

# KCC Case Book 2016

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# Kellogg Case Book – 2016 Edition

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▪ If you have questions or concerns please write to Kyle Guilfoyle at [kguilfoyle2017@kellogg.northwestern.edu](mailto:kguilfoyle2017@kellogg.northwestern.edu) or Max Dreeben at [mdreeben2017@kellogg.northwestern.edu](mailto:mdreeben2017@kellogg.northwestern.edu)

**This book was originally written, edited, and designed by:**

Adam J. Louras (Kellogg Class of '11)

Ameed Mallick (Kellogg Class of '12)

Uri Kalir (Kellogg Class of '12)

Peter Manoogian (Kellogg Class of '12)

Craig DePriester (Kellogg Class of '12)

Mauricio Atri (Kellogg Class of '12)

**This book was edited in 2016 by KCC**

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# The title page for each case contains details that will inform case selection

Using the case book

## Overview of case title page

### Maine Apples

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

Quant: 8      Industry: CPG  
Structure: 6      Framework: Market Entry

#### 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 traditionally uses a test market to determine commercialization. Given proximity to Boston and average apple yields, Maine has been chosen.
- Danut would like to know if they should attempt to commercialize this chemical.

#### Case tracker

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

#### Guide to interviewer

- After hearing the prompt, 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?*
- Key case steps:**
  - Confirm market attractiveness (size)
  - Evaluate orchard revenue and cost structures
  - Project farmers margins and pricing for Danut
  - Identify qualitative issues (Risks) to consider

1

2

3

1 Case tracker:

Provides overview on case including industry, format, and concepts tested

2 Status bar:

Includes ratings for quant intensity and structure (1 = lowest, 10 = highest), as well as industry and case format. Quant indicates how much math is involved and Structure represents the level of difficulty around developing frameworks.

3 Guide to interviewer:

Contains the overview of the case and allows users to determine whether they should give the case based on its attributes

The “Clarifying answers” page contains supplemental information and a suggested guide to the case’s flow

## *Overview of clarifying answers and case guide page*

### *Clarifying answers and case guide*

1	2
<p><b>Clarifying answers to provide</b></p> <p>(Provide this information on request)</p> <p>Competitive dynamics</p> <ul style="list-style-type: none"><li>- Highly fragmented industry</li><li>- No information about market leaders or trends</li></ul> <p>European industry overview</p> <ul style="list-style-type: none"><li>- GoNet plans to capture a base of 10 million subscribers</li><li>- Subscriptions will cost \$20/month</li><li>- The average GoNet subscriber purchases \$1,800 of goods on the internet annually</li><li>- GoNet receives 3% commission</li><li>- Fixed costs are \$1 billion annually</li><li>- Variable costs are \$110/subscriber annually</li></ul>	<p><b>Guide to case</b></p> <p>Part 1 – Quantitative discussion</p> <ul style="list-style-type: none"><li>- This should be the meat of the case and should be completed before discussing any general or qualitative responses.</li></ul> <p>Part 2 – Qualitative discussion</p> <ul style="list-style-type: none"><li>- After navigating the math, ask the candidate the following questions:</li><li>- 1) How could we reduce the fixed costs of investment?</li><li>- 2) Would there be any reason to continue with the investment even if it looks like it will lose money?</li><li>- 3) Are there any other risks/benefits that GoNet should consider?</li><li>- 4) How would you sum up the situation and what is your recommendation?</li></ul>



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#### 1 Clarifying answers:

Contains information that is less crucial to the main solution path. This is for supplementary information such as: “we do not know the competitive dynamics” or “the market has been growing at GDP.”

#### 2 Guide to case:

Lays out the ideal structure for the case and includes hints on how to walk through the interview/handouts, as well as when to show them to the interviewee.

# The “Key elements to analyze” page contains the analysis of the key case concepts

## Overview of key elements to analyze page

Key elements to analyze		
<b>1</b> 	<b>Market sizing</b> <ul style="list-style-type: none"><li>How big is the apple market in Maine?</li><li>Does this seem potentially large enough to continue investigating this product?</li></ul> <b>Note to interviewer</b> <ul style="list-style-type: none"><li>When asked, provide the following:<ul style="list-style-type: none"><li>Maine has 200 orchards</li><li>Avg. annual orchard revenue is \$30K/acre</li><li>Avg. orchard has 100 acres of land</li><li>Only one apple harvest per year</li></ul></li><li>Interviewee should calculate the market size based on info provided: <math>(\\$30K/\text{acre} \times 200 \text{ orchards} \times 100 \text{ acres/orchard} = \\$600M)</math></li><li>This is a significant market and warrants further investigation.</li></ul>	<b>Cost savings</b> <ul style="list-style-type: none"><li>What are the cost savings from using the chemical?</li><li>The chemical allows the farmer to harvest 10 days sooner</li></ul> <b>Notes to interviewer</b> <ul style="list-style-type: none"><li>When asked to quantify the improvements, provide the following:<ul style="list-style-type: none"><li>It costs \$1.5K/night to maintain crops for 100 acre orchard</li><li>With the chemical, farmers are able to harvest crop 10 days sooner</li></ul></li><li>Interviewee should calculate cost savings per year using this information:<ul style="list-style-type: none"><li><math>(\\$1.5K/\text{day} \times 10 \text{ days} / 100 \text{ acres} = \\$150/\text{acre/year})</math></li></ul></li></ul>
<b>2</b> 	<b>Revenue increase</b> <ul style="list-style-type: none"><li>How much additional revenue will farmers be able to generate?</li><li>What is the total profitability increase (including cost savings)?</li></ul> <b>Qualitative Assessment</b> <ul style="list-style-type: none"><li>When asked to quantify additional revenue, provide the following:<ul style="list-style-type: none"><li>Our client's product improves the consistency of red apples and improves the yield by 10%</li><li>The sweetness factor is estimated to improve the juice yield by 5%</li><li>25% of revenue comes from whole apple sales, 75% from juice sales</li></ul></li><li>Improved yield: <math>(\\$30K/\text{acre} \times 25\% \times 10\% = \\$750/\text{acre/year})</math></li><li>Improved sweetness: <math>(\\$30K/\text{acre} \times 75\% \times 5\% = \\$1,125/\text{acre/year})</math></li><li>Total improvement (with cost reduction) = <math>\\$2,025/\text{acre/year}</math></li></ul>	



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### 1 Concept box:

Includes the key question or objective associated with a main case concept tested. The interviewee should naturally move to asking or addressing the information in this box, but you may need to provide a little “push” at times.

### 2 Notes to interviewer:

Contains additional information that you may provide to the interviewee during an investigation of the particular case concept. This information is CRITICAL to the interviewee solving the case both numerically and conceptually.

# Tips for effective pre- and post-case activities

Before meeting

After the case

## Interviewer (delivering case)

- Ask the interviewee if they wish to focus on specific:
  - Case formats / concepts
  - Levels of difficulty
  - Industries
- Inform interviewee which case you plan to deliver to confirm they have no prior knowledge of the case
- Spend at least 30 minutes to review the case

## Interviewee (receiving case)

- Inform your interviewer if you have specific areas for improvement
- Send the interviewer a list of cases you have already done
- DO NOT read the case ahead of time or discuss the case contents with peers!
- Bring plenty of paper to take notes!

- Provide detailed feedback (both positive and constructive) to interviewee
- Seek feedback from the interviewee on your case delivery

- Seek feedback from the interviewer on your case performance
- Review the case and log your performance in a “case tracker”
- Provide detailed feedback (both positive and constructive) to interviewer

# Additional tips for giving an effective case

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While there is no single “right way” to give a case, here are a few suggestions:

Take the interview seriously; pretend that you are a real interviewer

- While your interviewee may be your friend, providing a formal atmosphere will be much more valuable and provide a more realistic interview experience

Learn to be comfortable with silence

- While silence may be uncomfortable, resist the urge to jump in with pointers, hints, or additional information

Solve the case math on your own beforehand

- Not only will you gain practice with the math required, thinking through the approach may help you identify traps your interviewee may fall into

If you are not familiar with the industry, spend a few minutes quickly reviewing of the industry summaries (found in the back of this deck) or Vault.com

# Case prep scoring: Provide tangible points that can be practiced and improved

1.- General feedback	Needs improvement	Good	Strong
Quantitative: comfort with complex math; shows math and logically lays out data			
Qualitative: conveys understanding of big picture takeaways; realistic thinking			
Creative: identifies different approaches to solve the problem			
Communication: strong listener, openly shares thought process, good body language			
2.- Case specific Feedback	Needs improvement	Good	Strong
Clearly understands and defines the problem/question; breaks problems into components			
Prioritizes analysis; Identifies critical path to the recommendation and most important issues			
Provides a structured and thoughtful approach to solve the problem (e.g. draw issue tree with critical pieces of analysis)			
Summarizes key findings through the solution of the case and translates them into insights or important takeaways			
Pragmatic/ realistic solution that answers the initial question with supporting evidence			
Assesses risks and consequences for the recommendation; identifies key next steps to further prove the solution			

# Feedback Reviewer Form

**Structure:**

**Quant:**

**Business Acumen:**

**Creativity:**

**Recommendation:**

**Client Presence:**

## Strengths (circle 2)

Framework / Structure  
Analytics / Data Interpretation  
Qualitative Analysis  
Synthesizing

Creativity/insights  
Driving the Case  
Conclusion  
Other

## Weaknesses (circle 2)

Framework / Structure  
Analytics / Data Interpretation  
Qualitative Analysis  
Synthesizing

Creativity/insights  
Driving the Case  
Conclusion  
Other

Score (8 is passing): 1 2 3 4 5 6 7 8 9 10

# Evaluation criteria (1/2)

## Case skills and driving the case

Problem definition: Clearly understands and defines the problem/ question; summarizes the essence of the issue

Problem breakdown: Breaks problem into most important components

Structure: Uses a structured and thoughtful approach to solve the problem (e.g. draw issue tree with critical pieces of analysis)

Prioritization: Identifies critical path to the recommendation and most important issues/components

Information: Identifies and addresses key pieces of information and assumptions needed to solve the problem

Solution oriented: Formulates hypothesis when needed and maintains focus on the recommendation

80-20 approach: Deep dives into identified critical issues to develop a recommendation (80% of solution with 20% of analysis)

Recommendation: Ends up with a pragmatic/ realistic solution that answers the initial question; supported with the analysis

## Communication skills

Structure: Shares thinking process throughout the case and aligns his communications with the structure of the case

Focus: Highlights key insights, important findings and critical issues

Questions: Ask clear questions related to the case process and solution

Engagement: Engages with the interviewer during the solution of the case

Support: Clearly supports any conclusion or important claim with relevant arguments

Business language: Feels comfortable discussing the case with business terminology

Body language: Communicates naturally and uses body language to support the communication process

# Evaluation criteria (2/2)

## Polish and interpersonal skills

Self confidence: Shows confidence when solving and attacking the case without sounding arrogant

Quantitative skills: Feels comfortable handling complex calculations and analytics; shows clear calculations and data framing

Analysis: Deep dives in identified critical issues or components and comes up with a solution for each issue

Interpersonal skills: Drive a conversation and acts naturally

Balance: Good balance of quantitative and qualitative analysis during the solution

## Business sense and high level thinking

Creativity: Identifies or uses different approaches to solve the problem. Out of the box thinking; uses creative methods and arrives at creative solutions

Synthesis: Summarizes key findings through the solution of the case and translates them into insights or important take-aways

Concepts: Clearly understands and uses the key business concepts to solve the case

“So what” thinking: Clearly addresses and articulates what each analysis, conclusion or recommendation means to the case, solution or the client

Testing: Frequently tests assumptions and conclusions with reality checks or other quick analysis

Assessment: Assesses risks and consequences for the recommendations; identifies key next steps to further prove the solution

Business sense: Uses common sense and realistic thinking to get to pragmatic recommendations; has the ability to think from different perspectives (e.g. client, competitor, consumer, etc.)

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# Broad Range of Business Concepts Evaluated

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*Each case will follow a specific format and cover multiple business concepts*

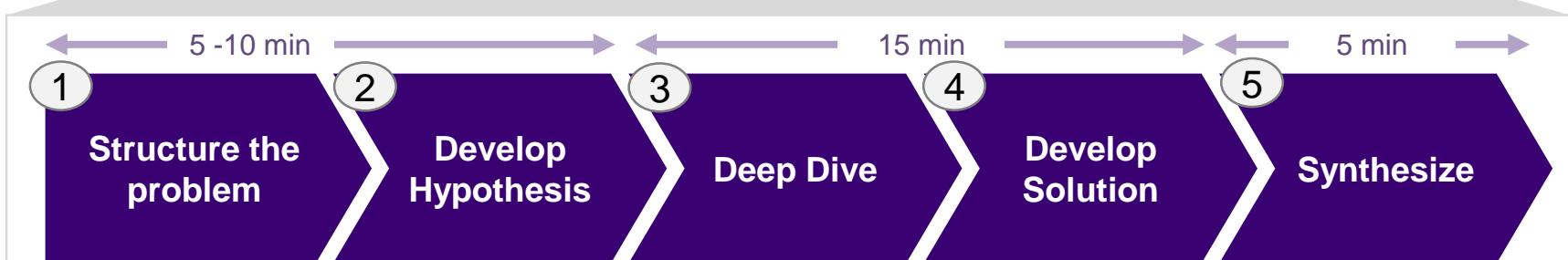
Sample Business Concepts	
Quantitative focus	Qualitative focus
Accounting	Customer strategy
Basic NPV	Competitive analysis
Break-even analysis	Creativity
Capacity expansion/Contraction	Operations
Elasticity	Marketing strategy
Investments	Organizational changes
Macroeconomics	Pricing strategy
Market share	Supply/value chain
Market sizing	Vertical integration
Microeconomics	Brain teaser (rare)

# Case Topics Vary

*The following represent the most common case topics on which a case interview may be based (ranked in descending order of frequency)*

Format	Focus
Profit improvement	Analyzing causes for recent drop in profits / ways to increase profits
Market entry	Analyzing a firm's opportunity to expand into a new business or segment
Opportunity assessment	Examining the potential purchase / sale of a new or existing business or installation / abandonment of infrastructure
Increasing sales	Identifying ways in which a firm can optimally increase sales
Merger / Acquisition	Evaluating whether a firm should merge or purchase another company
Market sizing	Determining the size, usually in terms of a firm's revenue potential, of a market
Industry analysis	Evaluating an industry's structure and/or desirability
Starting a new business	Similar to entering a new market; then taking an investment point of view
Growth strategies	Determining the optimal ways to grow a company
Developing a new product	Assessing a new product offering
Reducing costs	Identifying internal or external costs that are out of line
Competitive response	Evaluating ways to address a competitor's action (e.g., new product launch)
Turnarounds	Gathering info on why company is failing and then suggesting corrective action

# A Typical Case Flow (Standard Case)



- Summarize the essence of the problem
- Ask clarifying questions
- Structure thoughts
- Develop a hypothesis
- Prioritize analyses
- Deep dive into priority areas
- Make connections between information given throughout case
- Refer back to the initial problem and your hypothesis
- Be creative
- Ask 'so what?'
- Summarize recommendation for client
- Lay out risks and next steps

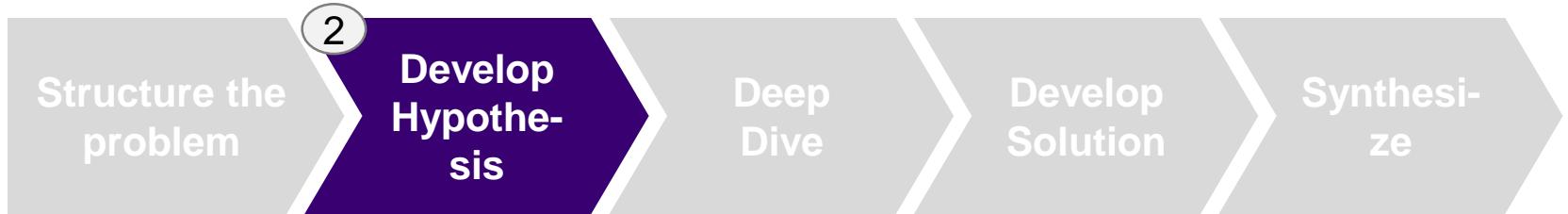
# Structure the Problem



- **Get the facts right – ask clarifying questions**
  - Make 100% sure that you understand the objective: e.g. if the objective is to be the market leader, clarify what this means (highest market share, revenue, profit?)
- **Summarize the essence of the problem**
  - Do not just repeat all of the facts back to the interviewer
- **Draw out your approach to solving the problem (i.e. framework)**
  - Try to include at least 2 levels of depth in your framework
  - Customize your framework to the case
  - Be MECE
- **Walk your interviewer through your framework**

**Remember: since every case is unique, don't try to force fit standard frameworks!**

# Develop Hypothesis



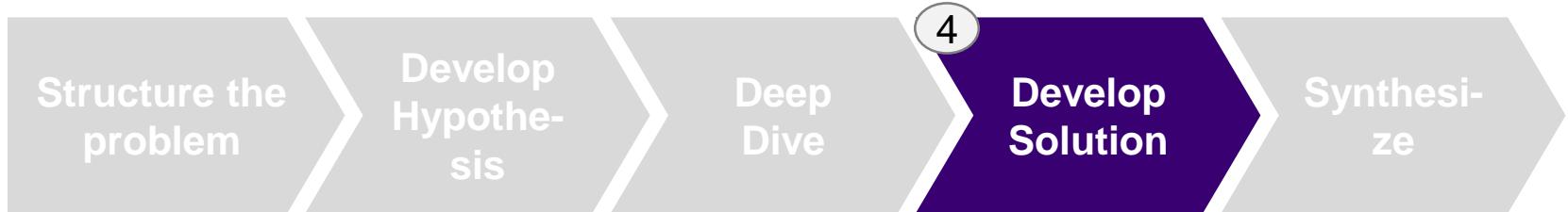
- **Use the info provided to form an initial hypothesis**
  - For example, if the case asks you to determine whether to enter a new market, take a position (e.g., enter), and list out the questions you would need to answer in order to validate your hypothesis
- **Use your hypothesis to prioritize your analyses**
  - What is most important to look into first, second, and third?
- **Engage with the interviewer**

# Deep dive into 1 or 2 areas



- **Treat your notes as “slides”**
  - e.g. separate pages for revenue analysis, cost analysis, profit analysis
- **Link various data points together**
  - Look at the case holistically and tie together information provided at various points in the case
- **Structure quantitative data “Excel-style” / in tables**
  - Before doing any calculations, write out your approach to solving the math problem (e.g., write the formula in words)
  - Turn the page around and walk the interviewer through your math structure (similar to how you would walk them through your framework)
  - Don’t start calculating numbers until you’ve received your interviewer’s buy-in that your approach will lead you to the right solution

# Develop Solution



- **Be sure to ask the ‘so what’ questions**
  - Don’t just state the obvious; explain what each conclusion means for your client
- **Develop creative solutions**
  - Pressure test your solution
  - If you think the goal is not achievable then suggest alternatives
- **Always consider implementation implications, risks and mitigation**
- **Utilize your analysis to make a powerful statement – take a stand, don’t hesitate**
- **Always end your case with a succinct recommendation**



**A good solution is:**

1. Best among alternatives
2. Practical
3. Based on facts

# Synthesize



- **Take a moment to prepare your thoughts**
  - But be prepared for the “elevator test”(interviewer doesn’t allow you time to prepare your thoughts)
- **Provide your recommend approach, backed up by facts**
- **List out risks that the client should consider when evaluating your recommendation**
- **Recommend next steps for analysis**

**Tip: Highlight or circle main points as you go through the analysis to facilitate a concise summary**

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3. Rotisserie Ranch*	37	6	5	New product/market entry	Consumer Products
4. Tarrant Fixtures	44	8	7	Profitability	Industrial Goods
5. Portkey Inc.	48	5	4	New product/market entry	Transportation
6. Salty Sole Shoe Co	52	7	6	Profitability	Retail
7. Money Bank Call Center	59	8	9	Cost Reduction and M&A	Call Center
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9. Shermer Pharma	69	5	5	New product/market entry	Healthcare
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13. Dark Sky	97	5	5	Growth Strategy	Aerospace and Defense
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19. Vindaloo Corporation	137	8	4	New product/market entry	Consumer Products
20. DigiBooks*	145	4	7	New product/market entry	Tech
21. Health Coaches	151	8	6	New product/market entry	Healthcare
22. High Q Plastics	157	8	5	Improving Profitability	Industrial Goods
23. Zoo Co	165	7	5	M&A	Financial Services
24. Syzygy Supercomputers	171	3	7	Profitability	Tech
25. Thompson Healthcare*	178	8	9	Cost Reduction	Healthcare
26. Rock Energy	187	7	5	Opportunity Assessment	Energy
27. Chic Cosmetology	192	7	8	Opportunity Assessment	Education
28. Tacotle	199	6	5	Profitability	Restaurant
29. Wine and Co*	212	7	5	Opportunity Assessment	Consumer Products
30. A+ Airline Co	219	8	8	Opportunity Assessment	Airline
31. Bell Computer	225	8	10	Improving Profitability	Tech
32. Montoya Soup	232	8	5	Improving Profitability	Consumer Products
33. After School Programming*	241	10	10	Growth Strategy	Non-Profit

# Maine Apples

Quant: 8

Industry: CPG

Structure: 6

Framework: Market Entry/  
New Product

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 traditionally uses a test market to determine commercialization. Given proximity to Boston and average apple yields, Maine has been chosen.
- Danut would like to know if they should attempt to commercialize this chemical.

## Case tracker

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

## Guide to interviewer

- After hearing the prompt, 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?*
- Key case steps:
  1. Confirm market attractiveness (size)
  2. Evaluate orchard revenue and cost structures
  3. Project farmers margins and pricing for Danut
  4. Identify qualitative issues (Risks) to consider

# Clarifying answers and case guide

Clarifying answers to provide	Guide to case / Guide to handouts
<p>Product Benefits</p> <ul style="list-style-type: none"><li>— Reduced costs through earlier harvesting</li><li>— Improved apple yields</li><li>— Improved juice yields (with higher quality apples)</li></ul> <p>Client Characteristics</p> <ul style="list-style-type: none"><li>— Only concerned about a “test-market” in the state of Maine</li></ul> <p>Competitive Dynamics</p> <ul style="list-style-type: none"><li>— No other competitive products on the market currently</li></ul> <p>Local industry Characteristics/Economics</p> <ul style="list-style-type: none"><li>— Growing at the rate of GDP</li></ul>	<p><b>1. Calculate Market Size (determine attractiveness)</b></p> <ul style="list-style-type: none"><li>— Share market size information with interviewee after probing questions are received</li><li>— Is the market large enough to continue?</li></ul> <p><b>2. Evaluate orchard profitability</b> – Share product benefit details – i.e. 10% increase (from calculation page)</p> <ul style="list-style-type: none"><li>— How much incremental profit does our product create for an apple orchard owner?</li><li>— Next, the interviewee should determine the profit margins for the farmers given the costs of purchasing the product. Additionally the interviewee should determine a reasonable price for the product</li></ul> <p><b>3. Risks &amp; Other Considerations</b> – Guide the interviewee to consider qualitative risks and issues before moving forward with commercialization</p>

# Key elements to analyze

<b>Market sizing</b> <ul style="list-style-type: none"><li>▪ How big is the apple market in Maine?</li><li>▪ Does this seem potentially large enough to continue investigating this product?</li></ul>	<b>Cost savings</b> <ul style="list-style-type: none"><li>▪ What are the cost savings from using the chemical?</li><li>▪ The chemical allows the farmer to harvest 10 days sooner</li></ul>	<b>Revenue increase</b> <ul style="list-style-type: none"><li>▪ How much additional revenue will farmers be able to generate?</li><li>▪ What is the total profitability increase (including cost savings)?</li></ul>
<b>Note to interviewer</b> <ul style="list-style-type: none"><li>▪ When asked, provide the following:<ul style="list-style-type: none"><li>- Maine has 200 orchards</li><li>- Avg. annual orchard revenue is \$30K/acre</li><li>- Avg. orchard has 100 acres of land</li><li>- Only one apple harvest per year</li></ul></li><li>▪ Interviewee should calculate the market size based on info provided: <math>(\\$30K/\text{acre} \times 200 \text{ orchards} \times 100 \text{ acres/orchard} = \\$600M)</math></li><li>▪ This is a significant market and warrants further investigation</li></ul>	<b>Notes to interviewer</b> <ul style="list-style-type: none"><li>▪ When asked to quantify the improvements, provide the following:<ul style="list-style-type: none"><li>- It costs \$1.5K/night to maintain crops for 100 acre orchard</li><li>- With the chemical, farmers are able to harvest crop 10 days sooner</li></ul></li><li>▪ Interviewee should calculate cost savings per year using this information:<ul style="list-style-type: none"><li>▪ <math>(\\$1.5K/\text{day} \times 10 \text{ days} / 100 \text{ acres} = \\$150/\text{acre/year})</math></li></ul></li></ul>	<b>Qualitative Assessment</b> <ul style="list-style-type: none"><li>▪ When asked to quantify additional revenue, provide the following:<ul style="list-style-type: none"><li>- Our client's product improves the consistency of red apples and improves the yield by 10%</li><li>- The sweetness factor is estimated to improve the juice yield by 5%</li><li>- 25% of revenue comes from whole apple sales, 75% from juice sales</li></ul></li><li>▪ Improved yield: <math>(\\$30K/\text{acre} \times 25\% \times 10\% = \\$750/\text{acre/year})</math></li><li>▪ Improved sweetness: <math>(\\$30K/\text{acre} \times 75\% \times 5\% = \\$1,125/\text{acre/year})</math></li><li>▪ Total improvement (with cost reduction) = <math>\\$2,025/\text{acre/year}</math></li></ul>

# 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? (If the candidate needs help, ask him/her what the max and min prices are for the product).
- 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.

# Kellogg in India

By: Abhilash Sridharan (Kellogg '15) & Rashaad Jamaal (Kellogg '15)

Quant: 8

Industry: Education

Structure: 5

Framework: Market Entry

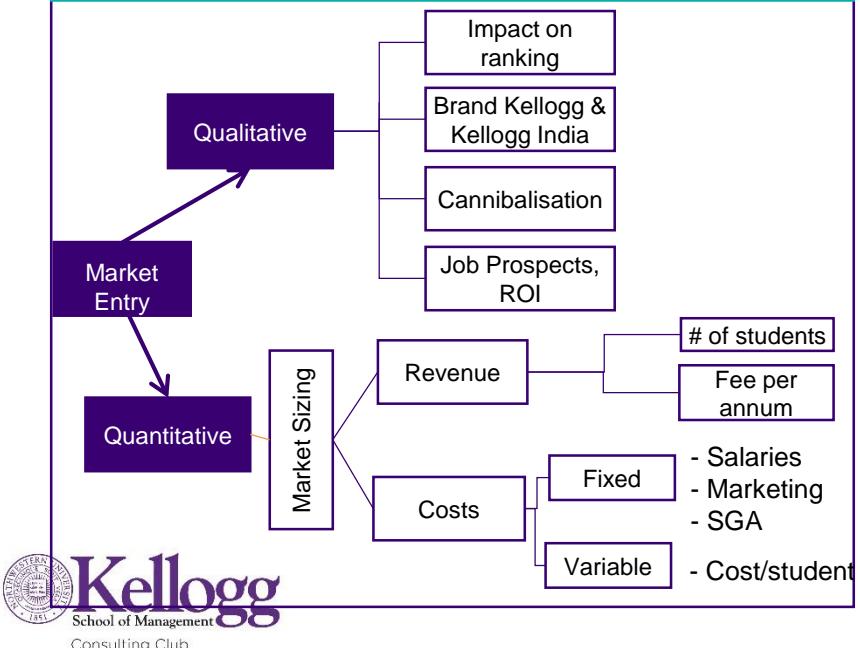
## Case Question

Our client is the Dean of Kellogg School of Management. She has hired you to advise her on an idea, which struck her during the previous week – To consider starting a satellite campus of Kellogg in India. She has asked you to determine whether Kellogg should enter the Indian market.

## Guide to the interviewer

- ✓ This case is a quintessential market entry case.
- ✓ The two main quantitative concepts on which the candidate is being tested are on market size estimation and breakeven analysis.

## A Model Structure should include the following



## Clarifying answers to be provided (If asked by the candidate)

- ✓ **What's the strategic rationale behind starting a campus in India?**
  - Fastest growing economies with a huge demand for business education both in India and students travelling abroad
  - Dean Sally believes that it would help Kellogg move to the Top 3
  - She wants the satellite campus to breakeven in 4 years
  - **Please Note:** The quality of students and the selection procedure would be comparable to the current procedure and there would be no compromise on the quality of applicants, to increase revenue.
- ✓ **What's the local competition in India for Kellogg?**
  - India has its own top-tier business schools such as the 7 Indian Institutes of Management (IIM) and the Indian School of Business (ISB) (ISB has a tie-up with Kellogg, for its pedagogy).
- ✓ **How do the top schools in India, select candidates?**
  - The B-Schools in India admit for the MBA program based on the Common Admission Test (CAT). The Indian School of Business admits candidates based on the Graduate Management Admission Test (GMAT).
- ✓ **How expensive is an MBA education in India?**
  - It costs a student about \$20,000 per year for an MBA education in India, as compared to an expense of about \$70,000 at Kellogg. Indian schools don't offer many scholarships but banks offer generous educational loans for top MBA schools in India.
- ✓ **What programs are we launching?**
  - Only the 2Y MBA program to start with.

# Case Guide

## Topic 1 Being Tested: Market Sizing

The candidate can choose to size the market, in anyway he wants – either top-down or bottom-up. A problem with the top-down approach is that it becomes too dependent on assumptions. Use Exhibit A for a bottom-up approach. (Don't hand it over right away – Let the candidate ask for it.)

### A. Estimate the Total Addressable Market from competition

- Indian Institutes of Management (IIM)
- Indian School of Business (ISB)
- Students joining B-Schools abroad (negligible amount)

#### 1. IIMs

- Every year, there are around 500,000 applications
- Top 6% get closed listed for an interview = 30,000 applicants
- 1 out of 5 are accepted = **6,000 eligible students**

#### 2. ISB

- 1,400 matriculated students / 70% of total admitted students = **2,000 eligible students**
- If interviewee gets this wrong, ask which student pool are we most interested in: matriculated students or all accepted students (some students may not matriculate due to prestige level of school).

Total Addressable Market =  $6,000 + 2,000 = 8,000$  high quality applicants

### B. Market Size

Fee to be charged annually needs to be calculated. A value somewhere in between \$20,000 and \$70,000 is acceptable. Too low or high a value needs to be challenged. Taking a value of \$50,000 per year for 2 years.

**Market Size =  $8,000 * \$50,000 * 2 = \$800M$  (Good enough to proceed ahead)**

## Topic 2: Market Share & Breakeven Analysis

- The candidate needs to mention a target market share in the year of launch. A lower number would be preferable to start with. After letting the candidate present his/her logic, ask him/her to take an assumption of **7.5% market share in the year of launch**.

### Breakeven Analysis

- Expected breakeven in 4 years
- Calculate the revenue and cost structure for 4 years

### Revenue: (hand over exhibit B)

- Only source of revenue is the fee charged from students.
- Revenue each year = Number of students admitted \* Fee/year
- From the second year onwards, add last year's fee back

### Costs:

- **Initial Costs incurred**
  - Land acquisition / leasing
  - Setting campus up
  - Infrastructure costs
- **Fixed Costs**
  - Salaries to Professors
  - Infrastructure Maintenance
- **Variable Costs**
  - Costs incurred per student

**Handover Exhibit C at this time.**

The candidate must move towards a NPV Calculation, as explained in the next page, to understand the breakeven possibility in 4 years.

# Breakeven Analysis & Qualitative Insights

## The Calculations are as follows:

	Y0	Y1	Y2	Y3	Y4
Number of students		600	600	900	900
Yearly Fee per student (\$)		50,000	50,000	50,000	50,000
Revenue from student in year 1 (\$ M)		30	30	45	45
Revenue from student in year 2 (\$ M)			30	30	45
Total Revenue (\$ M)		30	60	75	90
Costs (\$ M)	150	30	30	30	20
Profits	-150	0	30	45	70

## Inferences from the above calculations:

- Candidate must ask for discount rate to do the NPV Calculation. However, there is no discount rate and we could go ahead without it.
- From the above calculations, by the 4<sup>th</sup> year, it doesn't breakeven
  - A candidate could say that it doesn't breakeven even without using discount rates and to not go ahead with the market entry strategy
  - A good candidate would conclude that the venture misses the breakeven mark by only \$5M. Given the rising revenues (\$90M in Y4) and declining costs (\$20M in Y4, vis-à-vis \$30M in Y3), the breakeven would be achieved in the first month of year 5 itself.
- From a quantitative standpoint, the move makes sense

## Qualitative Insights

In addition to the breakeven analysis, a good candidate must discuss the qualitative factors, before moving to a conclusion

### ✓ Brand Impact / dilution

No Top B-School from the US (except for INSEAD) has successfully ventured to start a satellite campus in India. Whether a satellite campus will dilute the Kellogg brand needs to be studied in detail.

### ✓ Influence on rankings

What are the factors which may be impacted by the satellite campus:

- Diversity
- International Presence
- Proximity to other Asian countries
- Job prospects, in terms of % placements

### ✓ Cannibalisation

Kellogg Evanston has about 50-60 students who join every year from India . Will this cannibalise that number? Additionally, there are other students who join Kellogg from other Asian countries. Will this result in those quality applications moving out?

### ✓ Brand Parity

Will global employers view an MBA from Kellogg India on the same scale as they would view an MBA from Kellogg Evanston?

### ✓ Job Prospects & ROI

A huge premium is being charged on the joining fee vis-à-vis IIMs and ISB. Will students experience a similar increase in ROI?

### ✓ Infra & pedagogy support

The support on Infra and pedagogy from the parent campus to the satellite campus is critical

# Suggested conclusion

## Conclusion

A good candidate must highlight that while starting a satellite campus makes financial sense, further scrutiny needs to be done to check the impact of this move on brand Kellogg and other factors that impact the rankings (positively / negatively). Other additional points, which the candidate may add, could be:

- Negotiate on the costs for initial investments, to lower it down from \$150M.
- Support from Indian government on subsidies to be offered
- Develop additional sources of revenue, from supporting programs and corporate training sessions

## Risks

- Brand dilution / considering the impact of a satellite campus on Brand Kellogg
- Cannibalization of existing revenue from Indian students
- Admission percentage is projected to increase from Year 2 to Year 3 by 50% (This is quite high)
- The salaries of Indian graduates, as per Indian Market conditions, (considering Indian PPP) may influence the average salary of Kellogg School of Management given global reporting, eventually impacting the ranking negatively
- Given Kellogg's new building being constructed, the \$150M additional investment for a satellite campus, may require additional rounds of fund raising for the India campus

## Next steps

- Employ a Brand agency / consultant to figure out the impact of starting a satellite campus on Brand Kellogg
- Fund Raising for \$150M to be worked out
- Potential Partners for promoting the program and supporting with faculty initially
- Discussions to be started with the government of India for the land, infrastructure investment and licenses.

# Exhibit A – B-Schools in India

Category	Indian Institutes of Management (IIMs)	Indian School of Business (ISB)
Description of program	<ul style="list-style-type: none"><li>- IIMs select via the Common Admission Test (CAT)</li><li>- The CAT has 500,000 applications every year and the Top 6 percentile gets closed listed for an interview by the IIMs</li><li>- 5 candidates are interviewed for every slot available</li><li>- 85% of the admitted candidates end up joining an IIM</li></ul>	<ul style="list-style-type: none"><li>- 70% of admitted students matriculate each year between the two campuses for a total class size of 1,400</li></ul>
Cost incurred by Student	<p>INR 1,200,000 for each year (All expenses included)*</p> <p>Use the conversion rate of 1 USD = 60 INR</p>	

\*Assume the total cost incurred by a student annually at Kellogg, Evanston as \$70,000 per annum

# Exhibit B: Number of Admitted Students

Year	Expected Number of new students to be admitted each year
1	600 (7.5% of 8,000)
2	600
3	900
4	900

# Exhibit C: Intake and cost structure

## Initial Cost (Incurred in Year 0)

Acquiring land and setting up the campus = \$100M  
Support Infrastructure = \$50M

Total Variable Costs per Year			
Year 1	Year 2	Year 3	Year 4
\$30M	\$30M	\$30M	\$20M

# Rotisserie Ranch

## Interviewer-Led Case

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

Quant: 6

Industry: CPG

Structure: 5

Framework: Market Entry/  
New Product

### Case Question

- Our client is Rotisserie Ranch, a poultry farming company that specializes in growing chickens for rotisserie roasting. Its primary customer segment is comprised of large grocery chains that 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, what would you consider in making this recommendation?

