \text{ or about } \$30/\text{night in fixed cost}$

The candidate should add this with the variable cost for around \$70/night total for the three year period. If they do not interpret the number immediately, ask them what they think about the \$70/night total.

## Math information

- Investment:
  - \$6 million investment
  - Payback in 3 years
- Hotel:
  - 400 rooms
  - With waterpark, 50% vacancy on average for the year
- Cost structure:
  - Investment is fixed cost
  - Variable cost is \$40/night per room

# Key elements to analyze

## Pricing decisions

- How should we interpret the breakeven point on the hotel costs?
- How do we think about pricing?

## Other revenue streams

- What other potential benefits/revenue streams might this have?

## Potential risks and issues

- What are the potential risks and issues associated with ?

## Notes to interviewer

- The interviewee should realize \$70 is an extremely low number, especially considering that families may be staying at the park.
- This will also ask the interviewee to gauge this number against the real cost of hotels and their personal experiences.
- Realistically, the hotel will be able to charge significant premium in addition to covering its basic costs.
- There are two options: charge an additional fee for waterpark entry or make it all-inclusive with hotel fee.

## Notes to interviewer

- There are a lot of potential places to go here, but here are some ideas:
  - Charging admission entry
  - Food/restaurants at the park
  - Promotional tie-ins
  - Merchandise/swim suit apparel
  - Expansion to other hotels

## Notes to interviewer

- Similarly, there are a lot of potential risks:
  - Management competency (do we have any experience?)
  - Regulatory/insurance risks
  - Health/litigation risks associated with theme parks
  - Competitive response
  - Alienating business customers with family friendly atmosphere

# Solution and recommendations

## Solution & Recommendations

- This project should be undertaken. While there are a number of potential risks and considerations (including competitive dynamics), the economics are extremely attractive and the price (\$70/room) to earn back our investment is relatively low for almost any hotel, much less one with these amenities.
- The interviewee should make a solid case for their recommendation, using the other potential avenues for profit and the low payback price as key points for its undertaking.
- While the model answer suggests undertaking the investment, if an interviewee has a compelling, logical story on why the risks outweigh the benefits, it should be judged on its own merits. It would have to be a powerful argument though.

## Bonus/Guide to an Excellent Case

- This case is defies a lot of candidate's expectations, with a lot of them really focusing on competitive/market dynamics. An excellent interviewee will get to the math quickly by focusing on the important issues: returning the investment.
- Additionally, an excellent interviewee will interpret the breakeven point as low. Asking them to "interpret" these numbers provides a good check of business judgment. Furthermore, an excellent interviewee will provide a lot of creative risks/benefits from this investment as well.



# Case 16: Rock Energy

By: Mauricio Atri (Kellogg Class of '12)

## Case Question

- Rock Energy, an Oil & Gas company, is evaluating the purchase of one of three oil fields in Latin America. After purchasing the rights to extract oil from one of these fields, Rock Energy will outsource the drilling activity. You have been brought in to identify the best investment for Rock Energy.
- *How would you evaluate the three oil fields, and which oil field should Rock Energy purchase?*

## Case tracker

- **Industry:**  
Energy
- **Level of Difficulty:**  
Medium
- **Case Format:**  
Opportunity Assessment
- **Concepts Tested:**
  - Investments
  - Creativity

## Fit Questions

### Spend first 15 min on fit

- What are you most proud of?
- Describe a time at Kellogg where you worked with a team to achieve a challenging goal

## Guide to interviewer

- Main steps the interviewee should take:
  - Identify days it takes to drill one well in each region, using the depth and penetration rate provided
  - After this, he/she should be able to quantify the cost associated with drilling one well
  - The price and barrels extracted by day will allow the interviewee to estimate the total revenue and profit by well. It is essential to consider that in 1 year you can produce different number of wells by Region, and that you have limited amount of rigs
  - After achieving the calculations, the interviewee should consider other factors, risks that could affect the decision investment such as, political risks, labor costs, difference in oil quality, insurance costs, of future oil prices

7

Quants.

5

Structure



Invest.  
Creativity

# Clarifying answers and case guide

## Clarifying answers to provide

### Industry Characteristics/Market Economics

- The rights being offered to Rock Energy gives them the right to drill during 1 year, and produce oil for 20 years. Assume that no oil is produced until the beginning of year 2.
- Rock Energy can get the drilling operator to deploy a maximum of 10 rigs in each of the regions
- The cost of the rig day includes crew, consumables and services
- Any amount of oil being extracted will be sold at the spot market price of the moment
- For simplicity assume that the oil wells will produce the same amount of oil for the next 20 years with no maintenance costs
- The rights to extract oil cost \$40M in each region

## Guide to case / Guide to handouts

### Part 1 – Hand out exhibit #1 after introducing case

- This handout should lead the interviewee to understand that each region will have different geological characteristics which will affect the drilling time, production, revenues and costs for Rock Energy

### Part 2 – Profitability

- Give out the current spot price and ask the interviewee to work out the profitability for each field, and not only by well.
- The answer will be a function of the investment, variable costs, and quantity of oil extracted by field. This last variable will depend on the number of wells drilled in one year.

### Part3 – Conclusion and other issues

- Rock Energy should choose to buy the rights for **Region 2** because it will offer the best profits, but there are other factors that could impact the decision to invest:
  - Insurance costs
  - Political stability of the region
  - Labor contracts and unions
  - Volatility of oil prices
  - Oil quality differences

# Key elements to analyze

## Profitability - Quantitative analysis

- What are the costs and expected revenues of each investment option? What investment opportunity should Rock Energy pursue?

## Qualitative Issues

- Even though the numbers make **Region 2** the best investment, there are other issues that would need to be analyzed by Rock Energy to fully understand the risk of the investment

## Notes to interviewer

- Exhibit 1 – This exhibit should give the interviewee enough information to identify the number of wells and the amount of total oil that could be extracted from each field, as well as the per well yearly production. **Missing Spot Price = \$50**
- There are three major points to identify: 1) The average well production in Region 3 is the largest of all regions, but you can only drill 33%/50% the number of wells you can drill in Region 1&2. 2) Variable costs on a per well basis show Region 1 as the most profitable. 3) Nevertheless, the number of wells you can achieve during the first year are different in each region and there is a fixed cost, **so Region 2** will be the most profitable for Rock Energy
- The yearly profits will be (Calculations on next page):
  - Region 1 = 50M, **Region 2 = 68M**, Region 3 = -4M

## Notes to interviewer

- There are several “qualitative” issues that need to be considered when deciding to make an investment like this, and the interviewee is expected to mention and analyze the impact of at least two of these:
  - Insurance costs: Countries have different regulations and might differ on the required insurance coverage that an Oil & Gas company will need to hold. Liability caps could vary by country, affecting the insurance cost
  - Political stability of the region: Accessing a well site could become a challenge in politically unstable regions. Other property right risks could also affect the risk being bared by this firm
  - Volatility of oil prices: Prices below \$27 will make all the Regions have a negative return
  - Oil Quality: Differences in Oil quality could have an impact on the spot price

# Math question and solution

## Math question

- What are the first profits during the first year of production (i.e. 1<sup>st</sup> year spent on drilling, and production begins in 2<sup>nd</sup> year)

## Math solution

- Time to complete a well** = (Depth/Penetration Rate): Region 1 = 60, Region 2 = 90, Region 3 = 180
- Production per well by region** = Daily production \* 360 days: Region 1 = 36K, Region 2=72K, Region 3= 108K
- Cost per well** = Days to complete well\*Cost per rig day. **Yearly Revenue per well** = Price \* # barrels per year. **Number of wells per year** = 360/(Time to complete a well) \* number of rigs. Profit Margin = (Profit per well)/(cost per well). **Total Revenue** =(Yearly Revenue) \*( Number of wells per year). **Total Cost** = (Cost per well)\*(number of wells)+(Rights to extract oil). **Profit** = Total Rev – Total Cost.

Concept	Region 1		Region 2		Region 3	
Investment Cost (Rights to extract oil)	\$	40,000,000	\$	40,000,000	\$	40,000,000
Cost per well	\$	300,000	\$	900,000	\$	3,600,000
Yearly Revenue per well	\$	1,800,000	\$	3,600,000	\$	5,400,000
Profit per well	\$	1,500,000	\$	2,700,000	\$	1,800,000
Profit margin per well		500%		300%		50%
		(360/60) = 7 x 10 Rigs =				
Number of wells per year		60		40		20
Total Revenue	\$	108,000,000	\$	144,000,000	\$	108,000,000
Total Cost	\$	58,000,000	\$	76,000,000	\$	112,000,000
<b>Profit</b>	<b>\$</b>	<b>50,000,000.00</b>	<b>\$</b>	<b>68,000,000.00</b>	<b>\$</b>	<b>(4,000,000.00)</b>

# Solution and recommendations

## Solution & Recommendations

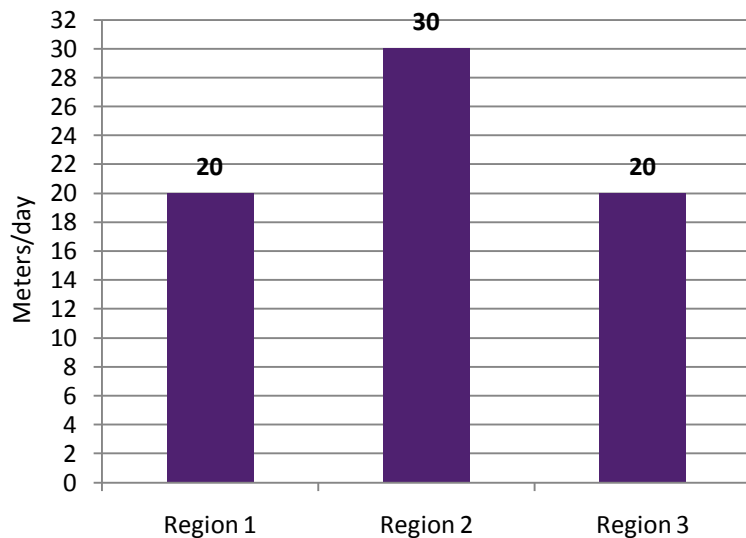
- Rock Energy should invest in buying the rights for Region 2
- It is important to recognize that even though the profit margin for Region 1 is significantly higher on a per well basis, the return of the investment depends on the total number of wells that you can drill in the first year and the upfront cost for the rights to extract oil in that Region
- Additionally, the interviewee should be able to identify other qualitative aspects of the investment that might affect the decision to invest in a certain Region

## Bonus/Guide to an Excellent Case

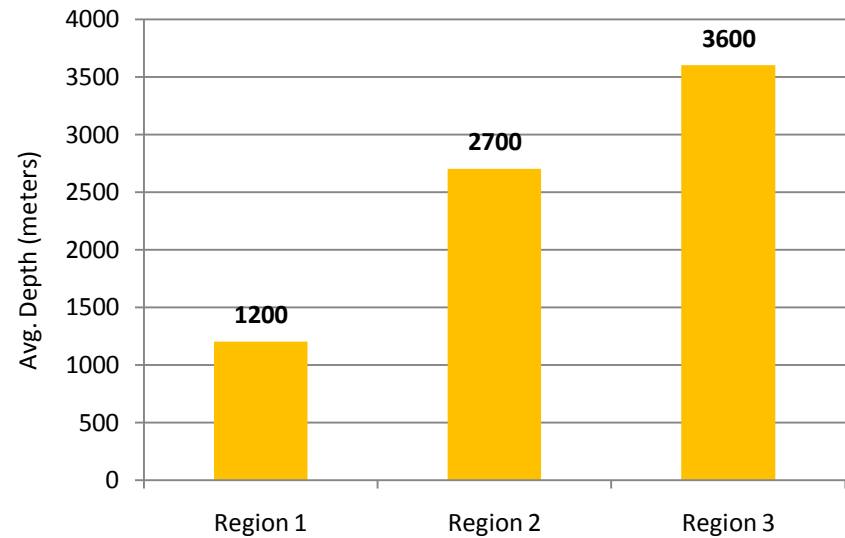
- An excellent answer would mention and briefly summarize the impact of including an expected value analysis, which would assign different probabilities of extracting the expected barrels per day

# Exhibit #1: Oil Field profiles, 2010

**Drilling rates by Region**



**Average depth of wells by Region**



■ Average depth (meters)

	Region 1	Region 2	Region 3
Number of Rigs that would operate	10	10	10
Average well production (barrels per day)	100	200	300
Cost per rig day (\$US)	\$5,000	\$10,000	\$20,000

\*Note: Wells are continuously dug for only one year and then oil is extracted going forward. Wells are dug by "Rigs". Once a Well has been completed, the Rig moves on to dig another well.

# Case 17: Orange Retailer Co.

By: Mauricio Atri (Kellogg Class of '12)

## Case Question

- Orange Retailer Co. (ORC) manufactures, import/exports and distributes **high-end** world known brands and conservative/traditional apparel brands in several countries in Latin America. ORC is considering entering a new country in Latin America, and you have been hired to determine whether they should enter this new market or not.
- *Don't mention this until they have determined to enter the market:* What would be the best entry strategy?

## Case tracker

- **Industry:**  
Retail
- **Level of Difficulty:**  
**Medium**
- **Case Format:**  
Market Entry
- **Concepts Tested:**
  - Market Sizing
  - Marketing Strategy
  - Creativity

## Fit Questions

### Spend first 15 min on fit

- Ask interviewee the name of a firm with which they have an interview, then ask Why this firm?
- Tell me about a time when you led a team through a challenge

## Guide to interviewer

- This case tests the ability to understand business concepts and quantify the potential benefits and risks of entering a new market.
- The interviewee should be able to size the potential market, distinguish different type of customer segments, and identify entry strategy for Orange Retailer Co.
- Additionally, the interviewee should identify some associated risks and potential ways to mitigate them
- Hand out exhibit #1 – Size of potential market and customer segments
- Hand out exhibit #2– Current players' share and margins
- After quantifying the size of the opportunity and the ideal strategy to enter this market, the interviewee should identify qualitative aspects of entering this new market

5

Quants.

5

Structure



Mkt Size.  
Mkt. Stgy  
Creativity

# Clarifying answers and case guide

## Clarifying answers to provide

### Industry Characteristics/Market Economics

- Macroeconomic outlook is positive in the new market
- Distribution channels are primarily department stores, free standing points of sale, and online sales

### Client Characteristics

- Client is currently the third biggest apparel retailer and has focused on F/H and T/C brands for over 30 years
- ORC has traditionally targeted High-End clients, men and women of ages 15-40

## Guide to case / Guide to handouts

### Part 1 – Hand out after introducing case

- Is there a market opportunity for ORC? What is the size of the relevant market? Interviewee should quantify the size of the market for fashion/high end and conservative/traditional apparel
- Additionally, there should be insight about the most attractive customer segments to target

### Part 2 – Hand out Exhibit 2 after solving Exhibit 1

- The data should lead the interviewer to recognize that the high-end fashion market is probably driven by brand and/or other factors besides price. The margins are more attractive. ORC should be able to leverage the “world known” brands to attract customers in this segment. Additionally, by targeting “young adults” and “teen & children” it can serve +80% of the market
- In the conservative/traditional market, there seems to be stronger competition, which is probably driven primarily by price. Achieving low costs in this market by importing would be unlikely due to tariffs, and local manufacturing would probably require significant fixed (plants, ...) and variable (labor, ...) costs

**Part3** – What other elements should ORC consider in its decision to enter this market?



# Key elements to analyze

## Topic 1 being tested

- What is the potential of the market for this apparel brand?
- *When asked, answer the following: ORC has traditionally targeted **High-End** clients, men and women of ages 15-40*

## Topic 2 being tested

- What could the client drivers be for each segment?
- Should ORC compete in both segments, one or neither?

## Topic 3 being tested

- What channels would you use to enter the market
- What other elements need to be considered?

## Notes to interviewer

- With Exhibit 1, you can estimate the size of each market: Value Driven (245M), Conservative (155M), Fashion & High-end (105M)
- Although the high-end market is smaller (105M) than the conservative market (155M), its concentrated in two customer segments that account for ~70%-80% of the market, which would make entry efforts simpler and more focused.
- Value Driven apparel is not something in which ORC focuses, so they should not enter this segment

## Notes to interviewer

- The Fashion/High-end market seems to be driven by factors such as brand, *trendiness* items, aspiration aspects, or similar. Assuming manufacturing costs are similar, players seem to be able to charge more for products that have a brand recognition
- The Traditional market appears to be a price sensitive market, driven by cost. Assuming that ORC has no cost advantages over local players, this seems like a less attractive market (tariffs, or investment cost would drive ORC prices up)
- ORC should only enter the F/H market

## Notes to interviewer

- ORC should probably enter the market by distributing to department stores coupled with online options, limiting costs of testing the market. Once this has proven successful, ORC should think about rolling out a series of free standing stores, beginning by flagships stores for the brand which will help them position in the new market
- Some of the other elements that could be considered are: new organizational structure, investments in advertising, transportation times and costs , and exchange rates risk

# Solution and recommendations

## Solution & Recommendations

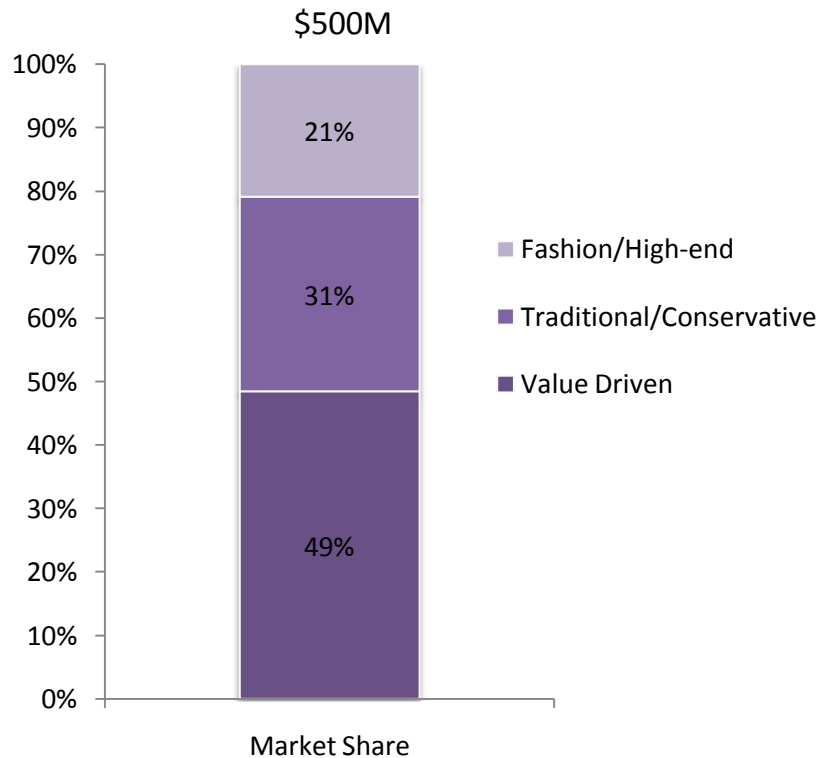
- ORC should enter the Fashion/High-end market. It should be able to leverage the “world known” brands to position itself in this market as an attractive option for the “young adults” and “teens & children” segments.
- To enter this market, ORC should focus on department stores first to test the market with low risk. It could enter the department stores and online channels without the need of a local partner. Once the market has been tested, it could be convenient to acquire/form a JV to build an independent store network

