

# Note to the reader

1

**Dear Consulting Club Member,**

This casebook is meant to provide you with a brief overview of consulting recruiting and interview preparation as well as a number of practice cases. Please note that this is meant to supplement the excellent work done by our and other schools in earlier casebooks, so we strongly encourage you to not make this your sole reference.

Good luck!

***- 2011 Wharton Consulting Casebook Editorial Team***

# Contents

2

Section	Page #
□ <b>Introduction</b>	<b>3</b>
□ <b>Interview Preparation</b>	<b>5</b>
□ Interview Overview – Fit + Case	
□ Sample Frameworks	
□ <b>Practice Cases</b>	<b>26</b>
□ 12 Practice Cases	
□ <b>Links to Other Cases</b>	<b>95</b>
□ Cases from Firm Websites	
□ Other Case Resources	

# BIG PICTURE: CONSULTING RECRUITING INVOLVES LOTS OF LITTLE THINGS... THERE IS NO SILVER BULLET

3

	Your objective	What resources you will need to use
Gather Info, Network & Decide	<ul style="list-style-type: none"><li>• Is consulting what you want to do?</li><li>• Which firm do you want to join?</li><li>• Why do you want to join a certain firm?</li><li>• Connect the dots (pre-MBA to MBA to consulting)</li></ul>	<ul style="list-style-type: none"><li>• MBACM industry chats</li><li>• Firm websites / Vault / WetFeet</li><li>• Coffee chats</li><li>• EISes</li><li>• Second Years / First Years from firms</li><li>• Speakers on campus</li></ul>
Apply	<ul style="list-style-type: none"><li>• Get invited to interview (prepare good resume and cover letter)</li></ul>	<ul style="list-style-type: none"><li>• MBACM resume review</li><li>• Resumania</li><li>• Second Years (at least 2 reviews)</li></ul>
Interview: Fit	<ul style="list-style-type: none"><li>• Demonstrate 'fit'<ul style="list-style-type: none"><li>- Leadership</li><li>- Team-player</li><li>- Well-rounded personality</li></ul></li></ul>	<ul style="list-style-type: none"><li>• Prep 'Fit' questions thoroughly</li><li>• MBACM mock interviews</li><li>• Interviews with Second Years</li><li>• Read WSJ, Economist... something</li></ul>
Interview: Cases	<ul style="list-style-type: none"><li>• Ace Cases</li></ul>	<ul style="list-style-type: none"><li>• Case books &amp; Industry Primer Series!</li><li>• Core courses</li><li>• Practice extensively with First Years</li><li>• MBACM mock interviews</li><li>• Interviews with Second Years</li><li>• Reach out to consulting firm buddies</li></ul>

# Contents

4

Section	Page #
□ <b>Introduction</b>	<b>3</b>
□ <b>Interview Preparation</b>	<b>5</b>
□ Interview Overview – Fit + Case	
□ Sample Frameworks	
□ <b>Practice Cases</b>	<b>26</b>
□ 12 Practice Cases	
□ <b>Links to Other Cases</b>	<b>95</b>
□ Cases from Firm Websites	
□ Other Case Resources	