### Case tracker

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

### 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.

# Clarifying answers and case guide

## Clarifying answers to provide if Asked

### Industry Characteristics/Product Details

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

### Client Characteristics

- *Competitive Advantage*: Client has patented process for steriley 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, tandori 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.

After Interviewee walks through structure, ask them:

- **Prompt 1:** Do you think that grocery retailers would be interested in pre-seasoned chickens from Rotisserie Ranch?
- **Prompt 2:** 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. Suggestions?
- **Prompt 3:** After discussing Prompt 2, discuss the results of the market test.

# Prompt 1 – Value to Grocers

## Prompt 1 - Value to Grocers

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

## Prompt 1 - Sample Answers

- There is not correct answer here, what you should be looking for is how well reasoned the recommendation is:
- 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 – Market Testing

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## Prompt 2 - 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?*

## Prompt 2 - Sample 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.*

# Prompt 3 – Demand Elasticity

## Prompt 3 - Demand Elasticity

- A test market launch for the new Rotisserie Ranch BBQ chicken was administered (Hand interviewee **Exhibit 1**).
- *What is the overall profit for both Store A and B from the test market?*

## Prompt 3 - Sample Answer and Notes on Exhibit 1

Using Exhibit 1, interviewee should calculate:

- Retailer profit for Seasoned Chicken compared to Standard Chicken
- Retailer profit = # of chickens sold \* (price per chicken \* retailer margin per chicken)

### Standard Chicken (total profit for retailers = \$300 + \$600 = \$900/week)

- Store A:
  - \$1,000 (weekly sales) \* 30% (retailer margin) = \$300 overall profit
- Store B:
  - \$2,000 (weekly sales) \* 30% (retailer margin) = \$600 overall profit

### Test Market BBQ Seasoned Chicken (total profit for retailers = \$400+ \$675= \$1,075/week)

- Store C:
  - \$1,600 (weekly sales) \* 25% (retailer margin) = \$400 overall profit
- Store D:
  - \$2,700 (weekly sales) \* 25%\* (retailer margin) = \$675 overall profit

# Solution and recommendations

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## 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 \$175 more gross profit using our client's product relative to the standard rotisserie chicken
  - Potential scale benefits to our Client over time as more pre-seasoned chickens are sold

## Exhibit #1: Store sales

	Standard Rotisserie	BBQ Seasoned Rotisserie		
Store	A	B	C	D
Weekly Sales	\$1,000	\$2,000	\$1,600	\$2,700
Retail Price	\$3.33	\$2.50	\$4.00	\$3.00
Retailer Margin	30%	30%	25%	25%

# Tarrant Fixtures

Quant: 8

Industry: Industrials

Structure: 7

Framework: Profitability

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
- **Case format:** Improving profitability
- **Concepts being tested:**
  - Operations
  - Accounting

## Guide to interviewer

- This case is about improving ROI 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.

# Clarifying answers and case guide

## Clarifying answers to provide if asked

### Industry Characteristics/Market Economics

- The market has grown 25% in total 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 three 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 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 increased by 200% (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
Net Profit	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 to Interviewer

- A line-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. Rationalize product portfolio
  - Inaccurate demand forecasts resulting in excess safety stock
  - Obsolete inventories of outdated 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 200% 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 outdated products
- To correct this issue, the client should work to reduce its inventory by:
  - Writing off or working down obsolete inventory (a write-off will cause an immediate hit on profits, so management may be reluctant)
  - Improving 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

# Portkey Inc.

By: Arielle Solomon (Kellogg '16) and Lumay Wang (Kellogg '16)

Quant: 5

Industry: Transportation

Structure: 4

Framework: New Product/  
Market Entry

## Case Question

Portkey Inc. is a British company that has developed a new technology, *Apparate*, that can transport a person in a matter of seconds. The founder, Albus Severus Potter, invented the technology when he needed a fast way to travel from McMuggle to the Hogwarts School of Management. *Apparate* is first technology of its kind, patented and does not have any direct competitors. Up-front fixed costs are estimated to be 2.3BN GBP.

Albus has tasked us with figuring out whether to launch *Apparate*, and if launched – how to price this new service.

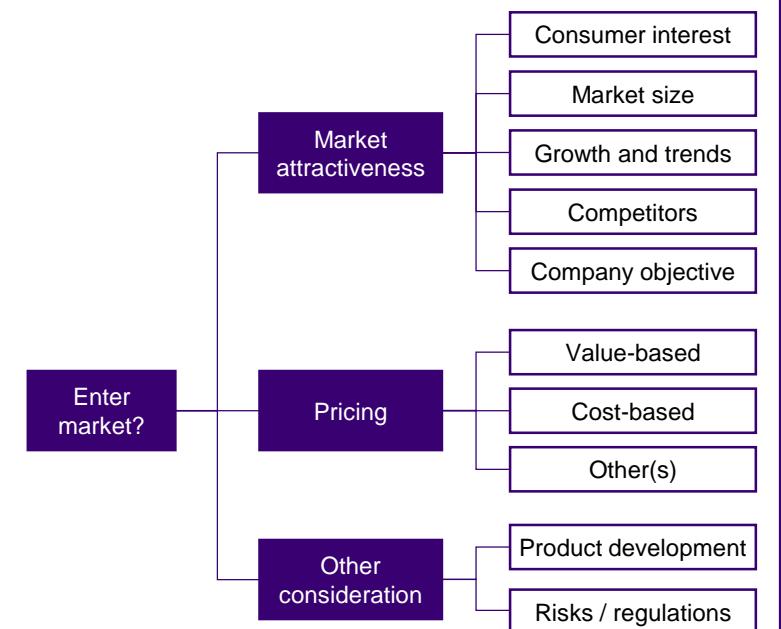
### Clarifying answers to provide (if asked)

- The U.K. is the only country that has given regulatory approval
- From an initial consumer survey, 60% of travelers indicated they are open to this new mode of travel
- From initial testing, out of 200k people, one person experienced half-a-body delay – an often fatal condition
- The trip is instant, but the technology's risks increase as trip distance increases

### Candidate reflections / initial hypothesis should include

- Business appears promising because there are no competitors and the patented technology creates new value for customers
- Candidate should focus on market attractiveness before addressing pricing

### A model framework should include the following



# Deep dive

## Further evidence to provide – Market Size

Q: Calculate the potential size of the market for a 400 mile trip (for example from London to Edinburgh). For the purpose of this analysis, candidate should focus on the UK market for 400-mile airplane trips.

Provide Exhibit A after candidate brainstorms inputs needed to size the market such as a transportation route, ticket prices of current substitutes, number of travellers, etc.

## Candidate insights –Market Size

A: The potential market size is equivalent to **30.4 billion GBP**. The candidate should break down the market into Price\*Quantity and recognize that there are two customer segments, business and leisure travelers.

$$\text{Business: } 60M \cdot .66 \cdot .80 \cdot 9 \cdot 100 = 28.8\text{BN}$$

$$\text{Leisure: } 60M \cdot .66 \cdot .20 \cdot 2 \cdot 100 = 1.6\text{BN}$$

$$\text{Total: } 28.8\text{BN} + 1.6\text{BN} = 30.4\text{BN} \text{ (304MM total trips)}$$

- This is a large market and growing.
- Candidate could also mention that business tickets tend to be pricier than leisure tickets
- Breakeven point isn't covered by the case but is a logical next step – assuming \$100/trip, need 23MM trips to break even or 8% market share of trip volume



## Further evidence to provide – Pricing

Q: As a next step, assess pricing strategies. What price would you recommend?

Candidate should take some time to write a second framework to think about pricing. Make sure candidate is not anchored to 100 GBP price shown in Exhibit A



## Candidate insights – Pricing

- Candidate should discuss cost- vs. value-based pricing and determine that Apparate should be value-based priced because of low breakeven, no direct competition, and high price of substitutes.
- May mention target return pricing (setting price to achieve breakeven in 1 year) or psychological pricing (setting price high as signal)
- Price should be at least the average price of a plane ticket as this method saves time/
- Candidate could brainstorm how to value time saved (work hours saved, opportunity cost, etc.)
- Candidate can mention how travelers may be hesitant to try this new product so may need discount / promotion

# Suggested conclusion

## Conclusion

Portkey Inc. should move forward with launching *Apparate*:

- The market for short-haul trips is 30.4BN GBP and growing at 2% a year
- There are no other direct competitors and the technology is patented
- Portkey Inc. could pursue a value-based pricing strategy that would position the company for future growth while funding new research and product development

## Risks

Risks include:

- Safety risks of product malfunctioning
- Lack of consumer adoption of a new product
- Changes in the regulatory environment/restrictions in commercializing the technology in other geographic markets
- Competitive entry affecting value-based pricing

## Next steps

As next steps, Portkey Inc. could:

- Complete a rigorous study on the safety of *Apparate* that may be publically available to ensure consumer confidence
- Conduct market research to better understand consumer interest / needs and how to maximize value creation
- Choose pilot market and/or segment (e.g. business travelers) and conduct test

# Exhibit A

Category	Statistic
Population of UK	60 million
Percentage of UK population that travels	66%
Average price of ticket (400 miles)	100 GBP (around \$150 USD)
% of traveling population that fly for business	80%
% of traveling population that fly for leisure	20%
# trips/year for business travellers	9
# trips/year for leisure travellers	2
Year-on-year growth of travel	2%

# Salty Sole Shoe Co.

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

Quant: 7

Industry: Retail

Structure: 6

Framework: Profitability

## 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
- **Case Format:** Improving profitability
- **Concepts Tested:**
  - Creativity
  - Accounting
  - Microeconomics

## 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

# 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 cyclicality due to economy and consumer preferences.

### Client Characteristics

- Client designs and distributes footwear to discount retailers (like 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? Examples include: 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? Examples include: 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 40% 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: Client Financial Estimates

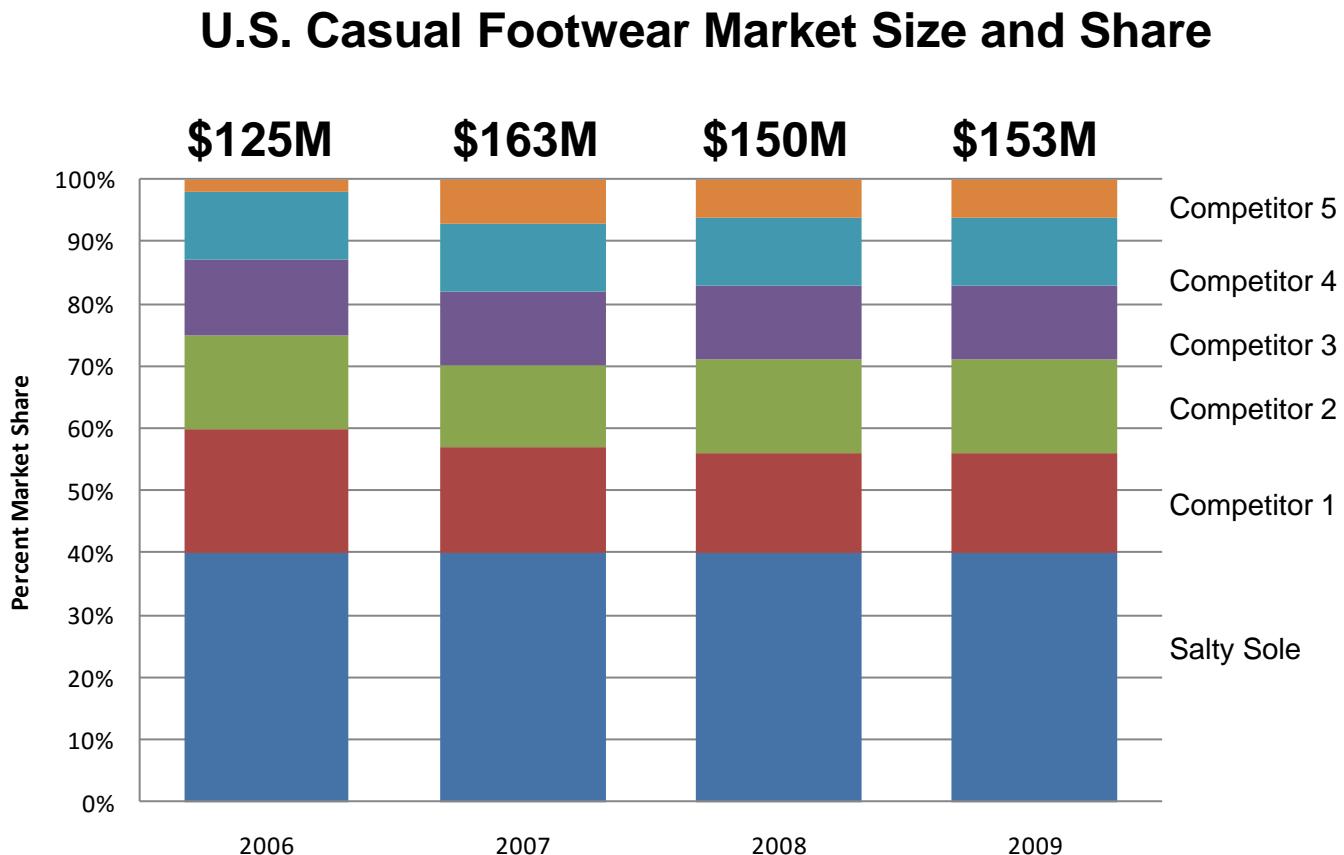
## Salty Sole Financial Estimates

*(\$ 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



# Money Bank Call Center

Quant: 8

Industry: Call Center

Structure: 9

Framework: Cost / M&A

By: Guruprasad Sankaranarayanan (Kellogg Class'12); edited by Nikola Jakić (Kellogg Class '16)

## Case question

- Our client is a large financial services firm with multiple locations around the world. Part of their service offering includes a 24-hour helpline. The client has their call centers in New York and Paris
- The client has recently acquired a small firm (Firm B) in order to expand its reach in a particular geography. Firm B provides a subset of the services and has its call center located in the Philippines
- The client has asked us to determine its strategy going forward for handling customer calls. In particular they want us to look into the call center operations

## Case tracker

- **Industry:** Operations / financial services
- **Case format:** Cost optimization
- **Concepts being tested:**
  - Financial analysis
  - Organizational fit
  - Option evaluation

## Guide to interviewer

- This is an outsourcing case with the following elements:
  - Use a framework that covers the most important areas of M&A and cost cutting
  - Read the exhibits to assess the cost effectiveness and efficiency of the 3 locations
  - Discuss qualitative information on the acquired company – products, culture, customers etc
- There is no right or wrong recommendation, as it will depend on the interviewees assessment of the qualitative concerns
- Key case steps:
  1. Evaluate existing and potential cost structure
  2. Explore alternatives / ideas for implementation
  3. Make a recommendation based on the data

# Clarifying answers and case guide

## Clarifying answers to provide

The following information can be provided to the interviewee if asked:

### Client Characteristics

- Provides full range of financial services for individuals and small organizations
- Acquired firm was started 5 years ago and is still run by the original founders

### Nature of call center

- New employees are college graduates with basic knowledge of financial services and products
- Fluency in English and several European languages required

### Regulatory environment

- Very difficult to lay off employees in the Paris location – significant costs will be incurred
- Philippines government encourages investment in the country – significant tax advantage possible

## Guide to case / Guide to handouts

**Case structure** – The interviewee should draft in a couple of minutes a framework that covers the most important areas in this case

### Options

- No changes – maintain all 3 call centers
- Close Firm B's call center and route calls to one of the existing locations
- Consolidate to a single location

### Company

- Comparison of services offered at the 3 call centers / product mix
- Metrics for evaluating call center performance (cost / call, calls / rep, etc.)

**Specifics to outsourcing** – The interviewee should include specific concerns to the industry such as employment regulations, quality of call, infrastructure capabilities, etc.

**Client goals** – the client wants any proposed solution to be **cash neutral by the end of year 2**, and is not flexible on this requirement

# Key elements to analyze

## Outsourcing

- Compare the efficiency of the 3 locations – possible explanations for variance
- Identify the cost effective option – how is this impacted by integration cost

## Note to interviewer

- When asked, the interviewer should provide data from *Exhibit 1*. Key takeaways from the exhibit are:
  - Total cost incurred by the 2 firms is \$9.6M
  - Philippines currently processes calls at **half the efficiency of NY** (per employee)
  - Interviewee could ask about available slack at any of the call centers but should be advised that all call centers are currently operating at capacity
- If asked, state that currently, we have space, infrastructure necessary to expand. Assume overhead is variable in this case. The candidate should be able to calculate that to process total call volume Philippines will need an additional 250 employees to handle the traffic (1.3M total calls/ 4000 calls/employee in Philippines). Operating cost after the change will be \$7.8M; net savings of \$1.8M.
- The interviewee should realize that this does not account for all the costs, including hiring and training costs. When prompted inform the interviewee about a 1 time cost of \$5M (includes severance for NY and Paris, expanding the Philippines facility) implying that the move is not profitable

	Calls / employee / year	Cost / call (\$)
New York	8,000	7.00
Paris	6,667	9.00
Philippines	4,000	6.00

# Key elements to analyze (cont.)

## Outsourcing

- Prompt the interviewee to explore ways to make outsourcing to Philippines feasible
- Client will not budge on two-year breakeven
- Other options include decrease \$5M investment cost and increase efficiency of Philippines employees (guide the interviewee to the latter)

## Note to interviewer

- The interviewee needs to identify the difference in calls / employee between the New York and Philippines locations
  - Ask the interviewee to assume that the best practices can be transferred and implemented within 3-6 months
- Potential cost savings if Philippines achieves same effectiveness as New York
  - # employees required =  $1.3M \text{ calls} / 8,000 \text{ calls / employee} / \text{year} = 162.5$  (allow rounding to 160)
  - New employee cost =  $160 * \$20,000 = \$3.2M$
  - Ask interviewee to assume overheads double with the need for better equipment. Before the efficiency improvement, OH =  $\$1.3M$  for  $1.3M$  call. New OH =  $\$2.6M$
  - New total cost =  $\$3.2M + \$2.6 = \$5.8M$  ( $\$3.8M$  savings from status quo and  $\$2M$  better than pre-efficiency improved option)
- Other questions interviewee needs to consider
  - Will the client be able to acquire sufficient talented personnel within the short time frame?
  - How will customer satisfaction be impacted with the new labor base?
  - Legal constraints / requirements in NY and Paris – how quickly can we lay off the staff?
  - How will public opinion be impacted by the news of massive outsourcing?

# Solution and recommendations

## Solution & Recommendations

- This is an open ended case. The interviewee needs to justify the recommendation based on the qualitative considerations
- A good recommendation would include 3 sections:
  1. Recommendations: if the recommendation is to outsource the interviewee needs to highlight the risks associated with outsourcing and nature of the acquired firm. If the recommendation uses any other approach sufficient justification needs to be given to overcome the cost savings
  2. Risks:
    - Risks associated with increasing capacity by more than 200% in the Philippines – people, infrastructure, service quality, gaps in knowledge transfer, organizational changes, etc.
    - Reputational impact – do customers notice a difference in service, can the competitor leverage this to steal customers?
  3. Next steps: If outsourcing, some of the next steps would be to analyze the infrastructure requirements and capabilities, find the right talent, ensure smooth transfer and implementation of best practices, etc.

## Bonus/Guide to an Excellent Case

- Excellent interviewees need to address the qualitative information provided in the case: nature of merger, nature of markets being served, etc.
- The interviewee should explore the option of improving effectiveness of the Philippines location without being prompted to do so

# Exhibit 1

## Call center performance – FY2010

Center	Calls / year	Employee cost / year (\$)	Overhead cost / year (\$)	# Employees
New York	600,000	50,000	450,000	75
Paris	400,000	50,000	600,000	60
Philippines	300,000	20,000	300,000	75

# Zephyr Beverages

Quant: 1

Industry: CPG

Structure: 5

Framework: Opportunity Assessment

By: Edwin Van Dusen, Brian Fox and David Welch (Kellogg Class of '04), Edited By: Ameet 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
- **Case format:** Opportunity assessment
- **Concepts being tested:**
  - Competitive analysis
  - Capacity contraction

## 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.
- This case is not representative of the quantitative rigor of interview cases and therefore we recommend it only be given as a warm-up early in the process.

# Clarifying answers and case guide

## Clarifying answers to provide if Asked

### Industry Characteristics/Market Economics

- It has been growing at GDP (~3%) 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 \$1 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 (60% of inputs) and flavor with cranberries, bananas, mangoes, etc. (the other 40%). 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. Each of the three products uses different machinery. It would be difficult to find another use for the plant without a major conversion.
  - Additionally, there are currently synergies between chilled, frozen and juice boxes – mothers are slightly more likely to buy products from the same brand
  - 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.

# Shermer Pharma

By: Ameed Mallick (Kellogg Class of '12)

Quant: 5

Structure: 5

Industry: Healthcare

Framework: New Product/  
Market Entry

## 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
- **Case format:** Market entry
- **Concepts Tested:**
  - Break Even analysis
  - Marketing strategies
  - Organizational changes

## 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 case should be driven by the interviewee.
- 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 interviewees ability to read tables and data on the market and our market share.

# 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.

- *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*
- *If the interviewee isn't getting to the question on the three 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.*

**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 try to 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	\$170 $((\$200k * 85) / 100)$	\$60
Total calls required	100k (should be asked/given)	200k $(100k * 2)$
Total Sales Reps needed	85	170 $(85 * 2)$
Total annual Selling Cost	\$17MM $(\$200k * 85)$	\$12MM $(\$60 * 200k)$

# Math Solutions: Exhibit 2

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

# 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					

# Orange Retailer Co.

By: Mauricio Atri (Kellogg Class of '12)

Quant: 5

Industry: Retail

Structure: 5

Framework: Market Entry

## 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
- **Case Format:** Market Entry
- **Concepts Tested:**
  - Market Sizing
  - Marketing Strategy
  - Creativity

## Guide to interviewer

- This case tests the ability to understand business concepts and quantify the 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
- *Consider doing this case as an interviewer led case for beginners, and interviewee driven case for advanced casers*

# 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, what is the most attractive customer segment(s) 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 70% 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?
- What segment of the apparel market, and customers should ORC target?
- *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?
- *When asked, current players include local/domestic players*

## Topic 3 being tested

- What channels would you use to enter the market
- What other elements need to be considered?
- What factors would impact how much market share we could get?

## Notes to interviewer

- Use Exhibit 1 to size each market: Value Driven (235M), Conservative (147M), Fashion & High-end (118M)
- Exhibit 2 shows that margins are higher and there is less competition in the High-end market
- Together, both Exhibits point to ORC targeting the High-End market
- Note: Value Driven is not appealing since it is not an existing competency
- Can target either Young Adults or Teens & Children, or both
- Should size market opportunity for target segments

## Notes to interviewer

- Fashion/High-end market: Driven by factors such as brand, trendiness of items, aspiration aspects, etc. Assuming manufacturing costs are similar, players seem to be able to charge more for products that have a brand recognition
- Traditional/Conservative market: appears to be more 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 invest. cost would increase ORC's costs)

## Notes to interviewer

- ORC can enter by:
  - Creating standalone stores – More control over branding, but higher costs and longer startup time
  - Distributing to department store – May work well if target mom as buyer for Teens & Children and lower fixed costs
  - Online only
- Other elements to consider: Partnering with local partner, emerging market risks, delivery logistics, tariffs, foreign exchange risk

# Solution and recommendations

## Solution & Recommendations

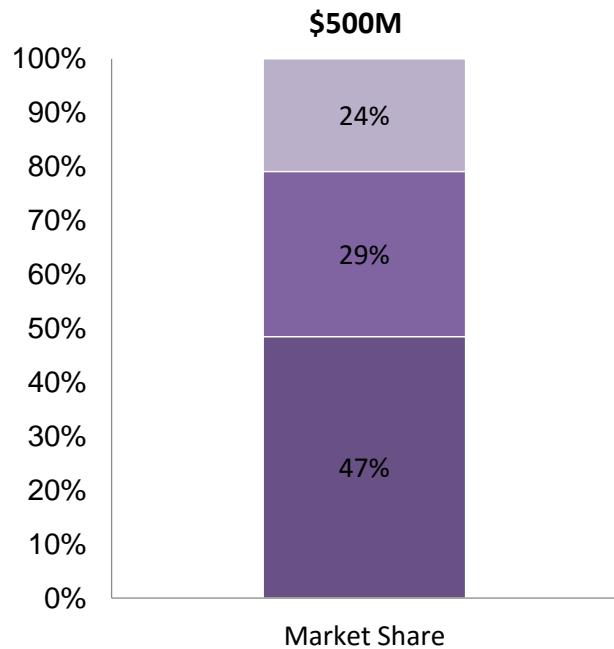
- ORC should enter the Fashion/High-end market. It should be able to leverage the “world known” brands to position itself in this market as an attractive option for either “young adults” or “teens & children” segments. If candidate recommends both segments, they should discuss synergies between the two segments that would make this feasible or examples of other brands that have successfully done this
- To enter this market, ORC could 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. Conversely, ORC could build its own stores or acquire/form a JV with a local partner if they want greater control over their brand

## Bonus/Guide to an Excellent Case

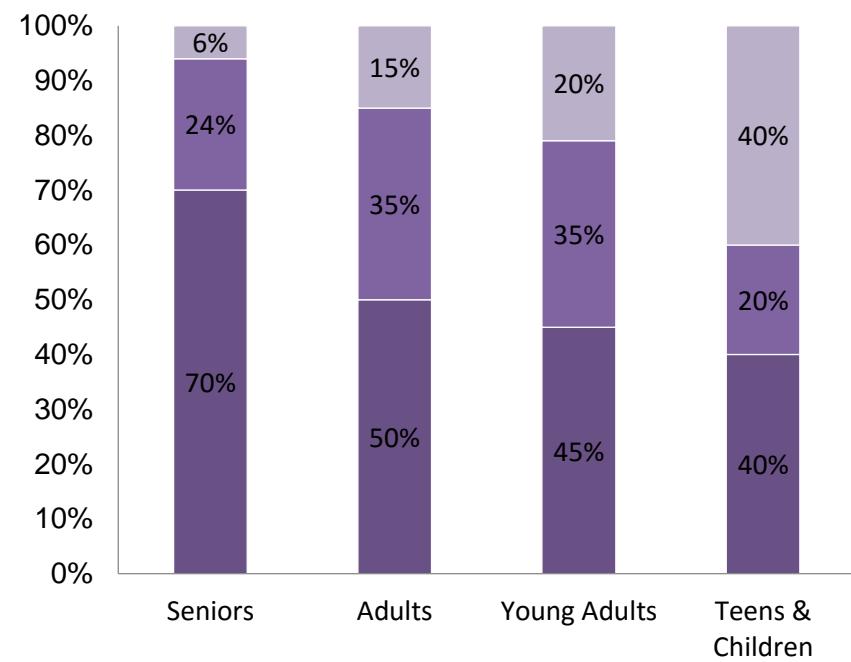
- An excellent answer should mention investments costs, manufacturing costs, transportation costs, and exchange rate risks. If costs are expensed outside of the new market, there are options to mitigate exchange rate risks by buying currency financial options

# Exhibit #1: Apparel market

Market Share (revenue)



Market share by customer segment (revenue)



Segment's share  
of total revenue

10%

20%

40%

30%

■ Fashion/High-end ■ Traditional/Conservative ■ Value Driven

# Exhibit #2: Current players

Current players in the Fashion/High-end market

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

Current players in the Conservative/Traditional market

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

# Vitality Insurance, Inc.

Quant: 3

Industry: Insurance

Structure: 7

Framework: Profitability

By: Peter Manoogian (Kellogg Class of '12), Edited: Matthew Heintz (Kellogg Class of '16)

## 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, long-term disability, etc.
- Vitality has undergone fairly steady growth in the past two years, but profit margin is decreasing. *What should they do about it?*

## Case tracker

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

## 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 rising drastically
  - 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

# 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 and pay a bonus in addition to standard commission
- 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% bonus 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

## 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

- 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

## Notes to interviewer

- If asked, confirm that agents have authority to "book" sales whenever they want by influencing the enrollment 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

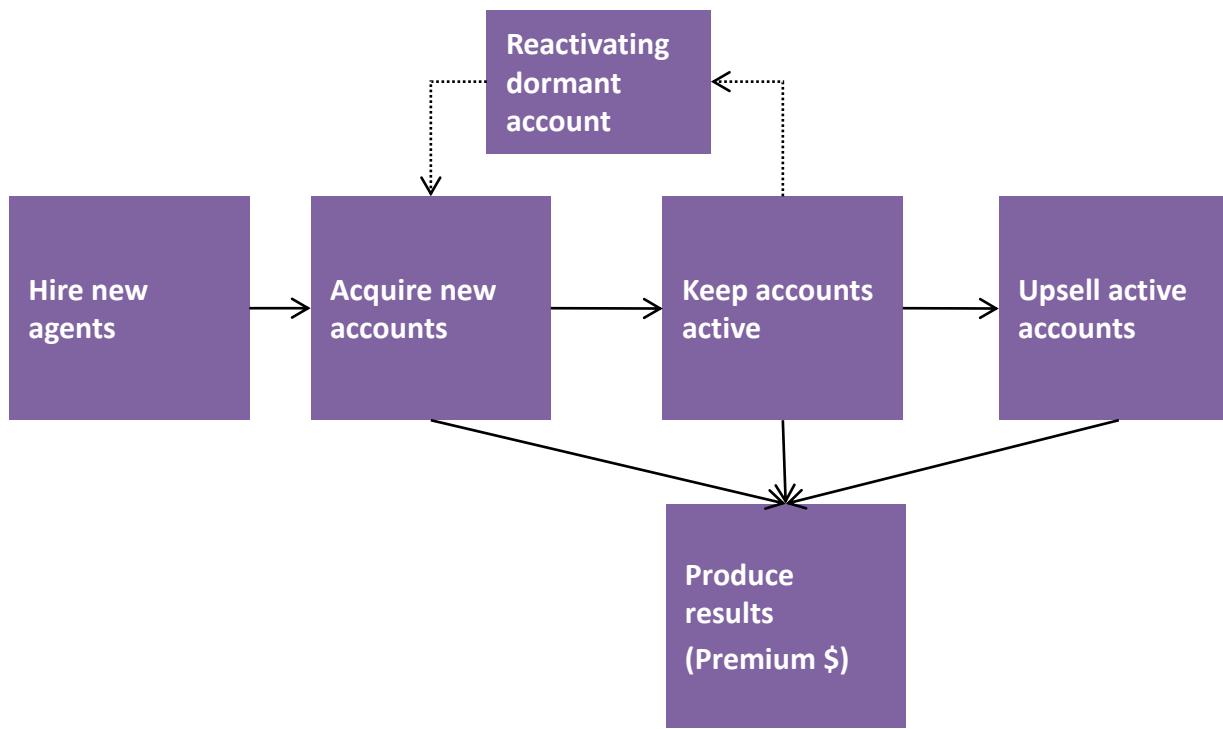
- Strong candidates will make the following observations:
  - Recognize that the likely decline in profit margin from 2009 to 2010 is linked to the abnormal increase to sales costs
  - That the “contest mix” in Exhibit two is similar to a firm’s marketing mix, especially given that the sales channel 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 results and major costs

**Vitality insurance key results and costs (Figures in 000s)**

	<u>2008</u>	<u>2009</u>	<u>2010</u>
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%

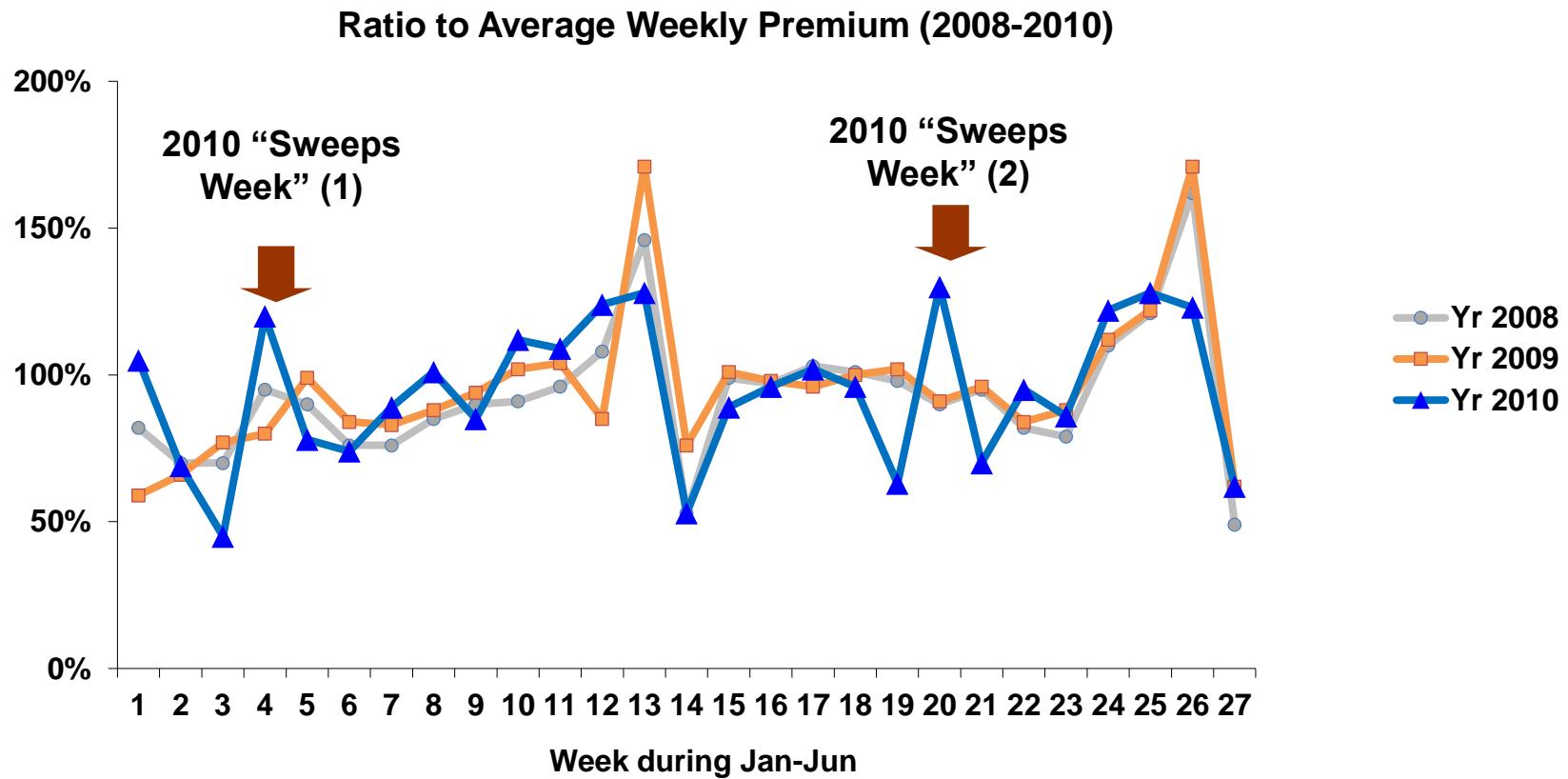
# Exhibit 2: Vitality insurance sales process



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

Year	New Agents	Acquire new accounts (bonus based on # of accounts)	Keep accounts active (bonus based on # of accounts)	Upsell active accounts (bonus based on # of accounts)	Produce results (bonus based on total premium \$)
2008	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



# Realty Seattle

By: Ryan Grandin (Kellogg Class of '16)

Quant: 7

Industry: Real Estate

Structure: 4

Framework: Profitability

## Case Question

Realty Seattle has been one of the fastest growing real estate companies in Seattle with \$2.625 billion in sales in 2014, with 250 agents. In 2010, they became the 2<sup>nd</sup>-highest producing agency in Seattle after just 5 years in business, and by 2014 had grown to #1. They are known primarily for their technology-based approach to real estate, with their website driving “leads” that they provide to their realtors. They are expecting their growth to stagnate over the next few years, and have hired us to come up with successful growth opportunities. What are your suggestions for how they can grow the bottom line?