## Bonus/Guide to an Excellent Case

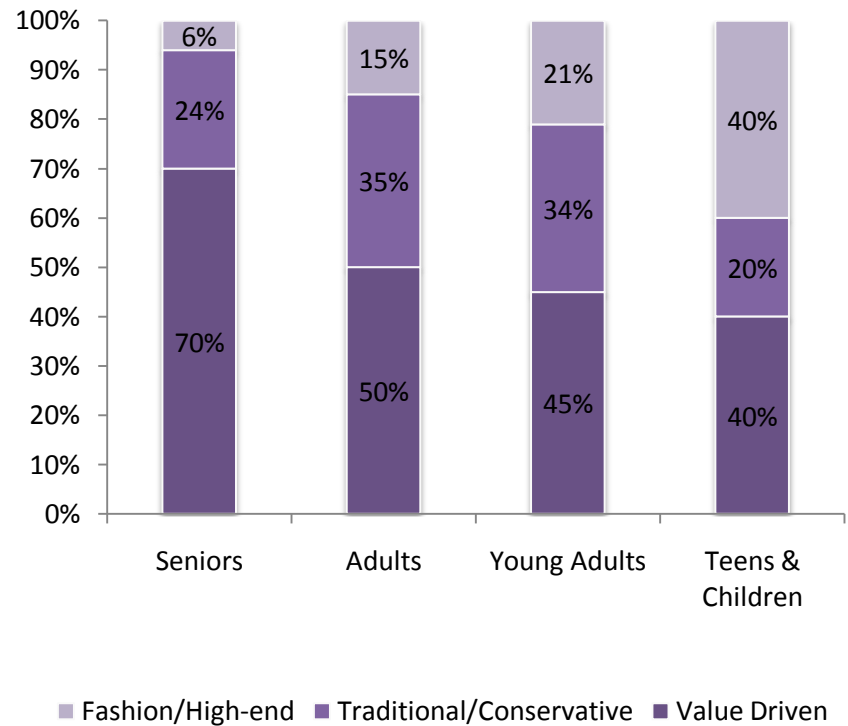
- An excellent answer should mention investments costs, manufacturing costs, transportation costs, and exchange rate risks. If costs are expensed outside of the new market, there are options to mitigate exchange rate risks by buying currency financial options

# Exhibit #1: Apparel market

Market Share (revenue)



Market share by customer segment (revenue)



## Exhibit #2: Current players

Current players in the Fashion/High-end market

<b>Fashion/High-end</b>	<b>Player 1</b>	<b>Player 2</b>	<b>Player 3</b>
Market share	40%	26%	34%
Gross Margin	70%	43%	55%
Operating Margin	45%	18%	30%

Current players in the Conservative/Traditional market

<b>Conservative/ Traditional</b>	<b>Player 1</b>	<b>Player 2</b>	<b>Player 3</b>	<b>Player 4</b>	<b>Player 5</b>
Market share	21%	18%	19%	21%	21%
Gross Margin	21%	22%	20%	23%	20%
Operating Margin	11%	12%	10%	13%	10%

# Case 18: Vitality Insurance, Inc.

By: Peter Manoogian (Kellogg Class of '12)

## Case Question

- Our client, Vitality Insurance, is a leading provider of supplemental insurance products in the United States.
- Vitality agents partner with companies to offer their employees optional, supplemental insurance for such conditions as life, cancer, etc.
- Vitality has undergone fairly steady growth in the past two years, but they suspect that some of their costs may be out of whack. *Is this indeed true, and, if so, what should they do about it?*

## Case tracker

- **Industry:**  
Financial Services
- **Level of Difficulty:**  
**Medium**
- **Case Format:**  
Improving profitability;  
Reducing Costs
- **Concepts Tested:**
  - Supply/value chain
  - Marketing strategy
  - Customer strategy

## Fit Questions

### Spend first 15 min on fit

- Give me an example of when you had to motivate others who did not report to you
- How would a friend, or a professor who knows you well, describe you?

## Guide to interviewer

- This case is primarily about diagnosing the source of cost increases for an insurance firm and then determining whether those increases are justified by increased profits
- The case is fairly structured in that the interviewee will need to “peel back” the layers of this case in the following process
  - Recognize that sales costs are out of whack
  - Identify the shift in sales contest mix for 2010
  - Evaluate the effectiveness of the new contest mix
- With any cost reduction case, an interviewee may seek information on other cost drivers. If this occurs, politely tell the interviewee nothing else exists and then refocus

6

Quants.

7

Structure



Reducing  
costs;  
profit

# Clarifying answers and case guide

## Clarifying answers to provide

### Client Characteristics

- Vitality is the leader in its category and has over 10K field sales agents
- Vitality sells all policies through its field sales agents who are solely compensated on a % commission of total new premium, defined as premium from new customers or additional premium (up-sell) from existing policyholders
- In addition to the commission, short term priorities are often communicated via sales contests that focus on a particular customer segment or activity
- Major costs: sales, G&A, and advertising

### Competition

- Vitality has a few other competitors in this market who have seen similar growth, but Vitality is a leader in the space and thus competition is not the focus

### Industry trends

- Mature market
- Agent turnover is very high on a yearly basis (though was lower during the recessionary period)

## Guide to case / Guide to handouts

**Exhibit 1**– Provide once interviewee receives clarifying information (left pane) and asks for more detail on costs

*Interviewee should recognize the following:*

- All line items except for sales costs growing at 10% per year
- Sales costs grow at 10% from 2008 to 2009, but at 45% from 2009 to 2010 (while premium growth remains at 10%)
- Stronger interviewees will quickly note that something is strange w/the 2010 sales costs, but will calculate to confirm
- Finally, profit margins are declining significantly from 09-10, suggesting that the increase in sales costs is not paying off

**Exhibit 2**– Provide if interviewee asks about the value chain or selling process. If the interviewee asks about the new contests focused on premium, provide the following information:

- Vitality launched a contest called “Sweeps Week” that aimed to drive increased premium in weeks that were traditionally low volume for the company. Vitality paid an extra 10% commission on all premium booked in those two weeks.
- Sales agents thought “Sweeps Week” was a great contest
- We have no info on the additional two contests on new accounts

**Exhibit 3**- Provide if interviewee asks for further detail on the effectiveness of “Sweeps Weeks”

# Key elements to analyze

## Supply/value chain

- As seen in **Exhibit 2**; Vitality's sales agents are engaged in several activities along the sales process, and that new premium can be generated in many ways.
- The interviewee should recognize the shift in contest mix from 2008/09 to 2010. Coupled with the additional information provided in the previous slide, the interviewee should realize that Vitality has shifted its focus more toward total premium and new accounts in 2010

## Notes to interviewer

- Assume the types of contests run in 2008 and 2009 were fairly similar
- Do not share **Exhibit 3** until the interviewee recognizes this shift in mix and begins asking questions about the new programs

## Marketing strategy

- **Exhibit 3** shows weekly premiums for all of Vitality from 2008 – 2010. The chart is shown in a way that compares each year's actual premium to the average of historical premium for that year, so as to provide for a "benchmark" comparison.
- The "Sweeps Week" contest launched in 2010 is shown in weeks 4 and 20 in the chart, and clearly yields high premium volume for those particular weeks. However, it is done at the expense of the weeks surrounding the sweeps week.
- This implies that agents may be "gaming" the system by pushing/pulling sales into that week to earn the contest \$\$

## Notes to interviewer

- If asked, confirm that agents have authority to "book" sales whenever they want by influencing the enrolment timing by up to one week
- Strong interviewees will also recognize that, despite not having charts to support it, a shift in customer focus toward acquiring new accounts in 2010 will likely also hinder profit margins, as acquiring a new customer costs considerably more than retaining (or up-selling) an existing customer

# Solution and recommendations

## Solution & Recommendations

- The interviewee should conclude that Vitality overspent in 2010 on the “Sweeps Week” sales contest, thus hurting its profitability
  - Exhibit three indicates that the contest influenced the sales force to conduct undesirable selling practices by pushing / pulling forward business to earn the extra commission
  - Further, the contest’s focus, driving new premium was duplicative with that of the main commission system, therefore it did not add much value
- Recommendation: eliminate “Sweeps Week” for 2011 and potentially repurpose those funds toward an activity that is not already covered by the main commission structure
- It is unclear whether we should remove the increased contests on new accounts, as this could be a new customer focus that we do not know about

## Bonus/Guide to an Excellent Case

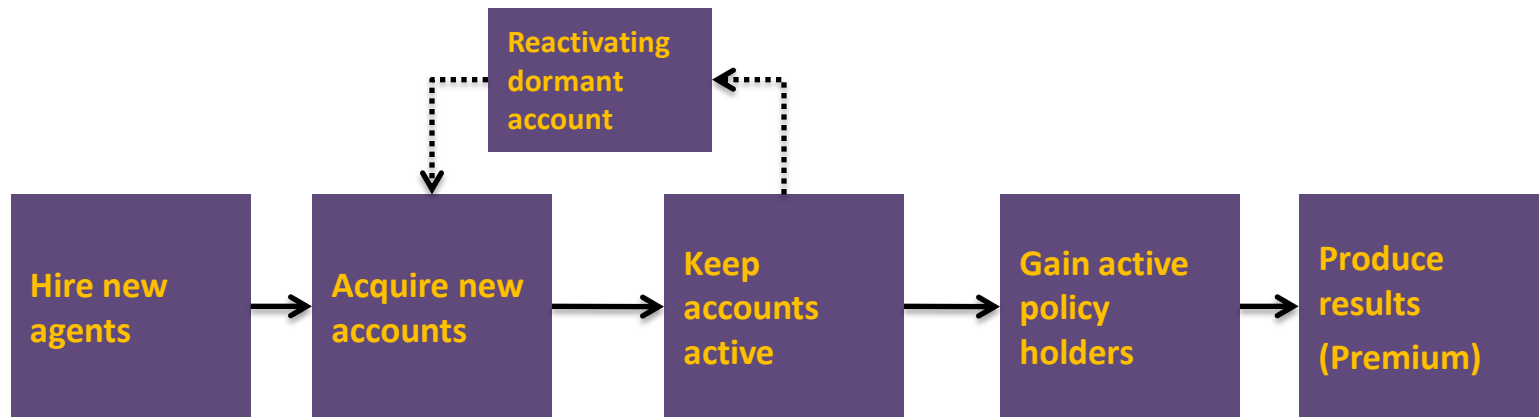
- Strong candidates will make the following observations:
  - Recognize that the likely decline in profit margin from 2009 to 2010 is linked to the abnormal increase to sales costs
  - That the “contest mix” in Exhibit two is similar to a firm’s marketing mix, especially given that the sales channel has already been established as the main marketing channel for these products
  - Suggest that the added contests on acquiring new accounts will also decrease profitability because acquiring new customers is more costly than retaining existing ones.



# Exhibit 1: Vitality insurance results and major costs

<b>Vitality insurance key results and costs (Figures in 000s)</b>			
	<b><u>2008</u></b>	<b><u>2009</u></b>	<b><u>2010</u></b>
Accounts converted	500	550	605
Total policyholders enrolled	1,500	1,650	1,815
Total premium from policyholders	\$2,500,000	\$2,750,000	\$3,025,000
Total costs			
General and Administrative	\$50	\$55	\$58
Sales	\$250	\$275	\$400
Advertising	\$25	\$28	\$30
Profit margin	9.50%	9.40%	8.50%

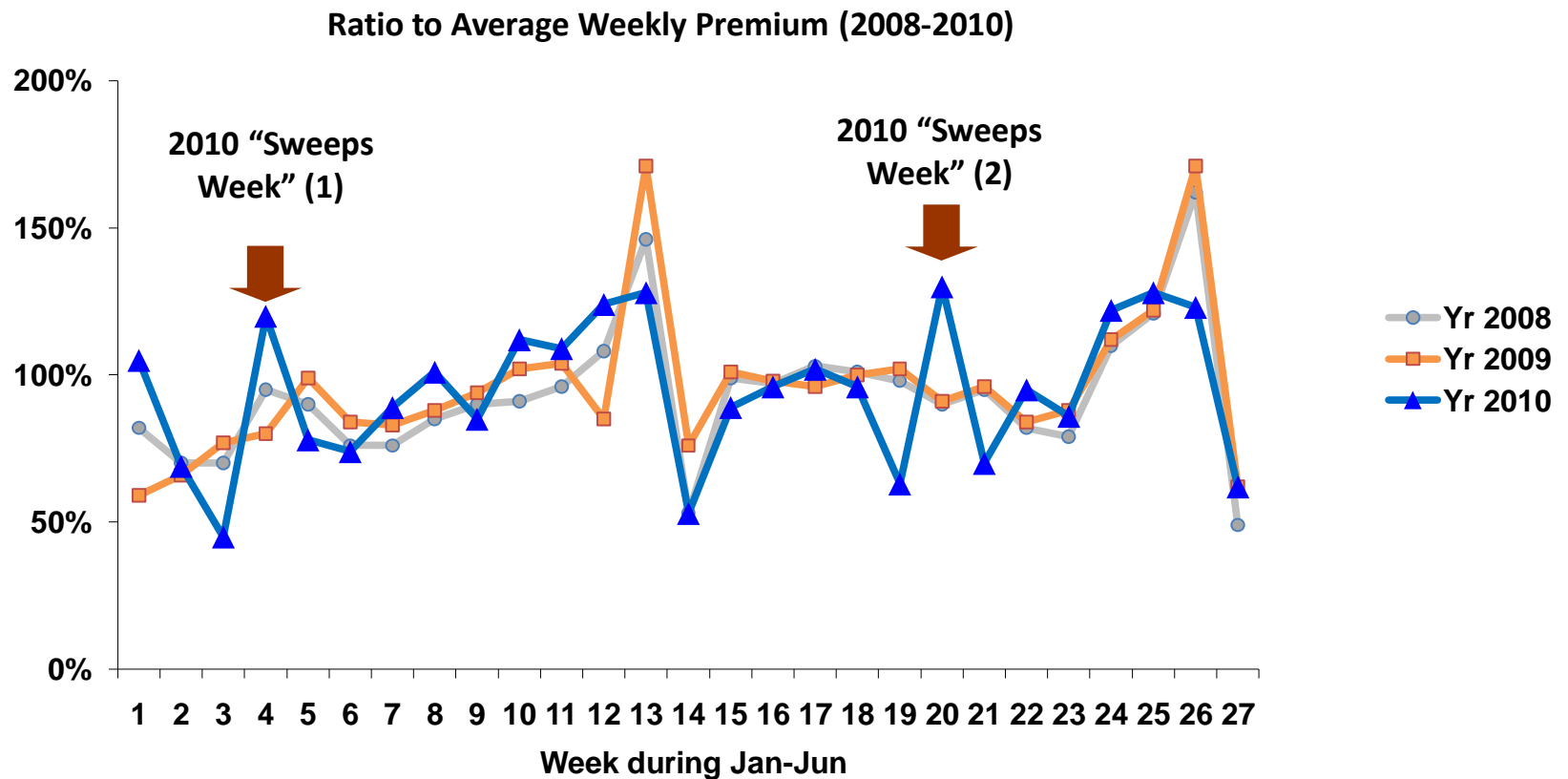
## Exhibit 2: Vitality insurance sales process



*# of agent focused sales contests targeted at these leverage points on the selling process*

Year	2008	2009	2010	Hire new agents	Acquire new accounts	Keep accounts active	Gain active policy holders	Produce results (Premium)
	2008	2009	2010	N/A	2	4	1	2
		2009		N/A	2	4	1	2
		2010		N/A	4	0	1	4

## Exhibit 3: Snapshot of “Sweeps Week” contest results



# Case 19: Chic Cosmetology University

By: Peter Manoogian (Kellogg Class of '12)

## Case Question

- Our client is a for-profit, specialty college named Chic Cosmetology University (CCU). Founded in 2005, CCU is a program for high school graduates seeking their professional cosmetology license. CCU is currently the market leader for cosmetology education with campuses in ten major metropolitan areas in the US.
- *CCU has capital to invest in a new campus and is considering Chicagoland as a location – should they do it?*
- *(If interviewee asks about OTHER objectives or defining success for opening the new location):* The client considers a successful launch as achieving positive operating profit for the new campus two years after opening

## Case tracker

- **Industry:**  
Education
- **Level of Difficulty:**  
**Medium**
- **Case Format:**  
Opportunity Assessment
- **Concepts Tested:**
  - Break-Even Analysis
  - Marketing Strategy
  - Market Share
  - Investments

## Fit Questions

### Spend first 15 min on fit

- Tell me about a difficult or sensitive situation that required careful communication
- Describe a project or idea that was introduced or implemented because of your efforts

## Guide to interviewer

- This case involves some number crunching but is more structurally focused. It is critical to ensure that the interviewee lands on the figures presented (or is course corrected toward them) in order to proceed with the later parts of the case.
- The interviewee should be able to develop a variant of the following question:  
*Will CCU be able to enroll enough students to offset the initial investment and achieve positive profit?*
- Key case steps:
  1. Evaluate CCU revenue and cost structures
  2. Project CCU's market share
  3. Estimate CCU Chicago enrollments
  4. Identify qualitative issues to consider

7

Quants.

8

Structure



B/E

Mkt. Stgy  
Mkt Share  
Invest.

# Clarifying answers and case guide

## Clarifying answers to provide

### Client Characteristics

- Enrolled students take classes at a physical campus for one school year to earn degree (FY begins on 9/1)
- CCU boasts the best campuses in the industry with state of the art equipment
- Strong job placement due to CCU's relationships with top salons in local areas
- CCU and industry enrollments growing at 5% per year

### Competitive Dynamics

- 2-3 other large specialty colleges, some of which are in the same geographies as CCU
- Community colleges beginning to offer cosmetology degrees at lower prices
- All ten CCU campuses have been present for at least three full school years
- All competitor campuses have also been present for similar lengths of time

### Industry Characteristics/Economics

- H.S. Diploma and cosmetology degree required to enter the field
- 98% of cosmetologists are women

## Guide to case / Guide to handouts

Share **Exhibit 1** with interviewee after probing questions are received about CCU's revenues and costs. Interviewee should be able to compute the following:

- Average revenue per enrollment = \$15K (revenue / total enrollments)
- Total annual fixed cost per campus = \$4.8M (\$48M / 10)
- Total variable cost per student = \$8K (\$80M / 10K)
- Gross profit per student = \$7K (\$15K - \$8K)

After that, the interviewee should begin to tackle the overall opportunity in the area as well as how many enrollments CCU could reasonably expect to obtain in year 1

Share **Exhibit 2** with interviewee after some of the qualitative aspects of CCU's targeting and marketing strategy are covered. Additionally, the interviewee should have asked about competitor information or made some attempt to assess what share of the market they should expect in Chicago.

- See "Market Share" section in next slide for further information on **Exhibit 2**

# Key elements to analyze

## Break-even analysis

- How many students will CCU need to break-even in year 1?

## Notes to interviewer

- Interviewee should ask about the investment cost of building a new campus in Chicagoland
- After asking, tell interviewee that the total cost is \$4.5M in initial building costs to renovate its chosen site. These costs can be amortized evenly over a three year period.
- Assume fixed costs remain flat per year

Interviewee should calculate

- Total fixed costs per year = \$6.3M (\$4.8M + \$1.5M from amortization).
- Gross profit per student = \$7K
- Break-even number of enrollments per year = 900 (\$63M / \$7K)

## Marketing strategy

- What types of schools / students do you think CCU targets?

## Notes to interviewer

Possible responses (schools):

- Public schools (private HS more likely to have grads go to 4yr univ)
- HS's in middle-class cities (may be an affordability issue w/lo income)
- Closest to the campus (geography)

Possible responses (students)

- Women HS graduates
- Not attending 4yr college
- Interested in cosmetology

**After a few of the above criteria are noted, share:**

- CCU has identified 1,000 targeted high schools in the Chicagoland area
- Within these HS, CCU's market research estimates that on average 6 students per HS have "potential" for CCU enrollment

## Market share

- What is the highest share we could expect CCU Chicago to capture in Y1?