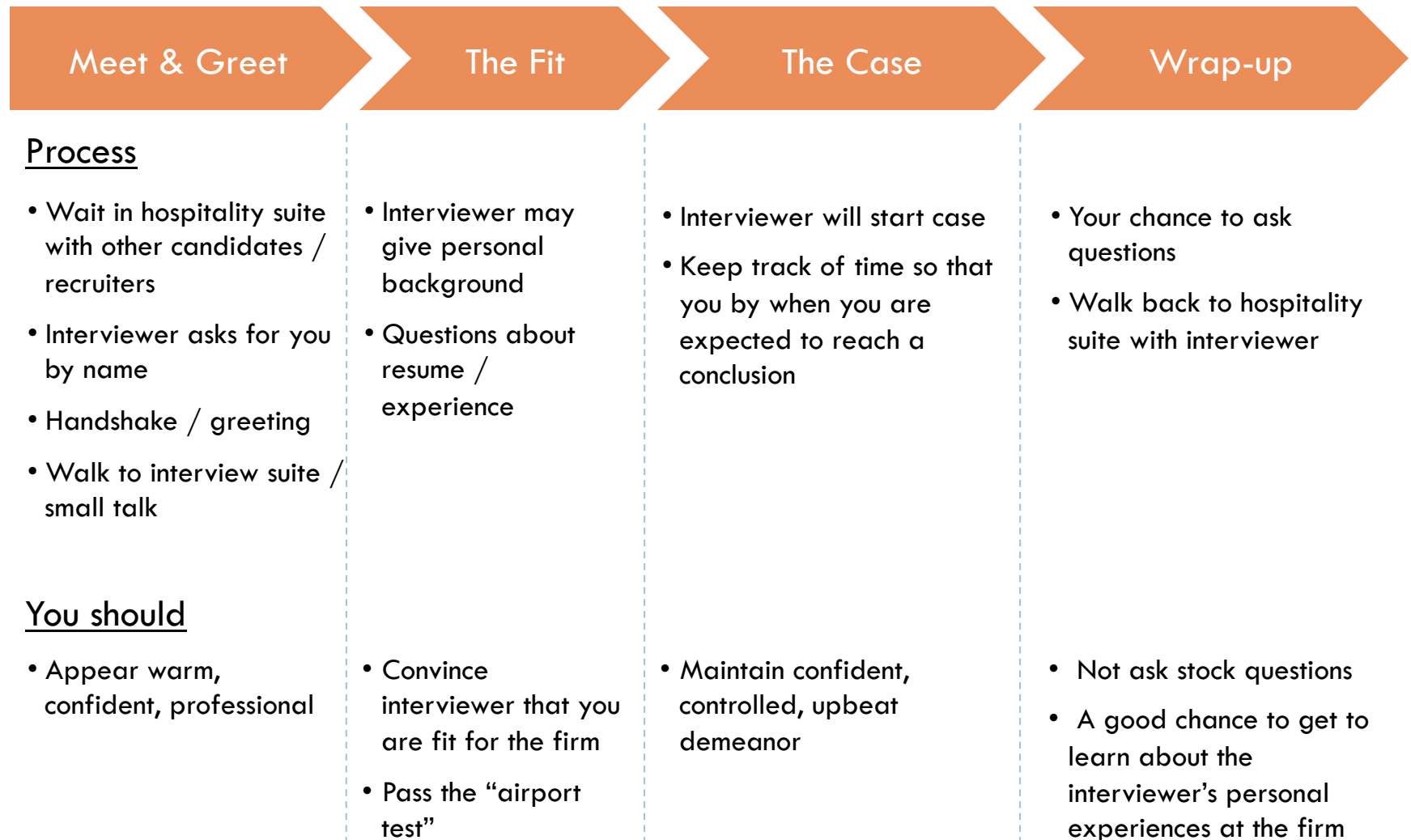
# Contents: Interview preparation

5

- A typical consulting interview
- General tips
- Fit interview preparation with sample questions
- Case interview preparation
  - ▣ What is a case? Case types and interview methods
  - ▣ Problem solving – what is it?
  - ▣ Overall flow of a case
  - ▣ Tips to stand out
  - ▣ Sample Frameworks
  - ▣ Common Industry Snapshots
- Tips for giving cases
- Other resources
- Industry snapshots

# A typical consulting interview

6



# General tips

7

- Make a great first impression
  - ▣ Professional appearance
  - ▣ Preparation
- Have needed supplies
  - ▣ Plenty of pens/pencils
  - ▣ Graph/plain paper
  - ▣ Serviceable portfolio
- Project confidence from start to finish
  - ▣ Relax (hard to appear confident if not)
  - ▣ Be yourself (extremely hard to be confident if not)