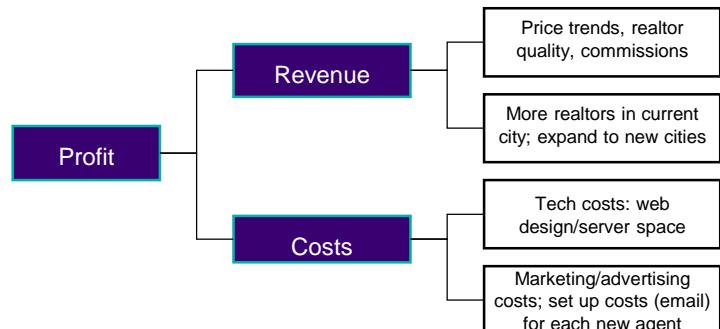
## Clarifying answers to provide

- Realtor's commissions are 3% of the sale price of the house. Realty Seattle takes 30% of a realtor's commission on up to 5M in sales in a year, and after that, they take 10%
- Realty Seattle has centralized marketing costs and charges agents \$500 per month
- They currently have 10 offices, all in Seattle

## Candidate reflections / initial hypothesis should include

- This case is a profitability problem
- Customers don't care what company their agent works for
- Should come up with expansion either in current city or in a new city
- Realize that most costs are fixed, so revenue growth is important

## A model framework should include the following



Company	Competition	Customers	Other
<ul style="list-style-type: none"><li>• Strengths</li><li>• Locations</li><li>• Turnover</li><li>• Funding</li></ul>	<ul style="list-style-type: none"><li>• Landscape</li><li>• Consolidation</li></ul>	<ul style="list-style-type: none"><li>• Type</li><li>• Reputation</li><li>• matter?</li></ul>	<ul style="list-style-type: none"><li>• Regulatory</li><li>• Real estate trends</li></ul>

# Question 1: Brainstorming

## Question to provide

Take me through what you think are Realty Seattle's biggest drivers of profit and give me some ideas of what you might come up with to improve profitability.

What are the Pros/Cons of Realty Seattle's payment model?

## Candidate insights – Expansion

A good candidate will have most of the following:

- Low variable costs/High fixed costs, therefore revenue growth is important
- Brand recognition is not a key driver for customers
- Options for profitability – grow market share or find a new market

Payment model:

Pros – incentive to sell more volume

Cons – does this incentive encourage volume sales at the expense of service?

# Question 2: Employee Pay

## Further evidence to provide – Salary

How much does Realty Seattle receive from its realtors in brokerage fees?

- Realtor's commissions are 3% of the sale price of the house. Realty Seattle takes 30% of a realtor's commission on up to 5M in sales in a year, and after that, they take 10%.
- Average home price: \$400,000

## Further evidence to provide – Marketing Charges

*What is the realtor's return on investment for marketing charges? Assume all marketing charges are spent on postcards mailed out to prospective buyers/sellers.*

*Hand over exhibit A*

**NOTE:** This is an optional math problem – if you think the person needs to focus more on math, ask it. Alternatively, if the candidate solves the first math problem very quickly, go ahead and ask this.

## Candidate insights – Salary

- Realty Seattle receives an average of \$61,500 per agent per year
- $2.625B/250$  Agents is an average of 10.5M in sales per agent.
- $5M * 3\% \text{ realtor commission} * 30\% \text{ Brokerage fees} = \$45,000$
- $(10.5M - 5M) * 3\% \text{ realtor commission} * 10\% \text{ Brokerage fees} = \$16,500$
- Total is  $45,000 + 16,500$ , or \$61,500

## Candidate insights – Marketing Charges

- Realtors at Realty Seattle make a 740% ROI (or 980%, depending on whether they assume it is in the first 5M of sales)
- 1000 postcards sent, .1% response rate = 1 sale per month. Commission on 1 sale =  $3\% * 70\%$  (or 90%)
- Candidate should analyze this number and suggest reason why it is so high
  - Pros: reduces employee turnover and makes it an attraction for star realtors
  - Cons: They may be able to charge more money to the realtors and capture more of the value

# Question 3: Expansion Plans

## Further evidence to provide – Expansion

Realty Seattle is considering 3 options for expansion: Hiring more realtors in Seattle; Portland, Oregon; Vancouver, Canada – Which would you suggest?

Hand over Exhibit B

- If candidates ask any questions about expected market share, ask them to discuss what they think is likely
- Any other brainstorming ideas that the candidate comes up with, ask them to justify and walk through their thinking

## Candidate insights – Expansion

City	Advantages	Concerns	<u>Other Concerns</u>
Seattle	City knowledge, brand recognition, leverage costs, dominant player	Overexposure, difficulty to increase market share	<ul style="list-style-type: none"><li>• City demographics</li></ul>
Portland, Oregon	Faster growing, similar market to Seattle, fragmented market	No market knowledge, no presence in the market	<ul style="list-style-type: none"><li>• Real estate trends</li></ul>
Vancouver, BC	Fastest growing market, highest home price	Regulatory, currency, financial institutions, very concentrated market	<ul style="list-style-type: none"><li>• Ability to cater to each market</li><li>• Financial ability to enter</li></ul>

# Suggested conclusion

## Conclusion

- Expand into nearby markets (Vancouver/Portland) to further grow the business
- Charge realtors more for marketing fees → If you ask this question
- Mention potential add-on services
- Discuss repeat purchase aspect of houses (not a very frequent purchase/sale)

## Risks

- Potentially inherent differences between markets – does the company have the knowledge to expand
- Difficult to manage more disperse groups of realtors
- Exchange rate risks in foreign markets
- Realtor turnover when fees go higher → If you ask about the marketing fees (math question 2)

## Next steps

- Research industry trends in potential cities
- Look into closing offices in Seattle to save on fixed costs
- Hire new market managers in new city

# Exhibit A

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## Monthly Marketing Statistics

- Monthly Marketing Charge to Realtors: \$500
- Cost per Postcard mailed: \$0.50
- Response Rate: 0.10%
- % of responses that turn into Sales: 50%
- Average Home Price: \$400,000

# Exhibit B

City	Current Market Share	Market Share of Top 3 Companies	# of offices	Expected Market Growth (5-yr CAGR)	Average Home Price
Seattle	40%	65%	10	10%	\$400,000
Portland, Oregon	0%	52%	0	15%	\$435,000
Vancouver, BC	0%	84%	0	20%	\$455,000

# Dark Sky Co.

By: Sean Burrow (Kellogg Class of '11), Edited By: Eugene Kim (Kellogg Class of '15)

Quant: 5

Industry: Aerospace

Structure: 5

Framework: Growth Strat.

## 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 2006, 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
- **Case Format:** Growth Strategy
- **Concepts Tested:**
  - Marketing Strategy
  - Creativity

## 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.

# Clarifying answers and case guide

## Clarifying answers to provide if asked

### 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

### 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)

### 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.

### 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.

## 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 2006. 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.

### Exhibit 3 – ONLY PROVIDE IF ASKED

- 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 2014? b) What was the growth rate from 2006 to 2010?
- 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 2014?
  - **Answer:** 50 units or  $\$5,000k \div \$100k/\text{unit} = 50 \text{ units}$
- What was the growth rate from 2006 to 2010?
  - **Answer:**  $900\% \circ (\$5,000k - \$500k) \div (\$500k) \times 100 = 900\%$

## 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 =  $50 * \$220,000 = \$11,000,000$
    - SandBird =  $60 * \$210,000 = \$12,600,000$
    - JointBird =  $(38 + 52) * \$180,000 = 90 * \$180,000 = \$16,200,000$
  - Total Revenue:
    - Assessor Only = **\$5,500,000**
    - Assessor and SeaBird =  $\$3,300,000 + \$11,000,000 = \$14,300,000$
    - Assessor and SandBird =  $\$1,650,000 + \$12,600,000 = \$14,250,000$
    - Assessor and JointBird =  $\$550,000 + \$16,200,000 = \$16,750,000$

# Solution and recommendations

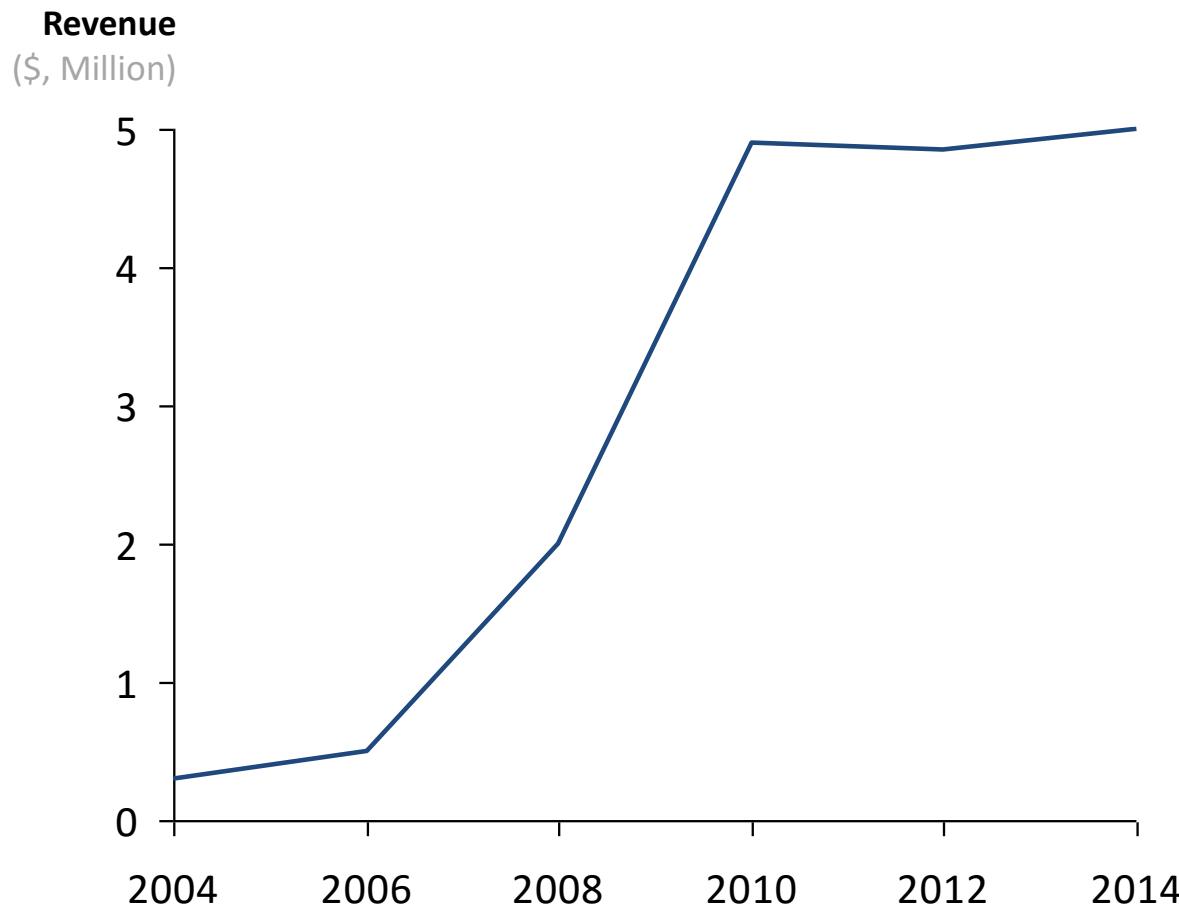
## Solution & Recommendations

- Based on 2015 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?
  - Potential benefits of have two customer bases for new product (Navy and Army).

# Exhibit #1



# Exhibit #2

## New Product Sales Forecast, 2015

New Product Offering	New Product Sales (# of aircrafts)		Price Per Aircraft
	Navy	Army	
SeaBird	50	--	\$220,000
SandBird	--	60	\$210,000
JointBird	38	52	\$180,000

# Exhibit #3

## Impact of New Product on Assessor Sales

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

# Healthy Foods Co.

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

Quant: 5

Industry: CPG

Structure: 6

Framework: Growth Strat.

## 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
- **Case Format:** Growth Strategies
- **Concepts Tested:**
  - Creativity
  - Marketing Strategy
  - Customer Strategy

## Guide to interviewer

- This case is a interviewee led case that 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.

# 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 key provider for a lot of them.
- Ask the interviewees to list all options to increase revenue and the reasons behind.
- Help interviewee to reach that the growth opportunity in the smaller revenue-generating customers, where client's share of wallet is smaller. Now the interviewee should formulate the criteria to prioritize 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

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## Solution & Recommendations

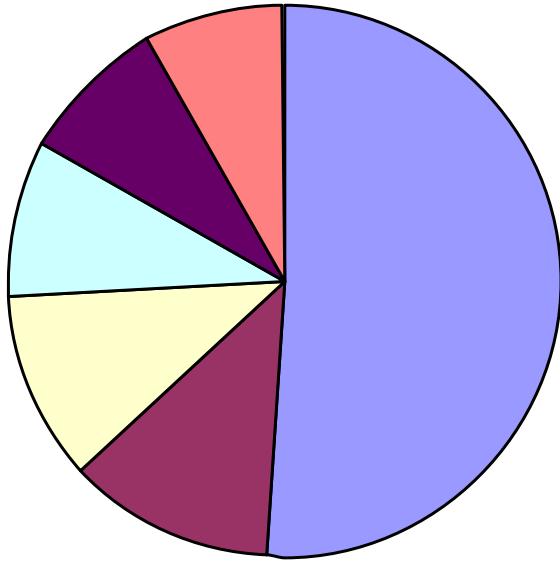
- In the current business, the largest growth opportunities lie in customer segments:
  - hospitals and hotels.
- The interviewee should suggest ways to better serve those customers and increase client's share of wallet there, capturing significant new revenues due to the large size of those clients'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

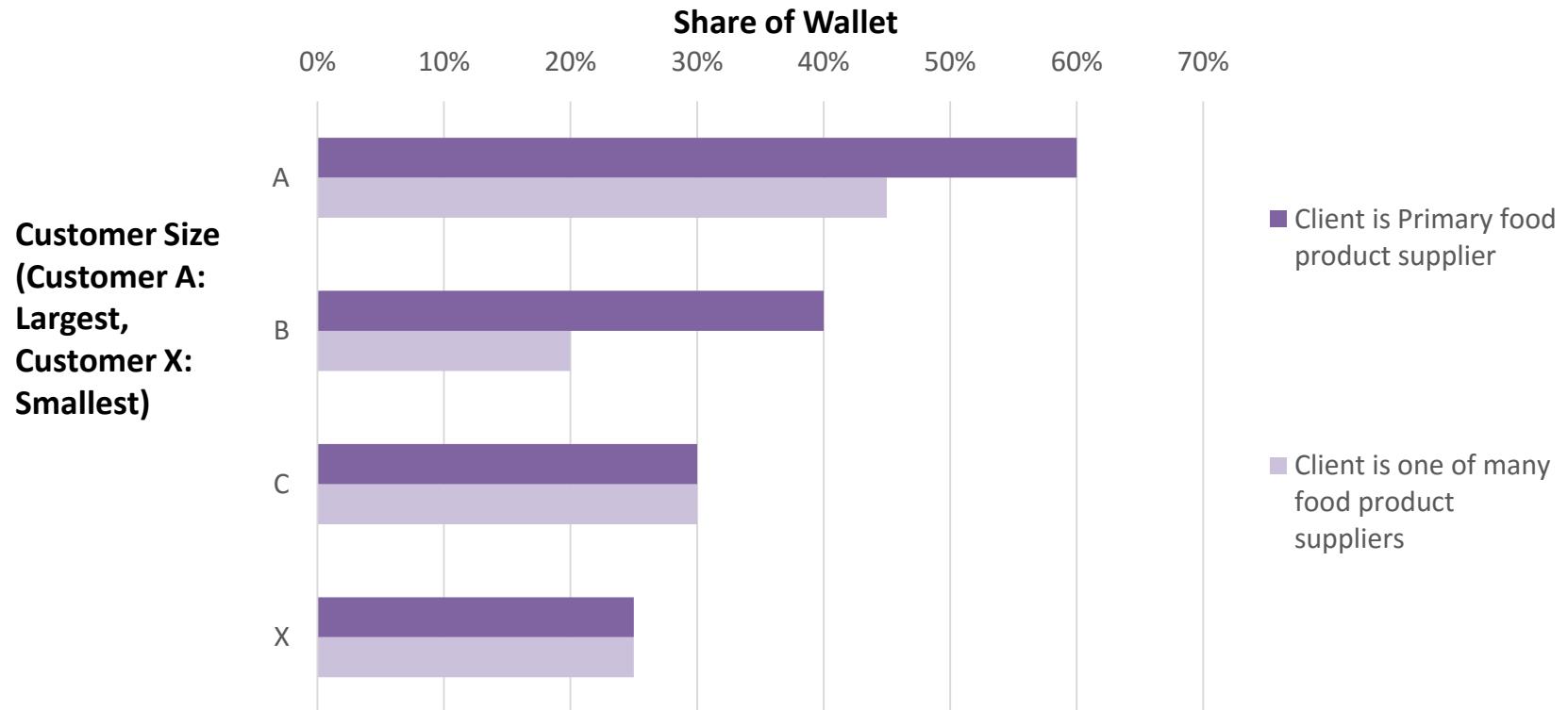
# Exhibit #1: Total Market Revenues by Customer Type

**Revenues by Customer Type**



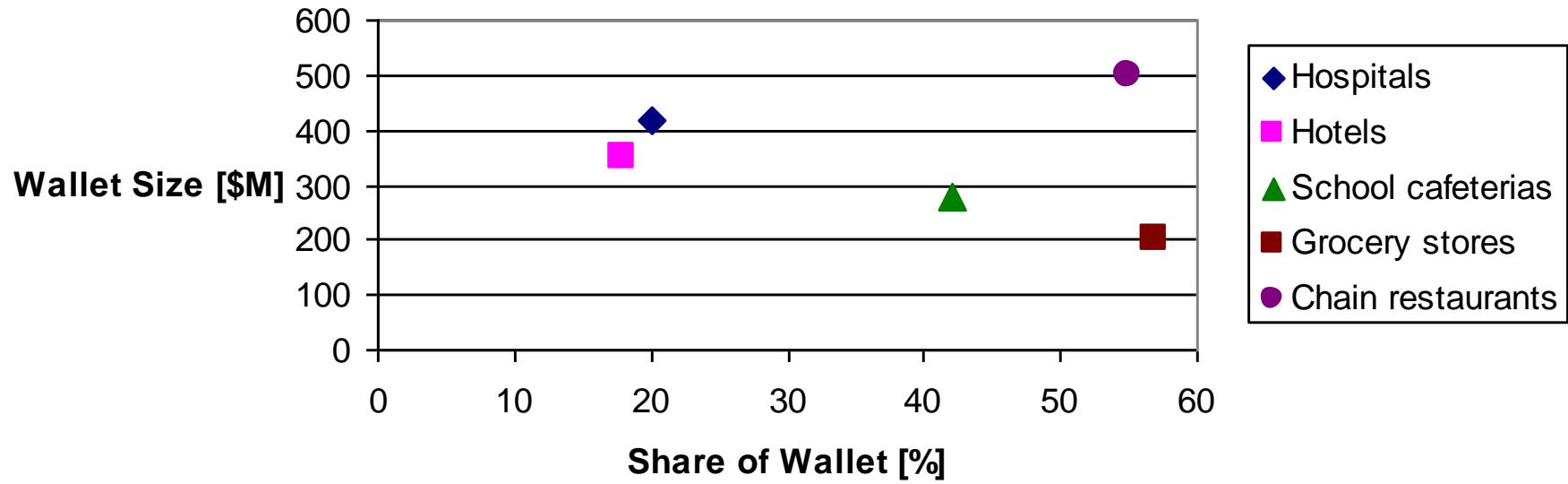
- Independent restaurants
- Chain restaurants
- Hospitals
- School cafeterias
- Grocery stores
- Other

## 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



# Plastic World

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

Quant: 3

Industry: PE

Structure: 4

Framework: M&A

## 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
- **Case Format:** M&A
- **Concepts Tested:**
  - Organizational changes
  - Market share
  - Customer strategy

## 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 – 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. S(he) should also come up with innovation-related costs from the pressure from the customers and how to push back.

# 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

- PlasticWorld's 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 goal 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

# 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.

# 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.

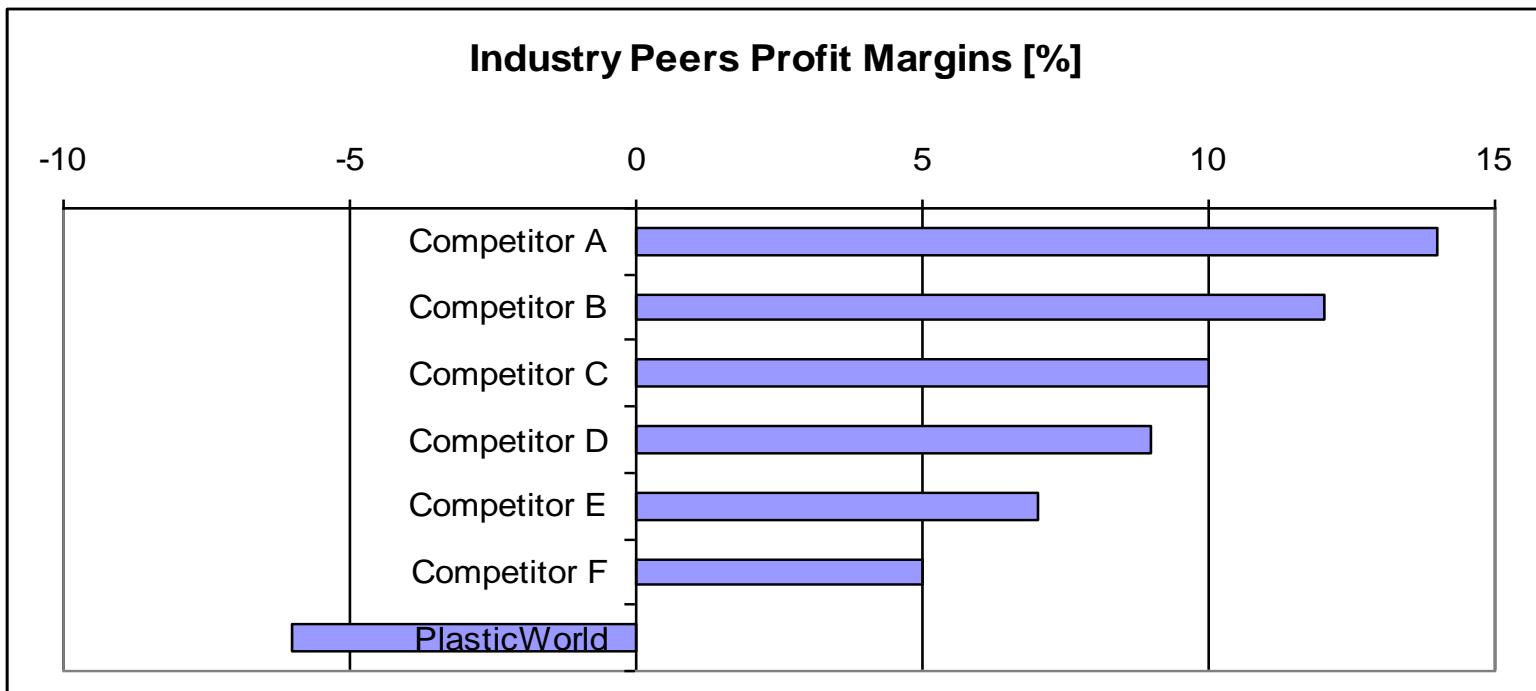
## Bonus/Guide to an Excellent Case

- 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.

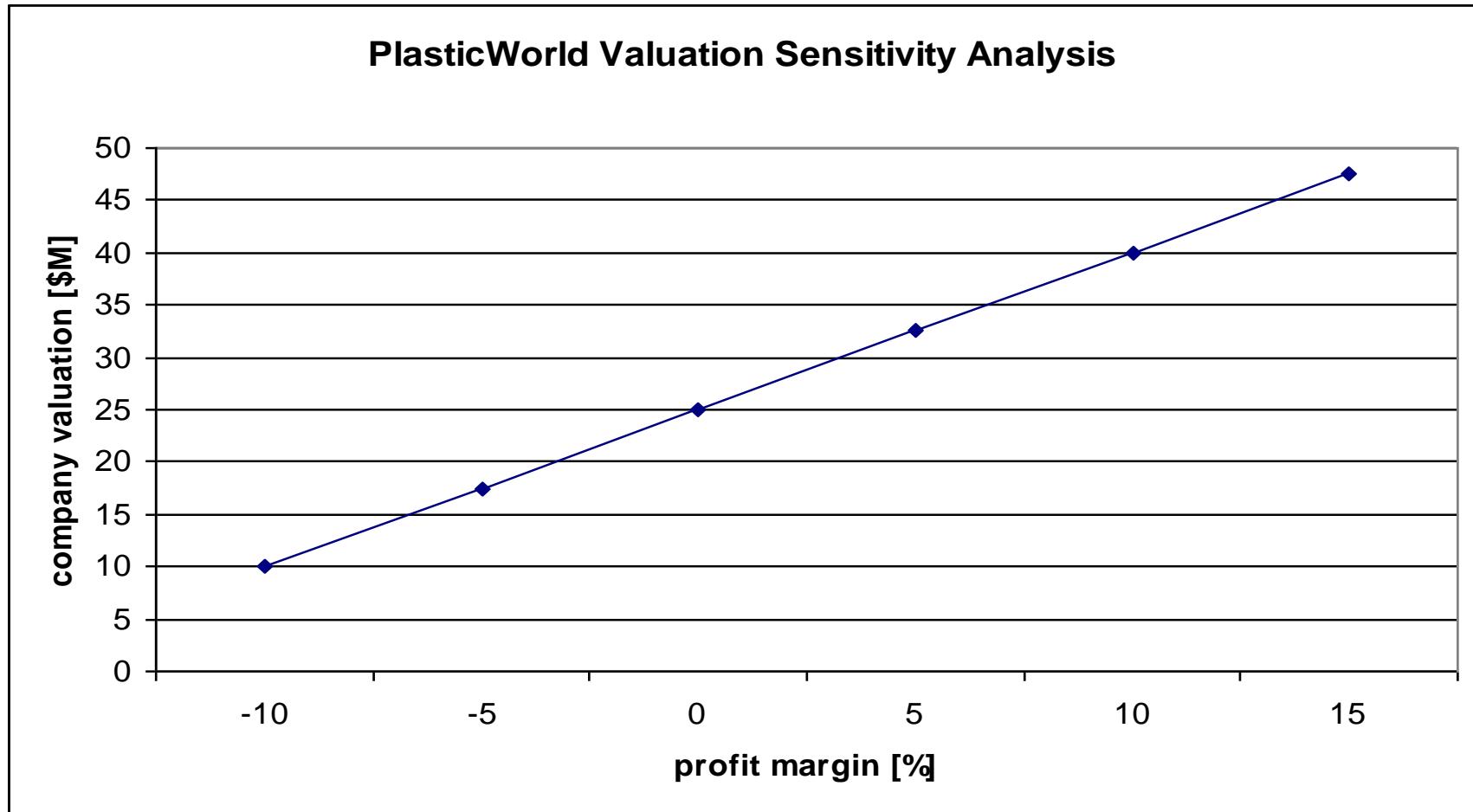
## Exhibit 1: PlasticWorld P&L statement in the past three years

	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



# GoNet Internet Service Provider

Quant: 8

Industry: Telecom

Structure: 4

Framework: Market Entry

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
- **Case format:** Market entry
- **Concepts being tested:**
  - Market share
  - Profitability

## 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 that the interviewee will have to react to.
- After the quantitative portion is completed, there are some open-ended questions for the candidate to answer.

# 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 ~29% (\$840M/\$2.94B)

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 maintain the same level of expected profits (at \$10/month)?

## 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

- 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.

# Orrington Office Supplies (OOS)

Quant: 6

Industry: CPG

Structure: 7

Framework: Profitability

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 product line extensions and 4 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 of 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
- **Case format:** Improving profitability
- **Concepts being tested:**
  - Capacity expansion /contraction

## Guide to interviewer

- This case combines public math with key qualitative insights. At its core, this is a case about rapidly declining profitability and finding ways (i.e. plant consolidation) 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.

# 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
- Highest selling 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 into declining profits.
- 2) Discussion of 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:**

Chihuahua: \$20M + \$18M = \$38.0M

Michigan: \$15M + \$39.5M = \$54.5M

New Jersey: \$18M + \$25.5M = \$43.5M

\$136M

**Each plant has the following variable cost per sku:**

Chihuahua: \$18M / 4.5K SKUs = \$4K per sku

Michigan: \$39.5M / 5K SKUs = \$7.9K per sku

New Jersey: \$25.5M / 3K SKUs = \$8.5K per sku

Consolidating revenues to Chihuahua will reduce annual costs by 50% to:

Chihuahua: \$20M + (\$4K \* 12K 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

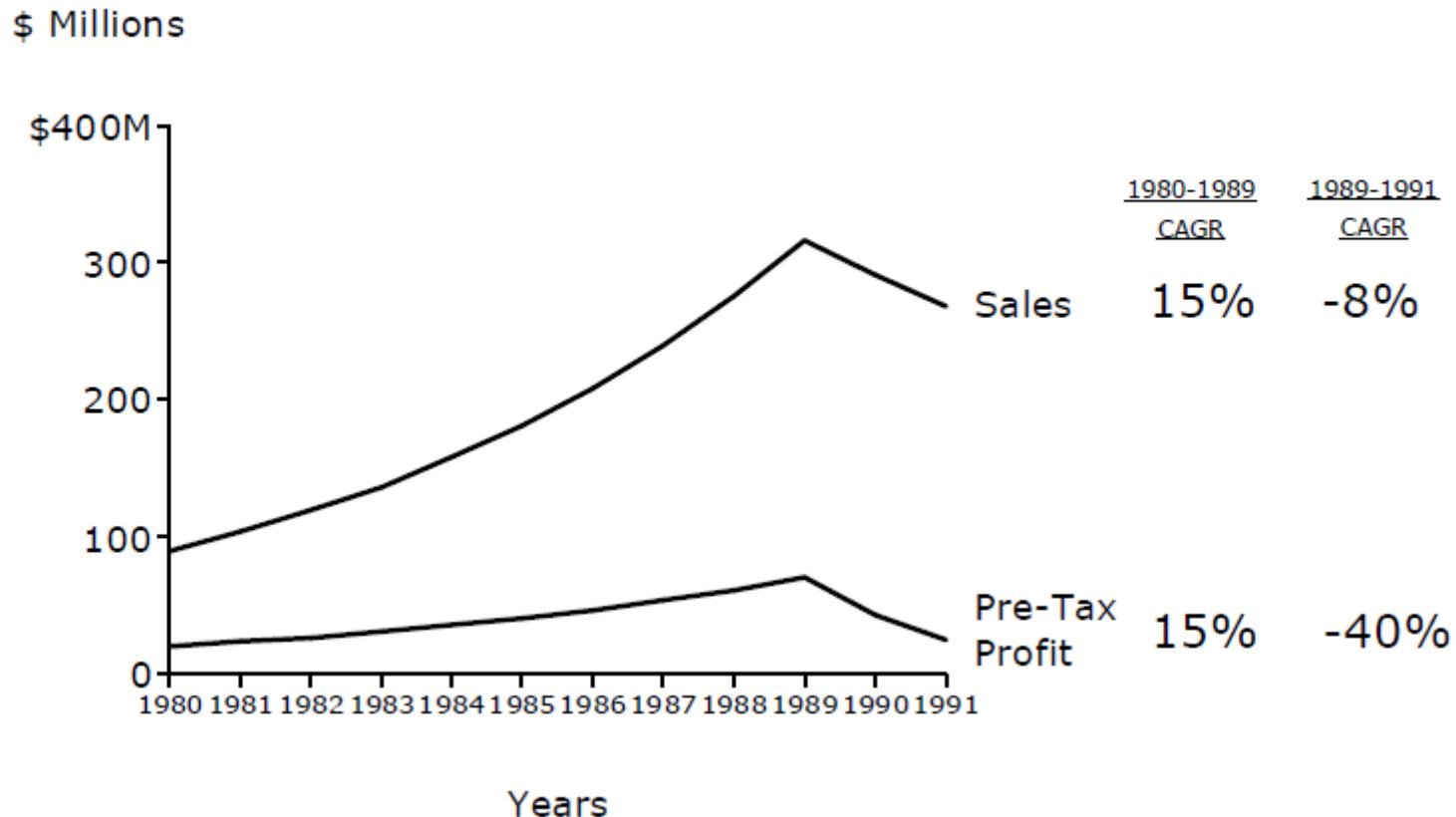
## Solution & Recommendations

- 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.

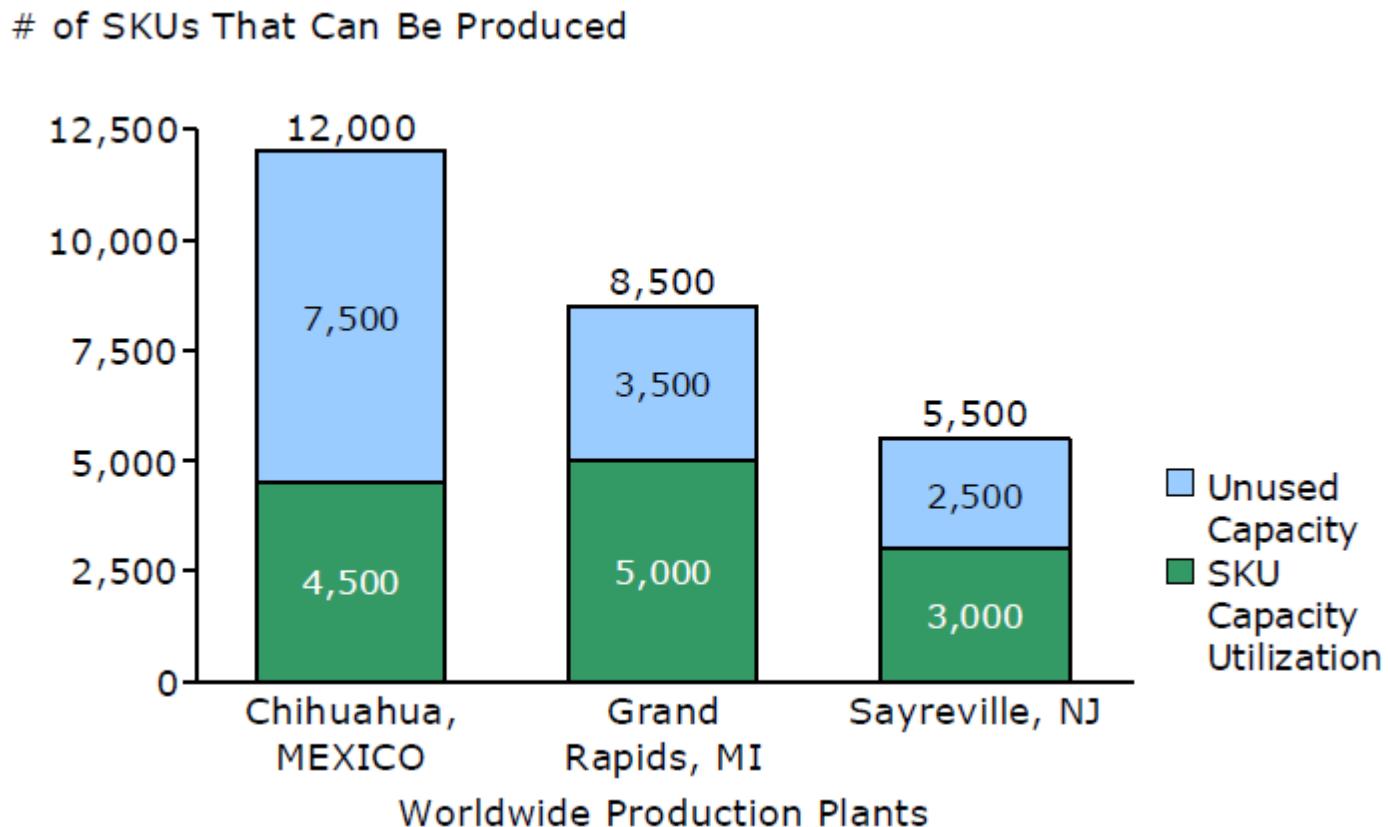
## Bonus/Guide to an Excellent Case

- 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

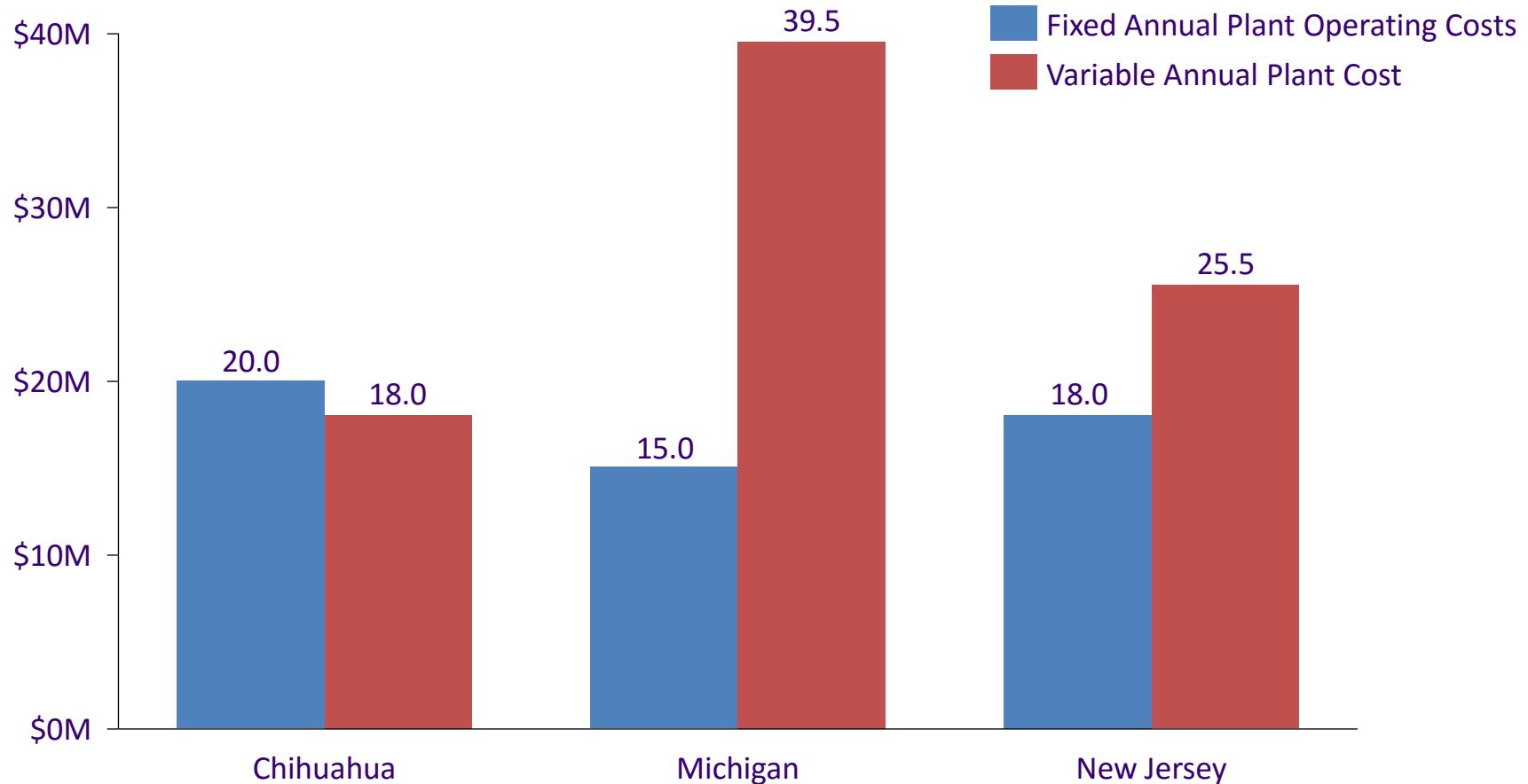
# Exhibit 1: OOS Sales / profit trend



# Exhibit 2: Overview of OOS production plants



# Exhibit 3: Plant operating costs



# Winter Olympics Bidding

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

Quant: 8

Industry: Media

Structure: 4

Framework: Opportunity Assessment

## Case Question

- Our client, a major US television network, is trying to figure out how much to bid for the exclusive right to broadcast the 2018 Winter Olympics Games in the U.S.
- The Winter Olympics are a huge deal and will require a significant amount of capital to secure the rights, so our client has brought us in to help them figure out the right bid amount after considering all relevant factors.