## Notes to interviewer

- Show **Exhibit 2** to interviewee
- Interviewee should recognize:
  - Campuses w/competitors present tend to have a lower share (10%) than those w/out (15%)
  - However, presence of >1 competitor does not have an increased negative impact on market share (Boston has 8% share w/only one competitor)
  - Interviewee should assume a projected 10% market share for a Chicago campus (one competitor)
- **Also share the following :** 80% of enrolled students directly from high school, the other 20% of students come from the "Adult" market

# Calculations

## Math questions

1. What is the breakeven number of students required for CCU Chicago?
2. How many students should CCU Chicago expect to enroll in year 1, at the most?
3. (If time permits) = Suppose CCU finds a lot with a one time construction cost of \$300K with the same amortization schedule. Should they enter Chicago now?

## Calculations

1. **Break-even: (Estimated campus fixed cost + Yearly amortization ) / gross profit per student**  
$$(\$4.8\text{M} + \$1.5\text{M}) / \$7\text{K} = 900 \text{ students}$$
2. **Students: Total potential students x maximum projected market share**  
$$\text{Total potential students} = \text{Potential (HS)} + \text{Potential (Adult)} = 7,500 \text{ students}$$
$$\text{Potential (HS)} = 6 / \text{HS} \times 1,000 \text{ targeted HS} = 6,000 \text{ students}$$
$$\text{Potential (Adult)} = 6,000 \text{ students} \times 25\% = 1,500 \text{ students}$$
$$\text{Total potential students (year 1)} = 7,500 \text{ students} \times 10\% \text{ share} = 750 \text{ students}$$
$$\text{Total potential students (year 2)} = 750 \text{ students} \times 1.05 \text{ (growth)} = 788 \text{ students}$$
3. **Break-even: (Estimated campus fixed cost + new yearly amortization ) / gross profit per student**  
$$(\$4.8\text{M} + \$0.1\text{M}) / \$7\text{K} = 700 \text{ students}$$

# Solution and recommendations

## Solution & Recommendations

- Overall, our client should NOT enter the Chicago market under the current cost structure. Even with a 10% market share assumption in year 1, the Chicago campus will enroll only 750 students, this is 150 fewer than the 900 required to break-even.
- The client should also consider several qualitative issues:
  - Consider offering scholarships to increase the number of potential students and/or conversion rate of potential students
  - Consider other cities beyond Chicagoland that currently do not have a CCU presence, or add a second campus to a city such as NYC that has high market share and potentially low capacity
  - Perform market research in other cities to understand if there is a greater potential per target high school to increase ROI
  - Consider ways to reduce fixed costs (*e.g.*, transporting equipment / materials from campuses that are not at capacity)

## Bonus/Guide to an Excellent Case

- Excellent interviewees will recognize that the 10% market share is for campuses that have been in place for at least three years, therefore Chicago is unlikely to achieve that share in year 1 or 2; this rules out the feasibility of the follow-up question that suggests the possibility of reducing the one-time investment from \$4.5M to \$300K.
- Additionally, a strong interviewee will identify several of the qualitative issues listed above as ways in which CCU could proceed



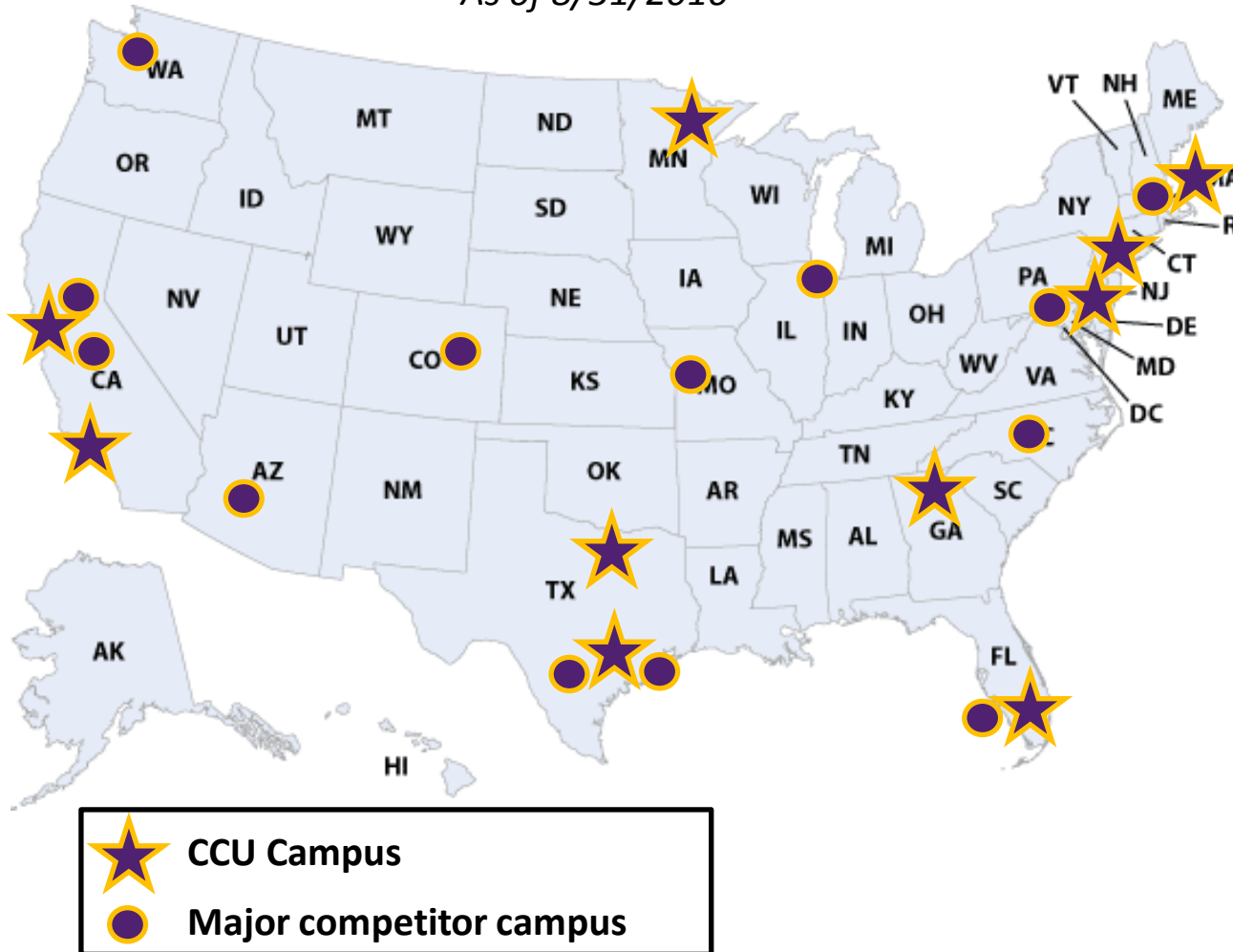
## Exhibit 1: 2010 CCU Financials

### CCU Financials as of 8/31/2010 ('000s)

Student enrollments (all campuses)	10
Revenue from enrollments	\$150,000
 Total fixed campus costs	 \$48,000
Buildings and equipment	\$32,000
Recruiting, general, and administrative	\$16,000
 Total variable campus costs	 \$80,000
Instructors	\$40,000
Student supplies	\$40,000
 <b>Operating profit</b>	 <b>\$22,000</b>

## Exhibit 2: CCU and major competitor campus locations

As of 8/31/2010



Campus	2010 share*
San Fran	8%
LA	14%
Minneapolis	15%
Dallas	14%
Houston	10%
Atlanta	16%
Miami	12%
Philly	12%
New York City	16%
Boston	8%

\* Measured as share of total “potential” students, as defined by CCU

# Case 20: DigiBooks Inc.

By: Shobhit Chugh (Kellogg Class of '11), Edited By: Adam Louras (Kellogg Class of '11)



## Case Question

- Our client, DigiBooks, is a manufacturer and seller of electronic book readers . DigiBooks also distributes e-books for the e-reader through their website. The reader is only compatible with books sold through the DigiBooks site.
- DigiBooks is planning the launch of its e-book readers in a country where no e-book readers are currently sold. Only 1% of the population has ever used a e-book reader, though 50% is aware of the concept. The Chief Marketing Officer of DigiBooks has come to you to help determine:
  - *How should DigiBooks launch and market the e-reader product in this new country?*

## Case tracker

- **Industry:**  
Tech/Telecom
- **Level of Difficulty:**  
Easy
- **Case Format:**  
Developing a new product
- **Concepts Tested:**
  - Marketing Strategy
  - Customer strategy
  - Creativity

## Fit Questions

### Spend first 15 min on fit

- Tell me about a time when you failed.
- Share me a time when you faced a difficult situation in a team and how you solved this .

## Guide to interviewer

- The case primarily tests the understanding of marketing concepts, specifically a new product launch.
- The case is written in McKinsey style format; the interviewer is expected to guide the interviewee step by step through each question.
- Begin by laying out the situation and case question, allow the interviewee to layout their structure, and then jump immediately to question 1. The interviewer is expected to drive this case rather than the interviewee.

4

Quants.

7

Structure



MKT Styg  
Cust. Styg  
Creativity

# Clarifying answers and case guide

## Clarifying answers to provide if Asked

### Industry Definitions

- *E-book reader*: Is a software, hardware and network platform that utilizes wireless connectivity to enable users to shop for, download, browse, and read e-books, newspapers, magazines, blogs, and other digital media.

### Client Characteristics

- *DigiBook's Product*: Uses an e-ink electronic paper display that features 16 shades of grey. This allows for a 12 hour long battery life and easy readability.
- *Locations*: DigiBook has never sold a product outside of the US.

### Competitive Dynamics

- No competitors in the e-book or tablet space plan to enter this country

## Interviewer Guide to case and handouts

**Case Structure** – Interviewee's structure should cover the key areas needed to explore in order to determine how DigiBooks should launch and market the reader in this country.

- The interviewee should take a few minutes to sketch out a framework for analysis of the marketing plan
- Key elements expected to be included in this framework are:
  - **Segmentation, targeting and positioning**: Are there particular segments in the population that will be ideal customers for us?
  - **Product**: What key capabilities are people looking for? Can we use our existing products or do we need to develop a new one for this country?
  - **Price**: What price should the readers and books be sold at? What is customers willingness to pay? Should we price the reader at a low price so as to capture most of the market, and make margin on e-books?
  - **Promotion**: How should the e-reader be marketed? What promotion mechanisms should be used?
  - **Place/Distribution**: Should the readers be sold through retail channels, internet or other alternative means?
  - **Selection of e-books**: Is a wide selection of books available for this country?

**Prompts 1-3** – After the interviewee has laid out their structure, begin by asking the question in Prompt 1. Once each prompt has been sufficiently covered, move to the next prompt. After all prompts are complete, ask the interviewee to summarize their findings. NOTE: Prompt 2 allows for creativity, so use your judgment when evaluating.

# Key elements to analyze

## Prompt #1: Cust. Strategy

- Through research, we found several segments. (Hand out **Exhibit 1**). We are only able to target one segment with our product.
- Using a 3-year projection, which segment should the e-book reader target?*

## Prompt #2: MKT Strategy

- DigiBooks is now considering how it should sell its e-book readers: through retail stores or through the internet.
- How would you go about evaluating this decision?*

## Prompt #3: MKT Strategy

- Based on revised market estimates, we decided to price the e-reader at \$100 and target the Occasional Reader segment.
- Using this information and **Exhibit 2**, can you estimate the profit potential of each of these sales channels? Which should we choose?*

## Notes on Exhibit 1

- If unclear, the interviewee should answer based on Revenue Potential (i.e. Ignore probability of purchase) assuming all reader sales happen immediately (Ignore TVM).
- The missing data is that the average price of an e-book is \$10, for each of the segments, and that e-books and e-reader have the same margin
- Using **Exhibit 1**, interviewee should calculate:
  - SR Revenue =  $[(15 \text{ books} \times \$10 \times 3 \text{ Years}) + (\$200 \times 1 \text{ e-reader})] \times 8\text{M People} = \$5.2\text{B}$
  - OR Revenue =  $[(10 \text{ books} \times \$10 \times 3 \text{ Years}) + (\$125 \times 1 \text{ e-reader})] \times 20\text{M People} = \$8.5\text{B}$
  - RR Revenue =  $[(5 \text{ books} \times \$10 \times 3 \text{ Years}) + (\$175 \times 1 \text{ e-reader})] \times 10\text{M People} = \$3.25\text{B}$
- ANSWER: Segment to be targeted = occasional readers (OR) with a Revenue Potential of \$8.5B**

## Notes on Prompt #2

- Retail Channel Sample Responses:**
  - CONS:
    - Lower margin due to value chain expansion
    - Will take time and money to set up and adds training costs
  - PROS:
    - Should encourage Trial of the product
    - Retailers can help with joint marketing campaigns
    - Retailers can help with customer service, returns
- Internet channel Sample Responses:**
  - PROS: Likely cheaper to establish, will result in higher margins
  - CONS: Hard to encourage trial

## Notes on Exhibit 2

- If unclear, the interviewee should answer this with a 1-year Gross Profitability calculation for each of the Sales Channels and back out the Upfront Investment. They should ignore all other costs such as SG&A.
- There is no missing data; however, the Market Size of 20M people in the OR segment is needed from **Exhibit 1** and the price per e-book of \$10.
- Using **Exhibit 2**, interviewee should calculate:
  - Retail Profit** =  $[(10 \text{ Books} \times \$10/\text{book} \times 50\%\text{GM}) + (\$100/\text{e-reader} \times 30\%\text{GM})] \times (10\text{M People} \times 40\% \text{ Penetration}) = \$320\text{M} - \$20\text{M II} = \mathbf{\$300\text{M}}$
  - Internet Profit** =  $[(10 \text{ Books} \times \$10/\text{book} \times 50\%\text{GM}) + (\$100/\text{e-reader} \times 60\%\text{GM})] \times (10\text{M People} \times 10\% \text{ Penetration}) = \$110\text{M} - \$10\text{M II} = \mathbf{\$100\text{M}}$
- ANSWER: Sales Channel to Use = Retail with a profit of \$300M**

# Solution and recommendations

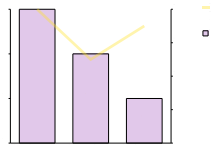
## Solution & Recommendations

- Overall, our DigiBooks should launch the e-book reader for the Occasional Reader segment through the Retail Sales Channel.
- Based on our calculations, we expect to earn a \$300MM return on an initial investment of \$20MM
- **Other items to consider:**
  - What advertising mechanisms do we use in this case?
  - Do we setup a manufacturing facility in the country or do we source the products from our current manufacturing facilities?
  - Are there any prospects of competitors entering the market?

## Bonus/Guide to an Excellent Case

- An interviewee who notices key nuances in the case such as: Time Value of Money impacts on Exhibit 1 and Probability of Purchase or Penetration on Exhibit 1
- An excellent interviewee will detail various elements of marketing strategy of a new product launch
- A key element of this case is being able to do relatively complex calculations at a fast pace. Laying out the tables appropriately for this case is essential to success

# Exhibit #1: Market segments



**\$200**

**\$175**

**\$125**

Segment	Size
Super Readers (SR)	8M
Occasional Readers (OR)	20M
Rare readers (RR)	10M

## Exhibit #2: Channel decisions

Channel	Percent of Total potential market	E book Gross Margin %	E-reader Gross Margin %	Penetration	Initial investment
Retail	50%	50%	30%	40%	\$20M
Internet	50%	50%	60%	10%	\$10M



# Case 21: After School Programming

By: David Morse (Kellogg Class of '11), Edited By: Ameer Mallick (Kellogg Class of '12)



## Case Question

- It is 2003, and our client offers after school programming focused on supporting at-risk youth through high school, enabling them to enter and succeed in college.
- The client is trying to identify the best approach to meet its growth target. The client's goals for expansion are to most efficiently serve students at 7 new sites, while raising their national profile. We have been hired to help them vet potential sites to maximize their social and financial impact.

## Case tracker

- **Industry:**  
Other (Non-Profit)
- **Level of Difficulty:**  
Hard
- **Case Format:**  
Growth Strategies
- **Concepts Tested:**
  - Organizational
  - Capacity Expansion
  - Customer Strategy
  - Marketing Strategy

## Fit Questions

### Spend first 15 min on fit

- "Why are you interested in Consulting as a career and our firm in particular?"
- "Tell about a time you failed and what you learned from the experience?"

## Guide to interviewer

- This case should be delivered McKinsey-style, i.e. following presentation of the framework, the interviewer should guide the interviewee from question to question. The secret to this case is thoroughly understanding the client's business and goals. Interviewers should encourage the interviewee to take time to understand the client's business model and to be sure they thoroughly understand the questions being asked.
- This case focuses on understanding not only the financial objectives but also the other objectives/impact that a client wishes to achieve and these should impact the analysis and recommendations to be delivered.

10

Quants.

10

Structure



Org. Chg  
Cap. Exp.  
Cust. Stgy  
Mkt. Stgy

# Clarifying answers and case guide

## Clarifying answers to provide if Asked

**The following information can be provided if the interviewee asks, but should not be volunteered:**

- ‘At-risk’ youth are those who, due to behavior or grades, are at risk of dropping out of high school or have already done so
- The client operates local centers attached to high schools with full time staff
- The client offers tutoring and test prep support to the youth with whom it works, as well as connecting youth to internships and career opportunities
- All centers are Massachusetts or southern New Hampshire
- The client operates 8 sites with 2,500 youth served
- School districts and state agencies reimburse the client for activities
- The client has a high national profile and has received calls from high school systems in Florida and California offering to pay for the client to establish centers in their districts; the client has declined these offers to date

## Interviewer Guide to case and handouts

**Question 1:** what are the client’s options for locating and for opening new sites, and what are some considerations the client should consider in selecting among these options?

**Question 2:** let’s look at the financial considerations, particularly at the effect of additional sites on central costs. The client allocates central office costs to each wholly owned site on a uniform basis, i.e.  $\text{total central office costs} / 8 = \text{allocation per site}$ . The client wants to understand how expanding sites will affect the per wholly owned site allocation of central costs. For this analysis, assume that central costs don’t vary depending on the method selected for expansion. **(Show Exhibit 1)**

**Question 3:** from a mission perspective, our client thinks that serving areas with a high density of at-risk youth will best deliver its mission as well as raise its national profile. As such, it would like to determine which geographic areas show the most promise for mission fulfillment. They provided some data from representative school districts for an initial analysis: **(Show Exhibit 2)**

**Question 4:** earlier, you listed some additional factors that might help the client screen new locations. What do you think are the pros and cons of these additional factors in each geographic area? How might this influence the client’s choice of target geographies?

**Question 5:** let’s wrap up with a summary of your findings and a recommendation to the client.

**Answer –** The interviewee cannot solve this case without understanding the client’s business and goals

# Key elements to analyze (1)

## Question 1: Organizational Changes

- **Question 1:** what are the client's options for locating and for opening new sites, and what are some considerations the client should consider in selecting among these options?