# What is “fit”?

8

- Opportunity to project “consultant” during the interview
  - ▣ Inquisitive, logical, confident, friendly, driven, happy
- When you describe yourself:
  - ▣ Focus on a set of skills that the company wants
    - Communication
    - Leadership/Management
    - Work under pressure / ability to deal with conflict and ambiguity
- When you describe your fit:
  - ▣ Don't repeat slogans; most firms do the same things
  - ▣ Focus on what the firms consider to be their *unique* factors (e.g. McKinsey's international reach, BCG's thought leadership, Bain's office culture etc.)
- For in-depth probing on leadership questions (typical of McKinsey)
  - ▣ Prepare a 5-10 word 'newspaper headline' that encapsulates the story
  - ▣ Prepare beforehand a 1-2 minute description that quickly lays out the context, the actors and the complication
  - ▣ Focus on your actions and thought process and the impact of your actions that led to the solution / eventual success



# Tips on the Fit Interview

9

- Almost every single interview involves at least some fit-interview type questions
- Applicants have been turned down from the top consulting firms for not having cleared the fit portions of interviews
- Very basic steps go a long way
  - ▣ Smile
  - ▣ Maintain eye contact
  - ▣ Be honest and heartfelt
  - ▣ Have a succinct story
- Practice can make perfect
  - ▣ InterviewStream
  - ▣ Mock fit interviews

# Tips on the Fit Interview (cont.)

10

## □ Do

- ▣ Establish common ground (geography, family, interests, sports, etc.)
- ▣ Ask the interviewer friendly questions
- ▣ Be confident in your answers
- ▣ Talk about something other than your qualifications (you're interesting, so talk about it)

## □ Don't

- ▣ Discuss something controversial
- ▣ Complain about *anything*
- ▣ Make up elaborate questions you know the answer to
- ▣ Repeat company slogans, mottos, tag-lines, etc.
- ▣ Focus only on your business qualifications and experience

# Sample fit questions

11

- Take me through your resume
- Tell me about a time when you exhibited leadership
- Tell me about a time when you had to solve a problem
- Tell me about a time when you failed
- Tell me about a time you had impact
- What kind of leader are you?
- Why Firm X?
- Why City Y?
- Why consulting?
- What is your greatest accomplishment?
- What would you say your biggest weakness is?
- What are your long-term goals?
- How do you like school?
- What is your favorite class at school?
- What did you do last summer?
- What do you do for fun?