## Case tracker

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

## 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.

# Clarifying answers and case guide

## Clarifying answers to provide

### 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

- \$482M of total production costs
- Opportunity cost: \$1M/hour
- Time value of money: 4 year lag for receipt of revenue

## Guide to case

### Part 1 – Quantitative discussion

- Candidate should determine that this is a cost-benefit / NPV analysis.
- Candidate should identify potential revenue streams from hosting the Olympics, i.e. ad revenue, product placements, etc.
- 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.
- Some of the numbers and assumptions here are difficult, so nudge the candidate along if necessary.

### Exhibit 1 – Provide Winter Olympics schedule if asked

- Give to candidate once he/she identifies ad revenues

### Part 2 – Qualitative discussion

- After finding the NPV of \$200M, 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 use 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):  $10 \text{ weekdays} \times 4 \text{ hrs/day} \times 10 \text{ min/hr} \times 2 \text{ slots/min} \times \$400,000/\text{ad} = \$320\text{M}$
  - Non-prime: Weekdays (M-F):  $10 \text{ weekdays} \times 6 \text{ hrs/day} \times 10 \text{ min/hr} \times 2 \text{ slots/min} \times \$200/\text{ad} = \$240\text{M}$
  - Weekend:  $4 \text{ days} \times 10 \text{ hrs/day} \times 10 \text{ min/hr} \times 2 \text{ slots/min} \times 400\text{K/ad} = \$320\text{M}$
  - Opening/Closing:  $2 \text{ days} \times 3 \text{ hrs/day} \times 10 \text{ min/hr} \times 2 \text{ slots/min} \times 400\text{K/ad} = \$48\text{M}$
- 2) Total profit should be equal to \$300M.
  - Profit:  $\text{Revenues } \$928\text{M} - \$482\text{M of total costs} - \$146\text{M of opportunity cost} (2 \text{ days} \times 3 \text{ hours} \times \$1\text{M/hr} + 14 \text{ days} \times 10 \text{ hours} \times \$1\text{M/hr}) = \$300\text{M}$
- 3) NPV should be equal to \$200M.
  - Discount rate:  $1.10^4 = 1.4641$  (ask candidate to round to 1.50)
  - $\$300\text{M}/1.5 = \$200\text{M}$

## 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
- \$482M of production costs
  - Opportunity: \$1M/hr
  - WACC: 10%

# Solution and recommendations

## Solution & Recommendations

- While the NPV of the project is \$200M, the fact that there are other intangibles (new viewers, plugging our programs, and prestige) the bid should just be \$200M.
- 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.

# Exhibit #1

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## Winter Olympics Schedule

Day 1 Opening Ceremonies (Friday)	Day 2-15	Day 16 Closing Ceremonies (Saturday)
8-11pm	Weekday: 9am-12pm, 2-5pm, 7-11pm  Weekend: 11am-9pm	8-11pm

# Vindaloo Corporation

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

Quant: 8

Structure: 4

Industry: CPG

Framework: New Product/  
Market Entry

## 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. Currently 100 beets produce 100 lbs of sugar or 1lb/beet while the new seeds will produce 200 lbs of sugar, or 2 lbs/beet.
- *Vindaloo now wants to sell the company, how would you think about pricing Vindaloo?*

## Case tracker

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

## 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.

# Clarifying answers and case guide

## Clarifying answers to provide if Asked

### Industry Characteristics/Market Economics

- The market has grown at GDP over the past few years and is predicted to grow at 2% annually.
- Sugar is a mature commodity, in other words, there is enough supply to meet demand. The wholesale market is \$2 billion worldwide per year.
- Farmland that is not used for sugar can be repurposed to grow cabbage, which is currently 1/5 as profitable as sugar.

### 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 an understanding of the sugar industry and market economics
- 2) Analyze the product benefits and potential impacts for farmers
- 3) Identify the channel structure and assess the opportunities to minimize costs within the value chain
- 4) Calculate NPV of cost savings to value the company

# Calculations

## Math question 1 – Cost Savings from Farming

- *What are the cost savings/increase in profits from farming with the new seeds?*
  - If interviewee has not already asked about what else farmers can do with the land, point out that since the market is saturated, there is no need for additional corn, farmers will instead use the land to grow cabbage.
  - Remind interviewee that cabbage is 1/5 as profitable as sugar.

## Math solution 1 – 10%

- **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 (20%) as profitable as sugar currently** – accounting for the 2x yield from the new sugar beets, **cabbage would only be 10% 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. Sugar is a mature commodity and if everyone produced twice as much sugar, there would be far more supply than demand, causing global prices to crash. Additionally, some candidates will try to calculate the costs savings of the entire value chain here (make sure to remind them in the debrief to answer the question that is asked.)

# Calculations (cont.)

## Math question 2 – Value Chain

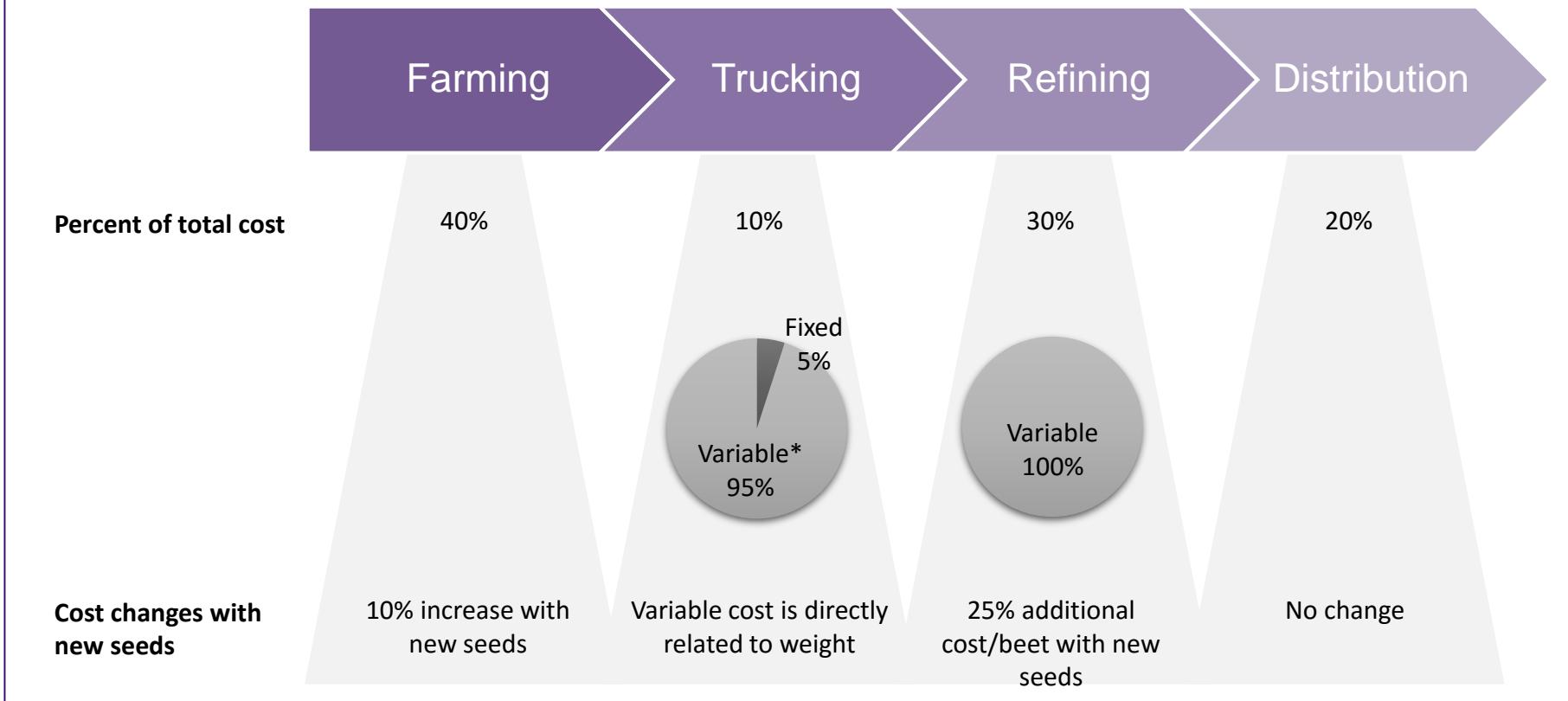
- *What do you think the value chain process looks like for Vindaloo?*
  - Hand interviewee Exhibit 1 and have them walk through their initial thoughts.
- *What are the cost savings from Trucking, Refining, and Distribution using the new seeds?*

## Math solution 2

- **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 have two components. Initially the costs will drop by 50% because only half as many sugar beets need to be refined. However, the variable cost/beet increases by 25% for the new sugar beets. In step the costs go from “X” to “.5X” to “.625X”, an overall cost savings of 37.5%.
- **Solution – Distribution**
  - There are no cost savings in distribution.

# Exhibit 1: Vindaloo Value Chain

## Vindaloo Value Chain Processes



# Calculations (cont.)

## Math question 3 – Total cost savings

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

## Math solution 3 – 20%

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 - NPV

- *How would you price Vindaloo to potential buyers?*
  - Remind the interviewee that the market size is \$2 billion; the growth rate is 2%; assume a 12% discount rate
  - If the interviewee cannot recall the perpetuity formula, provide it for them
    - $\text{Value} = \text{annual cash savings} / (\text{discount rate} - \text{growth rate})$

## Math solution - \$4 Billion

- **Solution – Net present value of cost savings**
- Our client's product will save 20% a year in sugar costs - multiplied by the \$2 billion market size, that cost savings comes out to \$400 million per year.
- Therefore the company can be valued at:
  - $\text{Value} = \$400M / (12\% - 2\%)$   
= \$4 Billion

# 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 \$4B.
- The interviewee should also identify a number of risks and potential benefits along the way (i.e. adoption rates given the required change to farmland and likely capex for equipment, competitive response, other uses for sugar in adjacent or completely separate markets, other uses for newly acquired farmland, potential buyers, government intervention, etc.) before making their final recommendation.

## Bonus/Guide to an Excellent Case

- This is a quantitatively heavy case. A excellent interviewee can quickly identify the important drivers of cost and can crunch the numbers easily and with little error. Additionally, they will organize the data in a tabular form for ease of calculation and presentation.
- Additionally, an good interviewee will synthesize each relevant cost savings, the final valuation, and next steps/risks as part of their final presentation.

# DigiBooks Inc.

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

Quant: 4

Industry: Tech

Structure: 7

Framework: New Product/  
Market Entry

## Case Question

- Our client, DigiBooks, is a manufacturer and seller of electronic book readers (tablets). DigiBooks also distributes e-books for the tablets through their website. The tablet is only compatible with books sold through the DigiBooks site.
- DigiBooks is planning the launch of its tablets in a country where no electronic book readers are currently sold. Only 1% of the population has ever used an electronic book readers , 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 DigiBook tablets in this new country?*

## Case tracker

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

## 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 interviewer 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.

# Clarifying answers and case guide

## Clarifying answers to provide if Asked

### Industry Definitions

- *Electronic book readers:* 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 Tablet:* 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

### Market Characteristics

- Total population of the country 76MM, high literacy level

## 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 tablets 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 tablets and books be sold at? What is customers willingness to pay? Should we price the tablet at a low price so as to capture most of the market, and make margin on e-books?
  - **Promotion:** How should the tablets be marketed? What promotion mechanisms should be used?
  - **Place/Distribution:** Should the tablets 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 (Exhibit 1)

- 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 DigiBook 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 (Exhibit 2)

- 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?*
- What segment would you recommend to your client?

## Notes on Exhibit 1

- If unclear, the interviewee should answer based on Revenue Potential (i.e. Ignore probability of purchase) assuming all tablet 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 tablets have the same margin
- Using **Exhibit 1**, interviewee should calculate:
  - SR Revenue = [(15 books x \$10 X 3 Years) + (\$200 x 1 tablet)] x 8M People = \$5.2B
  - OR Revenue = [(10 books x \$10 x 3 Years) + (\$125 x 1 tablet)] x 20M People = \$8.5B
  - RR Revenue = [(5 books x \$10 x 3 Years) + (\$175 x 1 tablet)] x 10M People = \$3.25B
- **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 Reponses:**
  - 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 Profitability calculation for each of the Sales Channels and back out the Upfront Investment. They should ignore all other costs.
- 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:
  - $Retail\ Profit = [(10\ Books \times \$10/book \times 50\%GM) + (\$100/tablet \times 30\%GM)] \times (20M\ People \times 50\% \text{ reach} \times 40\% \text{ Penetration}) = \$320M - \$20M II = \$300M$
  - $Internet\ Profit = [(10\ Books \times \$10/book \times 50\%GM) + (\$100/tablet \times 60\%GM)] \times (10M\ People \times 10\% \text{ Penetration}) = \$110M - \$10M II = \$100M$
- **ANSWER: Sales Channel to Use = Retail with a profit of \$300M**

# Solution and recommendations

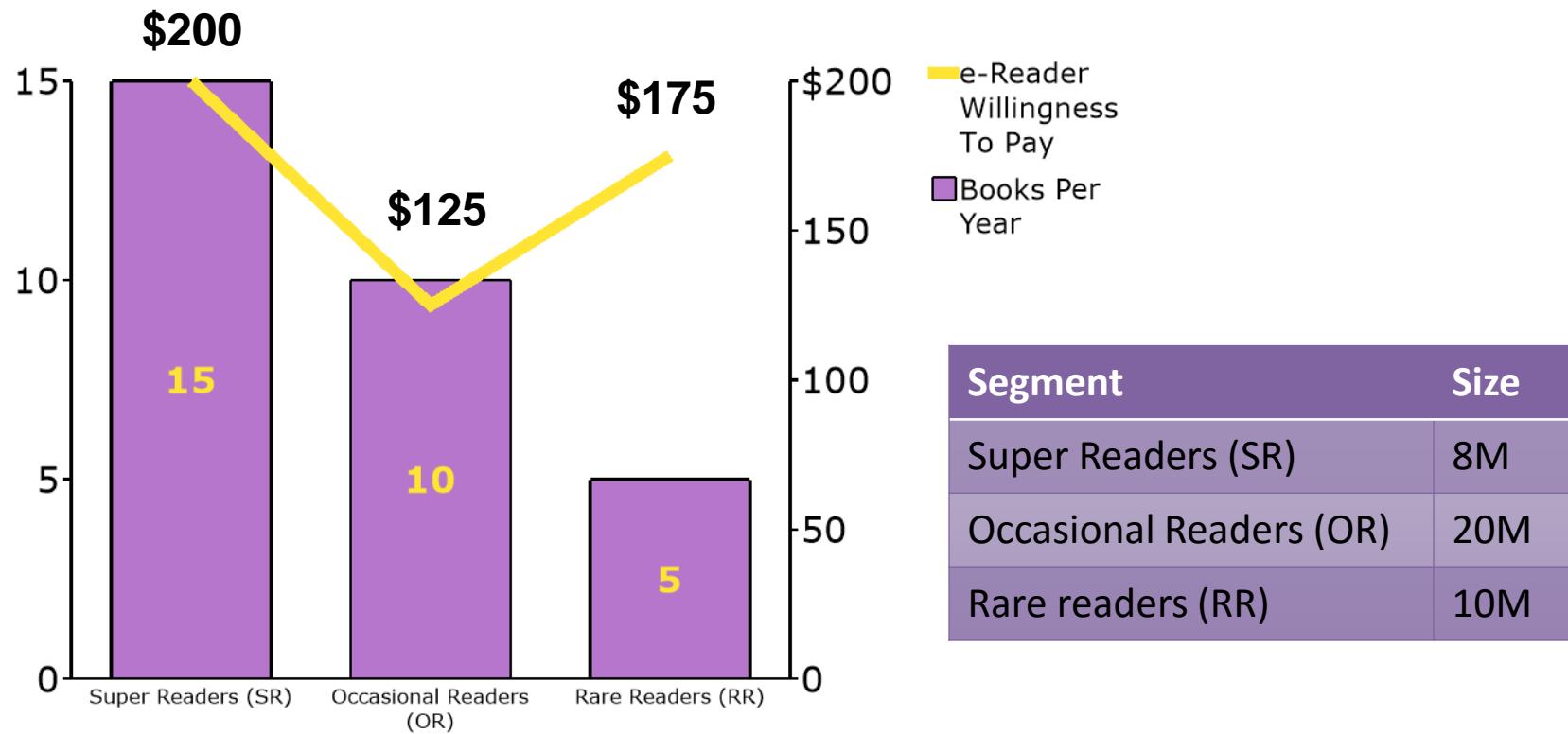
## Solution & Recommendations

- Overall, 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 annual return
- **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 better interviewee 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



# Exhibit #2: Channel decisions

Channel	Reach as a % of Total potential market	E book Gross Margin %	E-reader Gross Margin %	Penetration	Overheads
Retail	50%	50%	30%	40%	\$20M
Internet	50%	50%	60%	10%	\$10M

# Health Coaches

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

Quant: 8

Structure: 6

Industry: Healthcare

Framework: New Product/  
Market Entry

## 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
- **Case Format:** Developing a new product/Service
- **Concepts Tested:**
  - Customer strategy
  - Break-even analysis

## 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

# 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

- Customer segmentation by disease area and cost per member

### Program Costs

- Salary and other
- Portfolio size/capacity (members/coach)

### Risks

- Do assumptions hold?
- Competitive response
- Regulatory, liabilities

**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

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

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

Savings for one portfolio of 65+ diabetics:

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

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

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

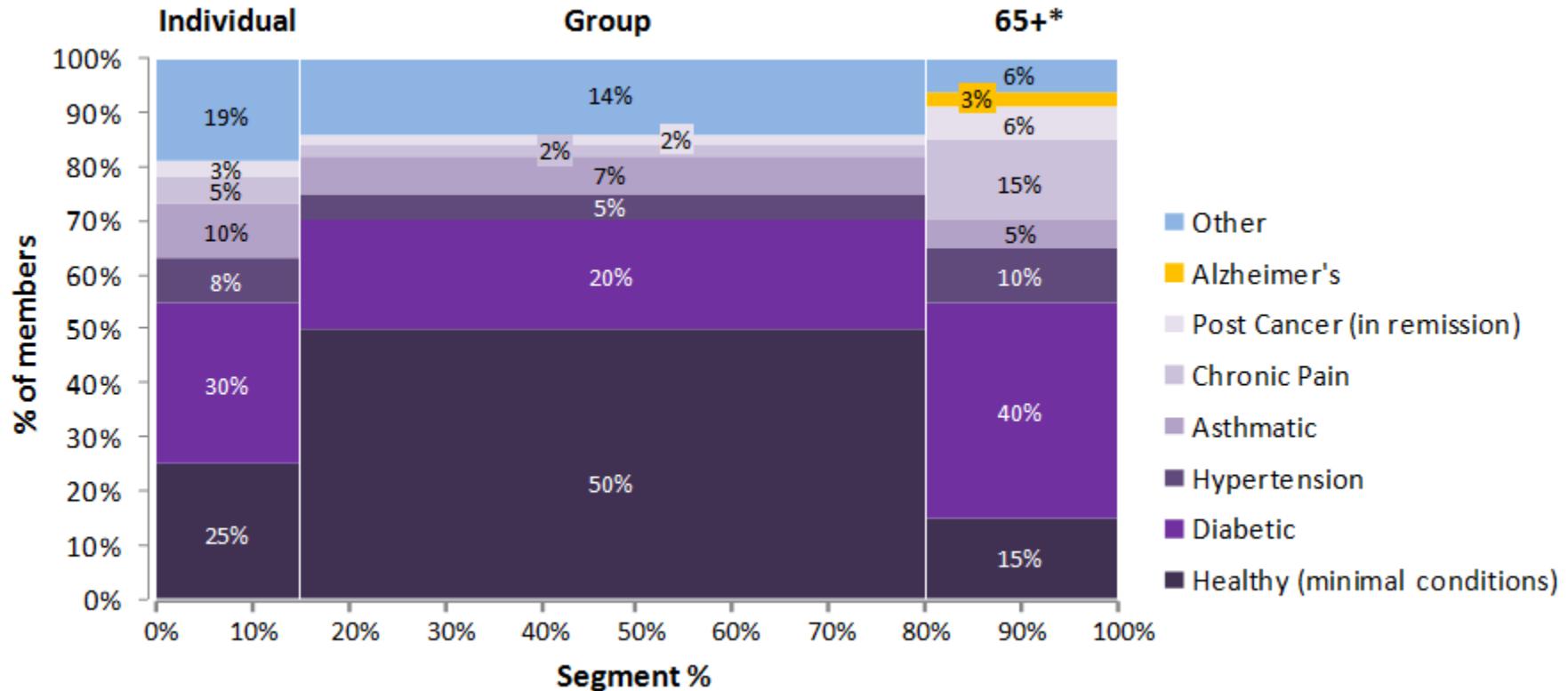
With 3-4 minutes remaining, give interviewee a moment to prepare a recommendation. Here is a strong sample:

- 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+ diabetes segment (\$144M per year savings per coach, a 2x return on each Health Coach)
  - Consider introducing to Individual diabetes 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 (Avg. PMPM)
Group	\$100	
65+	\$300	

# High Q Plastics

Quant: 8

Industry: Industrials

Structure: 5

Framework: Profitability

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
- **Case Format:** Improving Profitability; Cost Reduction
- **Concepts Tested:**
  - Competitive Analysis
  - Creativity
  - Operations

## Guide to interviewer

- This case is interviewer led. It contains three portions:
  1. Structuring a framework that helps to identify declining profitability
  2. Brainstorming ideas to improve profits, on both the revenue and cost sides
  3. Calculating whether or not the client can achieve \$100M in profits in 2014, given the exhibits and trends
- An effective interviewee should demonstrate clear and MECE approach at dissecting profitability, structured brainstorming in improving profits (e.g., brainstorming in buckets) and effectively using exhibits to outline the correct approach to calculating 2014 profits.

# Clarifying answers and case guide

Clarifying answers to provide	Questions and Hand-out Guide
<p><b>Industry Characteristics/Market Economics</b></p> <ul style="list-style-type: none"><li>- Automotive sales overall still growing steadily, driven by emerging markets</li><li>- Automotive manufacturing is leaving the U.S.</li></ul> <p><b>Client Characteristics</b></p> <ul style="list-style-type: none"><li>- Client is currently one of the leaders in this category</li><li>- Client has U.S.-based manufacturing</li><li>- Revenues have been slowly declining over last 5 years</li><li>- Client's products are of a higher quality than most Chinese competitors' products</li></ul> <p><b>Competitive Dynamics</b></p> <ul style="list-style-type: none"><li>- Automotive OEM customers are looking to reduce cost, driving increased price competition among parts suppliers</li></ul>	<ol style="list-style-type: none"><li>1. What key questions would you ask an industry expert in order to better understand the reasons behind High Q's declining profits?</li><li>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?</li><li>3. What ways can you think of to increase revenues? What ways can you think of to reduce costs?</li><li>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. <i>Hand out exhibit 1.</i><ul style="list-style-type: none"><li>• 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.</li><li>• Lean manufacturing implementation across all plants will provide an additional 20% savings in raw material, and 30% savings in labor.</li><li>• What is the change in profits the High Q CEO can expect from 2010 to 2014, based on this information?</li></ul></li><li>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. <i>Hand out exhibits 2 and 3.</i><ul style="list-style-type: none"><li>• 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?</li></ul></li><li>6. Please summarize your findings to the CEO, including any other potential opportunities to increase High Q's profits over the next few years.</li></ol>

# 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. Profit =  $Q*(P-VC) - FC$
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. Revenue will decrease by an additional 10%, in a cost cutting maneuver. 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 ("Sales" figures below are in units/vehicles). Rounded answers (\$13 or \$14M) are fine, given that interviewee has already demonstrated math proficiency.

	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>

5. 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, while recognizing that this initiative alone will not hit the CEO's total profit goal in 2014). The interviewee should also generate a list of additional opportunities that were not explored in the case, including:
- Consolidation of the 4 manufacturing plants (especially Plant D, with its high overhead costs)
  - Pursue growth in the aftermarket segment of their business
  - Diversify their business into plastic injection-molded parts for other industries (outside of automotive), with less price competition

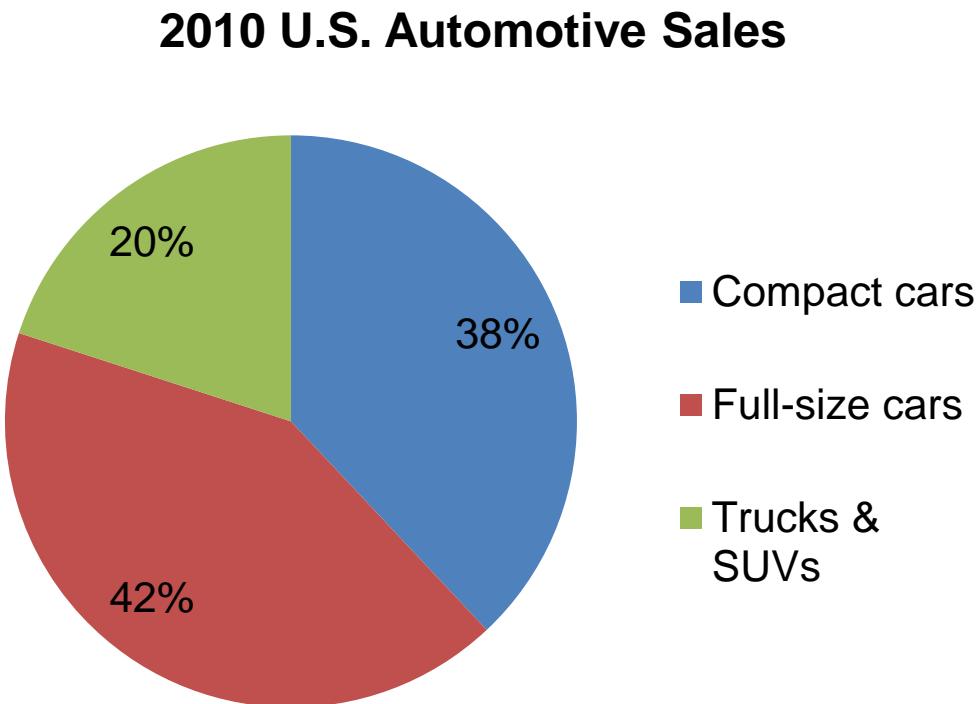
# Exhibit #1: High Q's 2010 Financials, By Facility

\*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

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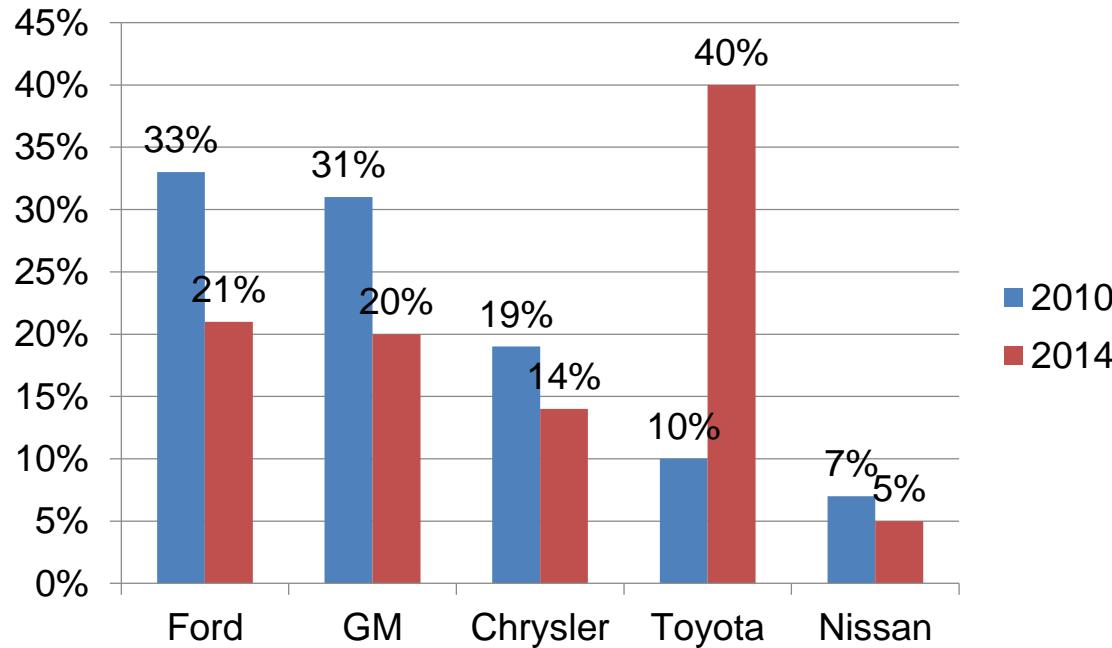


**\*Additional Information**

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

By: Aneri Jambusaria (Kellogg Class of '11), Edited By: Ron Mantel (Kellogg Class of '15), Matthew Heintz (Kellogg Class of '16)

## 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
- **Case Format:** M&A
- **Concepts Tested:**
  - Investments
  - Break-even Analysis
  - Basic NPV

## 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

# Zoo Co.: Clarifying answers and case guide

## Clarifying answers to provide

- Data to provide when asked
  - 300K people visit the zoo annually
  - Admission is \$15 per person
  - Benefits from zebra 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 sensitivity analysis. Afterwards, they need to think about performing a risk assessment (*only when you reach this point should you 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 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:  $= -\$1,195,000 + ((\text{revenue} - \$90,000) / 0.20)$   
 $(\$1,195,000)x .20 = \text{revenue} - \$90,000$   
 $\text{revenue} = \$239,000 + \$90,000 = \$329,000$  (\*required additional revenue to break even)

$$\begin{aligned}\$329,000 &= (300,000) \times (15) \times (\% \text{ increase}) \\ \% \text{ increase} &= (\$329,000 / \$4.5M) = 7.3\%\end{aligned}$$

## After handing over exhibit 1

2. Annual cost to zoo: 1% of total zoo revenues =  $(0.001) * (\$4,752,000) = \$47,520$   
Annual expected benefit to zoo =  $(\$250,000 - \$225,000) * (0.40) + (\$250,000 - 135,000) * (0.20) = \$33,000$   
*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%

**Expected Additional Annual Revenue** **\$252,000**

Plus: Current Annual Revenue **\$4,500,000**

**Expected Total Annual Revenue** **\$4,752,000**

# Thompson Healthcare

By: Aaron Mowery (Kellogg Class of '13)

Quant: 8

Industry: Healthcare

Structure: 9

Framework: Cost

Reduction

## Case Question

- Our client is Thompson Healthcare, a health insurance firm located in the Midwest.
- Customers pay Thompson a fixed monthly premium per person covered under the plan. In exchange, Thompson pays for all health services that each member requires (e.g., physician care, prescription medications, hospitalization).
- In recent years, Thompson's financial and competitive position has begun to erode, and the CEO has retained our firm to help them determine what is causing the problem and how to fix it.

## Case tracker

- **Industry:** Healthcare
- **Case format:** Cost reduction
- **Concepts being tested:**
  - Cost management
  - Sales channel strategy
  - Economic value analysis

## Guide to interviewer

### Read to the Interviewee before beginning:

This case is based on a real McKinsey study, and has been formatted as a McKinsey-style structured case.

Before asking you any questions about the case, I will give you the background that you will need.

There are a number of issues that I would like to cover with you today; please do not be surprised if I seem to change topics abruptly.

# Clarifying answers and case guide

## Clarifying answers to provide

### Client Characteristics

- Thompson Healthcare is a mutual insurance company, meaning all of its profits are returned to members in the form of lower premiums the following year. As such, Thompson does not seek to maximize profit – it seeks to minimize cost.
- Thompson's prices reflect underwriting of risk and the underlying cost to serve a customer

### Competitive Dynamics

- Market share is steady, despite presence of major national health insurance company in the market (United Healthcare - UHC).
- UHC has a 30% market share.
- UHC typically expects to earn a 5% profit margin.

### Local industry Characteristics/Economics

- The national average rate of medical cost inflation is 10% over the past five years.
- Thompson has seen medical cost inflation of 12% over the past five years.
- UHC has seen medical cost inflation of 10% over the past five years.

## Guide to case / Guide to handouts

- State the information to the left after reading the initial prompt, the interviewee should be able to develop a variant of the following question:

*How can Thompson Healthcare reduce its total cost to serve its policy holders?*

- Ideally, the interviewee should be able to break down the question into two parts:

1. Managing medical costs
2. Managing administrative costs

- This case is formatted as a McKinsey-style structured case. You should ask the interviewee the questions on pages 3-7 of this case directly and move on to the next page when the interviewee has answered the question sufficiently.

# Key elements to analyze

1

## Problem structure

What factors would you consider in order to understand Thompson's eroding financial position?

## Note to interviewer

- The interviewee should lay out a structure for analyzing the case.
- The interviewee could have determined that revenue is not relevant to this case based on information given in the initial prompt on page 1 and 2, so the interviewee should focus on cost.
- Costs in this case break out into fixed costs and variable costs:
  - Variable costs (medical costs – claims made by policyholders)
  - Fixed costs (administrative costs – e.g., marketing & sales, underwriting, finance, HR)
- Specifically, we will need to understand how these costs have changed in recent years.