## Notes to interviewer

- The interviewee should quickly focus on geographic options for sites:
  - Adjacencies to existing sites (middle schools, neighboring high schools)
  - New sites in existing states, separate from existing sites
  - New states neighboring existing states
  - New states that have contacted the client
- The three primary methods for opening new sites are:
  - Partnerships
  - Branching / licensing
  - Wholly-owned sites
- The interviewee should go back to their original question, and hopefully their framework, to remember that the client wants to vet potential sites for mission and financial impact. Based on this, they should come up with two sets of criteria, which might include:
  - Mission related:
    - Number of at risk youth
    - Presence of other youth service organizations
    - Potential to work with high schools
    - Knowledge of target market
  - Finance / operations related:
    - Potential to attract funding
    - Ability to leverage relationships and engage in political advocacy
    - Ability to leverage existing infrastructure
    - Ability to recruit talent

# Key elements to analyze (2)

## Question 2: Capacity Expansion

- **Question 2:** let's look at the financial considerations, particularly at the effect of additional sites on central costs. (Show Exhibit 1)

## Question 3: Customer Strategy

- **Question 3:** our client thinks that serving areas with a high density of at-risk youth will best deliver its mission as well as raise its national profile (Show Exhibit 2)

## Notes to interviewer

- A good interviewee will quickly point out that the 74% increase in costs is less than the 88% increase in the number of sites, and that central office cost allocation per site should decrease. Interviewees should quantify the impacts of growth on costs per site.

## Notes to interviewer

- Note 1: Worcester, MA neighbors an existing site for the client. Nashua, NH does not have a site.
- Note 2: This is a tough problem to solve. Work actively with interviewees to get to the answer. Assume that class sizes, dropout rates and GPA averages are uniform across grades.
- *Solution on "Math Solution"*

# Key elements to analyze (3)

## Question 4: Marketing Strategy

- **Question 4:** What do you think are the pros and cons of these additional factors in each geographic area? How might this influence the client's choice of target geographies?

## Notes to interviewer

- Good interviewees will draw a table matching geographic options against the screening criteria they listed in question one, then will give a quick summary of the pros and cons of each criteria in each geography. The interviewer can help the interviewee set the chart up but should let the interviewee take the lead on walking through the analysis. This question is highly qualitative and intended to test the interviewees' judgment and communication skills.
- Here is an illustrative Chart

	Neighboring site	New site in existing state	Neighboring state	New state
Mission fit	Pro: knowledge of local youth; relationships with policy makers and school admins Con: might not spread model		Pro: would spread model Con: need new relationships, regulations could differ and affect operations	
Financial fit	Pro: model already approved for funding, ability to move staff / hire easily Con: might hit funding limits		Pro: access to new sources of funding, higher national profile Con: districts / states might not fund model	

# Math Solutions (1)

## ANSWER: Question 2/Exhibit 1

	Current	Additional costs
Staff	\$750K	\$600K
IT	\$110K	\$80K
Office expenses	\$115K	No change
Training and support	\$25K	\$55K
Total central office costs	\$1,000K	\$735
Cost per site	$\$1,000K / 8 = \$125K$	$= \$1,735K / 15 = \$115.67K$

# Math Solutions (2)

## ANSWER: Question 3/ Exhibit 2

Column	A	B	C	D	E
	Average enrollment, HS	Annual % change in at risk youth, 2003	# high schools	HS completion rate, class of 2002	2002 % of enrolled students with GPA of D or lower
Worcester, MA	1,000	-10%	3	70%	30%
Nashua, NH	800	-5%	2	75%	25%
Barrington, CT	800	10%	1	75%	20%
San Mateo, CA	1,300	1%	4	85%	20%

Column	F	G	H	I	J	K	L	M
Formula	$A * C$	$F/4 * (1-D)$	$F - G * 3$	$G + H$	$F - I * E$	$I + J$	$K * (1 + B)$	$L / F$
	Total enrollment	Dropouts, class of 2002	Dropouts, other classes in 2002	Total dropouts, 2002	Low GPA students, 2002	Total at risk, 2002	Total at risk, 2003	Total at risk % of enrolled students
Worcester, MA	3000	225	675	900	630	1530	1377	45.9%
Nashua, NH	1600	100	300	400	300	700	665	41.6%
Barrington, CT	800	50	150	200	120	320	352	44.0%
San Mateo, CA	5200	195	585	780	884	1664	1681	32.3%

# Solution and recommendations

## Solution & Recommendations

- The case is designed to indicate that the client should focus on existing states, and perhaps on neighboring states. The client should not consider expanding outside its existing geographic foot print in New England.
- The interviewee should note that the client benefits financially from scale, but that a financial analysis does not indicate a geographic area for expansion. From a mission perspective, existing and neighboring geographies provide the highest density of at-risk youth. New geographies in existing states are also promising from a mission perspective. Thinking further about non-financial benefits from scale, as should be done in question 4, should also indicate that growing within existing states or in neighboring states poses fewer risks for the client.

## Bonus/Guide to an Excellent Case



## Exhibit 1: additional central costs from expansion

	<b>Current</b>	<b>Additional costs</b>
<b>Staff</b>	\$750K	\$600K
<b>IT</b>	\$110K	\$80K
<b>Office expenses</b>	\$115K	No change
<b>Training and support</b>	\$25K	\$55K
<b>Total central office costs</b>		
<b>Cost per site</b>		

## Exhibit 2: representative data on at-risk youth

	Average Enrollment, HS	Annual % Change in at risk youth, 2003	# high schools	HS completion rate, class of 2002	2002, % of enrolled students with GPA of D or lower
<b>Worcester, MA</b>	1000	-10%	3	70%	30%
<b>Nashua, NH</b>	800	-5%	2	75%	25%
<b>Barrington, CT</b>	800	10%	1	75%	20%
<b>San Mateo, CA</b>	1300	1%	4	85%	20%

# Case 22: Dark Sky Co.

By: Sean Burrow (Kellogg Class of '11), Edited By: Ameer Mallick (Kellogg Class of '12)



## Case Question

- Our client, Dark Sky, is a small manufacturer of unmanned (i.e. remotely piloted) data collection aircraft. Dark Sky produces the Assessor, an aircraft originally designed for unmanned weather exploration. In 2003, the United States military began purchasing Assessors for use in Intelligence, Surveillance and Reconnaissance (ISR) missions. The Assessor is profitable, but sales have stagnated and the client wishes to grow.
  - What are some steps Dark Sky could take to achieve growth?*

## Case tracker

- Industry:**  
Industrial Goods – Aerospace and Defense
- Level of Difficulty:**  
Easy/Medium
- Case Format:**  
Growth Strategy
- Concepts Tested:**
  - Marketing Strategy
  - Creativity

## Fit Questions

### Spend first 15 min on fit

- “What was the hardest piece of feedback you ever got? What did you do about it?”
- “How would your classmates and/or teammates describe working with you?”

## Guide to interviewer

- This case intentionally uses terminology that may not be familiar to the typical MBA student. This is meant to challenge the interviewee to dismiss superfluous information and to focus on the business problem.
- After asking the initial question, engage in a qualitative discussion regarding organic and inorganic growth opportunities.
- Knowledge of the Aerospace and Defense industry is not necessary – creativity is encouraged.

5

Quants.

5

Structure



Mkt. Stgy  
Creativity

# Clarifying answers and case guide

## Clarifying answers to provide if Asked

### Product:

- Dark Sky designs a unique aircraft that is launched from a catapult device; the aircraft can be launched from ships at sea or from harsh terrain (e.g. desert, mountains).
- Dark Sky only sells the Assessor, but has designed prototypes specifically for military operations.

### Company:

- The firm has additional capacity and is positioned to strengthen any division of the workforce, if required (e.g. sales force, manufacturing, R&D).  
Competition
- There are approximately 20 competitors that manufacture unmanned aircraft.
- Though too small to purchase a competitor, Dark Sky has been considered an acquisition target. Dark Sky's lack of growth in recent years concerns potential buyers.

### Customer / Price

- Dark Sky's only customer is the U.S. Military.
- Dark Sky has a Cost-Plus-Fixed-Fee contract with the U.S. Military for Assessor sales:
  - The contract has been extended in the past and is up for renegotiation; the Military has agreed to a marginal fee (i.e. price) increase to account for inflation
  - Contracts for new aircraft will be structured similarly

## Interviewer Guide to case and handouts

**This case is meant to stimulate the growth conversation and is designed to funnel the interviewee toward a new product launch.**

### Exhibit 1 – Provide following growth discussion

- The military started purchasing the Assessor in 2002. The price of the aircraft has remained constant at \$100,000 per unit. Throughout the past decade, The Assessor has been Dark Sky's only source of revenue.

### Exhibit 2 – Provide following Exhibit 1 calculations

- Dark Sky has developed several aircraft prototypes designed specifically for military missions. The company has the capability to continue producing the Assessor and to introduce one new aircraft.
  - SeaBird is specially designed for maritime (i.e. Naval) operations and can be sold to the Navy for \$220,000 per aircraft.
  - SandBird is specially designed for desolate land-based operations and can be sold to the Army for \$210,000 per aircraft.
  - JointBird is designed as a compromise for Army and Navy operations and can be sold to either service for \$180,000 per aircraft.
  - The Military has agreed to a 10% Assessor price increase. If Dark Sky only produces the Assessor, forecast sales remain flat (i.e. 50 aircraft annually). The introduction of a new aircraft will have a negative impact on Assessor sales

– *Continue to next page for further detail of the analysis to be performed*

# Key elements to analyze

## Current Revenues & Growth Strategy

- **Exhibit 1:** a) How many units were sold in 2010? b) What was the growth rate from 2002 to 2006?
- What are some steps to achieve growth (original question)

## Notes to interviewer

- **Exhibit 1** should be treated as a math warm up. **Price = 100K/Unit**
- **Organic Growth** – the interviewee should consider internal options to could stimulate growth. Some potential examples include:
  - **Increase penetration** – negotiate additional Assessor sales to the military.
  - **Product development** – develop new products that may appeal to the military (e.g. new aircraft, training services, aircraft accessories / add-ons).
  - **New market entry** – sell the Assessor in international markets or additional domestic markets (e.g. Border Patrol, police, news channels)
  - **Diversification** – develop a new product to serve a new market.
  - **Increase / Reduce prices** (based on elasticity of demand)
- **External growth** – the interviewee should consider growth options using external resources. Some potential examples include:
  - Joint Venture – contract with a firm to increase market accessibility or to develop a new product beyond the capability of Dark Sky.
  - Merger / Acquisition – acquire a new firm to add additional capacity and/or product mix. Because Dark Sky is relatively small in the Defense industry, consider becoming an acquisition target.

## Opportunity Assessment

- **Exhibit 2:** To maximize short-term growth, which aircraft should Dark Sky produce?

## Notes to interviewer

- **Exhibit 2:** To maximize growth, Dark Sky should focus on maximizing revenue.
- To calculate the revenue for each scenario, the interviewee should add Assessor sales to the sales of the new product.
  - Assessor sales are based on:
    - 50 units sold with no new product launch
    - Cannibalization forecast specific to each new product launch
    - \$110,000 per aircraft
  - New product sales can be easily calculated using shortcuts. For example:
    - SeaBird:  $\$220k * 100 = \$22m$ ... then half of this
    - SandBird:  $\$210k * 100 = \$21m$ ... then half of it and add (10% of \$21m)
    - JointBird: Add to get 90... then  $\$180k * 100 = \$18m$ , subtract (10% of \$18m)

# Math Solutions

## Math Exhibit 1

- How many units were sold in 2010?
  - **Answer:** 50 units or  $\$5,000k \div \$100k/\text{unit} = 50$  units
- What was the growth rate from 2002 to 2006?
  - **Answer:**  $900\% \text{ o } (\$5,000k - \$500k) \div (\$500k) \times 100 = 900\%$

## Math Exhibit 2

- To maximize short-term growth, which aircraft should Dark Sky produce?
- Answer: **JointBird**
  - Assessor Sales (Units, Revenue):
    - No new product = 50 aircraft, **\$5,500,000**
    - With SeaBird =  $50 + (50 * (-40\%)) = 50 - 20 = 30$  aircraft, **\$3,300,000**
    - With SandBird =  $50 + (50 * (-70\%)) = 50 - 35 = 15$  aircraft, **\$1,650,000**
    - With JointBird =  $50 + (50 * (-90\%)) = 50 - 45 = 5$  aircraft, **\$550,000**
  - New Product Revenue:
    - SeaBird =  $50 * \$220,000 = \mathbf{\$11,000,000}$
    - SandBird =  $60 * \$210,000 = \mathbf{\$12,600,000}$
    - JointBird =  $(38 + 52) * \$180,000 = 90 * \$180,000 = \mathbf{\$16,200,000}$
  - Total Revenue:
    - Assessor Only = \$5,500,000
    - Assessor and SeaBird =  $\$3,300,000 + \$11,000,000 = \mathbf{\$14,300,000}$
    - Assessor and SandBird =  $\$1,650,000 + \$12,600,000 = \mathbf{\$14,250,000}$
    - Assessor and JointBird =  $\$550,000 + \$16,200,000 = \mathbf{\$16,750,000}$

# Solution and recommendations

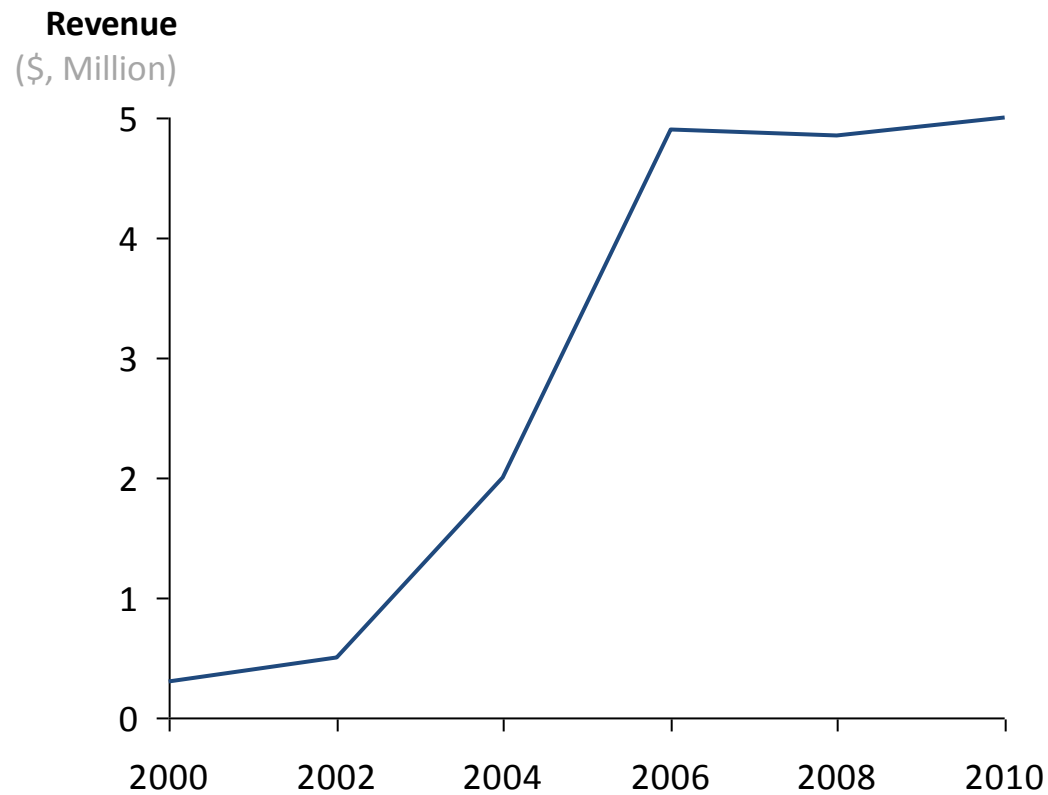
## Solution & Recommendations

- Based on 2011 forecasted revenue alone, Dark Sky should introduce the JointBird to the U.S. Military in order to boost short-term growth. However, there are several connected issues that Dark Sky should consider to include profitability, long-term revenue forecasts, competitive response, etc.

## Bonus/Guide to an Excellent Case

- An excellent interviewee will note:
  - How quickly could Dark Sky start manufacturing a third model (i.e. can Dark Sky produce SandBird this year, and be producing SandBird and SeaBird the following year)? If so, what are the revenue implications?
  - If Dark Sky produces JointBird, is \$550,000 in Assessor revenue worth the associated cost to produce the aircraft? Should resources be allocated to another project?
  - How profitable are the four aircraft models in comparison? Note: Because Dark Sky has a Cost-Plus-Fixed-Fee contract, profitability for each aircraft is likely equivalent. For this reason, Dark Sky should focus on maximizing the number of aircraft sold. • How much and how long is the payback period for the investment in manufacturing each type aircraft?

# Exhibit 1





## Exhibit #2

### New Product Sales Forecast, 2011

New Product Offering	New Product Sales (aircraft)		Assessor unit sales lost due to cannibalization
	Navy	Army	
SeaBird	50	0	40%
SandBird	0	60	70%
JointBird	38	52	90%

	Price Per Aircraft
Assessor	\$110,000
SeaBird	\$220,000
SandBird	\$210,000
JointBird	\$180,000

# Case 23: Health Coaches

By: David Wellner (Kellogg Class of '11), Edited By: Craig DePriester (Kellogg Class of '12)



## Case Question

- Our client is a large national health care payer (health insurance company, think Aetna) exploring the launch of a new disease management (“DM”) program to better serve its 5 million members. The idea is to hire and train a team of “Health Coaches” to specialize in a single disease area (e.g., heart disease, diabetes, etc). Each Coach will manage a portfolio of patients to reduce the costs of overall health expenditures (e.g., reminders to take drugs, provide limited medical advice, suggested diet, etc). Studies show that once a month contact with each patient reduces health spending by 5%, on average.
- *Should our client launch the program? If so, what steps should it take?*

## Case tracker

- **Industry:**  
Healthcare
- **Level of Difficulty:**  
**Medium**
- **Case Format:**  
Developing a new product/Service
- **Concepts Tested:**
  - Customer strategy
  - Break-even analysis

## Fit Questions

### Spend first 15 min on fit

- How do you feel about working in a feedback-intensive environment?
- Why is consulting a better career move for you compared to your next best option?

## Guide to interviewer

- The case tests the interviewee’s ability to probe and develop a customer segmentation, digest a relatively complex chart, isolate the most critical information and determine profitability
- The data provided by both exhibits should be requested; try not to show the exhibits until need for the data is demonstrated
- Strong interviewees should use common sense to make reasonable assumptions before you provide required inputs

8

Quants.

6

Structure



Cust. Stgy  
B/E

# Clarifying answers and handout guide

## Clarifying answers to provide

### Competitive dynamics (not core to case)

- With spiraling health care costs, the industry is under pressure to innovate new products that will control spending
- Assume client is first to market
- Past attempts to purely automate DM have yielded minimal savings

### Health Coaches

- All activity conducted remotely via phone/email
- Typical profile is registered nurse that wants to work from home
- It's difficult to actually reach patients, so Coaches can contact 8 members per day (assume 25 days per month)
- Annual costs per Coach: \$60K salary +20% other (training, benefits, laptop, etc)
  - There are no other program costs

## Guide to handouts

Before showing exhibits, interviewee should convey the essence of the case:  
**Are the costs associated with the DM program justified by the savings?**

Sample set-up:

Program Savings	Program Costs	Risks
<ul style="list-style-type: none"><li>– Customer segmentation by disease area and cost per member</li></ul>	<ul style="list-style-type: none"><li>– Salary and other</li><li>– Portfolio size/capacity (members/coach)</li></ul>	<ul style="list-style-type: none"><li>– Do assumptions hold?</li><li>– Competitive response</li><li>– Regulatory, liabilities</li></ul>

**Exhibit 1** – Hand out when interviewee establishes need for understanding client's membership segmentation and/or exposure to disease areas. If he/she is not headed there alone, you can ask "how would you segment the client's members?"

- "What can we get out of this chart? Please let me know if you have questions"
- Definitions (if needed): Group are employee sponsored plans (e.g., if you work for McKinsey, you are in a group plan), Individual are non-groups (e.g., private contractors, unemployed, etc). 65+ (see asterisk below chart).
- "Which segment is likely to generate the greatest per member costs.? Why?"
- "Which disease area should we look at first?"

**Exhibit 2** – Hand out when interviewee asks for medical cost data. Try to avoid handing out exhibit 2 until exhibit 1 has been discussed (*hint: if interviewee leads with profitability, steer him/her to first think about the customer segmentation*)

- "What can we do with this information?"

# Key elements to analyze

## Segmentation and disease focus

Using **Exhibit 1**, discuss which segments and disease areas are most important to explore

## Notes to interviewer

### Interviewee should choose to focus on the 65+ segment

- 65+ (Medicare) patients are the sickest, followed by Individual
- Group members are the healthiest (younger, working)
- Sicker patients are likely to drive higher costs, which will make them riper candidates for the DM program (i.e., the 5% cost reduction will have a bigger impact)

### Interviewee should choose to focus on diabetics (Assume all are Type 2 for the purposes of this case)

- Diabetics make up the largest portion of sick members
- As a chronic disease primarily brought on by behavior, T2 diabetics are most likely to benefit from DM program

### Number of 65+ diabetics:

$$\frac{20\%}{\text{segment \%}} \times \frac{40\%}{\% \text{ diabetic}} \times \frac{5\text{MM}}{\text{members}} = \frac{400,000}{65+ \text{ diabetics}}$$

## Program profitability

Leveraging all data (Both Exhibits), interviewee should determine if Health Coaches are profitable in each of the three segments

## Notes to interviewer

$$\text{Cost per Coach: } \frac{\$60,000 + 20\%}{\text{Base Salary + other = per coach per year}} = \$72,000$$

$$\text{Size of Portfolio: } \frac{8}{\text{contacts per day}} + \frac{25}{\text{days per month}} = \frac{200}{\text{max. patient portfolio}}$$

### Savings for one portfolio of 65+ diabetics:

$$\frac{\$300}{\text{avg. PMPM}} \times \frac{4}{\text{diabetic factor}} \times \frac{5\%}{\text{avg. savings}} = 60 \times \frac{12}{\text{mos.}} \times \frac{200}{\text{patient portfolio}} = \frac{\$144,000}{\text{savings per Coach per yr.}}$$

$$\text{Overall savings: } \frac{\$144K}{\text{savings}} - \frac{\$72K}{\text{costs}} = \frac{\$72K}{\text{profit per Coach}} \times \frac{2,000}{\text{Health Coaches}} = \frac{\$144 \text{ MM}}{\text{profit per year}}$$

### Conclusion:

- Profit is \$72K per Health Coach, 2x cost of a Coach
- Based on PMPM diabetic cost data, Individual segment is break-even (50% less savings), Group segment is a loss

# Solution and recommendations

## Solution & Recommendations

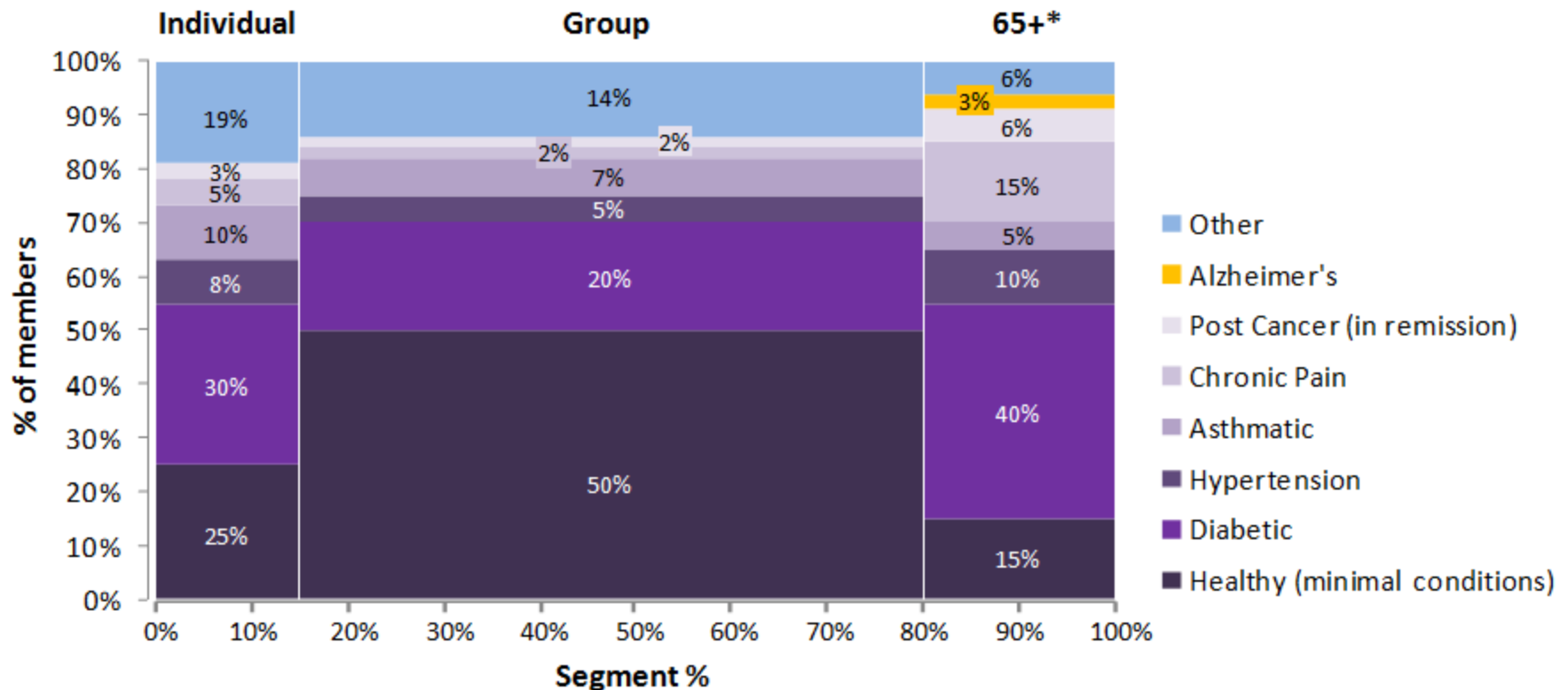
With 3-4 minutes remaining, give interviewee a moment to prepare a recommendation. Here is a strong sample:

- Client should launch the Health Coaching program, and first focus on diabetes for the 65+ Medicare segment
- The client should take the following steps:
  - Launch a pilot program to prove out assumptions (e.g., 5% cost reduction, Coach portfolio capacity, etc)
  - First expand to entire 65+ segment (\$144M per year savings, a 2x return on each Health Coach)
  - Consider introducing to Individual segment despite break-even (customer retention, moral rationale, etc)

Follow-up questions (if time permits)

- There are 650K Group diabetics left “uncoached.” Is there a way to make the segment profitable? Ideas include:
  - More efficient DM program (e.g., Coaching at work, bi-monthly contact, automated correspondence, etc)
  - Seek additional revenue sources (e.g., Employers might be willing to pay a fee, government support)
  - Since 5% is the average savings, program can target members who will respond with savings well above 5%
- As first to the market, client plans to expand Health Coach program externally. Who should they target?
  - It’s tempting to suggest that the client should market to 65+ Medicare patients with diabetes, since this is where the program yields the greatest savings. While it’s good that we have lowered the cost of older diabetics, client should keep in mind that more diabetic members will increase overall health care costs, considerably – (still almost 4x after savings)
  - An instinctive interviewee might suggest an alternative: Client should sell its Health Coach service to other payers. But how would you price that? What are the challenges (e.g., regulatory, info sharing, etc)

# Exhibit #1: Client's member segmentation by health condition



\* Members 65 years of age and above. Known as "Medicare Advantage", premiums funded by government

## Exhibit #2: Average cost data (Per Member Per Month)

Segment	Average PMPM	Average Diabetic
Individual	\$150	4x
Group	\$100	
65+	\$300	

# Case 24: Ocular Co.

By: Danny Fitzgibbons (Kellogg Class of '12), Edited By: Craig DePriester (Kellogg Class of '12)



## Case Question

- The first contact lenses were made of glass and appeared in the early 20th century, but contacts have come a long way since then – it is estimated that there are more than 100 million contact lens wearers around the world today. Ocular Co. currently commands 40% of the Irish contact lens market with its franchise of soft-contact disposable lenses that are disposed of weekly. In addition, Ocular has been considering the launch of Ireland's FIRST daily disposable contact lens after it received a favorable regulatory review, but wants to know if it should launch.
- *What are the key issues Ocular should consider when considering the launch of this product?*
- *Will this be a profitable venture? Should Ocular Co launch?*

## Case tracker

- **Industry:**  
Healthcare
- **Level of Difficulty:**  
Medium
- **Case Format:**  
Developing a new product
- **Concepts Tested:**
  - Creativity
  - Break-Even Analysis
  - Marketing strategy

## Fit Questions

- Spend first 15 min on fit**
- How do you feel about working in a feedback-intensive environment?
  - Why is consulting a better career move for you compared to your next best option?

## Guide to interviewer

- This case tests the candidates understanding of concepts such as cannibalization and challenges the candidate to make inferences about a break-even point.
- Objectives:
  - Demonstrate creativity and ability to frame strategy and risks for new product launch
  - Assess candidate's ability to solve a break even equation for product launch and to summarize key findings

6

Quants.

4

Structure



Creativity  
B/E  
Mkt. Stgy



# Clarifying answers and handout guide

## Clarifying answers to provide

### Customer considerations

- There is demand for “dailies,” and a global segment that is rapidly growing
- Dailies are less durable and breathable
- Customers are generally willing to pay a premium for daily disposables

### Product/company considerations

- If asked about portfolio, show **Exhibit 1**
- All R&D costs are sunk, but this requires more expensive packages & a retooling of its factories, increasing per-unit costs
- Dailies do NOT require cleaning solution

### Competition

- Market research shows a likely expansion of Irish market upon launch
- Dailies would capture share from its weekly product as well as competitors
- Ocular would have a 5+ year headstart over its competitors, given R&D

## Guide to handouts

The candidate should develop a framework to analyze the launch of the new product. Among other aspects, the candidate should mention potential market share, increased in costs, and impact on current products (i.e. cannibalization).

**Exhibit 1** –Hand to candidate after he or she asks about Ocular’s product mix

- (If needed, nudge) How could the launch of a daily contact lens impact the performance of Ocular’s other products?
- The candidate should make qualitative assessments about the impact of launching a daily contact lens on the sales of its other products, particularly its contact lens cleaning solution

**Exhibit 2** – Hand to the candidate when introducing the second question

- (If needed, nudge) Given the data provided, how attractive to Ocular’s future profit streams look when compared with those that they experienced in 2010 (without discounting)?
- Push candidate to provide calculation of profitability both before and after Ocular’s launch of daily disposable contact lenses

**Exhibit 3** – Hand to the candidate after working out the above portion

- Earlier we talked about the potential impact on the sales of cleaning solution. We’ve been able to come up with these projections – how would this impact your analysis and recommendations?
- Again, the candidate should be able to solve for the two annual profit streams (before and after the daily contact lens launch) and draw conclusions from the quantitative results.

# Key elements to analyze

## Topic 1 being tested

- Product launch considerations
- The candidate should lay out a cohesive qualitative structure.

## Topic 2 being tested

- Assessing profitability of product launch
- Use **Exhibits 2** to create an analysis of change in profitability

## Topic 3 being tested

- Impact on contact lens solution
- Use **Exhibit 3** to determine change in solution market

## Notes to interviewer

- A sample framework would include:
  - Potential market share gains vs. competitors
  - Increase in per-unit cost
    - Retooling the factory to produce daily lenses
    - Alternative packaging
  - Risks
    - Cleaning solution as a complimentary good
    - Cannibalizing the weekly contact lenses

## Notes to interviewer

- Annual profits from weeklies:
  - Before:  $(200,000 \times 50 \text{ lenses} \times \$3/\text{lens} - \$17.5\text{M}) = \$12.5\text{M}$
  - After:  $(175,000 \times 50 \text{ lenses} \times \$3/\text{lens} - \$17.5\text{M}) = \$8.75\text{M}$
- Annual profits from dailies:
  - $(100,000 \times 350 \times \$0.75 - \$21.75\text{M}) = \$4.5\text{M}$ , which would offset the losses.
  - It will take 4 years to break even on \$18M investment

## Notes to interviewer

- Annual profits from solution:
  - Before:  $(125,000 \times 8 \text{ bottles} \times \$9/\text{bottle} - \$8\text{M}) = \$1\text{M}$
  - After:  $(100,000 \times 8 \text{ bottles} \times \$9/\text{bottle} - \$8\text{M}) = -\$0.8\text{M}$
- As a result of the introduction of dailies, the contact lens solution product will go from a profitable product to an unprofitable one

# Solution and recommendations

## Solution & Recommendations

- Overall, our client should consider launching the new daily disposable lenses, despite considerable investments.
- The interviewee should be mindful of the increased costs and cannibalization risks that this launch poses to its weekly contact lens product and its contact cleaning solution product.
- If the client chooses to more narrowly focus on its contact lens business, it may even consider divesting its contact lens cleaning solution product.

## Bonus/Guide to an Excellent Case

- An excellent interviewee will be quick to notice the opposing profit drivers in the portfolio and potential for cannibalism. Additionally, he or she would be able to quickly draw logical conclusions from a quantitative analysis.
- An excellent interviewee would also acknowledge other risks in launching this product, such as reduced revenue related to multi-use of daily contacts (analogous to pharmaceutical pill splitting) and the large capital costs/relative increase in fixed costs.
- There are also revenue opportunities that exist outside the scope of the core analysis, such as expanding to mainland Europe.

# Exhibit 1: Current portfolio

## Contact Lenses

### Description of Ocular Products

- Contact lenses command 40% of the Irish contact lens market (by customers)
- Contacts are disposed of weekly and are maintained by a solution that disinfects and reconditions lenses

### 2010 Revenue

- \$40M

## Contact Lens Cleaning Solution

- Ocular sells its contact lens solution to users of both Ocular disposable contacts as well as contacts of its competitors
- Bottles are approximately 4oz and helps to moisten lenses and enhance comfort for up to a week

- \$10M

## Other Ocular Products

- Ocular produces several other eye-health products, including:
  - Prescription dry-eye relief product
  - Prescription ocular antibiotics
  - Eye Vitamins (drops)

- \$7M

## Exhibit 2: Projected impact of dailies on Ocular Co contact sales

### Impact on Contact Lens Sales

Cost and Revenue Data						Change in Consumption after 2011 Daily Contact Launch	
Product	Number of Lens Pairs Purchased in a Year per Consumer	Revenue Per Lens Pair	Average Variable Cost per Lens Pair	Total Annual Fixed Cost	One-Time Factory Conversion Cost	Total Consumers (2010)	Total Consumers (2011+)*
Weekly Disposable	50	\$4	\$1	\$17.50M (2010 and after)	N/A	200,000	175,000
Daily Disposable	350*	\$1*	\$0.25*	\$21.75M (2011 and after)	\$18M (2011 only)	-	100,000

\* Expected levels upon 2011 launch of daily disposable lenses

## Exhibit 3: Projected impact on contact lens cleaning solution

### Impact on Cleaning Solution Sales

Cost and Revenue Data					Change in Cleaning Solution Consumption after 2011 Daily Contact Launch	
Product	Number of Bottles Purchased in a Year per Consumer	Revenue Per bottle	Average Variable Cost per Bottle of Solution	Total Annual Fixed Cost	Total Consumers (2010)	Total Consumers (2011+)*
Ocular Contact Lens Cleaning Solution	8	\$10	\$1	\$8M	125,000	100,000

\* Expected levels upon 2011 launch of daily disposable lenses

# Case 25: Wine & Co.

By: Anil Goteti (Kellogg Class of '11), Edited By: Mauricio Atri (Kellogg Class of '12)



## Case Question

- Wine & Co. is a niche wine manufacturer in the San Francisco Bay area. Wine & Co. recently acquired 12 acres of land outside San Francisco. The company wants to investigate opportunities to best use the land and needs a recommendation from you.

## Case tracker

- Industry:**  
CPG
- Level of Difficulty:**  
Medium
- Case Format:**  
Opportunity Assessment
- Concepts Tested:**
  - Marketing strategy
  - Basic NPV

## Fit Questions

### Spend first 15 min on fit

- Tell me about a time when you failed.
- Share me a time when you faced a difficult situation in a team and how you solved this .

## Guide to interviewer

- The case tests the interviewee's ability to:
  - Structure the problem and brainstorm
  - Determine valuation and discounting
  - Recommend a marketing strategy
  - Synthesize the answers.
- This case is a McKinsey style case and has to be asked in a question and answer format. The interviewer should ask each question given below and wait for the interviewee to respond. If the interviewee is stuck, direction should be provided based on the information given below. The interviewee should be able to drive the case while at the same time seek direction based on the question asked.

7

Quants.

5

Structure



Mkt. Stgy  
NPV

# Clarifying answers and case guide

## Clarifying answers to provide

- **Question 1.** Some interviewees ask which geographical regions the company serves, the type of wines they manufacture and if they have other types of products (like other liquors or wine tasting tours in Napa valley). The following information can be provided if asked. a) They only manufacture red wines. b) The company serves only the local market (the San Francisco Bay area). c) The company does not sell any other products. d) The company is currently very healthy and does not face any problems.
- **Question 2.** Profit Margins on Wine & Co. are 10% while the margins on Bordeaux are 15%.
- **Question 3.** a) Discount rate is 12% (provide only when asked). Many people forget the time value of money and add profits across years without discounting. b) Assume the costs are only incurred when the revenues are realized after aging (no costs until year 6 for Merlot and no costs until year 12 for Bordeaux). c) If people are struggling with the division or approximations, suggest the "Rule of 72" (If  $r$  is the discount rate,  $72/r$  is the number of years it takes to double your money)
- **Question 4.** Customer segments that are currently served by Wine & Co.- niche wine enthusiasts.

## Guide to case / Guide to handouts

- Question 1. What are the different ways in which Wine & Co. can use the land?
- Question 2. Wine & Co. has decided to use the land to manufacture wine. Each acre of land produces 1000 kg of grapes annually. Wine & Co. has an option to manufacture Merlot or Bordeaux. The two wines use different grapes and the grapes have varying yields. While the Merlot grapes yield 2litres/kg, the Bordeaux grapes yield 1litre/kg. Wine & Co. can charge \$20 per liter of Merlot and can charge \$40 per liter of Bordeaux. Which wine yields more profits annually?
- Question 3. Aging has an effect on the revenues and profitability. Merlot has to be stored for 6 years while Bordeaux has to be stored for 12 years before revenues can be generated. Which wine would you choose for manufacturing?
- Question 4. Wine & Co. has decided to manufacture Merlot. How should they market this product in the San Francisco Bay area?
- Please summarize your recommendations to the CEO of Wine & Co.



# Key elements to analyze

## Topic 1 being tested

- What are the different ways in which Wine & Co. wines can use the land?

## Topic 2 being tested

- Which wine yields more profits annually?