# Key elements to analyze

2

## Initial hypothesis

Medical costs are the largest component of Thompson's costs. However, Thompson's medical costs are increasing faster than the national average. What are some potential reasons why this is taking place? What potential opportunities could you explore to reverse this trend?

## Note to interviewer

- Medical cost = (Number of claims) \* (Cost per claim)
- Potential answers include:
  - Deductibles are low, leading members to see doctors for minor medical issues -> increase deductibles to make members more conscious of costs
  - Thompson pays more for procedures than average -> conduct benchmarking study to determine what competitors charge for various procedures
  - Thompson insures an older population than average -> increase marketing efforts toward younger customers
  - Thompson insures a sicker population than average -> enhance wellness programs

# Key elements to analyze

3

## Second hypothesis

In addition to medical costs, administrative costs for Thompson are also higher than average. The biggest driver of this phenomenon is a high cost of sales. Thompson's policies are sold through independent agents. All independent agents work with a "General Agency" which acts as a sales support organization. How much does Thompson pay in commissions each year? What are some potential approaches Thompson could take to reduce its cost of sales? What potential strategic issues exist with these approaches?

### Note to interviewer

Additional information to provide after interviewee explains how they would calculate commission expense

- Commission (10% of annual premiums) is paid to the General Agency, which passes a share to the independent agent. Total commission paid is, on average, \$25 per agent, per month.
- Interviewee should identify the need for # of agents. Give the number 500,000 if asked.
- Total commission expense =  $\$25 * 500,000 * 12 = \$150,000,000$
- Potential approaches to reduce cost of sales:
  - Reduce commission percentage
  - Cap commission to a certain level per year
  - Change commissions structure from percent of premium to flat fee (percent of premium increases at the rate of medical cost inflation every year)
- Potential risks with these approaches:
  - Agents could shift business from Thompson to another carrier that pays higher commission
  - Agents would lose incentive to sell if their commission is capped

# Key elements to analyze

4

## Next level of analysis

The team has decided to pay a flat commission directly to agents, and to pay the General Agencies a separate fee for the support services they provide to agents. If the total commission paid to both parties is set at \$20 per member per month, what share should be given to the General Agencies?

(If interviewee is unsure of “what share” means, explain they should find the maximum amount that should be allocated to the General Agencies.)

## Note to interviewer

### Additional information

- General Agencies perform three activities: training, application processing, and performance management.
- If Thompson were to perform these activities internally, they would cost:
  - Training: \$6,000,000
  - Application processing: \$9,000,000
  - Performance management: \$15,000,000

### Potential approach

- The total cost of the activities that General agencies perform is \$30,000,000 ( $=\$6,000,000 + \$9,000,000 + \$15,000,000$ ).
- There are 500,000 members and 12 months in a year.
- The maximum amount of money Thompson should be willing to pay the General Agencies for the activities performed is the per member, per month cost of these activities ( $\$30,000,000 / (500,000 * 12) = \$5$ )

# Wrap-up

5

## Final recommendations

Taking into account what you've learned thus far as well as your own additional hypotheses, what initiatives would you recommend to the CEO at this point?

## Note to interviewer

- Our client should take action to reduce both medical costs and administrative costs.
- At this point, the interviewee should synthesize the findings from the interview into several clear initiatives, for example:
  - Enhance marketing efforts to attract more young customers and bring down the average claims per member.
  - Conduct a benchmarking study to determine opportunities for reductions in payments for medical services.
  - Change the commission structure to flat fee per member per month. This achieves the goal of reducing commission expense, while at the same time keeping an agent's incentive to sell more business.
- Strong interviewees will demonstrate the ability to analyze issues using a clear structure and will draw out the implications of their analysis. The quantitative calculations in this case are elementary, but the process to get to them is somewhat more complicated.

# Syzygy Supercomputers

Quant: 3

Industry: Tech

Structure: 7

Framework: Profitability

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
- **Case format:** Improving profitability
- **Concepts being tested:**
  - Competitive analysis
  - Operations

## 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

# 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	Notes on Exhibits 2 & 3	Notes on Exhibits 4 & 5
<ul style="list-style-type: none"><li>The X axis represents absolute market share (AMS), which correlates with the height of Syzygy's rectangles in exhibit 2.</li><li>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.</li><li>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.</li></ul>	<ul style="list-style-type: none"><li>Correctly interpreting slides 2 and 3 will lead the candidate to correctly identify the products on slide 3:<ul style="list-style-type: none"><li>Product #1 is custom applications</li><li>Product #2 is supercomputers</li><li>Product #3 is telecom equipment</li><li>Product #4 is satellites</li><li>Product #5 is operating software</li></ul></li></ul>	<ul style="list-style-type: none"><li>The key insight in exhibit 4 is that Syzygy is the only major competitor in this industry whose R&amp;D spending is below the “normative band”</li><li>We would expect each company's degree of technical leadership to go up as it invests in R&amp;D, but Syzygy, with slightly more R&amp;D spending than Cray Research and Sonic Wave, enjoys less of a perception of technical leadership from its customers</li><li>Exhibit 5 builds on this point. The key insight is the absolute expense (not percentage) Syzygy is spending on R&amp;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.</li></ul>

# Solution and recommendations

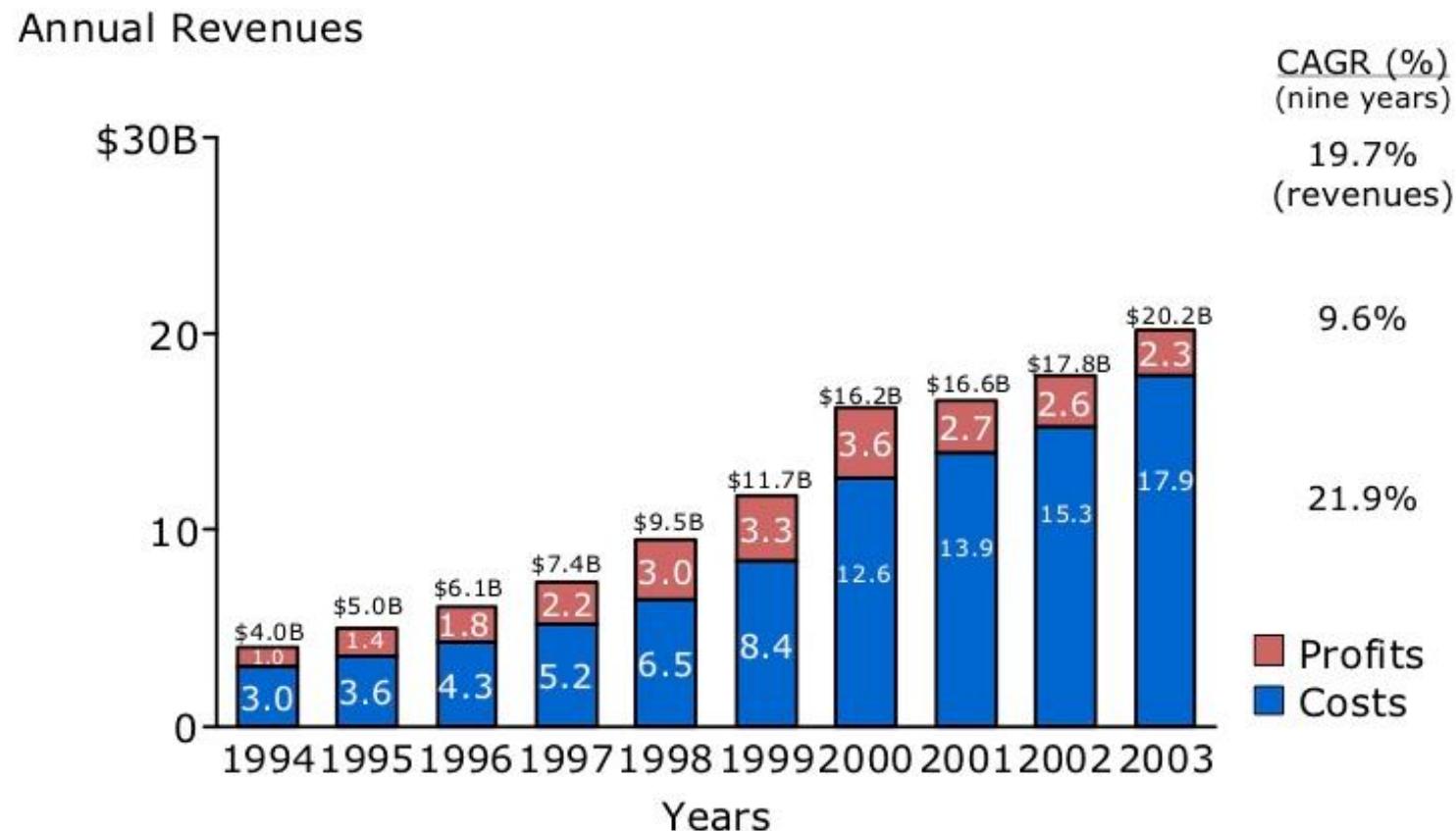
## Solution & Recommendations

- 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 its small market share will continue to erode as a result of economies of scale, network economics and the experience curve all working against it.

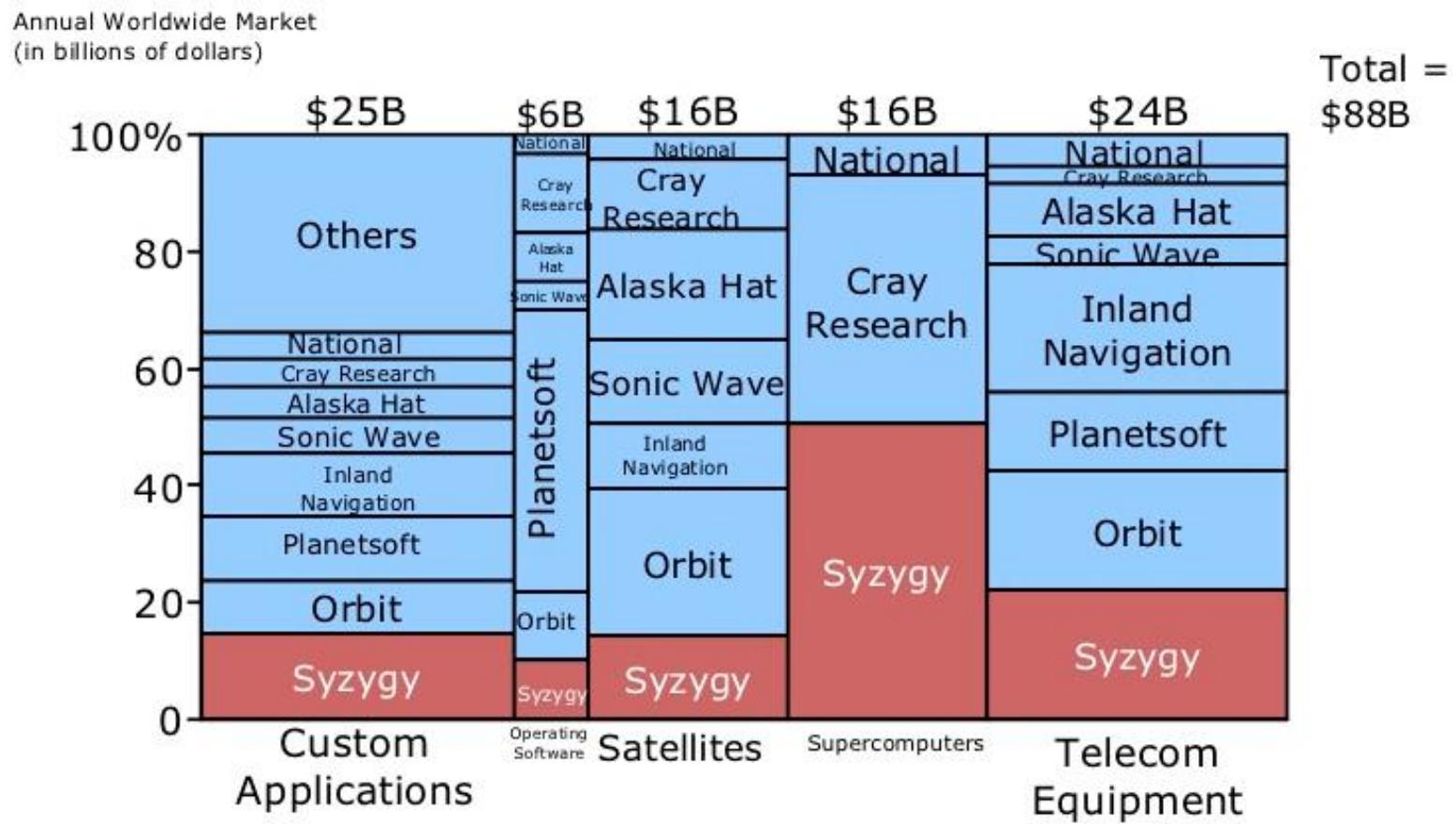
## Bonus/Guide to an Excellent Case

- 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

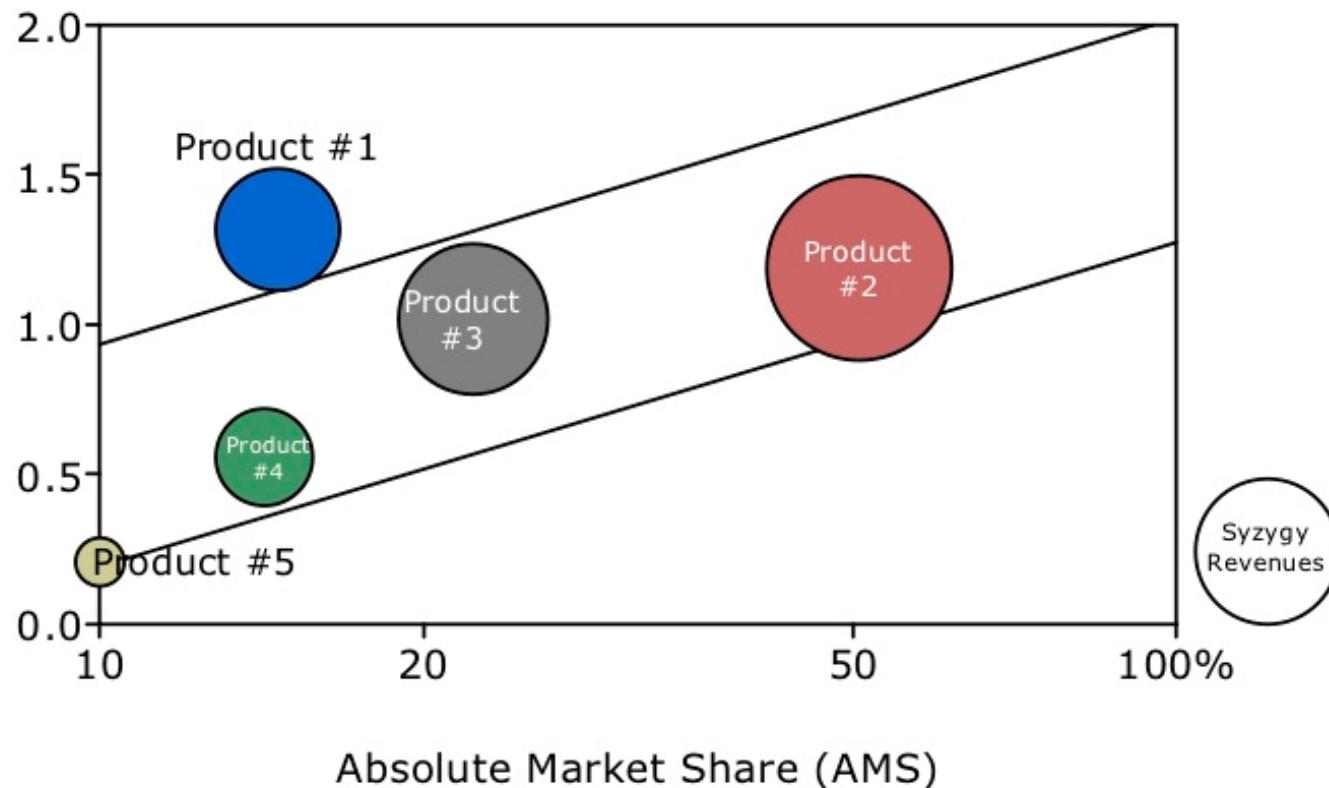


## Exhibit 2: Worldwide Telecom Computing Market (Today)

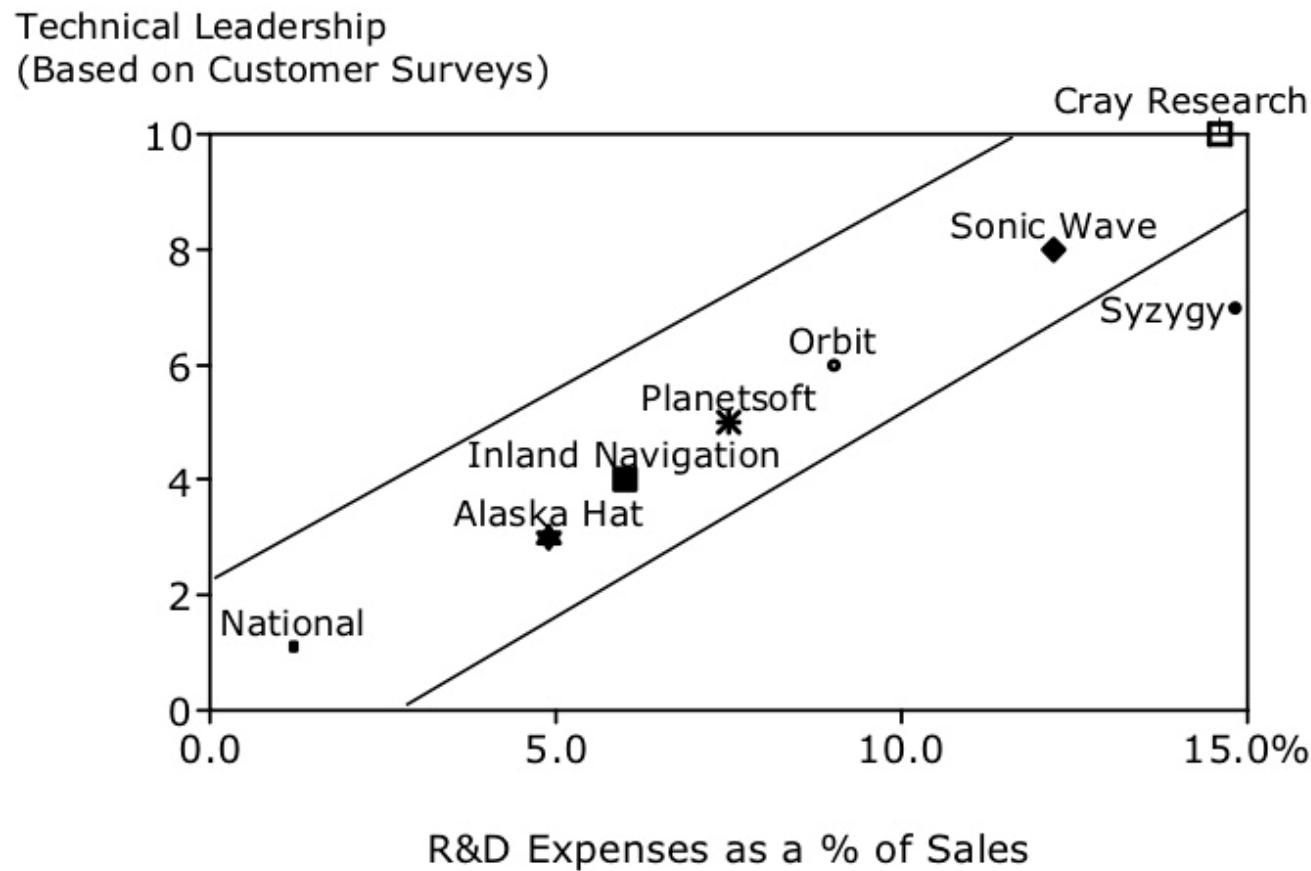


## Exhibit #3: Syzygy's Absolute vs. Relative Market Share

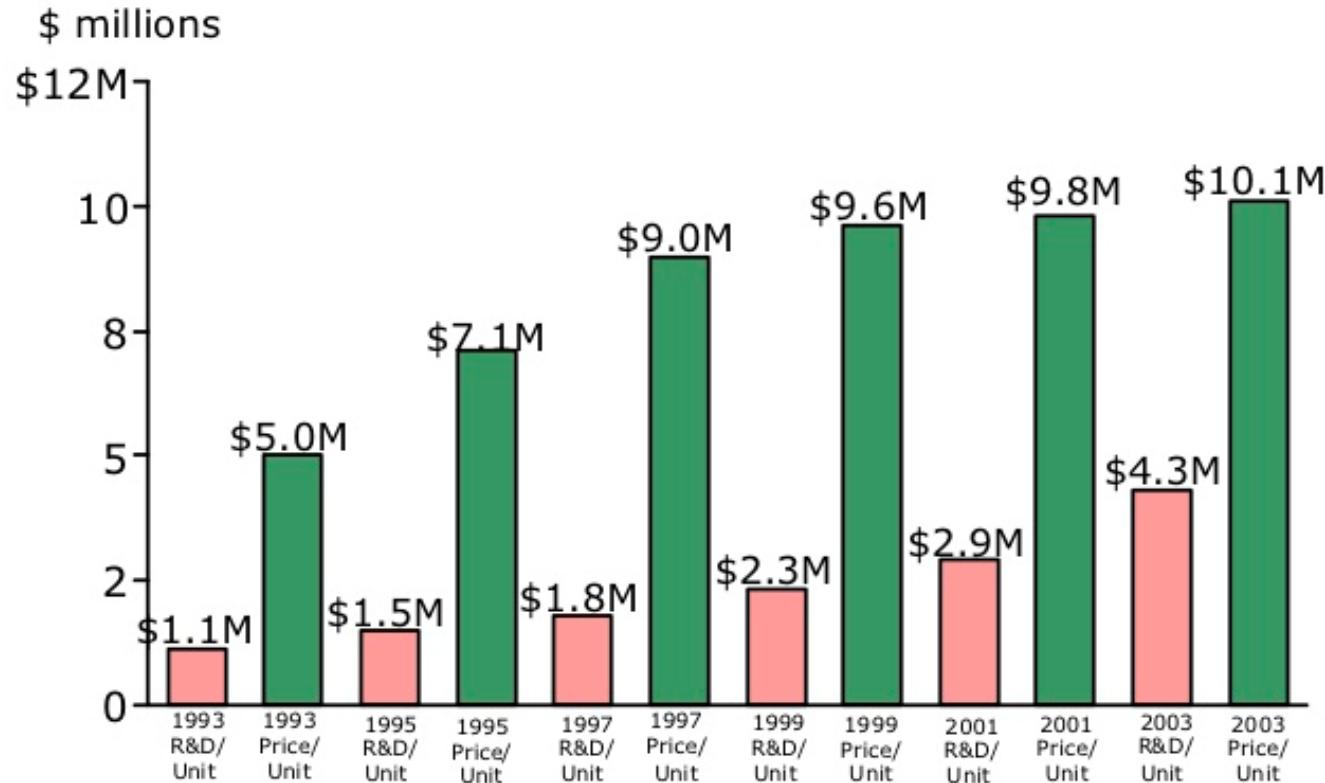
Relative Market Share (RMS)



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



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



# Rock Energy

By: Mauricio Atri (Kellogg Class of '12); Edited by: Ron Mantel (Kellogg Class of '15)

Quant: 7

Structure: 5

Industry: Energy

Framework: Opportunity Assessment

## Case Question

- Rock Energy, an Oil & Gas company, is evaluating the purchase of one of three oil fields in Latin America. After Rock Energy has decided which oil field to purchase, it will outsource all drilling related activities. 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
- **Case Format:** Opportunity Assessment
- **Concepts Tested:**
  - Investments
  - Creativity

## Guide to interviewer

- Main steps the interviewee should take:
  - You will likely see something similar to the Revenue/Cost framework where the interviewee assess the investment opportunity for each field; provide Exhibit #1 once they are ready to approach Revenues/Costs (after initial questions)
  - With the info from Exhibit #1, interviewee is expected to calculate Revenues and Costs (interviewee should identifying that they need to ask for price of oil and cost to secure initial rights)
  - The price and barrels extracted by day will allow the interviewee to estimate the total revenue and profit by well.
  - After calculating profit, the interviewee should consider other factors, risks that could affect the decision investment

# 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 year 1, 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 once the interviewee is at the point in their framework where they will analyze Revenue & Costs

- 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

- Provide the price of oil (**\$50/bbl**) if the interviewee does proactively ask for it when trying to calculate profitability; 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.

### Part 3 – 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

# 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%
Number of wells per year	(360/60)=6x10 Rigs=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
Profit	\$ 50,000,000.00	\$ 68,000,000.00	\$ (4,000,000.00)

# Solution and recommendations

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## Solution & Recommendations

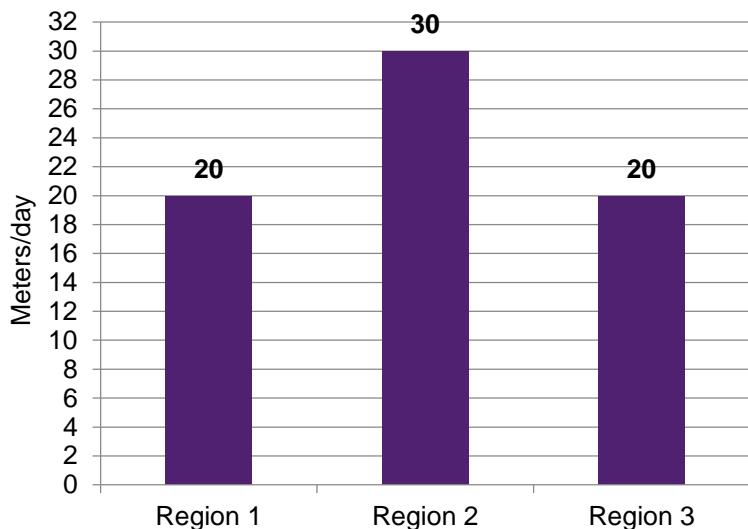
- Rock Energy should invest in buying the rights for Region 2
- It is important to recognize that even though the profit margin for Region 1 is significantly higher on a per well basis, the return of the investment depends on the total number of wells that you can drill in the first year and the upfront 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

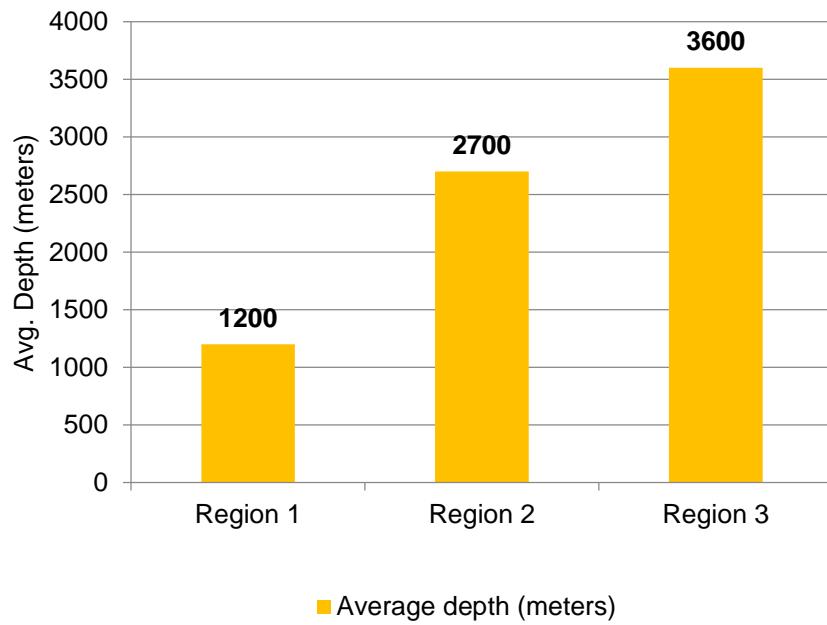
- An excellent answer would mention and briefly summarize the impact of including an expected value analysis, which would assign different probabilities of extracting the expected barrels per day

# 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
Max number of Rigs that would operate concurrently	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 during year 1 (assume 360 days), and oil is extracted beginning of year 2. Wells are dug by "Rigs". Once a Well has been completed, the Rig moves on to dig another well.

# Chic Cosmetology University

By: Peter Manoogian (Kellogg Class of '12)

Quant: 7

Structure: 8

Industry: Education

Framework: Opportunity

Assessment

## 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
- Case Format:** Opportunity Assessment
- Concepts Tested:**
  - Break-Even Analysis
  - Marketing Strategy
  - Market Share
  - Investments

## 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:
  - Evaluate CCU revenue and cost structures
  - Project CCU's market share
  - Estimate CCU Chicago enrollments
  - Identify qualitative issues to consider

# 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 CCUs 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	Marketing strategy	Market share
<ul style="list-style-type: none"><li>▪ How many students will CCU need to break-even in year 1?</li></ul>	<ul style="list-style-type: none"><li>▪ What types of schools / students do you think CCU targets?</li></ul>	<ul style="list-style-type: none"><li>▪ What is the highest share we could expect CCU Chicago to capture in Y1?</li></ul>
Notes to interviewer	Notes to interviewer	Notes to interviewer
<ul style="list-style-type: none"><li>• Interviewee should ask about the investment cost of building a new campus in Chicagoland</li><li>• 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.</li><li>• Assume fixed costs remain flat per year</li></ul> <p>Interviewee should calculate</p> <ul style="list-style-type: none"><li>• Total fixed costs per year = \$6.3M (\$4.8M + \$1.5M from amortization).</li><li>• Gross profit per student = \$7K</li><li>• Break-even number of enrollments per year = 900 (<math>\\$63M / \\$7K</math>)</li></ul>	<p>Possible responses (schools):</p> <ul style="list-style-type: none"><li>- Public schools (private HS more likely to have grads go to 4yr univ)</li><li>- HS's in middle-class cities (may be an affordability issue w/lo income)</li><li>- Closest to the campus (geography)</li></ul> <p>Possible responses (students)</p> <ul style="list-style-type: none"><li>- Women HS graduates</li><li>- Not attending 4yr college</li><li>- Interested in cosmetology</li></ul> <p><b>After a few of the above criteria are noted, share:</b></p> <ul style="list-style-type: none"><li>- CCU has identified 1,000 targeted high schools in the Chicagoland area</li><li>- Within these HS, CCU's market research estimates that on average 6 students per HS have "potential" for CCU enrollment</li></ul>	<ul style="list-style-type: none"><li>• Show <b>Exhibit 2</b> to interviewee</li><li>• Interviewee should recognize:<ul style="list-style-type: none"><li>- Campuses w/competitors present tend to have a lower share (10%) than those w/out (15%)</li><li>- However, presence of &gt;1 competitor does not have an increased negative impact on market share (Boston has 8% share w/only one competitor)</li><li>- Interviewee should assume a projected 10% market share for a Chicago campus (one competitor)</li></ul></li><li>• <b>Also share the following :</b> 80% of enrolled students directly from high school, the other 20% of students come from the "Adult" market</li></ul>

# 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

$$(\$4.8M + \$1.5M) / \$7K = 900 \text{ students}$$

### 2. Students: Total potential students x maximum projected market share

Total potential students = Potential (HS) + Potential (Adult) = 7,500 students

Potential (HS) = 6 / HS X 1,000 targeted HS = 6,000 students

Potential (Adult) = 6,000 students \* 25% = 1,500 students

Total potential students (year 1) = 7,500 students x 10% share = 750 students

Total potential students (year 2) = 750 students x 1.05 (growth) = 788 students

### 3. Break-even: (Estimated campus fixed cost + new yearly amortization ) / gross profit per student

$$(\$4.8M + \$0.1M) / \$7K = 700 \text{ students}$$

# 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

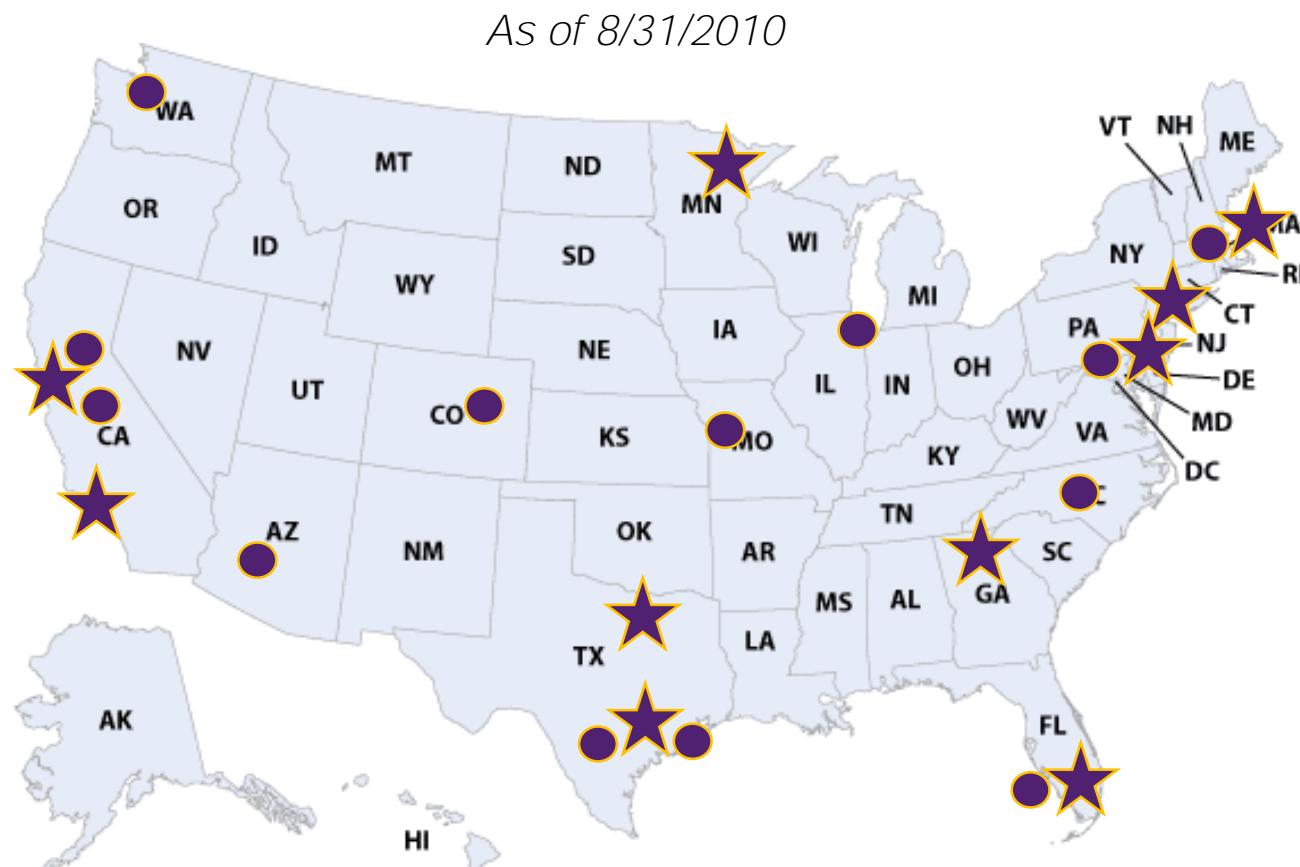
# Exhibit 1: 2010 CCU Financials

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## 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 locations



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%

# Tacotle Co.

By: Ryan Sullivan (Kellogg '16)

Quant: 6

Industry: Restaurant

Structure: 5

Framework: Profitability

## Case Question

Your client is Tacotle Co., a leading national fast casual restaurant with \$420M in revenue in 2014. Over the five years proceeding 2014, Tacotle has experienced steady revenue growth and industry leading profitability. For the first time in its 15 year history, Tacotle has experienced three straight quarters of EBITDA erosion. Tacotle's CEO has hired you to explore what is causing profits to drop and what can be done to reverse the tide.