## Notes to interviewer

- The interviewee should create a framework and structure the problem. The interviewee should suggest options including manufacturing the wine, creating adjacent products (like wine tasting tours), using the land for other uses (commercial real estate/selling the land for a profit/other opportunity costs). A good candidate would provide a detailed structure (eg. profitability framework for manufacturing feasibility with customization of the framework - yield of grapes, cost per liter of wine, etc.) and outline the risks or considerations involved in some of these options (like usability of land for manufacturing or company competency in pursuing in other opportunities unrelated to wine manufacturing).

## Notes to interviewer

- A good candidate would ask for the profit margins/costs without being prompted. Look for organization and structure when the candidate evaluates the annual profits for each wine (a good candidate would use a table like structure when doing the math). The revenues would be \$480,000 for both wines annually but the margins would be higher for Bordeaux (\$72,000 for Bordeaux vs. \$48,000 for Merlot). After the candidate arrives at the profits, look for interpretation. A good candidate would recommend using Bordeaux while at the same time consider other factors (competency in manufacturing either of the wines, customer demand in the bay area, sensitivity to product yields, customer reservation price, etc.). A creative candidate might suggest that we compare the age of the two wines (and hence will impact when the profits might actually start)

# Key elements to analyze

## Topic 3 being tested

- Which wine would you choose for manufacturing?

## Notes to interviewer

- Candidate should identify that the cash flows for Merlot would be \$48,000 annually starting year 6. Cash flows for Bordeaux would start in year 12 (\$72,000 annually). A good candidate would then consider the time value of money and discount the two perpetuities to the same year for an apples-to-apples comparison. Merlot: Annual Cash flow starting year 6: \$48,000 Perpetuity value of cash flow (value in year 6) =  $\$48,000 / 0.12 = \$400,000$  Bordeaux: Annual cash flow starting year 12: \$72,000 Perpetuity value of cash flow (value in year 12) =  $\$72,000 / 0.12 = \$600,000$  Value of perpetuity in year 6 =  $\$600,000 / (1.12^6) = \$300,000$  (Rule of 72). Provide help here if the candidate is struggling with the division. Look for the candidate's approach than the exact number. Since value of pursuing Merlot (\$400,000) is higher than value of pursuing Bordeaux (\$300,000), the company should manufacture Merlot. A good candidate would interpret the result and suggest we take into account other factors like inventory costs, sensitivity to discount rate, etc.

## Topic 4 being tested

- How should they market this product in the San Francisco Bay area?

## Notes to interviewer

- Candidate should ask for the customer segments that the company might sell to and suggest appropriate marketing channels/strategies to consider. Look for a MECE structure here. Suggestions should include retail strategies, direct to consumer strategies (like wine clubs, wine tasting), traditional media and print advertising and online advertising.

# Solution and recommendations

## Solution & Recommendations

- A good candidate would recommend a solution (manufacturing Merlot) but would detail out the risks/next steps associated with the recommendation. Next steps may involve market research, land usability testing, evaluation of opportunity costs. Risks have been outlined above already.

## Bonus/Guide to an Excellent Case

- An excellent answer should include:
  - a) Identification of opportunity costs
  - b) Considering industry specific issues like aging of wine
  - c) Considering time value of money/perpetuity of cash flow
  - d) Considering risks like customer demand, land usability

# Case 26: Healthy Foods Co.

By: Milija Medic, Edited By: Mauricio Atri (Kellogg Class of '12)



## Case Question

- Our client is Healthy Foods Co, a wholesaler serving a variety of clients with Food products. The client is profitable but they want you to help them find revenue growth opportunities from their current business.
- *How can we help Healthy Foods Co. drive their revenue growth?*

## Case tracker

- **Industry:**  
CPG
- **Level of Difficulty:**  
**Medium**
- **Case Format:**  
Growth Strategies
- **Concepts Tested:**
  - Creativity
  - Marketing Strategy
  - Customer Strategy

## Fit Questions

- Spend first 15 min on fit**
- Tell me about a time when you failed.
  - Share me a time when you faced a difficult situation in a team and how you solved this .

## Guide to interviewer

- This case tests growth opportunities identification, and share of wallet analysis.
- It tests conceptualization skills as the interviewee needs to formulate prioritization criteria. The case is mainly qualitative.

5

Quants.

6

Structure



**Creativity**  
**Mkt. Stgy**  
**Cust. Stgy**

# Clarifying answers and case guide

## Clarifying answers to provide

### ▪ Customers

- The client serves various customer categories (shown in **Exhibit 1**).
- Customer sensitivities are (highest to lowest):
  - Price
  - convenient delivery
  - help with location planning
  - help with menu
  - web site development
  - inventory
  - Help with management optimization

### ▪ Competition

- The client is one of the market leaders and is not losing the market share

## Guide to case / Guide to handouts

- **Exhibit 1:** Hand out when interviewee asks about customers or revenue by customer type. Interviewee should notice that independent restaurants are the largest customer category and revenue source, and that there is a number of other customer types of similar revenue contributions comprising the rest.
- **Exhibit 2:** Hand out when interviewee identifies share of wallet as a relevant parameter, in search of revenue growth from existing customer types. Interviewee should generate a key insight that Healthy Foods Co's share of wallet is already large for the customers who bring in the largest revenues. The opportunity for growth therefore is in the smaller revenue-generating customers.
- **Exhibit 3:** Hand out when interviewee recognizes that in order to find the smaller customer types with highest revenue growth potential, (s)he needs the plot of the size of the wallet vs. the current client's share of wallet for that customer. The customers with large wallets, where the client has small share of wallet, are at the moment the best candidates to achieve increase in revenue from. Interviewee should identify hospitals and hotels as the customers with largest potential for revenue growth.

# Key elements to analyze

## Topic 1 being tested

- Identify the main customer types and their current contributions to the client's revenues, using **Exhibit 1**

## Topic 2 being tested

- Share of wallet analysis, using **Exhibit 2**

## Topic 3 being tested

- Wallet size vs. share of wallet

## Notes to interviewer

- The interviewee will probably explore opportunities for growth in the independent restaurant category. If they inquire about customer satisfaction and sensitivities, provide information from the "clarifying information" section, and emphasize that **the needs of this segment are already met**.
- The interviewee should inquire about the share of wallet in the customer categories to get a better idea on where the growth opportunities lie.

## Notes to interviewer

- The interviewee should recognize that share of wallet in the highest-revenue-generating customer categories is already high, and that the client is already a primary provider for a lot of them.
- The key insight here that you can help interviewee to reach, is the growth opportunity in the smaller revenue-generating customers, where client's share of wallet is smaller. Now the interviewee should formulate the criteria for prioritization among the smaller revenue-generating customer types: the bigger their wallet and the smaller client's share of wallet, the better.

## Notes to interviewer

- The bigger their wallet and the smaller client's share of wallet, the larger the revenue growth opportunity for the client.
- Using **Exhibit 3**, the interviewee should identify the hospitals and the hotels as the most promising candidates for revenue growth given their large wallets and small client's share of wallet. The interviewee should identify the strongest sensitivities these clients would have and suggest ways to increase client's share of wallet there.

# Solution and recommendations

## Solution & Recommendations

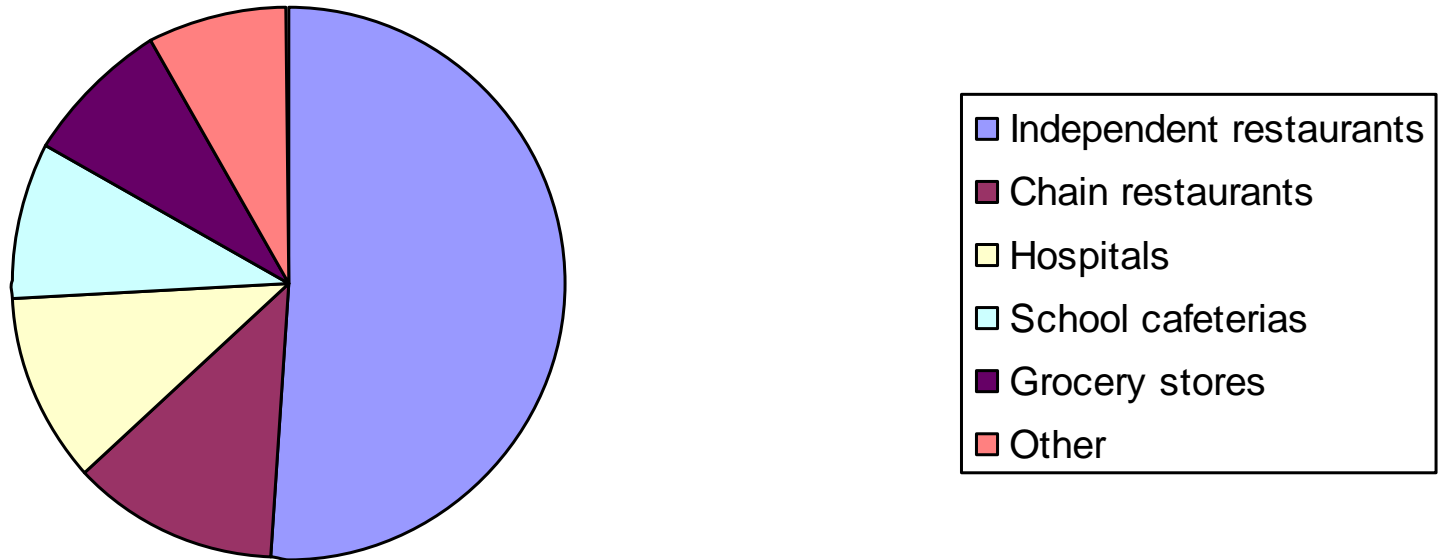
- In the current business, the largest growth opportunities lie in customer segments:
  - hospitals and hotels.
- The interviewee should suggest ways to better serve those customers and increase client's share of wallet there, capturing significant new revenues due to the large size of those clients' wallets.

## Bonus/Guide to an Excellent Case

- An excellent interviewee should identify share of wallet as an important parameter, quickly recognize that there is little opportunity for growth in the largest-revenue-generating customers, and come up with the size of wallet vs. share of wallet plot as a good prioritization tool for identifying promising customer categories for the client's revenue growth.

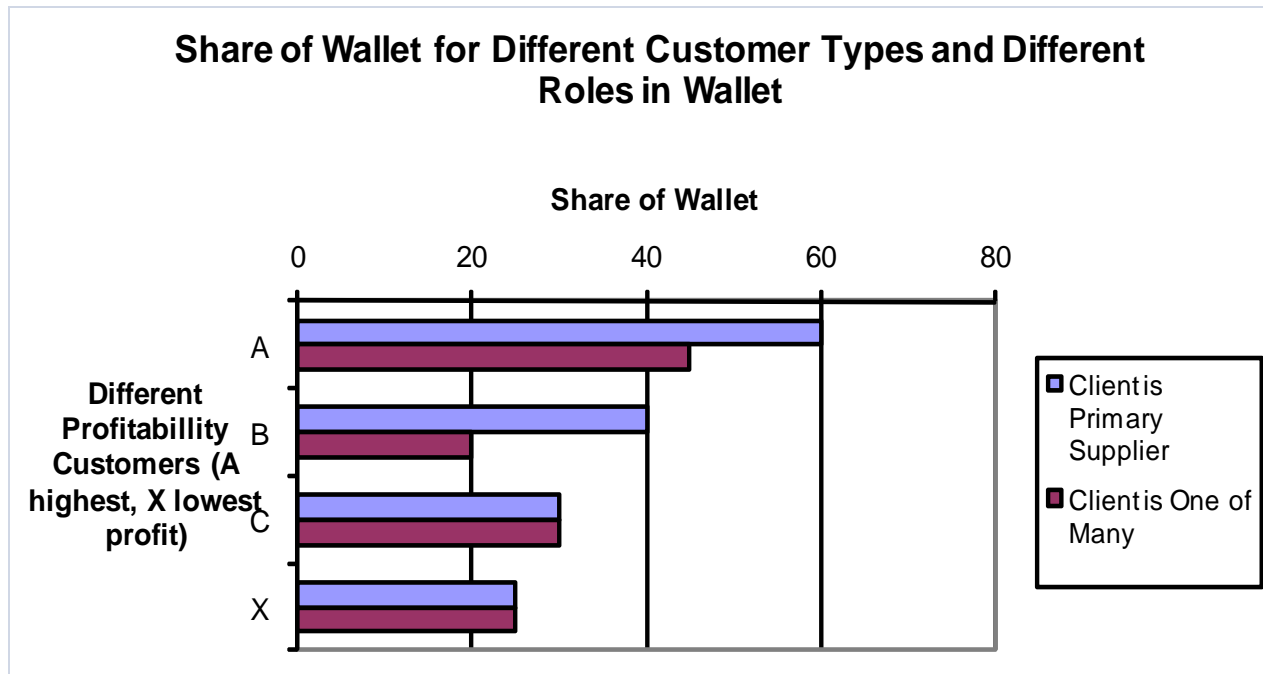
## Exhibit #1: Total Market Revenues by Customer Type

Revenues by Customer Type



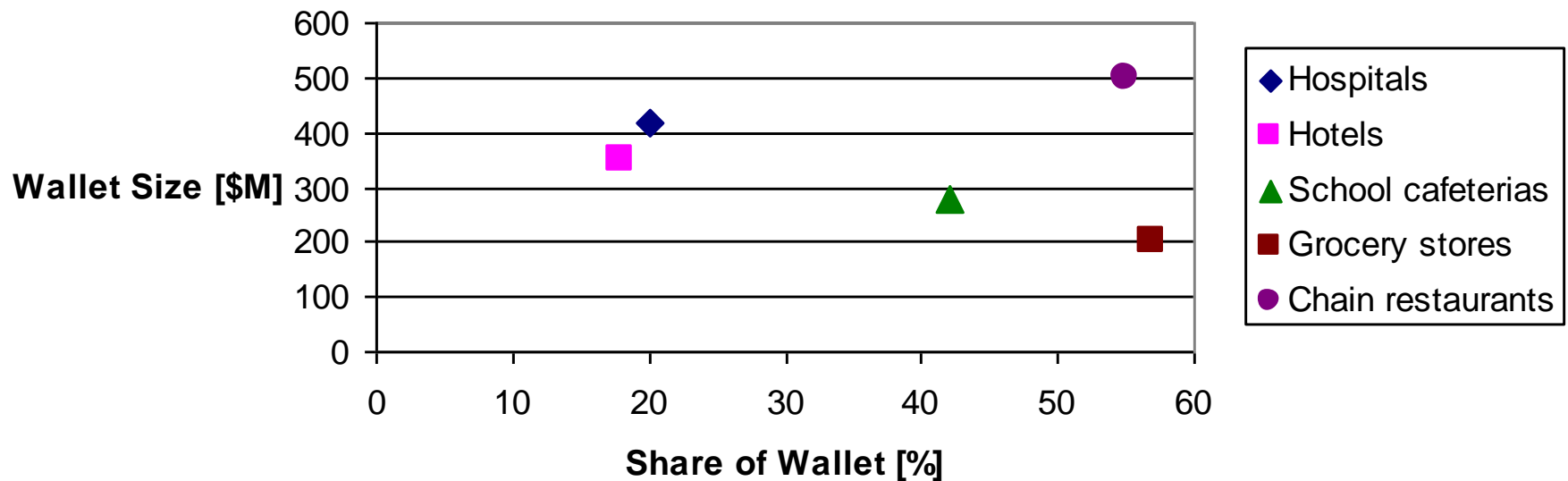


## Exhibit #2: Client's Share of Wallet



## Exhibit #3: Wallet Size vs. Share of Wallet

**Wallet Size vs. Share of Wallet for the Smaller-Revenue-Generating Customer Categories**



# Case 27: High Q Plastics

By: Erin Brooks (Kellogg Class of '11), Edited By: Uri Kalir (Kellogg Class of '12)



## Case Question

- Our client, High Q Plastics, is an automotive parts supplier in the U.S. They primarily manufacture and sell plastic injection-molded parts, such as grills, door handles, decorative trim etc., to automotive customers.
- The client has two primary revenue sources: large automotive OEMs, and aftermarket. The client has recently seen declining profits, primarily due to increased price competition from new overseas competitors in China. Annual profits have declined from \$50M to \$20M over the past few years.
- What is the reason behind declining profitability? How can High Q improve profits? Can they reach \$100M in profits by 2014?*

### Case tracker

- Industry:**  
Industrial Goods
- Level of Difficulty:**  
Medium
- Case Format:**  
Improving Profitability;  
Cost Reduction
- Concepts Tested:**
  - Competitive Analysis
  - Creativity
  - Operations

### Fit Questions

- Spend first 15 min on fit**
- Tell me about your greatest challenge, and how you overcame it.
  - What is the best way to deal with a difficult client who does not agree with your recommendations?

### Guide to interviewer

- The interviewee should examine the following MECE questions about the competitive dynamics of the industry:
  - Industry:** What is the sales volume trend? What is the % of demand and growth of OEM vs. aftermarket segment? Is one of these segments more profitable than the other?
  - Competitors:** Who are they? What is their relative market share? What are their prices vs. our clients'? What is their cost structure vs. our clients'? Do they have a technology or quality competitive advantage relative to our client?
  - Revenue:** How have our clients' prices changed in recent years? Have they declined across all customers and products?
  - Costs:** What trends is our client seeing in their cost structure? Increasing labor or material costs?

8

Quants.

5

Structure



Comp. Als  
Creativity  
Ops.

# Clarifying answers and case guide

## Clarifying answers to provide

### Industry Characteristics/Market Economics

- Automotive sales overall still growing steadily, driven by emerging markets
- Automotive manufacturing is leaving the U.S.

### Client Characteristics

- Client is currently one of the leaders in this category
- Client has U.S.-based manufacturing
- Revenues have been slowly declining over last 5 years
- Client's products are of a higher quality than most Chinese competitors' products

### Competitive Dynamics

- Automotive OEM customers are looking to reduce cost, driving increased price competition among parts suppliers

## Questions and Hand-out Guide

1. What key questions would you ask an industry expert in order to better understand the reasons behind High Q's declining profits?
2. The CEO of High Q wants to know if \$100M in annual profits is achievable by 2014. What would you need to know in order to determine this? What data would you ask for?
3. What ways can you think of to increase revenues? What ways can you think of to reduce costs?
4. Our client is planning on implementing lean manufacturing across all 4 of its U.S. plants, in order to provide cost savings and increase profits. *Hand out exhibit 1.*
  - The client is expecting to produce 80% of 2010 volumes in 2014. They are also planning on reducing prices by 10% due to increased competition.
  - Lean manufacturing implementation across all plants will provide an additional 20% savings in raw material, and 30% savings in labor.
  - What is the change in profits the High Q CEO can expect from 2010 to 2014, based on this information?
5. High Q's CEO has also asked us to take a look at competitive dynamics among the automotive OEMs, in order to predict any increase in profits from increased sales. Hand out exhibits 2 and 3.
  - Based on the information given, what do you expect High Q will see in additional profits due to Toyota's predicted 30% increase in market share in truck and SUVs?
6. Please summarize your findings to the CEO, including any other potential opportunities to increase High Q's profits over the next few years.