### Clarifying answers to provide

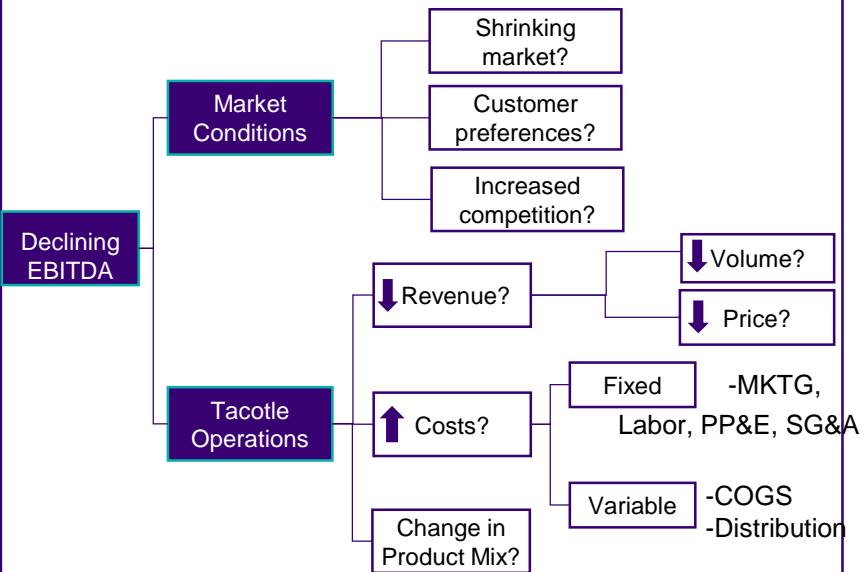
- This case is designed to be **interviewee led**
- Case Goal: Profitability (no specific milestones, looking for positive annual profit growth in the short term)
- If asked about market conditions, defer until after the framework presentation
- Ensure interviewee understands what EBITDA is

### Candidate reflections / initial hypothesis should include

After framework review, Candidate should:

- Understand that the problem could originate from market conditions or company operations
- Discuss the basis profitability framework with some focus on anticipated fixed and variable cost drivers for Tacotle

### A model framework should include the following



# Guide to Interviewer

This information is provided for interviewer use only to help guide this interviewee-led case interview.

## Situation

- Tacotle is an industry leading national fast casual restaurant that specializes in selling tacos and burritos
- At the end of 2013 Tacotle implemented a new menu after analysing the results from a customer satisfaction survey (Exhibits D and E)
- This menu change increased the selection of toppings and level of customization available to customers and improved the quality of all toppings
- The following were the effects on Tacotle following the implementation the menu changes:
  - Tacotle raised prices anticipating the increased costs (COGS) associated with the menu change
  - The increased prices led to an immediate spike in revenue for 1Q14 (Exhibits A and B)
  - COGS nearly doubled, though, leading to an EBITDA margin decrease (Exhibit A and C)
  - Customer satisfaction decreased overall driven by increased wait times and decreased menu item consistency (Exhibit E)
  - Although there was an initial spike in revenue, EBITDA remained flat due to the offset of decreased EBITDA margin (Exhibit A)
    - This spike was driven solely by the price increase (Calculation Section)
    - Total units sold actually decreased (Calculation Section)
  - Over the last three quarters of 2014, revenue and EBITDA both decreased as number of units sold decreased driven primarily by customer dissatisfaction (Exhibit A)

# Market Conditions

## Market Growth and Maturity

If asked about the market's growth and maturity:

- Market is growing at the same rate as GDP
- Mature market

## Competition

If asked about any changes in the competitive nature of the market:

- No major competitors have entered or exited
- No new substitutes introduced
- Tacotle currently has a 30% market share (by revenue) which it has maintained

## Customer Preferences

When asked about customers:

- Customers are beginning to stress the importance of ingredient quality and order customization

## Candidate insights – Growth and Maturity

The profitability issue is not one that is market wide. The problem seems to be specific to Tacotle

## Candidate insights – Competition

There are no major competition related factors that are driving the decreased profitability. The issue is most likely related to a change within Tacotle

## Candidate insights – Customer

The change in customer preferences doesn't seem like it is directly driving decreased profits but it may have influenced decisions made within Tacotle

## Summary - Market Conditions

- The interviewee should at some point want to discuss the market to verify that the decreased profits aren't due to conditions affecting all companies in the market. After a quick conversation regarding the market, the interviewee should look at operations within Tacotle.

# Profitability and Revenue

## Profitability

- Provide **Exhibit A** once the interviewee requests information regarding Tacotle revenue or profitability
- Ensure that the interviewee is clear what EBITDA is
- What are potential drivers of:
  - Revenue spike? (Increase in price or units sold)
  - EBITDA erosion? (Increase in cost, decrease in rev.)
  - EBITDA % decline? (Decrease in margin)

## Candidate insights – Profitability

- Spike in revenue in Q1 '14 with relatively flat EBITDA and large decrease in EBITDA %. Followed by steady revenue decline
- Good response will hypothesize what could cause this, with the conclusion that either prices and/or purchases increased with costs increasing **more** than the additional revenue
- A good interviewee will take a deep dive into the profitability framework looking to determine why:
  - Revenue spiked then declined over the following quarters
  - Profitability (EBITDA) did not follow revenue

## Revenue/Quantitative Proof

- Once interviewee has hypothesized potential drivers of increased revenue, provide **Exhibit B**
- After interviewee has stated that price increased, interviewee should recognize that a change in price could lead to a change in quantity. Interviewee should ask "How did quantity of units sold change in 2014?" – provide **Exhibit C**

(See next page for quantitative solution)

## Candidate insights – Revenue

### **Exhibit B**

- A good interviewee will quickly identify that Tacotle increased the average price of their orders.
- It should initially be ambiguous whether units sold increased or decreased. A good interviewee will not rush to a conclusion

### **Exhibit C**

- Interviewee should evaluate the entire slide then attempt to answer the question posed regarding units sold in 2014
- Interviewee should refer back to the exhibit and notice that COGS nearly doubled from 2013 to 2014

# Revenue Calculation

How did total number of orders sold change from 2013 to 2014?

## Units sold in 2013:

Units sold = Revenue / (Avg. price per unit)

2013 Revenue = \$377M (Round to 380M) (From Ex. C)

2013 Avg. price per unit = \$4.05 (Round to \$4) (From Ex. B)

Units sold = \$380M / \$4 = **95 M units sold**

## Units sold in 2014:

Units sold = Revenue / (Avg. price per unit)

2013 Revenue = \$420M (From Ex. C)

2013 Avg. price per unit = \$5.25 (Don't round) (From Ex. B)

Units sold = \$420M / \$5.25 = **80 M units sold**

## Conclusion:

- 1) Although revenue increased sharply, the total number of orders decreased.
- 2) As revenue continued to decline over the last three quarters of 2014, prices remained the same. Therefore, a decrease in the quantity sold is responsible for the eroding revenues and EBITDA

## A good interviewee should have follow up questions to the above conclusions:

- Why did Tacotle increase prices?
- Why did units sold continue to decrease throughout 2014?

\*\*\*Provide the interviewee with Exhibit D\*\*\*

# Costs and Operations

## Costs

Ask the interviewee to list cost drivers specific to the industry

If the interviewee does not refer back to **Exhibit C**, guide him/her to revisit the Income Statement for a breakdown of costs

## Operations (Exhibit D)

Ensure that before moving into “operations” the interviewee has analysed **Exhibits A, B and C** and has received **Exhibit D**.

Interviewee should provide hypotheses for all observations discussed in both exhibits

## Candidate insights – Operations (Exhibit D)

- Graph illustrates Tacotle’s performance against customer preferences
- Tacotle lags with regards to quality but is on par or exceeding expectations for all other categories
- Interviewee should conclude that Tacotle did something that was aimed to increase quality which most likely caused COGS and revenue to increase

## Additional Information

After interviewee has speculated on potential operational changes Tacotle could have implemented, inform them that Tacotle introduced a new menu focused on allowing the consumer to customize their orders more and higher quality and selection of ingredients  
\*\*\* Provide **Exhibit E**\*\*\*

# Operations

## Operations (Exhibit E)

- Once presented with **Exhibit E** interviewee should review and elaborate on the differences between Exhibits E and D
- If asked for, the average time to serve a customer increased from ~1 minute to ~3.5 minutes.

## Candidate insights – Operations (Exhibit E)

- Interviewee should recognize that Exhibit E is the same survey as Exhibit D but for the next year (post menu upgrade)
- Interviewee should also recognize that the order of attributes has changed
- “Speed of Service” is now Tacotle’s weakest attribute
  - This is due to the new menu which added complexity to food preparation
- “Consistency of Service” has also dropped below customer expectations due to the added complexity of food preparation
- Although Tacotle has met expectations with regard to “Quality”, the decline of ratings in “Speed of Service” and “Consistency of Service” have more than cancelled it out, resulting in a net decrease in customer satisfaction
- The menu change was not effective

# Suggested conclusion

## Conclusion

Recommendation: Scale back the menu changes that were implemented during 2014.

Reasons:

- 1) The menu change led to a significant increase in COGS which decreased EBITDA %
- 2) The menu change led to overall customer dissatisfaction, degrading brand equity
- 3) The customer dissatisfaction lead to decreasing unit sales (quarter over quarter) which is driving the EBITDA erosion

## Risks

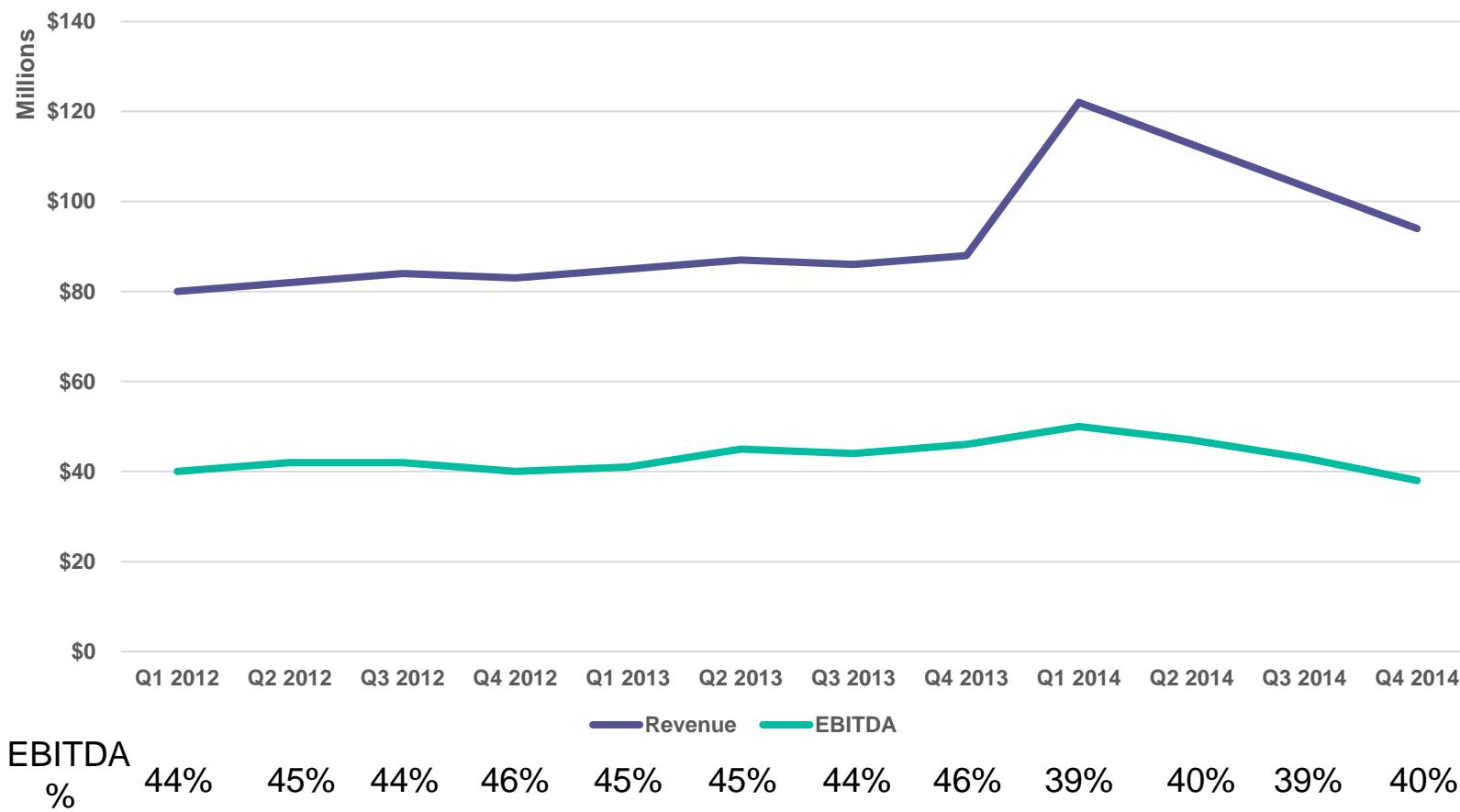
- Scaling back the menu too much could lead to decrease in customer satisfaction for “Quality”
- Implementing a scale back could disrupt relationships with suppliers and could require divesting assets that were purchased for the initial menu change at a loss
- A scale back that does not focus on margin improvement could lead to smaller revenues and profits, effectively downsizing the company.

## Next steps

- Perform more detailed and focused customer surveys to gage what Tacotle customers expect from the chain
- Perform a scale back on the menu size that focuses on cost cutting balanced with customer needs
- Follow-on menu changes should be implemented on a smaller/trial basis at a small number of individual restaurants

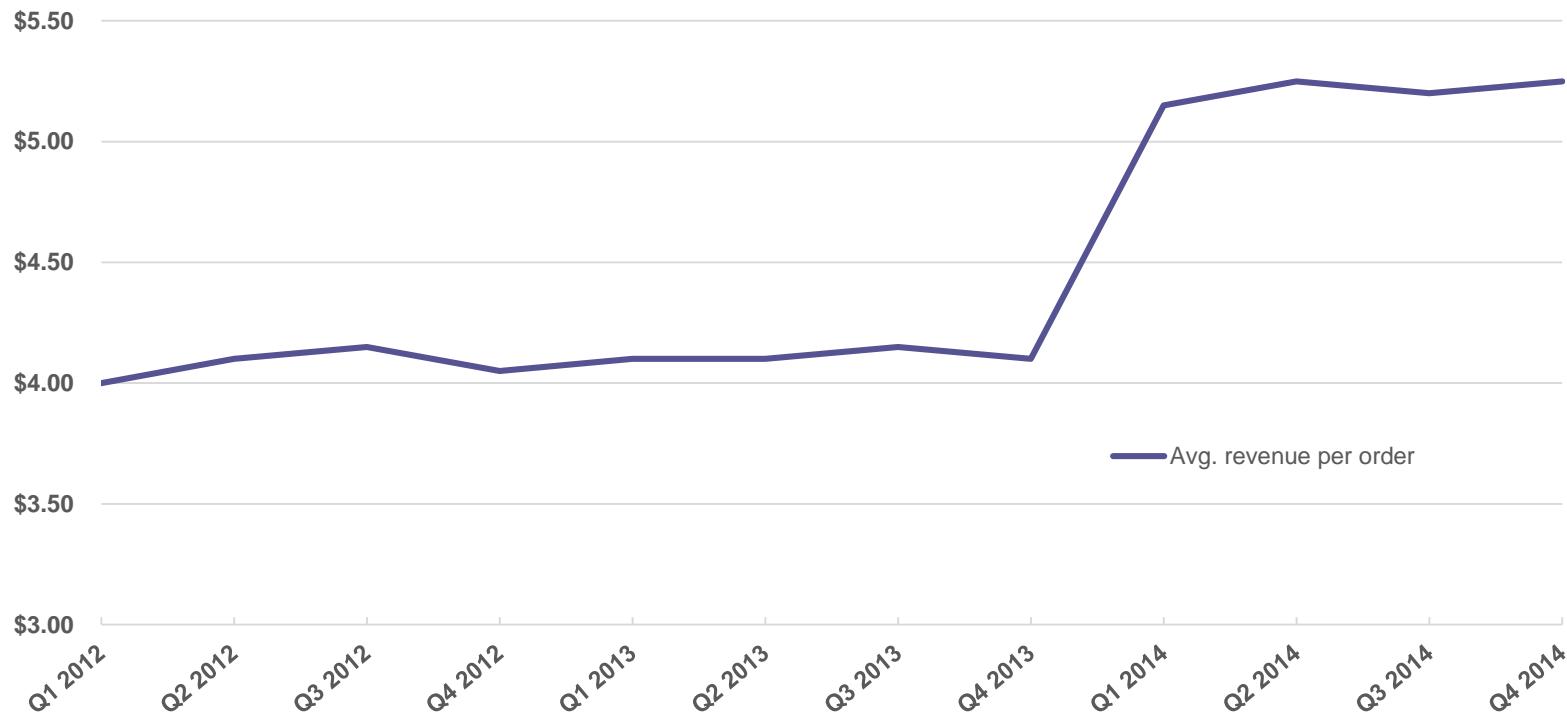
# Exhibit A

## Tacotle Co. quarterly revenue and EBITDA



# Exhibit B

## Tacotle Co. avg. revenue per order



# Exhibit C

Tacotle Co. income statement

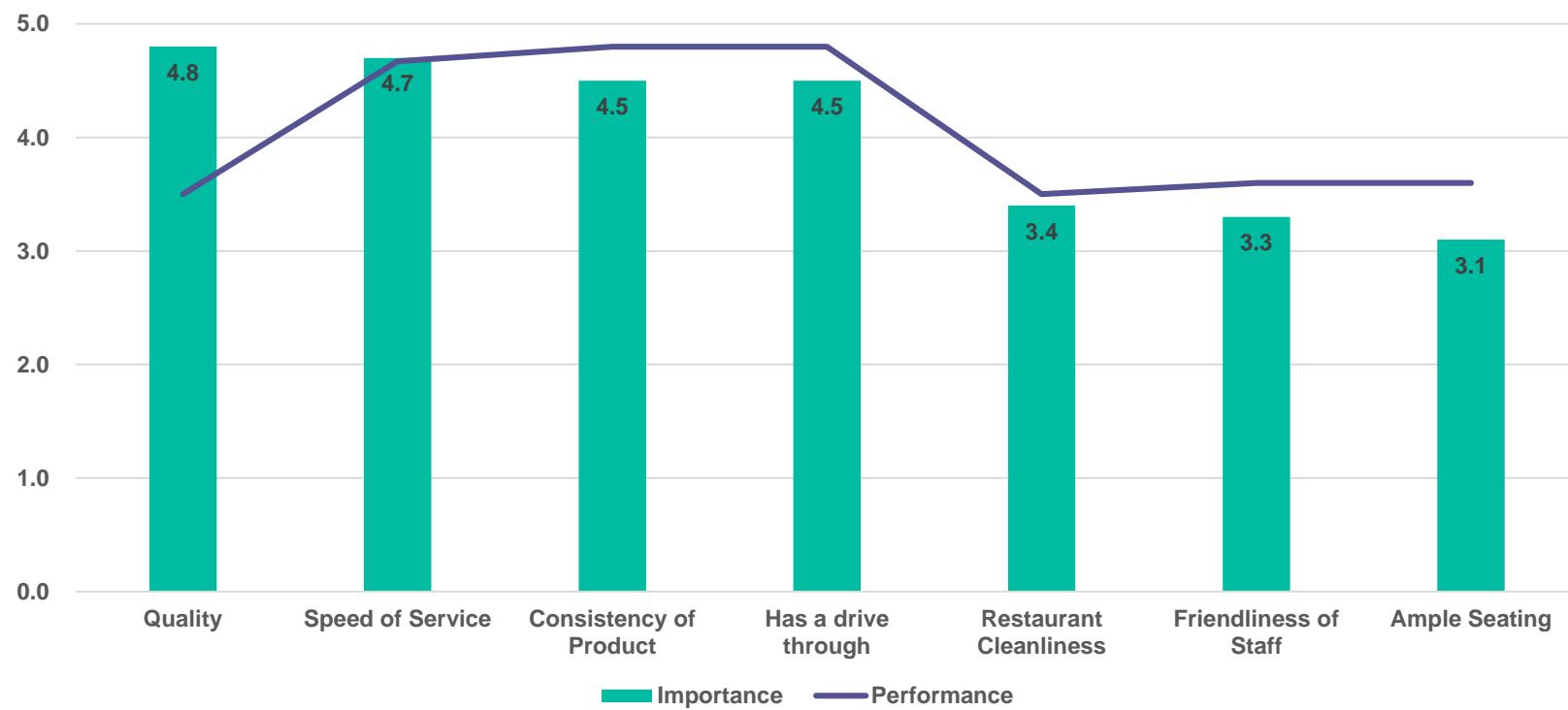
	<u>2012</u>	<u>2013</u>	<u>2014</u>
<b>Revenue (\$M)</b>	\$364.0	\$377.0	\$420.0
<b>Expenses (\$M)</b>			
COGS	\$51.0	\$54.0	\$96.0
Wages	\$96.0	\$99.0	\$101.0
Corp SG&A	\$11.0	\$10.0	\$10.0
Fixed Overhead	\$43.0	\$44.0	\$44.0
<b>EBITDA (\$M)</b>	\$163.0	\$170.0	\$169.0

# Exhibit D

## Results of 2013 Tacotle Co. customer survey

On a scale of 0-5, how important are the following characteristics when dining at fast casual restaurants?

On a scale of 0-5, how well does Tacotle Co. perform against the following characteristics?

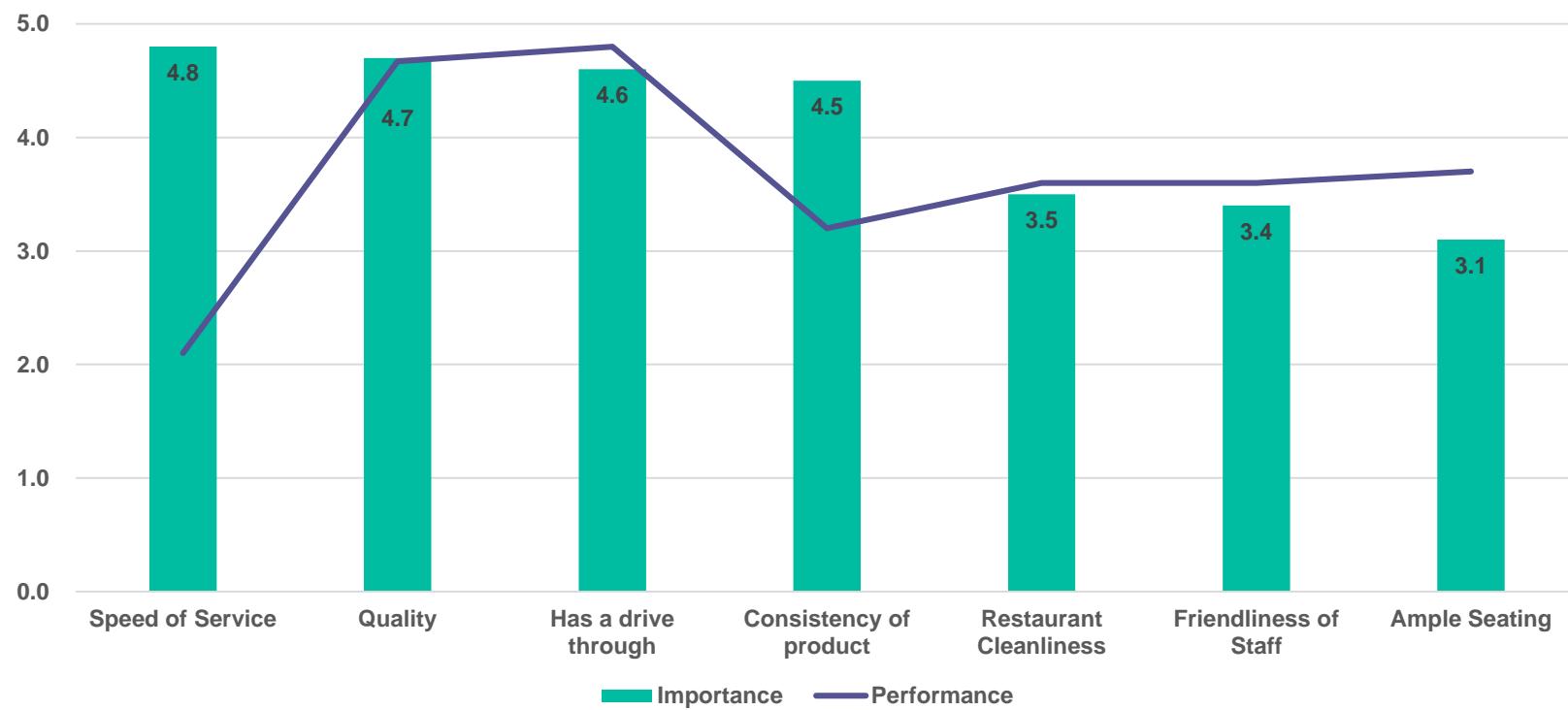


# Exhibit E

## Results of 2014 Tacotle Co. customer survey

On a scale of 0-5, how important are the following characteristics when dining at fast casual restaurants?

On a scale of 0-5, how well does Tacotle Co. perform against the following characteristics?



## 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
- Case Format:** Opportunity Assessment
- Concepts Tested:**
  - Marketing strategy
  - Basic NPV

## 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.

# 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 Merlot 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)

# Math for Topic 2

		<b>Value</b>	<b>Comments</b>
A	Acres of Land	12	Given
B	kg of grapes produced/acre	1000	Given
C	kg of grapes produced total	12000	=A*B
		<b>Merlot</b>	<b>Bordeaux</b>
D	Yield (Litre/kg)	2	1
E	Total Yield (Litre)	24000	12000
F	Price / Litre	\$20	\$40
G	<b>Total Revenue</b>	<b>\$480,000</b>	<b>\$480,000</b>
H	Profit Margin	10%	15%
I	<b>Total Profit</b>	<b>\$48,000</b>	<b>\$72,000</b>
			<b>Comments</b>

# Key elements to analyze

## Topic 3 being tested

- Which wine would you choose for manufacturing?

## Topic 4 being tested

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

## 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.

## 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.

# Math for Topic 3

Method 1

Method 1

Method 2

Method 2

		Merlot	Bordeaux	Comments
	A Annual Profit	\$ 48,000	\$ 72,000	See Q. 2
	B Years to maturity	6	12	Given
	C Discount Rate	12%	12%	Given
	D Merlot NPV once ripe - at year 6	\$ 400,000		=A/C
	E Bordeaux NPV once ripe - at year 12		\$ 600,000	=A/C
	F Bordeaux NPV at year 6 (using discount rate)		\$ 300,000	=E/(1.12)^6
	G Comparison at year 6	\$ 400,000	\$ 300,000	=D and F
	I Merlot NPV at year 12 (using discount rate)	\$ 800,000	\$ 600,000	=D*(1.12)^6
	J Comparable comparison at year 12	\$ 800,000	\$ 600,000	=I and E

**Alternative method  
using "Rule of 72"**

**instead of  $(1.12)^6$**       **Value**      **Comments**

Discount Rate	12%	Given
---------------	-----	-------

Years to double value $= 72/\text{Discount rate}$	6	$=72/12$
--	---	----------

Bordeaux: changing from year 12 to year 6 = halving the value of year 12

Merlot: changing from year 6 to year 12 = doubling the value of year 6

# 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, particularly of not selling/leasing the land, which might be more profitable considering the current value of land in the Bay Area and/or Napa
  - 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
  - e) Potential benefits of diversifying the acreage and producing multiple types of grapes (compensate for shifts in consumer demand, broader appeal to local market, etc.)

# A+ Airline Co.

By: Adam J. Louras (Kellogg Class of '11); Edited by: Deepika Singh (Kellogg Class'16)

Quant: 8

Industry: Airline

Structure: 8

Framework: Opportunity Assessment

## 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
- **Case format:** Opportunity Assessment
- **Concepts being tested:**
  - Basic NPV
  - Operations
  - Market Sizing
  - Customer Strategy

## 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.

# 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.

- 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:
  - Total Number of Passengers per Plane*

	Seats	Occupants	Business	Leisure
First Class	50	50	50	0
Economy	150	120	60	60
<b>Total</b>	<b>200</b>	<b>170</b>	<b>110</b>	<b>60</b>
  - Total Number that Purchase & Total Spend (\$)*

	# that Purchase	Total Purchase \$
Business	45	\$450
Leisure	15	\$75
<b>Total</b>	<b>60</b>	<b>\$525</b>
  - 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
- 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. A good candidate will notice that savings go straight to the bottom line whereas revenue doesn't.**

## 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

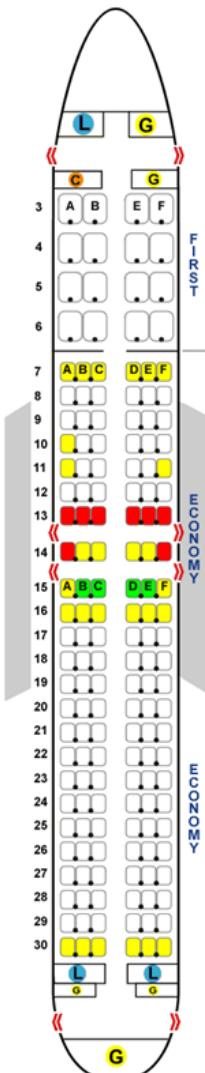
## Solution & Recommendations

- 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.
  - Being creative when listing the change of costs as: Wifi cost (connect with banks and verify transaction), Fraud cost (increased chance of fraud to happen after implementing card only payment).

# 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	41.0%	\$10
Leisure	25.0%	\$5

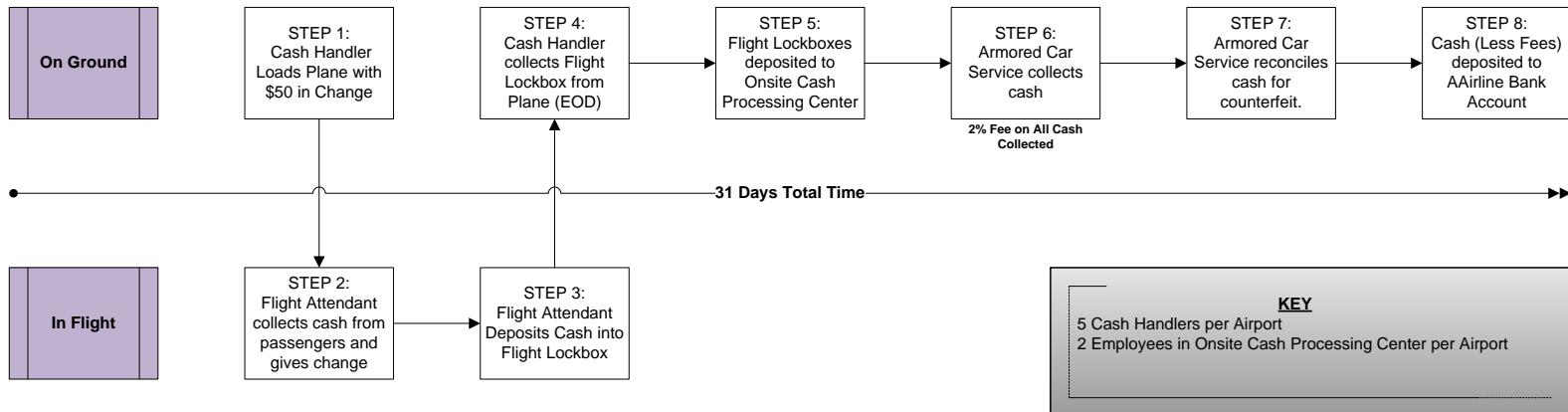
\*Note: First Class Passengers Receive Free Food & Beverage

## % of In-flight Purchases

Cash	20%
Card	80%

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

## AAirline Cash Management Process



## AAirline Credit Card Process



# Bell Computer Inc.

By: Adam J. Louras (Kellogg Class of '11); Revised by Matthew English ( Kellogg Class of '16)

Quant: 8

Industry: Tech

Structure: 10

Framework: Profitability

## 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
- **Case Format:** Improving profitability + Reducing Costs
- **Concepts Tested:**
  - Marketing Strategy
  - Competitive Analysis
  - Supply/value chain

## 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”:
  - $\text{Profit}/\text{Unit} = \text{Price}/\text{Unit} - \text{Variable Cost}/\text{Unit} - \text{Fixed Costs}/\text{Unit}$
- 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.

# 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.
- “Full Potential” profitability can be interpreted as market-leading

### 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 | → | <i>Exhibit 1</i> |
| – Prices      | → | <i>Exhibit 2</i> |
| – Costs       | → | <i>Exhibit 3</i> |

**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, focusing on laptops

## Competitive Analysis + Supply Chain

- Using Exhibit 3, the interviewee should identify a “Full Potential” improvement for Bell to improve its laptop 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 Consumer 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 negative margin impact of the falling price of laptops – see following page for calculations

## 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 Exhibit 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” margin benefit in the laptops segment – see following page for calculations

# Math Solutions

## Math Part I

	<b>BELL</b> <b>FY2005</b>	<b>BELL</b> <b>FY2010</b>
	Laptop PCs	Laptop PCs
Units Sold (K)	10.0	30.0
ASP	\$2,000.0	\$750.0
Cost per unit	800.0	800.0
<i>Contribution/Unit</i>	<i>\$1,200.0</i>	<i>(-\$50.0)</i>
Revenue (\$M)	\$20.0	\$22.5
Total Cost (\$M)	8.0	24.0
<i>NI (\$M)</i>	<i>\$12.0</i>	<i>(-\$1.5)</i>
<i>Profit Margin</i>	<i>60.0%</i>	<i>(6.7%)</i>

**Net income from Laptops has therefore decreased by \$13.5M as a result of the price drop**

## Math Part II

	<b>BELL Full Potential</b>
	Laptop PCs
Units Sold (K)	30.0
ASP	\$750.0
Cost per unit	350.0
<i>Contribution/Unit</i>	<i>\$400.0</i>
Revenue (\$M)	\$22.5
Total Cost (\$M)	10.5
<i>NI (\$M)</i>	<i>\$12.0</i>
<i>Profit Margin</i>	<i>53.3%</i>

- Lowest possible cost per unit, based on achieving:
- Parts in line with Haysus (\$200)
  - Labour in line with Racer (\$50)
  - G&A in line with HC (\$50)
  - Marketing as-is (\$50)

### Results:

	Laptop PCs
<b>Profit (\$M)</b>	<b>\$13.5</b>
<b>Improved</b>	
<b>Cost Per Box Reduced</b>	\$450.0

# Solution and recommendations

## Solution & Recommendations

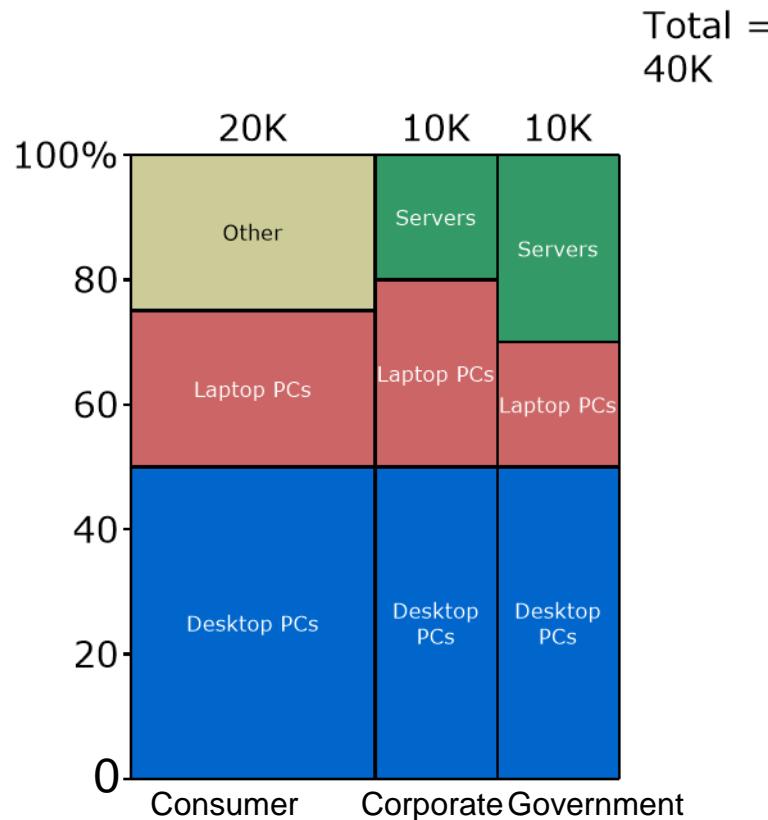
- Bell Computer Inc. and the PC industry have faced five years of Average Price declines in the Laptop product segment. At the same time, “Client” or retail consumers have shifted their preferences towards Laptops and a new product segment called Netbooks. Because Bell Computer has not reduced its costs 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 for laptops of roughly \$13.5M.

## Bonus/Guide to an Excellent Case

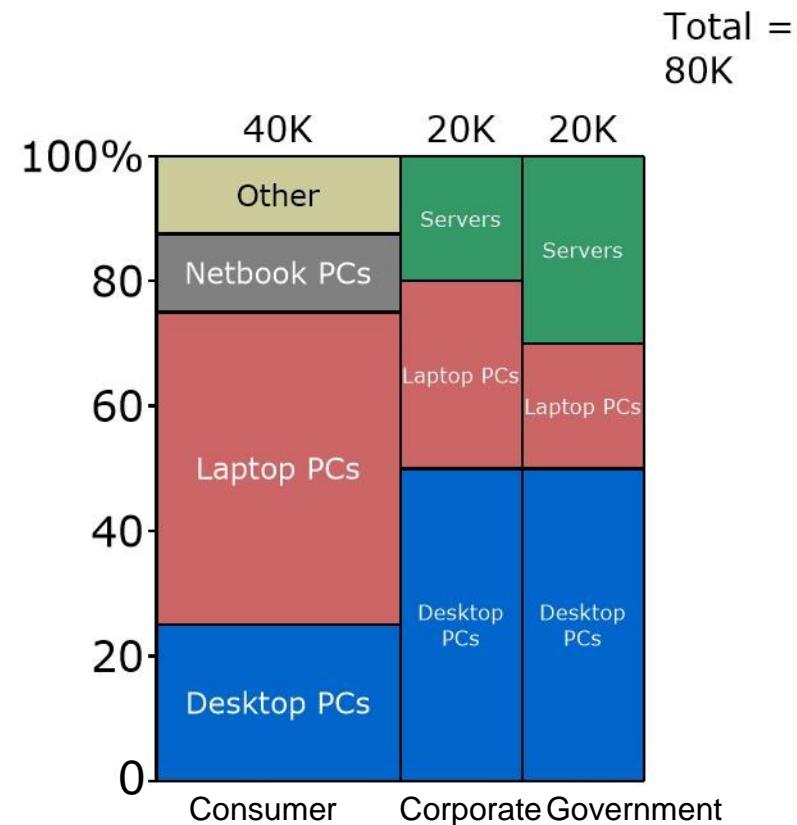
- An excellent interviewee will note:
  - Additional ways to improve net income by selling complimentary, high margin products such as:
    - Printers
    - Software
    - Parts upgrades
    - Warranties
  - Additional ways to cut costs, such as:
    - SKU Rationalization (Reducing the number of product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

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

PC Units(K) Sold in 2005

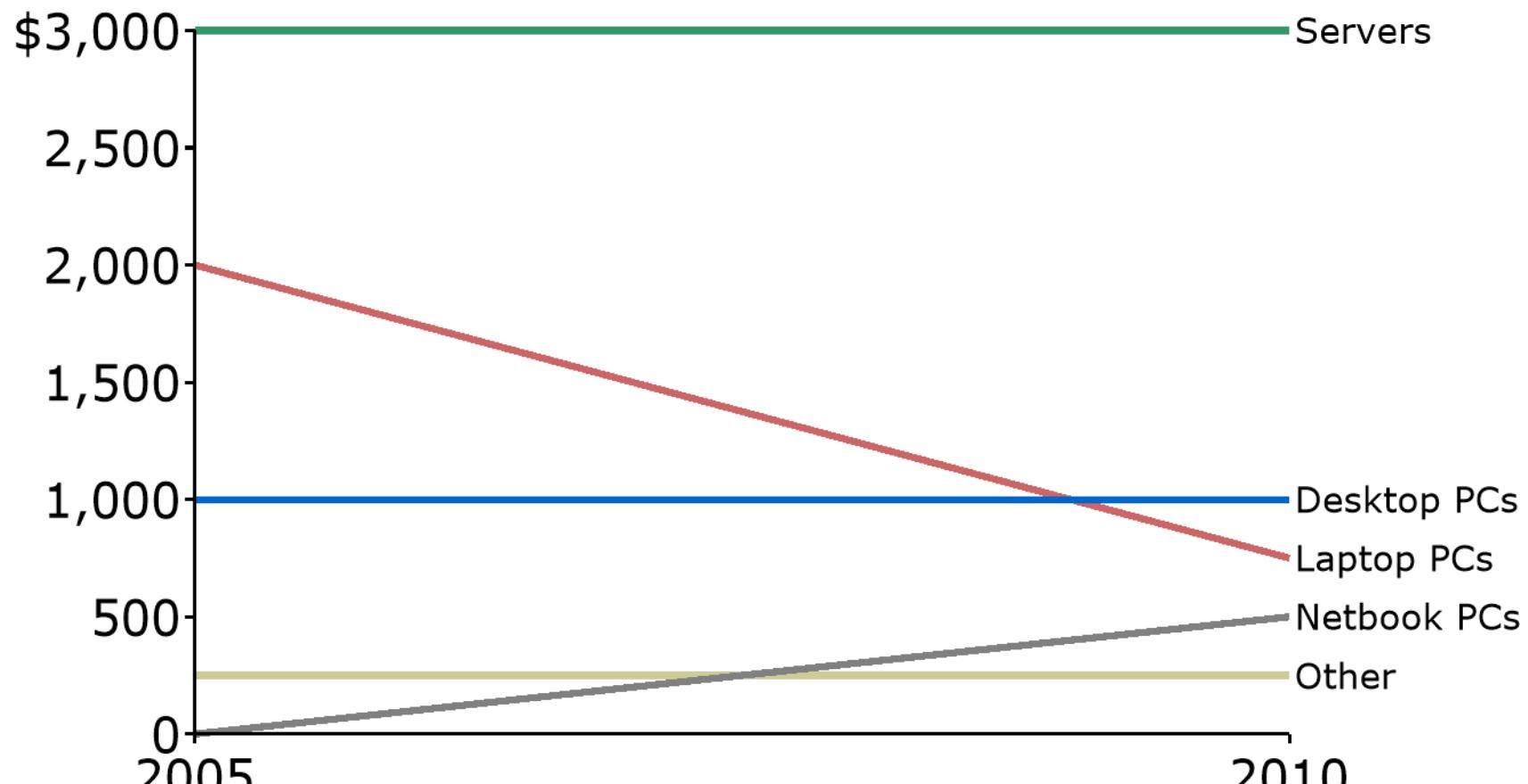


PC Units(K) Sold in 2010



\*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

# Montoya Soup

By: Nico Montoya (Kellogg '16)

Quant: 8

Industry: CPG

Structure: 5

Framework: Profitability

## Case Question

In F14, Montoya Soup Co., a Business Unit of Izzy's Healthy Foods, grew revenue and increased the contribution margins on their Traditional and Light Soups. However, a spike in fixed costs caused them to see a dip in profitability. To offset this effect in F15, they launched a line of premium soups in an attempt to increase volume and generate economies of sale. Though they felt the new launch was a success, their profitability dropped again in F15. They have hired you to diagnose the problem and propose a solution for F16.

## Clarifying answers to provide

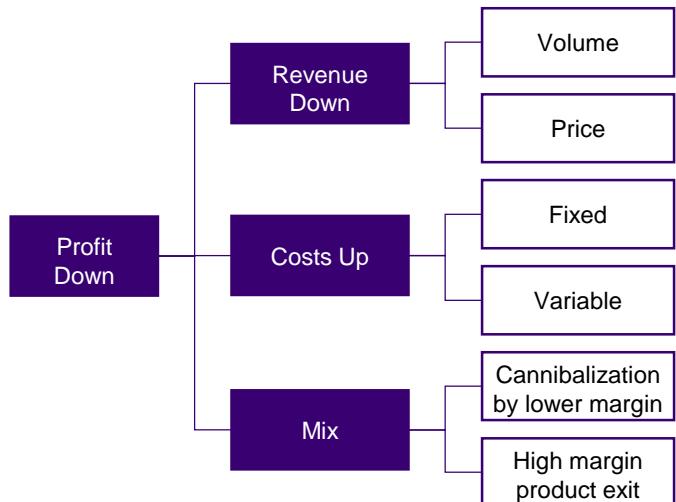
Traditional, Light, and Premium are the only product lines in Montoya Soup Co.'s product portfolio.

Montoya sells cases to buyers at grocery retailers who mark up the units inside to sell to consumers

## Candidate reflections / initial hypothesis should include

The prompt hints that revenue is up and fixed costs haven't increased in 2015, so the candidate should be thinking about variable costs right away. That said, this is a portfolio pricing strategy case disguised as a cost reduction case and a strong candidate might recognize that possibility.

## A model framework should include the following



# Deep dive – Why did profitability decline?

Revenue	Costs	Product Mix
<p>Provide Exhibit A</p> <p>If asked: growth was driven by premium line. There was some cannibalization of traditional and light lines (provide Exhibit B).</p> <p>Q: What trends do you see with regard to top line growth?</p>	<p>Provide Exhibit A</p> <p>If asked: input prices <b>are the same as F14 for the traditional and light lines</b>. No additional wastage. No change in formulation</p> <p>Q: What happened with fixed costs in F15? Variable costs?</p> <p>Q: What could have driven up our variable costs?</p>	<p>Provide Exhibit A</p> <p>Q: How can profitability be down if revenue is up, fixed costs are flat, and the cost of our inputs have not changed?</p> <p>Q: What information do you need to look into fixing the product mix to optimize profitability</p>
<p>Candidate insights</p> <p>Revenue grew significantly in F15, much faster than in any other year in recent history</p> <p>Revenue outpaced volume, meaning that not only did revenue grow, but it grew even though average price increased</p>	<p>Candidate insights</p> <p>Fixed costs were flat at \$1.3bn in F15 (Gross Margin - Contribution Margin = Fixed Costs), so profit decline was driven by an increase in variable costs.</p> <p>Increase in variable costs could have come from pricier mix of inputs, same inputs but increase in input prices, more waste in manufacturing, or change in demand mix for more expensive products. (Provide Exhibit B.)</p>	<p>Candidate insights</p> <p>If revenue is up, input costs are flat (<b>assuming no change in formulation or wastage</b>), and profitability is down, then the issue must be with cannibalization of higher margin products by lower margin ones.</p> <p>Candidate should want to look at the product lines' prices, COGS, elasticity, and cannibalization rates.</p>

# Deep dive – How do we fix profitability?

## Cost Reduction

Provide Exhibit B and C when appropriate

If asked: Competitors aren't playing in the "premium" space, only in "value" and "super-premium"

Q: How much profit do we make per case of Premium? Traditional? Light?

## Pricing (Cannibalization and Elasticity)

Provide Exhibit B and C when appropriate

If we both raise prices **and** change packaging, we will lose enormous distribution

Q: What is the optimum price for profitability?

## Stakeholder Value Proposition

Provide Exhibit D

Q: What are the long-run effects on customers for changing packaging? For reducing meat/vegetable costs? For increasing prices?

Q: What about for the end consumer?

## Candidate insights

\$10 contribution margin on Traditional and Light, \$6 contribution margin on Premium (price – sum of variable costs)

Largest opp. for v. cost reduction would be in packaging, meat, and veg., but reducing these might erode value proposition of a premium product

Math on next page

## Candidate insights

Candidate should infer from Exhibit B that Premium cannibalized Traditional substantially.

Math on next page

## Candidate insights

Candidate should see that customer are willing to pay for a pricier product, but that reducing variable costs (and thereby reducing quality) is not a viable long run strategy and will hurt the brand

# Math Solutions

## Logic behind the math

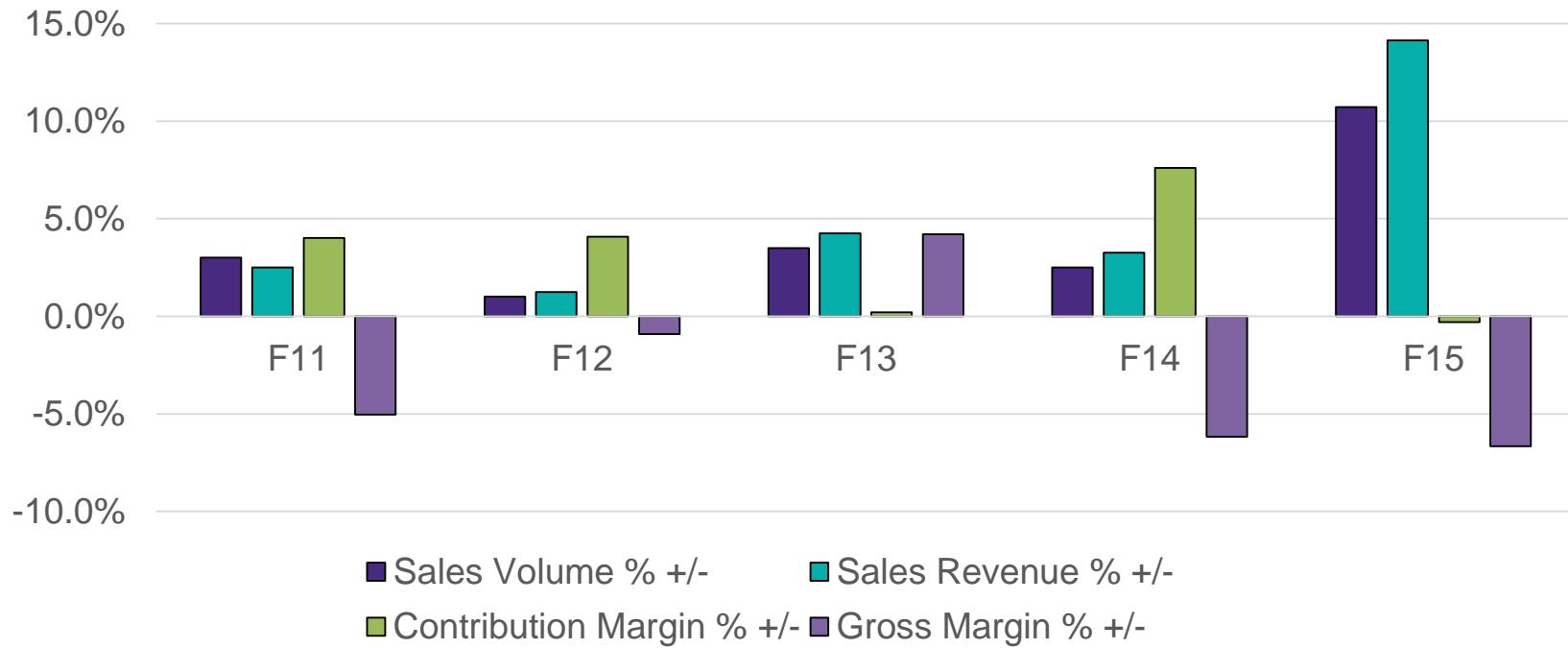
Below are the calculations the candidate would have to make if they calculated every single scenario. It seems like a lot, but keep in mind that the margins on Traditional and Light are \$10, so candidates can simply add a zero to the cannibalized volume number to get cannibalized profit.

The candidate should feel free to elect not to even calculate the first two scenarios if they are deemed strategically unwise long-term decisions.

Net profit from premium will be the profit from Premium (**bold**) minus and profit lost from cannibalizing Traditional and Light (**bold**)

	Unit Margin	Vol	Profit (Margin* Vol)	Trad Vol. Cannibalization	Trad Margin	Trad Profit Lost	Light Volume Cannibalization	Light Margin	Light Profit Lost	Net Profit from Premium
Last Year	\$6	40	\$240	-20	\$10	(\$200)	-5	\$10	(\$50)	(\$10)
If we change packaging	\$9	32	\$288	-24	\$10	(\$240)	-5	\$10	(\$50)	(\$2)
If we reduce meat and vegetable costs	\$9	40	\$360	-20	\$10	(\$200)	-5	\$10	(\$50)	\$110
If we raise price to 33	\$9	20	\$180	-2	\$10	(\$20)	0	\$10	\$0	\$160

# Exhibit A: Performance metrics

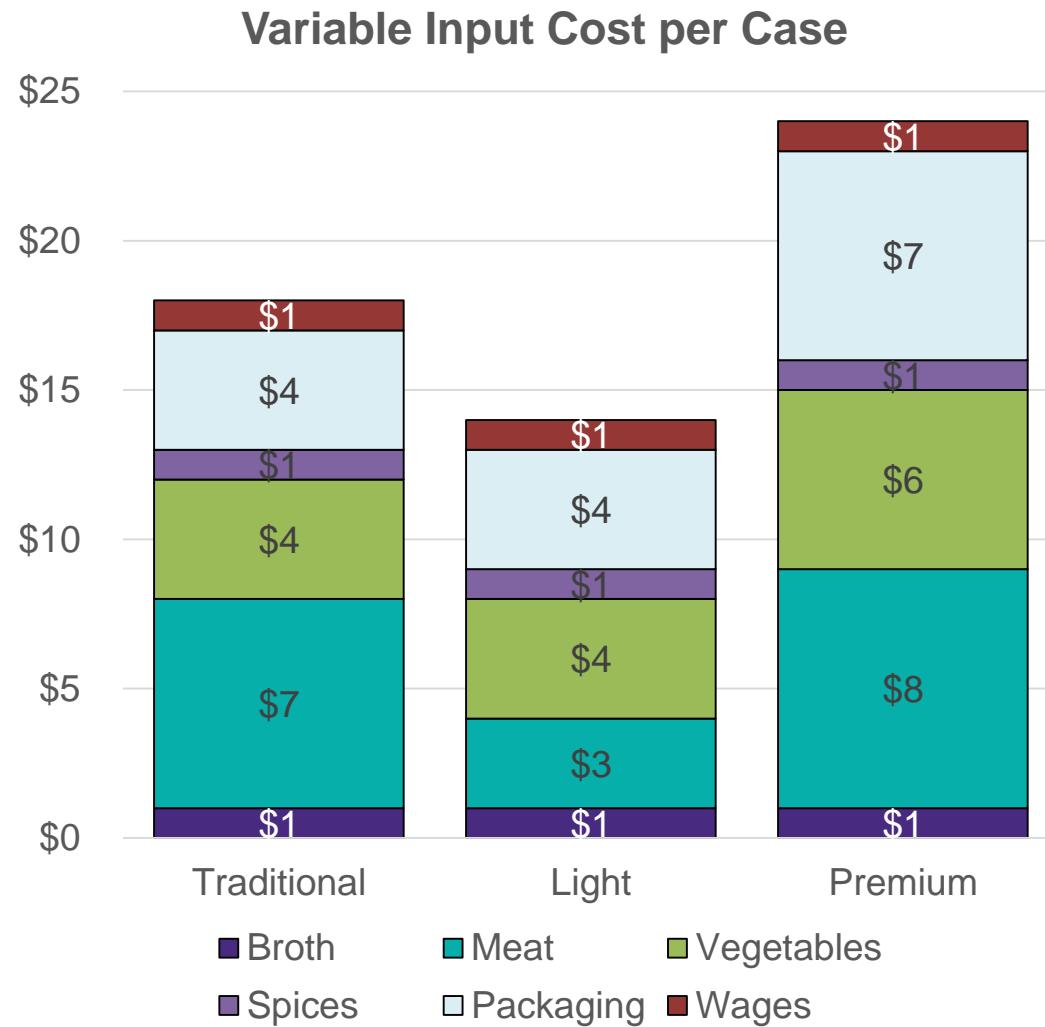


	F10	F11	F12	F13	F14	F15
Sales Volume (millions of cases)	126.5	130.4	131.7	136.5	140.0	155.0
Sales Revenue (millions)	\$3,282	\$3,366	\$3,409	\$3,560	\$3,680	\$4,200
Contribution Margin (millions)	\$1,165	\$1,212	\$1,261	\$1,264	\$1,360	\$1,356
Gross Margin (millions)	\$65.2	\$61.9	\$61.4	\$63.9	\$60.0	\$56.0

# Exhibit B: Product lines

*“Our research showed that many of our consumers were willing to pay more for a product with more meat and vegetable bounty in a carton (instead of a can). After testing several price points, we decided a lower margin and higher volume would help us reach the economies of scale we wanted to see. Consumers loved the product and thought it was a great bargain!”*

	Trad.	Light	Prem.
Wholesale Price	\$28	\$24	\$30
F14 Vol. (m cases)	80	60	-
F15 Vol. (m cases)	60	55	40



# Exhibit C: Demand analysis

## Cost Reduction Effect on Demand

*"We looked into moving premium out of cartons and into cans. On the plus side, it would gain us \$3 of margin per case, but on the con side it would decrease demand by 20% and cannibalization of our Traditional line would spike to 75%"*

*"We could decrease our meat and vegetable bounty to be on par with Traditional. That would buy us \$3 of margin points and consumers shouldn't know the difference, in the short run at least."*

## Price Elasticity and Cannibalization

	Last Year	Increase Price
Premium Price	\$30	\$33
Premium Demand (m cases)	40	20
Traditional cannibalization rate	50%	10%
Light cannibalization rate	12.5%	0%

# Exhibit D: Stakeholder input

## Customer Feedback

- *"We really loved the new Premium Montoya Soup offering, it brought a new consumer to the shelf-stable soup category when all of the other players were introducing products that just stole from their competitors."*
- *"We're planning to give more shelf space to Montoya Soup in F16 after their successful premium launch this year. Our guests really loved the new packaging format and the higher meat and vegetable content. Product trial wasn't extremely high, but we saw a lot of repeat purchases from the people who were buying."*

## Consumer Focus Group Excerpts

- *"I'm trying to eat healthier, and I'm really nervous about canned products with their BPA lining. As soon as Montoya came out with their new carton soup I switched right away from their Traditional line and I'm never going back!"*
- *"I definitely think their brand is rising with me, the old stuff was mostly broth, this new stuff is a huge bargain and it actually has actual stuff in it."*
- *"Glad to see that when everyone else is trying to rip you off, Montoya is making Soup that actually tastes like something I would make at home."*

# Suggested conclusion

## Conclusion

*Profits have declined due to the introduction of a margin-dilutive product line that cannibalized higher margin products. Recommendation: Increase price of product line to \$33 per case to maximize profitability (Gross profit would more than quadruple)*

- Increases margins (though volume will drop)
- Reduces cannibalization substantially
- Alternative cost-reduction measures hurt value proposition and will cause long-run issues with brand equity

## Risks

- Pricing measures didn't consider competitive response (could competitor come in with a lower priced premium soup and force us out of the category?)
- Raising prices could upset some buyers and lose distribution
- Opportunity Cost: Could be better long-term strategy to keep prices low and start phasing out of old lines, ramping up premium

## Next steps

- Perform due diligence on long-term consumer preference forecast
- Launch advertising campaign to make sure we can justify higher prices and defend from competitors
- Look to reduce high fixed costs so we can protect against potentially price-aggressive competitors or increased commodity prices

# After School Programming

By: David Morse (Kellogg Class of '11), Edited By: Merih Ocbazghi (Kellogg Class of '16), Ameed Mallick (Kellogg Class of '12)

## Case Question

- It is 2015, 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)
- **Case Format:** Growth Strategies
- **Concepts Tested:**
  - Organizational
  - Capacity Expansion
  - Customer Strategy
  - Marketing Strategy

## 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.

# 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. total central office costs / 8 = 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.
- *Solution on “Math Solution” page*

### 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.
- Note 3: Mention that high school is 4 years i.e. There are 4 classes in school at any given time.
- *Solution on “Math Solution” page*

# 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, 2015	# high schools	HS completion rate	2014 % of enrolled students with GPA of D or lower
Worcester, MA	1000	-10%	3	70%	30%
Nashua, NH	800	-5%	2	75%	25%
Barrington, CT	800	10%	1	75%	20%
San Mateo, CA	1300	1%	4	85%	20%

Column	F	G	H	I	J	K
Formula	$A*C$	$F*(1-D)$	$(F-G)*E$	$G+H$	$I*(1+B)$	$J/F$
	Total Enrollment	Dropouts in 2014	Low GPA Students	Total at Risk, 2014	Total at Risk, 2015	Total % of Students at Risk, 2015
Worcester, MA	3000	900	630	1530	1377	46%
Nashua, NH	1600	400	300	700	665	42%
Barrington, CT	800	200	120	320	352	44%
San Mateo, CA	5200	780	884	1664	1681	32%

# Solution and recommendations

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## 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 indicates that growing within existing states or in neighboring states poses fewer risks for the client.

# Exhibit 1: Addt'l 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, 2015	# high schools	HS completion rate, class of 2014	2014, % of enrolled students with GPA of D or lower
Worcester, MA	1000	-10%	3	70%	30%
Nashua, NH	800	-5%	2	75%	25%
Barrington, CT	800	10%	1	75%	20%
San Mateo, CA	1300	1%	4	85%	20%

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# Industry Research Overview

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## A tailored approach to industry research can help you prepare

- Provides insight into industry-wide trends and revenue/cost drivers
  - Allows you to make a more nuanced framework or tack on an additional piece of industry-specific analysis
  - May point you toward sources of issues in cases
  - Can be helpful in Q&A with your interviewers about their own work
- Spend your limited time well
  - No need for extensive research on industries in which you already have significant prior experience or knowledge
  - Read high-level industry summaries (such as those on the following pages) to gauge whether anything is completely new to you
  - Consider reading in-depth guides for industries that
    - Are completely new to you
    - You seek to specialize in
    - You know will come up in interviews (e.g., due to industry focus of firm)

# List of Industry Overviews

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**This section includes brief overviews of 19 industries that are likely to come up in interviews**

- Industrial Goods
- Energy
- Airlines
- Automotive
- Online Services and Storage
- Computer Software
- Hardware and Digital Devices
- Semiconductor
- Pharmaceuticals
- Medical Devices
- Hospital Facilities
- Healthcare Payers
- Banking and Financial Services
- Media and Entertainment
- Telecom
- Retail
- Household Durables
- Household Non-durables
- Restaurant
- Non-alcoholic Beverages
- Beer, Wine and Distilled Spirits
- Mining and Precious Metals
- Utilities

# Industrial Goods



## Overview

- Large and diverse industry that provides products/services primarily used to produce other goods
- Main sectors
  - Electrical Equipment and Components
  - Industrial Automation/Heavy Machinery
  - Construction and Engineering
  - Aerospace & Defense
- Key Players include: GE, Siemens, Cummins, Boeing, Lockheed Martin, Northrop Grumman, Eaton, Honeywell, Raytheon, 3M, Caterpillar, Emerson Electric, Fluor, Tyco, Waste Management, Bosch Rexroth

## Trends

- Tighter consumer spending has led to reduced production and stagnant growth for the industry
- Industry has seen increasing consolidation over the past few years; Most sub-segments are Oligopoly
- Emerging markets are key for growth as they are quickly developing and increasing production capacity for a variety of goods
- Local assembly is common since components are easier to ship than finished goods

## Drivers

### Revenue

- New Product Innovation
- Product quality and reliability including after-sales service
- Specialized products for various customer segments

### Cost

- Raw materials including oil, natural gas, metals,
- Human capital costs including engineers, labor/manufacturing force and sales force
- R&D

# Energy



## Overview

Major E&P players like BP, ExxonMobil, Petrobras, Aramco are involved in both upstream and downstream.

### Upstream Steps:

1. Exploration: Finding oil, including geological exploration, research, and purchasing/leasing land. Offshore is leased from gov'ts through auctions
2. Drilling. Companies drill exploratory wells to determine size; if satisfactory, add'l wells are developed. Overheating can cause explosions ("blowouts").
3. Well Completion. Post drilling, engineers put cement in the walls

Steps 1-3 are often contracted out from E&P firms to firms like TransOcean. Delays are very expensive (\$500k a day), and may be charged to contractors; but E&P firms make decisions

Downstream Steps: Production → Refining → Marketing

Liability for spills is extremely costly (\$1-4k per barrel spilled, 205M gallons est. spilled)

## Trends

**New Legislation Post –BP oil spill** the industry is likely to experience major changes.

- A hodgepodge of oversight agencies granted exceptions to rules, as government agencies needed to both foster and police the industry
- A mix of companies is in charge of each rig, and their interests are not always in sync (see **delays** under overview, eg for maintenance)

Foreign countries maintain their own oil standards

State-owned oil companies like Saudi Aramco and Petrobras are sitting on enormous oil reserves, but cannot exploit it as efficiently as public companies

New players in China (supported by government) is entering the OEM and shipping industry

## Drivers

### Revenue Drivers

**Outside Factors:** economic environment (GDP growth), supply, consumption and demand level, oil and gas inventories.

**Prices** of oil, gas, and refined products are the most watched factor in energy.

**Key measures:** Supply and demand of oil and natural gas, rig count, rig utilization rates, rig dayrates and daily margins

**Drilling companies:** provide the rigs and operate them, either on a project or long-term contract basis, with **rates charged by the day (popular among offshore drilling), foot drilled, or all-inclusive basis**.

**Wide range of services**, including: pressure pumping, wireline, directional drilling and measurement while drilling (MWD), and marine support

### Cost Drivers

Upstream - exploration and production expenditures; Midstream – transportation, and storage costs; Downstream – refining and marketing costs.

**OPEC:** influences global price.

# Airlines



## American Airlines



## UNITED



### Overview

- Airlines provide air transport services for passengers and freight
- The industry was deregulated in 1978 free from government control of fares, routes, merger and acquisitions. This helped to completely transform air travel from a luxury to a mass-market service

#### INDUSTRY STRUCTURE:

**Major Airlines:** revenues > \$1B

**National Airlines:** revenues \$100 M - \$1B

**Regional Airlines:** revenues < \$100M

- Airlines is a low-margin industry

#### COMPETITION

- Price Competition: airlines compete to provide the lowest fares to the passengers
- To attract leisure travelers they advertise huge discounts
- Niche players like JetBlue, Southwest, and Spirit have entered

### Trends

#### MERGERS

The industry has seen a lot of consolidation in recent years. There are 3 major US carriers, down from 6 a few years ago (eg, United/Continental Delta/Northwest)

#### BANKRUPTCY:

Mergers primarily happened as the due to several airlines filing for **bankruptcy and going out of business**

There has been a barrage of bankruptcies in the industry. More than **20 airlines** have filed for bankruptcy in the last decade

#### Potential problems of declining revenue:

- Inefficient network: look at route profitability and see if some of the routes could be eliminated
- Poor use of fixed capacity: increase volumes to tackle this issue

### Drivers

#### Revenue Drivers

Airlines have been really creative to add several revenue streams to their business

- Passenger fares
- Mail and cargo charges
- Meals / alcohol in flights
- In flight entertainment
- Extra baggage/seat prices

Customers are broadly categorized as:

- Leisure: highly price sensitive
- Business: not price sensitive, hard to reach

#### Cost Drivers

Airline industry is **capital and labor intensive**

**Fuel:** Fuel costs are highly volatile and can range anywhere from 25% - 40% of the total cost for an airline

**Labor:** costs in 2009 was 26% of the total cost. Labor is unionized, and pilots have few substitutes

- Includes pilots, attendants, ground services, dispatchers, maintenance, customer service

**Equipment:** is around 10% of the total cost

- Some airlines lease fleets rather than buy

# Automotive



Mercedes-Benz

## Overview

The automotive industry is engaged in the design, production, marketing, sale, and servicing of motor vehicles.

New light vehicle sales in the US expected at **11.7 million for 2010. Volume increase is forecasted** in 2011, to 13.5 million.

**Heavy capital commitments** required to keep pace with product development and model changeovers.

**Demand** is naturally affected by economic environment.

**Auto parts manufacturers highly fragmented:** produce original parts and accessories for new vehicles, replacement parts, and accessories for older vehicles, or both

**Labor** is often unionized and wields power.

## Competition

**Extremely competitive.** The US is the world's most competitive auto market.

**Detroit Three losing market share:** GM, Ford, and Chrysler. The top three foreign companies have a combined US market share of 41.5%: Toyota, Honda, and Nissan.

## Trends

**US share of global market shrinking:** In 2009, China overtook the US as the largest market for new vehicles. US accounted for **16.3% of global demand**.

**Demand in developing markets**, including the BRIC economies, is projected to outstrip that of the world's mature markets.

**US and global sales to advance.** Production in NA was up 70% in the first quarter of 2010. Europe may lag.

Companies in China, Russia, India to make **acquisitions in the US**.

**Alternative fuel and hybrid vehicles** – All automakers are developing the technology: ethanol, methanol, natural gas, and electricity derived from batteries or solar power.

**Auto parts** – online procurement has changed the business, with increased transparency pressuring selling prices for commodity items.

**Bankruptcy:** GM, Chrysler, GMAC (auto lender) and suppliers filed for bankruptcy and some for bailouts in 08/09

**Distribution:** Main channel is – dealership model. Rapid consolidation in recent years.

## Drivers

### Revenue Drivers

**Factors affecting new car sales:** changes in style, engineering, safety, quality, cost and availability of gasoline and insurance.

**Price increases are limited.** Rising competition in NA and Europe has restricted manufacturers' pricing power.

**Demand, sales rise** during sustained economic growth and plentiful employment.

**Tactics to stimulate demand:** discounts and cash rebates, (dealers' discounts,) financing at lower interest rates, eliminating options on a model to offer a low-priced alternative.

### Cost Drivers

**Capital expenditures of 2010:** GM \$6.0 billion, Ford \$4.5-5 billion, Toyota \$8.1 billion.

**Costs breakdown:** plants, raw materials, design, production, labor, distribution, marketing, and customer service.

**Suppliers:** number shrinking, due to globalization, reduced volume from US automakers, high material and labor costs.

### Oil prices and raw material prices

**Cost cutting tactics:** higher unit production volume, savings on parts and labor, improved manufacturing efficiencies.

# Online Services and Storage



## Overview

The online industry consists of companies that provide virtual-environment services and products, including data search, cloud data storage, social networking, big data analytics, music and video streaming, e-Stores (fashion, media, etc.), news and gaming.

### INDUSTRY STRUCTURE:

**Total Revenues:** ~\$1.8Trillion

**Industry Leader in Revenues:**

Google (\$29.3 Billion)

### COMPETITION

- Innovation: companies try to differentiate themselves by investing heavily in innovation, or “the next big thing”, such as YouTube, Facebook or eBay, most of which are monopolies in their own specific market.
- In the consumer world, major players include online services companies such as Google or DropBox, e-Retailers such as Amazon and Gilt, entertainment providers such as NetFlix and Hulu, and social networks such as Facebook and Twitter. In the business arena, companies such as IBM, McKinsey, Accenture and other professional services companies are taking the lead.



## Trends

### CLOUD COMPUTING:

A wide variety of service providers are battling over the right to provide consumers with free cloud based services, most notably storage (DropBox, Google Drive, Amazon Cloud Drive), productivity (Google Docs, Microsoft Office Live), CRM (Salesforce) and professional services (Quickbase, Bill.com).

### BIG DATA:

The huge amount of information out there serves not only as an opportunity for companies to study, analyze and predict market trends, but also as an essential tool for survival.

### CYBER SECURITY:

Both in the private sector, where many have already entrusted the web with their most intimate information, including bank accounts, emails or work, and in the more global aspect, cyber warfare, spying and intelligence gathering have all increased the need for highly developed cyber security services, to protect both corporate secrets and peoples' lives.



## Drivers

### Revenue Drivers

In the consumer market, most services are given for free, where most revenues come from advertising and data collection. Some services/products are given for a subscription fee, and some (usually e-retailers) usually come from direct sales. In the business sector, the ability to provide expertise to increase value for clients, where many companies are quickly transitioning themselves from conventional services firms into “one-stop-shop” firms, mostly among consulting companies, accounting firms and technology firms, allow such companies to charge service fees.

Customer base is very broad, i.e. not limited solely to ultra-techy consumers, but also to sophisticated business people, organizations and consumers with low-to-intermediate level of technical experience.

### Cost Drivers

The online industry relies heavily on innovation (a large portion of which comes from M&As of startup companies), customer relations and IT infrastructure. Conventional costs such as physical stores, fragmented inventory space and manpower are very low.