# Solution and recommendations

## Solution & Recommendations

1. The interviewee should examine the following MECE questions about the competitive dynamics of the industry:
  - a) **Industry:** What is the sales volume trend? What is the % of demand and growth of OEM vs. aftermarket segment? Is one of these segments more profitable than the other?
  - b) **Competitors:** Who are they? What is their relative market share? What are their prices vs. our clients'? What is their cost structure vs. our clients'? Do they have a technology or quality competitive advantage relative to our client?
  - c) **Revenue:** How have our clients' prices changed in recent years? Have they declined across all customers and products?
  - d) **Costs:** What trends is our client seeing in their cost structure? Increasing labor or material costs?
2. In order to understand if \$100M in profits by 2014 is achievable, you would need to know the annual qty of units sold, the selling price, and the clients' fixed and variable costs.  $\text{Profit} = Q \cdot (P - VC) - FC$
3. The interviewee should come up with 2-3 ways each for cost reduction and increasing revenues:
  - a) **Reduce Cost:** find alternative material sources, invest in process automation to reduce labor, consolidate multiple manufacturing sites to reduce SG&A costs, relocate close to customers to reduce transportation costs.
  - b) **Increase Revenue:** segment customers to determine sensitivity to price, increase marketing in aftermarket segment, negotiate long-term contracts with OEM customers.

# Solution and recommendations (2)

## Solution & Recommendations

4. The interviewee should use the information provided in **Exhibit 1** to calculate the following profitability for each plant in 2014, and walk the interviewer through the calculation steps. It is important to first note that revenues, labor, and material will decrease by 20% due to the reduced quantity output from each plant, plus the additional 20% savings in material and 30% in labor. Overhead costs will not change.

*all figures are in \$ million USD.				
	Plant A	Plant B	Plant C	Plant D
Revenues	72.0	72.0	72.0	72.0
Labor	11.2	22.4	33.6	16.8
Material	35.2	25.6	12.8	22.4
Overhead	20.0	15.0	15.0	30.0
Net Profits	5.6	9.0	10.6	2.8
Total 2014 Profits				28.0
<b>Additional Profits</b>				<b>8.0</b>

From this calculation, the interviewee should reference back to question 2. Even with the lean manufacturing implementation, High Q is still a long way from the CEO's goal of \$100M in annual profits, and this is therefore not a realistic target. A strong interviewee should note the importance of aligning a client's expectations.

# Solution and recommendations (3)

## Solution & Recommendations

5. The interviewee should be able to use the information provided in the Exhibits to calculate the following revenue growth. Rounded answers (\$13 or \$14M) are fine.

	2010	2014
U.S. Auto Market	16,000,000	
U.S. Truck & SUV Sales	3,200,000	
Toyota Truck & SUV Sales	320,000	1,280,000
High Q's Toyota Qty. Sold	224,000	896,000
High Q's Toyota Revenues	\$ 4,480,000	\$ 17,920,000
<b>Additional Revenue</b>		<b>\$ 13,440,000</b>

6. The interviewee should concisely summarize the overall goal of the case (to increase High Q's declining profitability due to new, low-cost competition), and main findings from each question, and a recommendation (yes, High Q should implement the lean manufacturing initiative). The interviewee should also generate a list of additional opportunities that were not explored in the case, including:
- a) Consolidation of the 4 manufacturing plants (especially Plant D, with its high overhead costs)
  - b) Pursue growth in the aftermarket segment of their business
  - c) Diversify their business into plastic injection-molded parts for other industries (outside of automotive), with less price competition

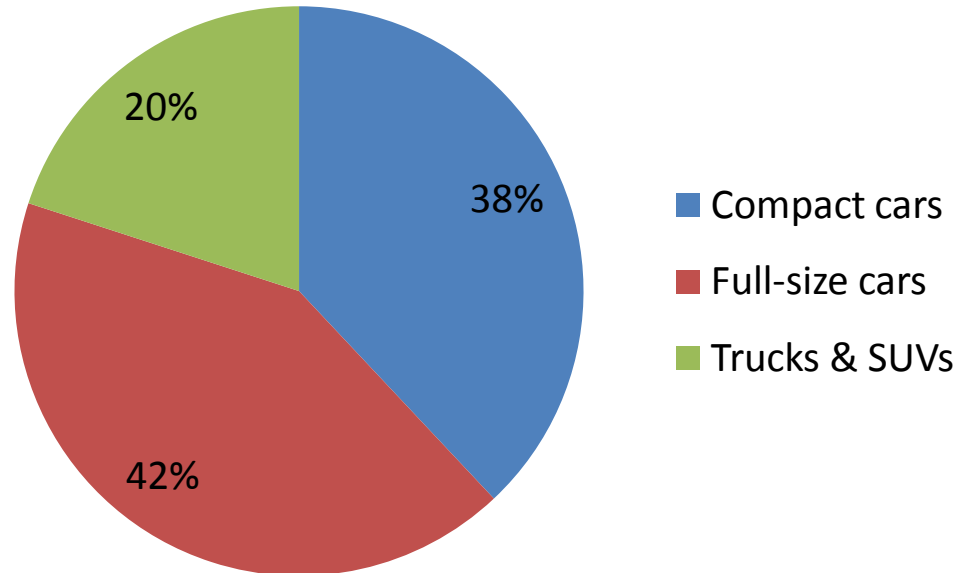
## Exhibit #1: High Q's 2010 Financials, By Facility

*all figures are in \$ million USD.				
	Plant A	Plant B	Plant C	Plant D
Revenues	100	100	100	100
Labor	20	40	60	30
Material	55	40	20	35
Overhead	20	15	15	30
Net Profits	5	5	5	5



## Exhibit #2: 2010 U.S. Automotive Market

2010 U.S. Automotive Sales

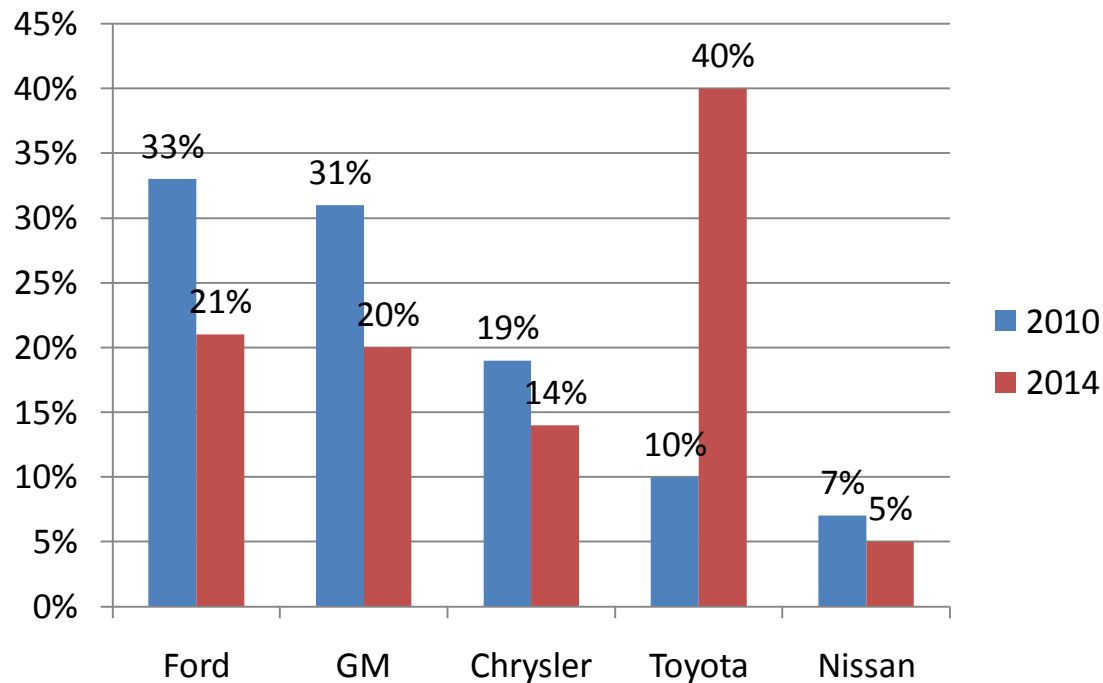


**\*Additional Information**

2010 U.S. Automotive Sales = 16 Million vehicles

## Exhibit #3: U.S. Automotive OEM Market

**OEM Truck / SUV Market Share 2010-2014**



**\*Additional Information**

High Q supplies 70% of Toyota's business

Avg. Price of High Q products sold to Toyota = \$20

# Case 28: Salty Sole Shoe Co.

By: Meredith Tierney (Kellogg Class of '11), Edited By: Uri Kalir (Kellogg Class of '12)



## Case Question

- Your client is a large retail-focused private equity firm that owns Salty Sole, a leading designer of junior women's footwear, primarily targeting the 14 – 22 year old age group. Salty Sole was purchased last year by the private equity firm expecting to realize substantial profits upon sale in 2012 by increasing the company's EBITDA. The situation, however, is that due to a current recession, annual profit has only grown modestly post the acquisition and is not on track to generate the double-digit returns that the private equity firm originally anticipated.
- *How can the company increase profitability and achieve the private equity firm's return on investment objectives?*

## Case tracker

- **Industry:**  
Retail Apparel
- **Level of Difficulty:**  
Medium
- **Case Format:**  
Improving profitability
- **Concepts Tested:**
  - Creativity
  - Accounting
  - Microeconomics

## Fit Questions

### Spend first 15 min on fit

- Tell me about a problem you faced in your professional life, how you resolved it, and what the results were.
- Tell me about a time when you worked in a contentious or high-stress situation and how you handled it.

## Guide to interviewer

- **The case primarily tests an understanding of profitability and profitability growth strategies**
- Begin by reading the case question and asking the interviewee to take a few moments and then explain how they would like to proceed in the client's problem
- After they present a framework for solving the case, if they have not already done so, ask the interviewee what he/she believes the primary components of costs are for a business like this.
  - **Answer:** materials, distribution (labor / transportation / taxes), sales force labor

7

Quants.

6

Structure



Creativity  
Acct.  
Micro.

# Clarifying answers and handout guide

## Clarifying answers to provide

### Industry Characteristics/Market Economics

- Client is the market leader in junior women's footwear in the U.S. only.
- Apparel industry is characterized by cyclicalities due to economy and consumer preferences.

### Client Characteristics

- Client designs and distributes footwear to discount retailers (think Kohl's) and is considered mid-priced.
- Client outsources all manufacturing on a fixed-contract basis (i.e. manufacturing costs with outsourced providers fall under Fixed Costs for simplicity).

### Competitive Dynamics

- Client follows a “me-too” strategy and follows fashion rather than inventing it then offering lower prices than name brands (i.e. not subject to fashion risk).
- Client competes on the basis of trendy fashion and value pricing.

## Guide to handouts

- After asking the case question, the interviewee should draw a framework that outlines the basic concept that profit is driven by revenue (price and volume) and cost (fixed and variable)
- **Exhibit 1** – Hand out after interviewee presents his/her framework.
  - What observations can be made from this chart?
  - Interviewee should point out that the company experienced significant growth during the pre-recession years, but a decline and only gradual pick-up following.
  - Interviewee should pick-up on the fact that the change in net sales is not due to increased discounts/allowances (remains 1% throughout years).
  - On the cost side, interviewee should note that variable costs remained flat at 50% and fixed costs remained flat
- **Exhibit 2** – Hand out when discussing revenue / increasing volume.
  - Note that the “casual” footwear market is used as a proxy for the junior women's category in which the client competes and is the market leader.
  - What observations can be made from this chart?
  - Candidate should note that the client is already the market leader with greater than 35% share and that the industry is not projected to grow.

# Key elements to analyze

## Costs

- Using **Exhibit 1**, have a quick discussion about the company's cost structure.

## Revenue

- Once interviewee determines that cost is not the issue, have a discussion on the components of revenue – price and volume.

## Notes to interviewer

- Fixed: Interviewee should note that fixed costs are not extremely high (about 23-25%), but could be an area for improvement. Ask how interviewee would reduce fixed costs? **Answer:** renegotiate contracts, find cheaper manufacturing partners, etc.
  - State that in-fact fixed costs cannot be adjusted based on the company's research.
- Variable: Interviewee should note that variable costs are approximately 50% of sales. Ask how interviewee would think about reducing variable costs? **Answer:** reduce labor/sales force, use technology, renegotiate / volume purchase materials
  - State that variable costs are currently at the lowest possible rates based on market research.

## Notes to interviewer

- Price: Interviewee should ask if pricing has remained constant over time or if the company has adjusted its pricing to reflect lower consumer discretionary income.
- Ask what considerations the interviewee would have when considering adjusting price?
  - Answers should be price sensitivity / elasticity, cost structure, brand equity (dilute brand through price decrease but compete with more upscale brands if increase).
  - State that pricing has remained constant at an average of \$25/unit. The company has determined that it would not be prudent to adjust pricing based on industry research. Interviewee can now determine the number of pairs of shoes sold for later in the case.

# Key elements to analyze

## Revenue (cont' d)

- Now that the interviewee has hopefully zeroed-in on the fact that the issue is volume, ask how many units must be sold by 2012 in order for the private equity firm to achieve a 20% return on the investment in Salty Sole Shoe, which equals approximately \$300 million sale value (give this number). Note that interviewee should *ignore* discounts/allowances for simplicity.

## Notes to interviewer

- Interviewee should determine that if the sale value needs to be \$300mm in 2012, then EBITDA will need to be  $\$300 / 6.5 = \$46.15$  (round up to \$50 million).
- The formula to determine how many pairs of shoes must be sold to reach that EBITDA level is as follows:
  - $\$50,000,000 = \$25 * v - (.5 * 25 * v) - 15,000,000$
  - $\$65,000,000 = 12.5v$
  - $V = 5,200,000$  pairs of shoes
- Interviewee should note that this is more than double the 2008 and 2009 volume levels.
- Ask what the interviewee would want to know to determine if this volume is feasible? Answer: market size / share.

## Market Size

- Show the candidate Exhibit 2 when he/she notes that market size/share would be helpful.
- Candidate should note that the client is already the market leader with greater than 35% and that the market size is not projected to increase.
- This should lead to the conclusion that the client can increase volume by stealing share and/or new products in other categories.

# Solution and recommendations

## Solution & Recommendations

- The interviewee should zero-in on the fact that since cost-structure is fixed and price is also fixed, volume is the only real way to increase profitability.
- However, volume must more than double in order to achieve the growth desired by the private equity firm for a 20% return, which could be difficult given recession and the fact that the industry as a whole isn't growing.
- Interviewee should recommend potential strategies for achieving that volume growth while outlining the risks of each: 1) Volume: new products / geographies / distribution channels (international?); increase marketing to steal share; acquire growth (brands); adjust product mix to higher-margin products. 2) Price: add value / features. 3) Risks: Capacity, cannibalization if new products.

## Bonus/Guide to an Excellent Case

- An excellent interviewee will quickly identify that volume is the issue by ticking through the parts of the profitability equation.
- An excellent interviewee will also ask about product mix and question the 50% gross margin. Interviewer should note that it's assumed that all products have the same margin, but that's a great question.
- An excellent interviewee will also note that since the company is not projected to have to adjust discounts / allowances, then it probably has a good product that is highly-valued by customers and/or this may be aggressive projecting.

# Exhibit #1: Clients Financial Estimates 2006 - 2012

## Salty Sole Financial Estimates

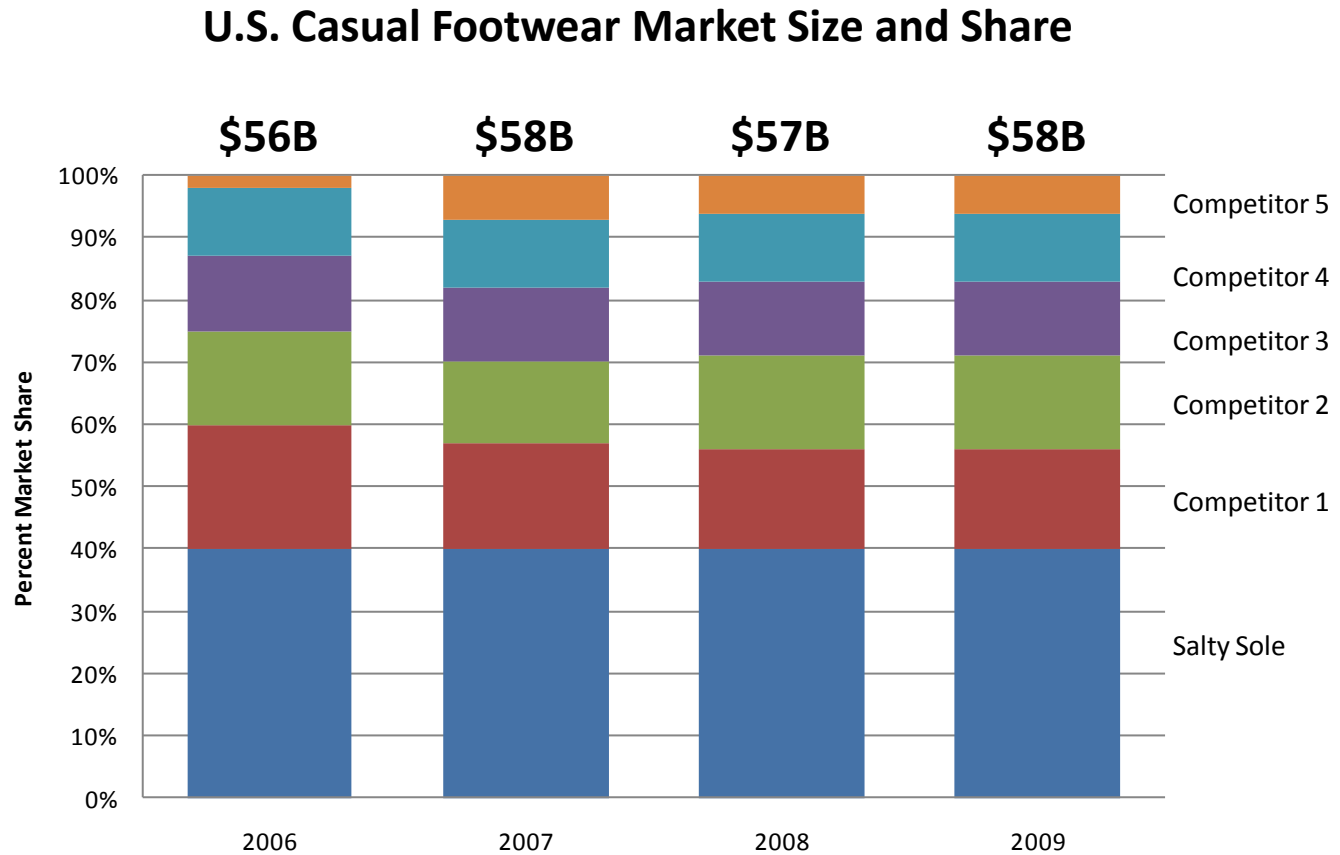
(\$ in millions)

	2006A	2007A	2008A	2009E	2010E	2011E	2012E
Sales	50.00	65.00	60.00	61.00	62.00	65.00	70.00
Less: Discounts/Allowances	(0.50)	(0.65)	(0.60)	(0.61)	(0.62)	(0.65)	(0.70)
Net Sales	\$49.50	\$64.35	\$59.40	\$60.39	\$61.38	\$64.35	\$69.30
% Increase / Decrease	20.0%	30.0%	(7.7%)	1.7%	1.6%	4.8%	7.7%
Cost of Goods Sold	24.75	32.18	29.70	30.20	30.69	32.18	34.65
Fixed Costs	15.00	15.00	15.00	15.00	15.00	15.00	15.00
Total Costs	39.75	47.18	44.70	45.20	45.69	47.18	49.65
EBITDA	\$9.75	\$17.18	\$14.70	\$15.20	\$15.69	\$17.18	\$19.65
Sale Multiple	6.50x	6.50x	6.50x	6.50x	6.50x	6.50x	6.50x
Purchase/Sale Price		\$111.64	\$95.55	\$98.77	\$101.99	\$111.64	\$127.73
Return on Investment							2.7%

Note: Acquisition occurred on December 31, 2006.