# Computer Software



Overview	Trends	Drivers
<p>The software industry includes businesses for development, maintenance and publication of software, including productivity suites, games, mobile apps, hardware-specific software (both firmware and custom made software) and operating systems (including mobile platforms).</p> <p><b>INDUSTRY STRUCTURE:</b></p> <p><b>Total Revenues:</b> \$303Billion (in 2010)</p> <p><b>Industry Leader in Revenues:</b></p> <p>Microsoft \$69Billion (in 2010)</p> <p><b>COMPETITION</b></p> <ul style="list-style-type: none"><li>Software companies compete not only with other software companies, but also with other technology-based services providers, by focusing on specific clients – whether by creating simple and cheap mobile apps for clients on the go, or niche expertise-based products for sophisticated clients.</li><li>Major players include very large companies such as Microsoft, IBM, Oracle, Symantec and Adobe, which focus on the working environment, and of smaller companies such as Electronic Arts, which focus on gaming across multiple platforms.</li></ul>	<p><b>DIGITAL TRANSFORMATION:</b></p> <p>For the last few years, there is an apparent slowdown in growth in the software industry, where gains are achieved through operational performance rather than technological innovation, and growth is accomplished through mergers rather than organic development. Due to convenience issues, piracy and security risks related to software-based ecosystems, the tech world is moving towards online services and mobility. Other than switching to other, software developers are also either focus on smaller &amp; simpler versions for the consumer market (mobile apps) or on much more sophisticated software for the business market, mostly for CRM, IT systems, database and online services.</p> <p><b>MICROSOFT RISE AGAIN(?)</b></p> <p>Despite overwhelming criticism regarding its lack of innovation and inability to create value in the longer term, Microsoft managed to retain its dominance in the productivity software market with its Office cash-cow, while introducing the much anticipated Windows 8 OS, which draws positive attention.</p>	<p><b>Revenue Drivers</b></p> <p>The industry experienced very few changes in such respect, as revenues are based mostly online and retail sales, service and client support fees, annual subscriptions and licensing fees.</p> <p>The customer base has changed in the past couple of years: regular consumers are interested more in simple friendly software rather than sophisticated do-it-all software, and businesses are worried that constant innovation will harm their competitiveness if they commit to the wrong software, and are interested more in “renting” a dynamic software rather than buying a product that requires high implementation costs. Therefore, the software industry focuses on the 2 “extremes”: the relatively low-tech customers and ultra-sophisticated ones.</p> <p><b>Cost Drivers</b></p> <p>The biggest cost software companies traditionally faced was related to the development of the products. In the past, the huge allure of the software industry was its relatively low operational costs once the product has been developed, and such costs have shrunk even more in the last few years due to online distribution. However, piracy has plagued most of the software industry and increased the cost of protecting the companies' intellectual property.</p>

# Hardware and Digital Devices



## Overview

The Computer Hardware industry consists of companies engaged in assembling and manufacturing computers, computer hardware and computer peripherals, including storage devices, keyboards, printers, monitors, mouse and other pointing devices, Webcams and PC cameras.

### INDUSTRY STRUCTURE:

**Total Revenues:** \$842.1 Billion

### Industry Leader in Revenues:

Apple (\$156.5 Billion)

### COMPETITION

- Price/Feature Competition: companies try to differentiate either by selling at low prices and relying on complementary products, or by increasing consumer benefit through innovation and features.
- Major players include manufacturers such as Apple and Samsung, but also Google, which does not manufacture but has tremendous influence over the industry due to its Android mobile operating system and its collaboration with manufacturers such as LG.

The Samsung logo, consisting of the word "SAMSUNG" in white capital letters inside a blue oval shape.

## Trends

### MOBILE COMPUTING:

During the last decade, we experienced a major shift from desktop computing to computing-on-the-go, mainly due to growing popularity of smartphones and the emergence of tablet computers (see below). Cloud computing reduced the need for physical storage, while constant improvement in speed and reliability of mobile internet connectivity allow consumers to communicate, work and play anytime and anywhere. The recent growth also led to increased revenue by component manufacturers (ARM, Broadcom, Samsung) and demand for online services. Tablets and smartphones are estimated to have cannibalized more than 20% of the computer industry.

### TABLET WARS:

Despite continuous dominance by the iPad (50.4% market share), industry behemoths such as Microsoft (Surface), Google (Nexus), Amazon (Kindle) fiercely compete over the tablet industry, though most profits do not come from units sold but from complementary products (such as apps and cases).

The Lenovo logo, consisting of the word "lenovo" in blue lowercase letters with a red "o" and a small "think" logo above it.

## Drivers

### Revenue Drivers

Companies seek to add revenue streams to their business

- App and digital content stores for Smartphones and Tablets
- Advertising through mobile apps
- Collaboration with peripheral product manufacturers (such as keyboards, casing, headphones and audio systems) and with mobile telecommunications companies.

Customer base is very broad, not limited solely to ultra-techy consumers, but also to sophisticated business people and consumers with low-to-intermediate level of technical experience

### Cost Drivers

The hardware industry relies heavily on component manufacturers, which are exposed to variance in material prices, environmental regulation, and cost of labor (as most manufacturing is done in developing countries). Hardware companies are also required to invest heavily in R&D.

# Semiconductor



## Overview

### Industry:

The research, development, production, and marketing of semi-conductors

### Products:

Industry is made up of four product categories:

1. **Memory** – Memory chips are temporary storehouses of data and pass information to and from computer
2. **Microprocessors** – central processing unit that contain the basic logic to perform tasks
3. **Commodity Integrated Circuit** – “standard chips” – produced in large batches for routine processing purposes
4. **Complex SOC** – “System on a Chip” – integrated chip with entire system’s capability on it

### Key Ratios/Terms:

**Moore’s Law** – number of transistors on a chip doubling every two years

**“Fabless” Chip Makers** – semi-conductor companies that carry out design and marketing, but outsource the actual manufacturing

**R&D/Sales** – research and development expenses as a percent of sales – want high %

**Yield** – # of operational devices out of all mfg.

## Trends

### Growth:

- Semi-conductor industry is highly cyclical
  - Companies face constant highs and lows for demand of their product
- Growth trends track closely with demand for personal computers, cell phones, and other electronic equipment

### Trends:

Traditionally, semi-conductor companies have controlled the entire production process, but in order to be lean, efficient, and effective, they are moving away from that model:

- Successful companies must be smaller, faster, and cheaper
- Chip makers are beginning to delegate manufacturing to foundry companies (whose sole business is manufacturing)
- Noticeable increases in specialized designers and chip testers

### Competition:

- “Fabless” companies overcome barriers to entry related to large capital requirements
- Foundries gaining supplier power because of cutting-edge equipment and production skills
- Intense rivalries between companies

## Drivers

### Revenue:

Revenue = Price of chip x quantity sold

- Due to Moore’s law and the competitive nature of the industry, it is not uncommon for the price of a new chip can fall by as much as 50% in a short time period
- By nature of the process, there is a long lead time with product releases, so it may take years before a company sees revenue for certain products

### Costs:

- Semi-conductor companies live and die by their ability to be cost efficient
- Constant pressure from market and customers to develop better, cheaper products in a short time frame
- As noted above, each product has a long lead time, so a company will incur costs for a long time before that product generates any revenue
- As noted in “Trends”, historically complete process companies have outsourced some of the production process in order to be more lean and cost efficient

# Pharmaceuticals



## Overview

- Historically among the world's most profitable industries
- Total domestic expenditures for prescription drugs were roughly \$234.1B in 2008, and is increasing
- Worldwide sales are expected to increase 5-8% per year (similar figures in the US), and reach \$1.1 trillion in sales by 2014
- In 2009, the US and Europe markets made up approximately 39% and 32% of the world wide market followed by Asia, Africa, and Australia (12.7%), Japan (11.3%), and Latin America (5.7%)
- Typically high economic, regulatory and legal barriers to entry

## Trends

- The growth of the industry has been supported by an aging population (in developed markets), lengthening of the life expectancy, and rising incidence of chronic diseases
- Emerging markets are leading industry growth; CAGR is expected to be 14-17% through 2014
- Patent expirations are expected to peak in 2011-2012; resulting revenue loss has forced many companies to downsize to maintain high levels of profitability
- Large pharma companies are increasingly relying on purchasing or partnering with young / niche firms to create growth
- Uncertainties introduced by PPACA ("Obamacare") and lagging drug approval times by FDA is expected to slow growth
- Insurers are getting increasingly more stringent on which medications they will reimburse

## Drivers

### Revenue

- New products – premium-priced breakthrough therapies that open new markets
- Patent protection – commercial life of a branded drug is approximately 10 years
- OTC – some pharmas are introducing OTC versions to combat generics when patents expire

### Cost

- R&D – costs higher than any other industry; can take 10+ years for new drug development
- Sales and Marketing – US companies spend approximately \$20B/year on promotions

# Medical Devices



Overview	Trends	Drivers
<p><b>Industry Definition:</b> any healthcare product that achieves its intended purpose <i>not through</i> chemical action or being metabolized</p> <p><b>Products:</b> devices range in complexity from tongue depressors to multi-million \$ imaging equipment.</p> <ul style="list-style-type: none"><li>- Most common are surgical appliances/supplies, surgical &amp; medical instruments, electro-medical equipment, in-vitro diagnostic substances, irradiation apparatus (typically x-ray), dental &amp; ophthalmic (eye) goods</li></ul> <p><b>Key Stats:</b> US industry includes about 11,000 companies with combined annual revenue of over \$150 billion. Globally, the industry generates annual revenue over \$400 billion. Major markets include the US, Japan, Germany, France, and Italy.</p> <ul style="list-style-type: none"><li>- Industry is concentrated: 50 largest companies account for ~60% of revenue</li></ul> <p><b>Major Companies:</b> include Baxter International, Boston Scientific, Johnson &amp; Johnson, Medtronic, GE &amp; St. Jude</p>	<p><b>Growth:</b> industry revenue is projected to grow on average 6.6%/yr. from 2012 to 2017</p> <p><b>Trends:</b></p> <ul style="list-style-type: none"><li>- Uncertainties introduced by PPACA ("Obamacare") and lagging device approval times by FDA is expected to slow growth</li><li>- PPACA contains med device tax -will cost the industry \$20 billion over the next decade</li><li>- Increased government regulation around the globe threatening growth</li><li>- Recent difficulties in retaining qualified manpower to design and produce devices</li><li>- Aging population and increased access to care should help stem some of losses from forces mentioned above</li><li>- Growing attention to healthcare in developing markets</li></ul> <p><b>Competition:</b> increasingly sophisticated pharmacologic products, growth in preventive medicine</p> <p><b>Barriers to entry:</b> high for small players; economies of scale and access to capital are critical to negotiate complex regulatory and approval processes</p>	<p><b>Revenue Drivers:</b></p> <ul style="list-style-type: none"><li>- expanding emphasis on healthcare in developing countries</li><li>- standardization of regulatory requirements across countries</li><li>- Growth in elderly population means increased demand for devices</li><li>- Improved patient longevity due to higher quality healthcare</li><li>- Innovation in product development due to strong scientific progress</li></ul> <p><b>Cost Drivers</b></p> <ul style="list-style-type: none"><li>- Research and development</li><li>- Regulatory approval and compliance process</li><li>- Federal and local taxes</li><li>- Sales and marketing operations</li></ul>

# Hospital Facilities

HCR ManorCare



## Overview

**Acute care hospitals** – 5,815 in 2008. Non profit entities account for 82% of this segment. Total revenues in 2008: \$608 billion. Revenue CAGR (04-08) – 5.4%

**Rehabilitation hospitals** (both stand-alone units & those attached to a larger facility) – 203 in 2008

**Psychiatric hospitals** – 447 in 2008; Avg. length of stay has remained stable at 9-10 days

**Specialized hospitals** – orthopedics (25); obstetrics & gynecology (13); chronic disease (4); eye, ear, nose, and throat (6); & tuberculosis and other respiratory diseases

**Nursing homes** – 15,531 in 2008, occupancy rate ~84%

**Assisted-living facilities**, and home healthcare services.

## Trends

**Patient Protection and Affordable Care Act (PPACA)** ("ObamaCare") reforms aspects of the private health insurance industry and public health insurance programs, increases insurance coverage of pre-existing conditions, expands access to insurance to over 30 million Americans, and increases projected national medical spending while lowering projected Medicare spending.

**Shortage of Physicians and Nursing staff** : As the population ages the shortage of primary care physicians would aggravate

**Highly regulated** by the government which is a key buyer for the hospital industry

**Gov't**: account for 47% of healthcare spend

**Healthcare reform** will extend healthcare insurance coverage to approximately 32 million of the previously uninsured by 2019

**Consolidation**: To reduce costs, nonprofit chains or individual nonprofit hospitals being acquired and/or entering into JV arrangements with the for-profit chains

## Drivers

### Sources of Revenue:

**Inpatient admissions**: Has remained flat at ~118 admissions/1000 population

**Procedures**: Decrease in admissions result of a shift towards procedures performed on an outpatient basis rather than in hospital

**Reimbursement rates**: Controlled by gov't

**Demand Drivers**: Increase in **unemployment** → loss of employer-based health coverage

**Decline** in the rate of elective procedures

**Shift** towards procedures performed in outpatient facility or physicians' offices that don't require an overnight hospital stay

**New medical technologies** reduce or eliminate the need for hospitalization

Increasing influence of **third-party payers**, **Ageing** population

### Cost Drivers

Labor Costs (Doctors, Nurses, Admins)

Uncompensated Care: high % bills not billed to insurance is written off as bad debt

Taxes: non-profits are exempt from some taxes

# Healthcare Payors



## Overview

### WHAT PAYORS DO:

- Underwrite (assume risk of, assign premiums for) health insurance policies
- Provide admin services for self-funded plans (e.g. employers providing benefits with own funds)
- Help manage individuals' care

### KEY INDUSTRY STATISTICS:

- Revenues/Profits: \$707.4B / 28.3B (4%)
- CAGR '07-'12 / '12-'17: 2.8% / 5.1%
- Number of businesses: 927

### PRIMARY PLAN OFFERINGS:

- Fee-for-service: Provider paid on one-off basis; patient choice not restricted
- Health maintenance org: Payer and provider integrated and pre-paid; cheaper, but patient choice limited
- Preferred provider org: Mix of FFS, HMO
- High deductible: Lower premiums but higher out-of-pocket obligation; patient has incentive to use services efficiently
- Pharmacy benefits

## Trends

### HEALTHCARE REFORM

- Directly pressures payors' bottom lines by:
- Eliminating coverage caps, denials based on pre-existing conditions, etc.
  - Increasing medical loss ratios (% premium dollars payers must spend on healthcare, with remainder going to admin and profit)
  - Increasing gov. scrutiny of premium hikes
  - Forcing payors onto exchanges for individuals; more price competition, less G&A scale than with employer groups

However, the law will bolster top-line growth by growing the insured population

### COMPETITION

- The top four payors have ~35% share; the rest of the market is fairly fragmented
- Slow but steady consolidation expected to continue given profitability issues

### MACROECONOMIC ENVIRONMENT

- Recession precluding payors from increasing premiums in line with healthcare cost inflation

## Drivers

### REVENUE DRIVERS

Payor revenues are largely dependent on external factors:

- Total health-related expenditures
- Number of physician visits
- Number of employed individuals
- Age of population
- Regulation and legislation

Payors also attempt to steal market share from one another by differentiating on:

- Steeper discounts on provider charges
- Broader network coverage
- Lower administrative fees
- Add-on services (e.g. case management)
- Attractiveness to individual consumers (once exchanges go live in 2014)

### COST DRIVERS

- Purchases of medical and Rx services/products) comprise ~72% of costs; influenced by utilization and cost inflation.
- Relative to other sectors of healthcare, the health insurance industry is neither capital nor labor intensive.

# Banking and Financial Services



## Overview

**Diversified Financial Services firms:** large financial conglomerates (e.g. JP Morgan Chase & Co.) which combine insurance, securities, and lending businesses

**Consumer finance firms:** primarily lend money to consumers: mostly through small to midsized loans (\$1,000 to \$75,000). The main products include home equity loans, credit card loans, etc

**PE/VC firms:** invest in and help manage or guide businesses with hopes of company growth resulting in profits from a later sale

(Additional Types under **Drivers**)

**Interest Rates** are at zero, meaning banks will make no money by investing in government bonds. This is the federal reserve encouraging banks to lend money

Customer deposits in banks are FDIC insured up to \$250,000, meaning the government will make you whole if the bank loses that money

## Trends

As a result of recent financial crisis, **regulations have increased** (controlled by Treasury Department, The Federal Reserve, House and Senate bills)

The US government intervened in 2007-09 to lend money to banks, insurers, and other key players to keep the financial system afloat.

### Consolidation of banks

Trend towards large “financial supermarkets” like Citi may be reversing, as many large banks sold off divisions for needed cash during the downturn

Post-financial crisis, many financial institutions have stopped **proprietary trading**, or placing bets with their own assets.

The Dodd-Frank act, which has not been fully implemented, includes **new and consolidated federal regulatory agencies**, stricter **capital requirements** for banks, and regulates the trading of certain **derivatives**.

## Drivers

### Revenue Drivers

**Commercial Banks** earn money by reinvesting customer deposits in higher-yielding funds or lending at higher rates and charging transaction fees

**Investment Banks** charge fees for advising corporate and governmental clients on mergers, acquisitions, restructuring, and debt and equity issuances

**Insurance Companies** earn money by taking in monthly premiums from customers, who receive a payout if an event occurs

**Credit Card Companies** (Visa / Discover) earn fees from customers and merchants by handling the complex processing necessary. AMEX does the same, but also lends the customer money.

### Cost Drivers

**Research** (whether to buy/sell securities, or suggest a specific merger)

**Salary and benefits, supplies, insurance.**

**Losses on investments** like loan defaults

**Risks**, such as a sudden demand from many customers to redeem their money

# Media and Entertainment



## Overview

- Media and entertainment companies create, license and / or distribute content (TV shows, movies, music, news, video games, books, magazines, radio shows, advertising, etc.)
- The industry has long been known for conglomeration; developing and acquiring multiple brands and multiple distribution channels for their dissemination

### INDUSTRY STRUCTURE:

**Total:** Global revenues of \$1.5 T

**Consumer / End-User Spend:** \$1 T

**Advertising Spend:** \$500 B

- The leading 10 companies in the industry account for one third of revenue
- This includes some cable, telecom, hardware, software and internet spend which is hard to split from “content”
- Other national or regional conglomerates and digital startups comprise remaining revenue

## Trends

### MACROECONOMICS:

Consumer and advertising spending on M&E is tied to economic growth, though some segments (cable, internet access) are resistant to downturns and / or more impacted by secular trends. Annual growth slowed in 2008 and the industry retracted by 2.4% in 2009. Growth has rebounded to ~4.5% since then.

### DIGITAL:

The biggest long-term issue for industry players is how to put content online. The internet poses a number of challenges:

- Lowered barriers to entry for creating / distributing, increasing competition
- Increased piracy due to high-speed connections and illegal download sites
- Consumer expectations of lower priced / free content, available on-demand
- New intermediaries and lack of standards (Google search, iOS vs. Android app platforms, new ad formats)
- Limitless advertising inventory and less consumer attention, reducing ad prices
- Distribution and standing out harder given huge libraries (Amazon books, iTunes)

## Drivers

### Revenue Drivers

Depending on the company's focus, the below revenue mix differs. There has been a lot of experimentation in adapting these business models to digital age:

- **Consumer / end-user:** More of a focus on subscriptions, multi-device access and free or “freemium” with micro-transactions
- **Advertising:** More of a focus on direct response and tying ad exposure to purchases or clicks, also use of web usage data to micro-target, raising privacy issues
- **Licensing / distribution:** More focus on retransmission fees TV networks charge to cable cos. and revenue shares with online marketplaces

### Cost Drivers

The M&E industry is **labor intensive** in terms of costs for “creative” talent and sales staffs, which can comprise 40% - 50% of costs for a company or project (one movie). **Marketing** also represents a large portion of costs, given the competition for consumer attention. Capital investments in digital technologies represent a newer but growing area of cost

# Telecom



## Overview

### Industry:

Made up of companies that allow people to connect all over the world through a complex networks of phones, mobile phones, and internet-linked PCs.

### Products:

This is not a comprehensive list, but it does provide examples of products from the Telecom industry:

- Telephone
- Fiber optics
- High-speed internet
- Radio
- Satellite communications
- Cell phone networks

### Key Ratios:

**Churn Rate** –rate at which customers leave for a competitor. Telecom industry has highest churn rate of any industry.

**Average Revenue Per User (ARPU)** – understand purchase level for each user

**Broadband** – high-speed internet access tech

**Telecommunications Act** – stimulate competition in the industry



## Trends

### Growth:

- Growth in this industry comes from services delivered over mobile networks

### Trends:

- Deregulation and innovation changed the competitive landscape of this industry
- Telecom companies are beginning to expand out of telecom and into enter other industry spaces
  - An example of this is Comcast entering the media and entertainment industry
- The reverse is also true where outside industry companies are expanding into the telecom industry, e.g. Google Fiber

### Competition:

- The telecom industry requires large capital investments upfront, which creates a potential barrier to entry for new entrants
- No significant supplier power due to large quantity of equipment suppliers
- Growing buyer power due to access to substitutes and the telecom becoming a commodity
- Deregulation and receptiveness of the market has made this industry incredibly competitive



## Drivers

### Revenue:

Revenue = subscription fee x # of subscribers

- Subscription fee structure will vary by service offering and telecom company
  - Companies will try to maximize their revenue through the structure of their fee arrangement
  - Must be very conscious of industry pressures related to fee structure
- Bundling services is a common practice in the industry in order to maximize revenue
- Another opportunity for telecom companies to make revenue is to provide network connectivity to other telecom companies

### Costs:

- Fierce competition in an essentially commodity market has led to cost competition between companies
- Efficient billing systems are a way for companies to decrease cost and improve margins
- Expanding a company's network and service offering are large cost drivers
- Smaller players may have to pay for connectivity which will increase their costs

# Retail



## Overview

- Retail trade makes up \$3.8 trillion in sales (second largest US industry)
- Retail industry is comprised of the following sub-industries:
  - General merchandise
  - Apparel
  - Consumer electronics
  - Home improvement
  - Office supplies
  - Drug retail
  - Automotive retail
  - Specialty
  - Food retail
  - Hypermarkets/super-centers

## Trends

- The industry has generally been negatively impacted by the economy (discount retailers have done best)
- Due to frequent price promotions, lower profit margins are common in the industry
- Retailers are expanding their share of private label brands
- Many specialty retailers are selling services to differentiate themselves from rivals
  - Best Buy – Geek Squad, Staples – Copy Centers, Pet Smart – Grooming and Training
- Online sales are increasing faster than traditional retail sales (currently 3-4% of retail industry revenue)

## Drivers

### Revenue

- Promotions – retailers drive traffic through price reductions and in-store displays
- Consumer spending/confidence – retail industry is leading indicator for economic conditions (discount retailers generally do better in bad times than specialty retailers)

### Cost

- Inventory management – critical to minimize cost, increase response times and increase profitability
- Real Estate – number of stores and location decisions are important given high fixed costs

# Household Non-Durables



## Overview

**Industry Definition:** Manufactured products with useful life < 3 years

### Products

- Household – soap, detergent, cleaning, paper towels, pet care... (US Revenue ~\$100B per year)
- Personal care: hair care, cosmetics, fragrances, skin care, oral care...(US Revenue ~\$250B per year)

**Major Companies:** P&G, Colgate-Palmolive, Ecolab, Henkel KGaA, SC Johnson, Nestle, Georgia Pacific, Kimberly Clark, International Paper, Estee Lauder, J&J, L'Oreal, Unilever

**Competition:** Markets tends to be concentrated

- Scale, shelf placement at retail critical and promotions critical
- Small companies compete through product specialization or targeting local markets

## Trends

**Growth:** Category is expected to grow at a low to moderate pace; most growth from emerging economies

### Trends:

- Industry concentration
- Power of key customers (Wal-Mart)
- Focus on export growth to tap into middle class in emerging economies
- Brand rationalization/optimization
- Private label gaining share and improving in quality
- Pressure for environmental sustainability, compliance and product safety
- Increase cost and scarcity of raw materials
- Growing demand for organic / environmentally friendly products
- R&D– more advanced compounds / multi-use products

## Drivers

### Revenue

- Household products cash flow generally even throughout the year
- Personal care products are seasonal with loading in first half of year
- New product innovation
- Marketing/Promotions
- Brand equity / loyalty- insulates against switching & price wars

### Costs

- Capital intensive significant investment to improve efficiency
- Significant spends on marketing, sales and R&D
- Raw materials costs significant as much as 50% of revenues
- Futures contracts to protect cost of inputs
- Environmental and other regulatory compliance in production / waste disposal

# Household Durables



**SONY**



## Overview

**Industry Definition:** highly durable goods useful for at least 3 years

**Products:** industry is often classified into two segments:

- Electronics (Brown Goods) – TVs, A/V, computers, cameras, tools (>\$500B globally)
- Appliances (White Goods) – Refrigerators, AC, microwaves (~\$160B globally)
- Home furnishings/furniture are also often considered durables (~\$400 globally)

**Major Companies:** GE, Sony, Samsung, LG, Apple, Whirlpool, Panasonic, Xerox, Cannon, Philips, Furniture Bands International, IKEA

**Competition:** A/V competes with PCs and games for in-home entertainment

## Trends

**Growth:** Despite recession, demand surging as emerging markets (India, China, Mexico...) buy basic goods due to emerging middle class real estate expansion and access to credit

### Trends:

- Slowing housing market in the US has directly impacted purchases
- Raw material costs for appliances (oil and precious metals) increasing
- US manufacturers losing market share to foreign producers
- Demand for products that work with smart grid technology
- Shift from brick and mortar to internet purchases
- Scrutiny re: “dumping” products in competitor markets
- Recent scandals re: working conditions in factories

## Drivers

### Revenue

- Cash flow partly seasonal (holidays, real-estate purchases)
- Long purchase cycle means goods sold on higher margin
- Demand often tied to fluctuations in real-estate market
- International competition putting downward pressure on price
- Planned obsolescence
- Stiff competition and discounting

### Costs

- Often carry large inventories
- Capital intensive manufacturing and R&D processes
- Compliance with regulation re: production and waste disposal
- Currency translations and tariffs impact profit
- Supplier network and sourcing
- Distribution network and shipping

# Restaurant



## Overview

- Restaurant industry makes up \$604 billion in sales
- Restaurant industry is comprised of the following sub-industries:
  - Quick-service restaurants (QSR)
  - Full-service restaurants
- One of the largest private sector employers (~13M jobs)
- Many QSRs operate as franchises

## Trends

- Growth and profits have been hurt by soaring food and energy prices
- Explosive growth overseas, especially in QSR industry, due to strong economic growth and growing middle class in emerging markets
- Health and wellness concerns continue to pose problems for QSRs and have resulted in healthier menu options
- Newer “fast casual” restaurants like Chipotle and Panera threaten to steal market share from both QSR and full-service restaurants
- In general, restaurants have been negatively impacted by the economy and reduce consumer spending

## Drivers

### Revenue

- Food and beverages (usually the higher margin products)
- Merchandise
- Catering
- Franchising fees
- Licensing

### Cost

- Labor – largest cost for restaurant operators
- Raw materials – accounts for roughly a third of sales
- Real Estate – number of restaurants and location decisions
- Other – product innovation, consumer research

# Non-Alcoholic Beverages



## Overview

**Non-alcoholic beverages: (NA)** industry is highly concentrated: 89% of US retail sales are a few companies: Coca-Cola, PepsiCo, and Cadbury Schweppes PLC (Dr. Pepper & 7UP)

**Main NA beverage categories:** 1) Carbonated soft-drinks 2) Bottled water (fastest growth)  
3) Juice drinks 4) Sports drinks

## Trends

**Growth in soda is flat.** Bottled water's growth will continue well into the future because of increasing demand for natural, organic products.

More manufacturers work with consumers to understand their packaging preferences

Hispanics, followed by Asian-Americans are fastest growing segments.

The low-carbohydrate trend is virtually nonexistent outside of the United States and the United Kingdom

Many US consumers believe that the "better-for-you" substitutes do not taste as good as the traditional brands, and a large majority of them remain committed to traditional high-carb, high-sugar foods.

### Competition

**Energy drinks** is a growing and competitive segment. These drinks turn into fashion among youngsters.

**Barriers to entry** – not high for small players, however economies of scale and brand are important issues

## Drivers

### Revenue Drivers:

**Increasing market share:**  
**new segments** (incl. international, especially emerging markets)  
**new products** (incl. acquisitions of niche lines)  
**expanding distribution channels** (cooperating with Wal-Mart Stores, etc)

**Squeeze existing users** more (premium labels, complementary products such as Coke and chips)

**Innovation in product and merchandising strategies**, such as the use of mobile internet and online shopping

### Cost Drivers

**Packaging** – the cost of plastic increases over the years

**Taxes** - on inputs (eg sugar) and vice taxes (falls on end users – reduces demand)

**Wages** within the industry are noticeably higher than the national average

# Beer, Wine & Distilled Spirits



Overview	Trends	Drivers
<p><b>Beer/Malt Beverages:</b> major products are malt beverages, primarily beer. Major companies: Anheuser-Busch InBev (Belgium), SABMiller (UK), Heineken (Netherlands), MolsonCoors &amp; Boston Beer (US)</p> <ul style="list-style-type: none"> <li>- Top sellers: Budweiser, Bud Light, Heineken, Corona, Skol, Stella Artois</li> </ul> <p><b>Wine:</b> make wine and brandies from grapes. Major companies: Constellation Brands, E&amp;J Gallo, &amp; Jackson Family (US), Veuve Clicquot Ponsard (France), Gruppo Italiano Vini (Italy) Viña Concha y Toro (Chile)</p> <ul style="list-style-type: none"> <li>- Red &amp; white containing <math>\leq 14\%</math> ABV (60% of market); Brandy, &amp; other wines (15%); Dessert wine, coolers, &amp; effervescents (~10%)</li> </ul> <p><b>Distilled:</b> distill, blend, or mix liquors. Major companies: Brown-Forman (US), Diageo (UK), Kweichow Moutai (China), &amp; Pernod-Richard (France)</p> <ul style="list-style-type: none"> <li>- Major products: whiskey &amp; bourbon (10% industry revenues); cordials &amp; liqueurs (10%); gin (5%). Other products include vodka, specialty liquors &amp; bottled cocktails</li> </ul>	<p><b>Growth:</b>  <b>Beer</b> – forecast to grow at 3% CAGR between 2012-2016  <b>Wine</b> – forecast to grow at 2% CAGR between 2012-2016  <b>Distilled</b> - forecast to grow at 3% CAGR between 2012-2016</p> <p><b>Tends:</b>  <b>Beer</b> – Consolidation: 8 largest brewers account for ~90% of industry revenue; success of small, independent craft brewers have influenced larger brewers; growing popularity for seasonal brews  <b>Wine</b> – reliance on restaurant sales ties performance to food service sector, increasing demand from baby boom generation, agritourism (winery visits)  <b>Distilled</b> – mixed fruity drinks increasingly popular, flavored malt beverages evolving, rise in grain prices  <b>Competition:</b> Beer, Wine, Distilled compete against each other. Energy drinks  <b>Barriers to entry:</b> not high for small players, however economies of scale and brand are important issues</p>	<p><b>Revenue Drivers:</b>  <b>Increasing market share:</b>  <b>new segments</b> (incl. international, especially emerging markets)  <b>new products</b> (incl. acquisitions of niche lines, increasing variety of products)  <b>expanding distribution channels</b> (cooperating with Wal-Mart Stores, increasing importance of convenience stores)  <b>Squeeze existing consumers</b> more (premium labels, other occasions for use)  <b>Innovation in product development, packaging and merchandising strategies</b>, such as new flavored malt beverage varieties, use of mobile internet, sports and other event promotion</p> <p><b>Cost Drivers</b>  <b>Packaging &amp; Other raw input costs</b> – continue to rise over time  <b>Shipping</b> – heavy products and rising gas prices  <b>Taxes &amp; Regulation</b> – complex three tier distribution system and heavy federal/state taxation</p>

# Mining and Precious Metals

## RioTinto

### Overview

#### Industry:

Includes the constructing and operating mines as well as building and operating production facilities.

#### Products:

Products include a wide variety of precious metals including gold, silver, copper, diamonds, and lead. Gold is the most popular precious metal for investors.

#### Industry Structure:

- Industry is not vertically integrated

#### Three types of firms

1. Exploration – explore and prove gold exists
2. Development – develop mines on sites that have proven that the precious metal exists
3. Production – full-fledged mining companies

#### Key Ratios/Terms:

**Mine Production Rates** – quantity produced

**Scrap Recovery** – supply of metals from sources other than mines, e.g. old jewelry

**Future Sales by Producers** – indicates producers expectations on future gold prices

**Bullion** – refined metal that is high quality



**AngloAmerican**

### Trends

#### Growth:

Growth of each precious metal will be unique compared to other precious metals

#### Gold

- Growth for gold is inversely related to the stock market (i.e. it has a negative beta), so the gold market experienced large growth during the recent recession, but has decreased since the recovery of the market

#### Trends:

- Most gold that is mined today is used for jewelry as opposed to currency or other possible uses for gold and other precious metals
- Technology has greatly changed the mining industry making it more efficient

#### Competition:

- High capital requirements creates a deterrent to entry to potential new entrants
- Government regulations are main consideration for supply concerns
- Substitutes are other precious metals
- Do not compete on price, but do compete for land with other companies



### Drivers

#### Revenue:

Revenue = output x the selling price of gold

- Prices are determined by market forces
- Output varies by demand and market price
- Low operating costs allow a mine to have higher/more stable outputs at lower market price points and therefore increase revenue
  - E.g. if it costs a company \$250/ounce to produce, then they will not produce until the price for gold increases over \$250/ounce

#### Costs:

Main costs of production:

**Location** – Understand cost in certain areas and risk due to political unrest

**Ore Quality** – Oxide ores are better because it is easier to extract the precious metals

**Mine Type** – Most underground mines are more expensive than open pit mines

- Company's must manage costs in order to maintain good financial health and production levels in the face of volatile gold prices
- Producers usually publish their cost of production in their annual report

# Utilities



Overview	Trends	Drivers
<p><b>Industry:</b> Generate, manage, and provide electrical power to the general population</p> <p>Historically the industry was run by monopolies, but is now disintegrating into the following four supplier segments:</p> <p><b>Supplier Segments:</b></p> <ul style="list-style-type: none"><li><b>Generators</b> – Create electrical power</li><li><b>Energy Network Operators</b> – Sell access to their networks to retail service providers</li><li><b>Energy Traders and Marketers</b> – buy and sell energy futures and derivatives. Help secure electricity at a stable, predictable price</li><li><b>Energy Service Providers and Retailers</b> – sells energy to end user</li></ul> <p><b>Key Ratios/Terms:</b></p> <ul style="list-style-type: none"><li><b>Power Purchase Agreements (PPA)</b> – contract between power producer and its customers</li><li><b>Megawatt Hour</b> – basic industrial unit for pricing electricity</li><li><b>Load</b> – amount of electricity delivered</li><li><b>Federal Energy Regulatory Commission (FERC)</b> – oversees rates and service standards</li></ul>	<p><b>Growth:</b></p> <ul style="list-style-type: none"><li>Consumption of electricity expected grow rapidly as the world becomes increasingly “electrified”</li><li>Energy Information Administration (EIA) projects that 40% more electric generating capacity will be needed by 2020 to meet growing demand</li><li>Short term direction of the market still remains a risky bet</li></ul> <p><b>Trends:</b></p> <p>Utility companies are undergoing major changes due to:</p> <ul style="list-style-type: none"><li>Regulatory changes</li><li>Demand fluctuations</li><li>Price volatility</li><li>New competition</li></ul> <p>The once stable industry has become much more unstable and risky</p> <p><b>Competition:</b></p> <ul style="list-style-type: none"><li>High barriers to entry due to large capital requirements and significant regulation barriers</li><li>Fierce rivalry between competitors because product is a commodity</li></ul>	<p><b>Revenue:</b> Revenue = \$ per megawatt per hour x utilization</p> <ul style="list-style-type: none"><li>Wholesale electricity prices are no longer set by regulatory agencies<ul style="list-style-type: none"><li>This heightens the risk of uncontrollable price increases</li></ul></li><li>Forwards and future options provide energy buyers (not at the consumer level) the tools to help hedge against large volatility in price</li><li>Utilization will vary by utility company and their market strategy</li><li>See the “Growth” section for more information on short term and long term utilization projections</li></ul> <p><b>Costs:</b></p> <ul style="list-style-type: none"><li>There are high fixed costs upfront in order to build new generation plants</li><li>A lot of capital is required to enter the market</li><li>Marginal costs are relatively low, i.e. it is not costly to offer one more kilowatt-hour to one more person</li><li>Economies of scale are a very effective way to reduce costs in this industry</li></ul>

# Additional Industry Research Resources

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**Several sources may help you further research specific industry topics**

- For a basic overview
  - Industry overviews provided on consulting firm websites
- For more in-depth background on industry context and trends
  - Vault industry guides (note: these are lengthy!)
  - Investopedia – <http://www.investopedia.com/features/industryhandbook/>
- For in-depth information on revenue and cost drivers
  - Standard & Poor's NetAdvantage guides, which include guidance on how to effectively analyze and value companies
- For up to date information on industry developments
  - WSJ (can be accessed for free on CMC website's Factiva link)

**All of these resources are public or can be accessed via CMC's Research Guide portal**