## Exhibit #2: Market Size and Share



# Case 29: Plastic World

By: Milija Medic, Edited By: Peter Manoogian (Kellogg Class of '12)



## Case Question

- Our client is a private equity firm interested in PlasticWorld, a plastic packaging manufacturer.
- *PlasticWorld's owners are requesting \$25M. The offer is final. Should our client buy?*

## Case tracker

- **Industry:**  
Financial Services
- **Level of Difficulty:**  
**Medium**
- **Case Format:**  
M&A
- **Concepts Tested:**
  - Organizational changes
  - Market share
  - Customer strategy

## Fit Questions

- Spend first 15 min on fit**
- Tell me something about yourself that is not listed on your resume.
  - What was the most difficult problem you solved in your previous job, business-wise?

## Guide to interviewer

- **The case primarily tests the ability to gain insight from quantitative data , value a company and find potential improvements.. As such, it is a little bit more data-driven than the average case.**
- The interviewee should focus on the company value as the recommendation regarding the offer depends on it; and on feasibility of identified profit-improving changes.
- The interviewee should be able to come up with the key improvements if (s)he invests some effort in understanding the price drop and its relationship to the sales force incentives; as well as the innovation-related costs from the pressure from the customers and how to push back.

3

Quants.

4

Structure



Org. Chg.  
Mkt. Share  
Cust. Stgy

# Plastic World: Clarifying answers and case guide

## Clarifying answers to provide

### PlasticWorld Characteristics

- Makes plastic packaging for beverages, cosmetics, household and automotive chemicals
- Products are top quality, they have 350 sets of molds, with different materials, finish, colors, always innovating
- Overall product mix has not changed in recent years
- The sales force is “the best in breed”, they hold market share, and they are compensated on market share
- Two years ago they invested further in equipment for product innovation

### Customers

- PlasticWorlds’ customers exhibit strong loyalty
- They are experiencing increasing pressures in their industries to innovate the plastic packaging

## Guide to handouts

Begin by handing out exhibit #1 after stating the case question.

### Exhibit 1 – Hand out after introducing case

- What observations can be made from this P&L statement?
- Interviewee should calculate the profit margin (-6%), notice that sales volume is growing but revenues are dropping, and infer that the cause may be pricing (*more detail on next page*)
- To check if it’s an industry-wide or company-specific drop in profitability, *they should request competition profitability data*

### Exhibit 2 – Hand out if the candidate requests competition data

- Note that it’s a company-specific problem
- Push the interviewee to postulate what would be a realistic profit margin for PlasticWorld based on this industry profitability data (*more detail on next page*)

### Exhibit 3 – Hand out after discussion of Exhibit 2

- Sensitivity analysis indicates that the company would be worth the offered \$25M if the profit margin was brought from -6% to 0%
- Interviewee should investigate the profitability drop and the low prices further and suggest options to get PlasticWorld’s profitability in line with the industry, and their feasibility

# Plastic World: Key elements to analyze

## Sales Force Incentives

- Using Exhibit 1, What could be the reasons behind what is in the data?

## Profit Margin Improvement Feasibility

- Use Exhibit 2 to conclude it's a client-specific problem, use Exhibit 3 to discuss company's value if the profit margin is increased to the industry average.

## Notes to interviewer

- Exhibit 1 – PlasticWorld has experienced a steady drop in revenues while the sales volume has been growing.
- There are three major points to identify: 1) the profit margin is dropping and negative; 2) given the unchanged product mix and increasing sales volume, the drop in revenues is caused by a reduction in prices; 3) depreciation change – it was equipment investment.
- The interviewee should find, asking independently or with your help, that sales force is compensated based on market share. This gives the sales force incentive to drop the prices.
- Interviewee should ask about the product quality and customer loyalty to discard price competition as the reason to drop prices. The products are high-quality and customers are loyal, so most of them would buy even at a higher price.

## Notes to interviewer

- Exhibit 2 - the candidate should identify the profitability problem is client-specific, all competitors are profitable.
- Exhibit 3 – the observation from the graph is that the company would be worth the \$25M if PlasticWorld increased profit margin from –6% to 0%. If the profit margin reached the industry average, the company would be worth \$40M.
- Now the question is how easily can the profitability be increased above zero (making the company worth more than the \$25M). The sales force incentive change is easy to make.
- Looking for other high-impact improvements, the dense product line and constant innovation is the next largest candidate. Eliminate some molds to cut costs, mindful of innovation pressures in PW's clients' industries.

# Plastic World: Solution and recommendations

## Solution & Recommendations

- Our client should accept the \$25M offer and boost the profitability (and value) of PlasticWorld.
- The client should engage in the following easy-to-implement changes:
  - Compensate sales force based on company earnings instead of market share.
  - Simplify the product line - eliminate some of the 350 molds to cut costs while leveraging the superior sales force to maintain client satisfaction.
  - Examine the industry best practices to find other areas for improvement.

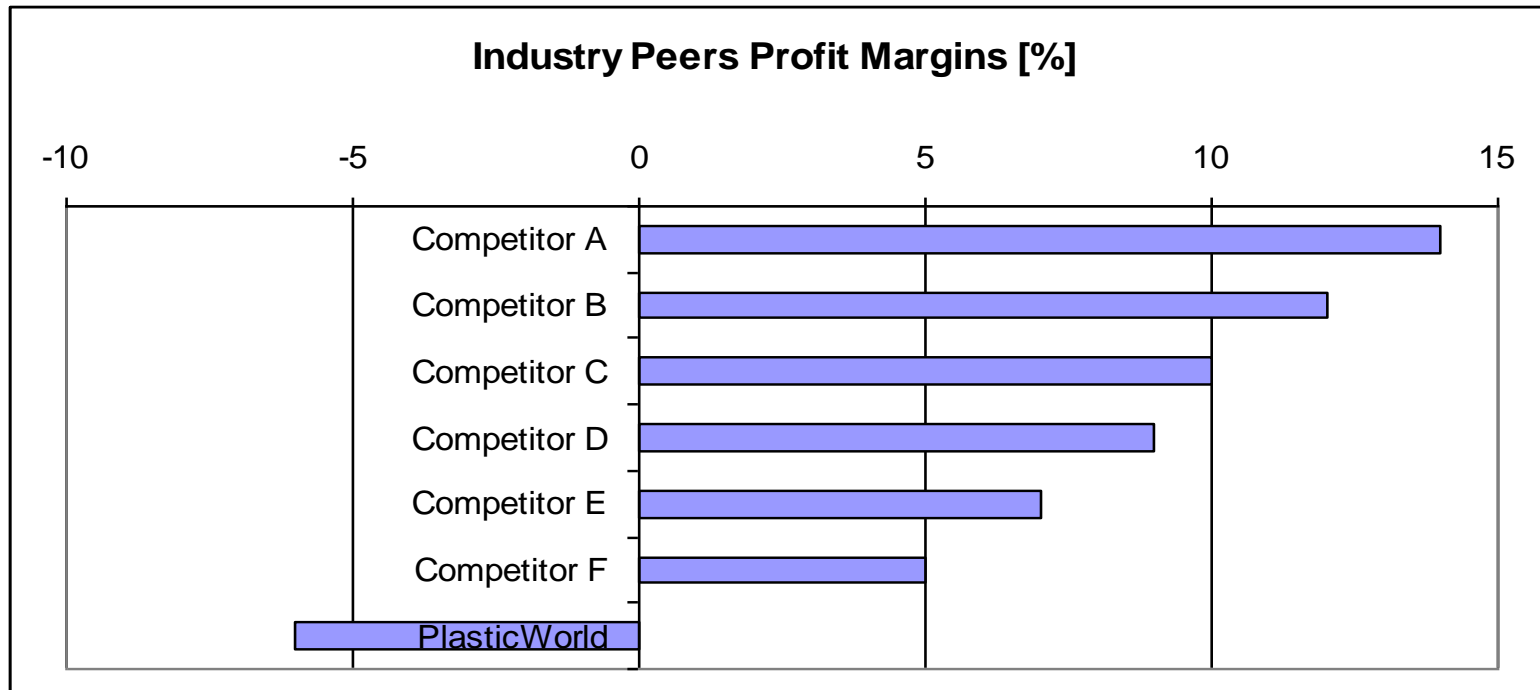
## Bonus/Guide to an Excellent Case

- An excellent interviewee will quickly identify the pricing as the issue behind the revenue decrease and lay out potential causes for the price drop, finding the sales force incentive.
- Additionally, a strong interviewee will immediately notice that the company would be worth more than \$25M if its profit margin was at the level of industry average.
- A framework comprehensive enough to find the product line size problem would be a plus.

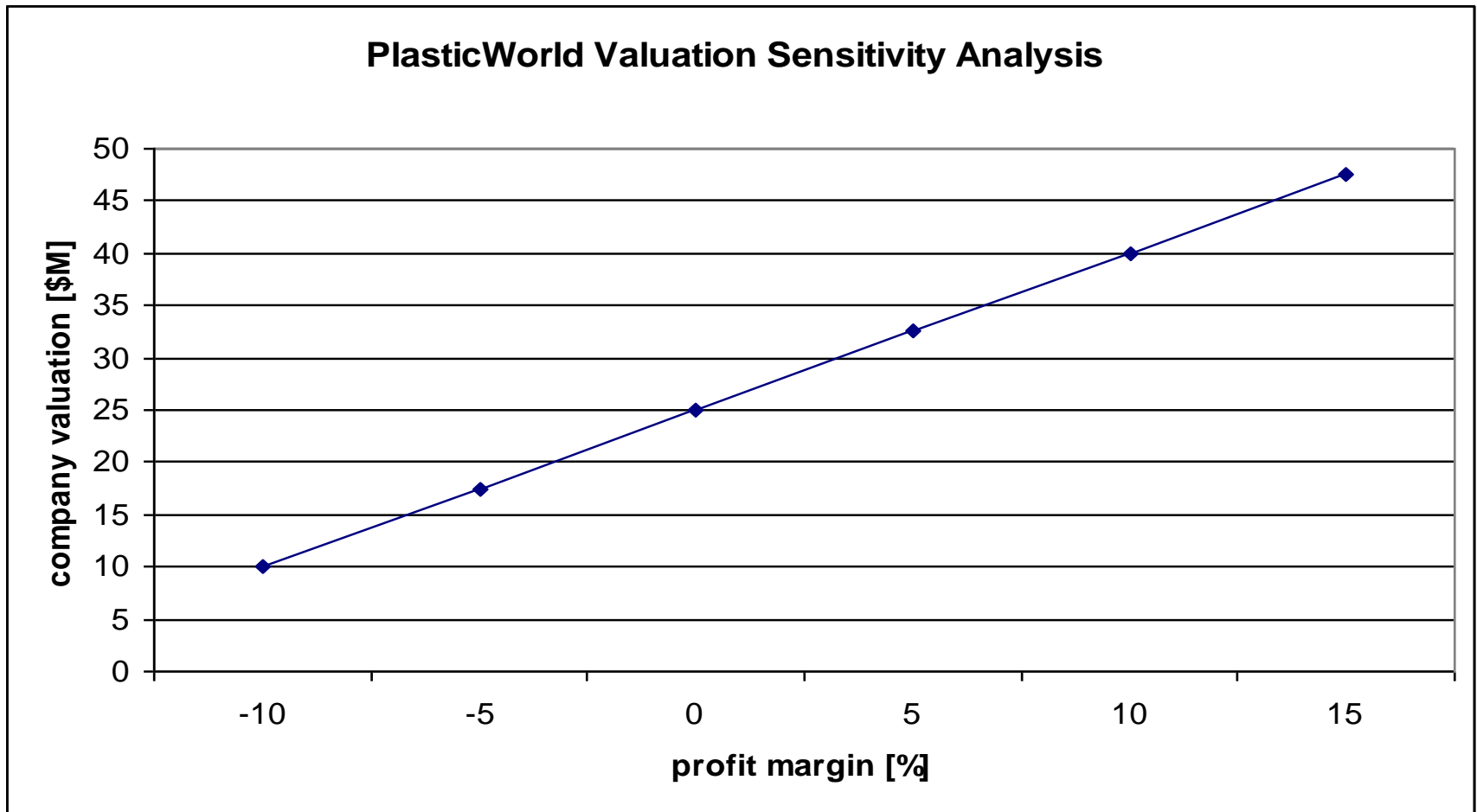
## Exhibit 1: PlasticWorld P&L statement in the past three years

	2009	2008	2007
Sales (\$)	18,824,000	19,180,000	19,650,000
Volume (units)	36,200,000	34,250,000	32,750,000
COGS (\$)	9,050,000	8,900,000	8,650,000
SG&A (\$)	7,500,000	7,200,000	7,300,000
Depreciation (\$)	3,450,000	3,450,000	2,250,000
EBIT (\$)	-1,176,000	-370,000	1,450,000

## Exhibit 2: PlasticWorld and Industry Peers Profit Margins



## Exhibit 3: PlasticWorld Valuation by Profit Margin





# Case 30: Zoo Co.

By: Aneri Jambusaria (Kellogg Class of '11), Edited By: Peter Manoogian (Kellogg Class of '12)



## Case Question

- Our client is a zoo that is thinking about acquiring a famous zebra from an African preserve.
- It's a huge investment, but they believe the new zebra would be a great contribution to their animal community. You have been engaged to help decide whether this is a good idea. What would you consider when trying to help your client make this decision?

## Case tracker

- **Industry:**  
Financial Services
- **Level of Difficulty:**  
**Medium**
- **Case Format:**  
M&A
- **Concepts Tested:**
  - Investments
  - Break-even Analysis
  - Basic NPV

## Fit Questions

### Spend first 15 min on fit

- Describe a recent unpopular decision you made. What was the result?
- Tell me about a successful business relationship you built with a client, boss, or peer in your previous job.

## Guide to interviewer

- Even though the client is a Zoo, we're undertaking a similar process to what is done when underwriting an insurance policy. The case evaluates basic concepts, but involves many calculations and use of financial and assessment techniques.
- Key case objectives:
  1. Investment Valuation – Walk through the valuation process for an asset
  2. Breakeven Analysis – Determine the revenue increase needed for a positive NPV
  3. Risk Assessment – Should the zoo should use an insurance contract to hedge downside risk?
- Rounding numbers is generally okay but should not be done to the extreme as it will alter the results

7

Quants.

5

Structure



Invest.  
B/E  
Basic NPV

# Zoo Co: Clarifying answers and case guide

## Clarifying answers to provide

Data to provide when asked

- 300K people visit the zoo yearly
- Admission is \$15
- Benefits from acquisition could lead to increased attendance. Another zoo that acquired a similar zebra had an 8% increase

Costs from zebra acquisition

- Immediate costs: acquisition fees, transportation costs, and new facilities.
- Food, health costs and additional trainers are part of annual maintenance costs
- Acquisition cost: \$235K
- New facilities: \$850K
- Transportation: \$110K
- Annual maintenance: \$90K
- Discount rate = 20% Assume that immediate cost are paid today, and annual costs and benefits are realized beginning next year and sustained into perpetuity, even though the Zebra will not live on to perpetuity

## Guide to case / Guide to handouts

- The interviewee should think about performing a break even and a sensibility analysis. Afterwards, they need to think about performing a risk assessment (*only when you reach this point you should deliver exhibit 1*)
- They should start by asking about the benefits and costs associated with zebra acquisition (Left)– Share with interviewee after probing questions are received
- Using the data on the left to calculate benefit to zoo from acquisition – Determine whether or not this zebra purchase makes financial sense for the zoo, using the NPV value
- Using the cost and benefit data provided, the interviewee should calculate the NPV of the acquisition
- *Assume that attendance benefits are realized immediately and maintained thereafter*
  - Annual benefits =  $(300K) * (\$15) * (0.08) = \$360K$
  - Upfront costs =  $\$235K + \$850K + \$110K = \$1.195M$
  - Annual costs =  $\$90K$
  - NPV =  $-\$1,195K + ((\$360K - \$90K)/0.20) = \$155K$
- Continue by asking questions in next page

# Zoo Co: Key elements to analyze

## Break-even analysis

- Zoo Co. is concerned about using the other zoo's attendance benefits as a proxy. They think that attendance could increase by less than 8%. What analysis could you perform to address their concerns? What is the breakeven attendance increase required?

## Risk assessment

- Since the zoo is very risk-averse, they're interested in hedging some of their downside risk. An insurance company has offered to provide the Zoo with a constant revenue to increase revenue to \$250,000 per year if attendance increases are less than or equal to 5% (if revenue is \$135K, the insurance will give the Zoo, \$115K. In exchange, the insurance company wants the zoo to pay 0.1% of the zoo's total annual revenues as a premium. What might you do to determine if this was a good deal?

## Notes to interviewer

- The interviewee should determine that a sensitivity / breakeven analysis of the NPV calculation with lower attendance increases will help confirm that the project still makes sense
- See calculations page

## Notes to interviewer

- The interviewee should recognize that additional information is needed, and that a market research study could aid in this process
- Hand out Exhibit 1 after the interviewee identifies this notion
- The interviewee should use the market research to determine the probable attendance increase

# Zoo Co: Calculations

## Math questions

1. What is the breakeven attendance increase required?
2. Do you think the insurance company is providing a good deal to the zoo?

## Calculations

1. Break-even:  
$$= -\$1,195,000 + ((\text{revenue} - \$90,000) / 0.20)$$
$$(\$1,195,000) \times .20 = \text{revenue} - \$90,000$$
$$\text{revenue} = \$239,000 + \$90,000 = \$329,000 \text{ (*required additional revenue to break even)}$$
  
$$\$329,000 = (300,000) \times (15) \times (\% \text{ increase})$$
$$\% \text{ increase} = (\$329,000 / \$4.5\text{M}) = 7.3\%$$

*After handing over exhibit 1*

2. Annual cost to zoo:  $0.1\% \text{ of total zoo revenues} = (0.001) \times (\$4,752,000) = \$47,520$   
Annual expected benefit to zoo =  $(\$250,000 - \$225,000) \times (0.20) + (\$250,000 - 135,000) \times (0.40) = \$33,000$   
*Costs > Benefits, so this is **not** a good deal*

# Zoo Co: Solution and recommendations

## Solution & Recommendations

- It is unlikely that the zebra acquisition is a good idea for the zoo to undertake given the information provided. At other zoos, attendance has gone up substantially due to a new zebra; however, based upon our market research, it seems less likely that we can breakeven on the investment through increased attendance. We have received an insurance contract to help mitigate some of the downside risk; however, it is too expensive to create value.
- In order to make the investment more palatable, we may consider negotiating with the insurance company to either increase the revenue benefits provided or decrease the premium cost.

## Bonus/Guide to an Excellent Case

Excellent cases will:

- Identify that we can use another zoo's attendance increases as a proxy for estimating our own attendance increases
- Notice in Exhibit 1 that it is unlikely that attendance will increase sufficiently enough for the zoo to break even
- Notice that the insurance company's premiums and benefits are both impacted by attendance increases; so if attendance increases are always greater than 5%, the zoo will be paying even more but getting no benefit
- Notice that the insurance company's contract is essentially an option; so a different structure to the contract may be more suitable for the zoo

# Exhibit 1: Market research findings

## Exhibit 1: Market Research Findings

Possible Attendance Increases	Annual Revenue	Probability
3% Increase	\$135,000	20%
5% Increase	\$225,000	40%
7% Increase	\$315,000	30%
9% Increase	\$405,000	10%
<b>Expected Additional Annual Revenue</b>	<b>\$252,000</b>	
Plus: Current Annual Revenue	\$4,500,000	
<b>Expected Total Annual Revenue</b>	<b>\$4,752,000</b>	



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