# Case types and case interview methods

12

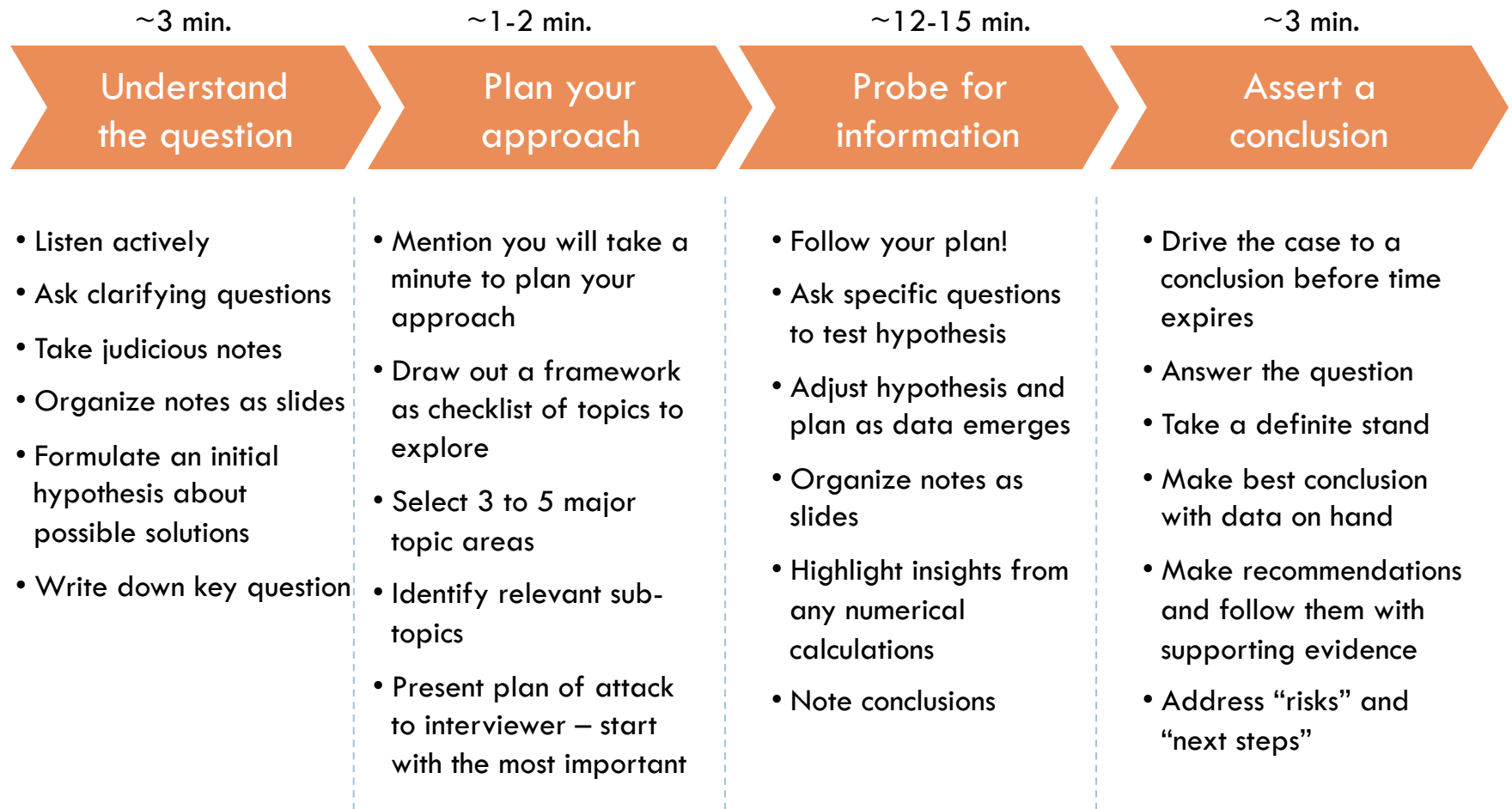
- What is a case?
  - ▣ A business issue/problem company is facing in a few sentences
  - ▣ Takes about 25 minutes; has limited data which is usually provided if asked for
  - ▣ Approach to solution is more important than the final solution
- There are two common case interview methods:
  - ▣ **'Go with the flow' cases (typical of most firms)** – You will determine which areas to explore and lead the discussion, i.e. drive the case
  - ▣ **Command and control (typical of McKinsey)** – Interviewer guides the discussion and case has heavy brainstorming components and quantitative work
- Common case types\* (not a comprehensive list):

<ul style="list-style-type: none"><li>▣ Profitability</li><li>▣ Market Entry</li><li>▣ Acquisition</li><li>▣ Organization</li></ul>	<ul style="list-style-type: none"><li>▣ Industry Analysis (incl. non-profit)</li><li>▣ Market Sizing</li><li>▣ Capacity Expansion (incl. outsourcing)</li><li>▣ Investments</li></ul>
---	---

*\*Note: one case could span multiple case types*

# Overall flow of a case

13



# Tips: Communication, Notes & Math

14

## □ Communication

- Explain your thought-process when presenting your plan
- Make hypotheses when asking questions/requesting information
- Go beyond verbal communication
  - Be engaging! Enjoy the case problem and work together to solve it!
  - Body language (eye contact, gestures, posture); smile often but do not overdo it
  - Facial expressions (Maintain composure at all times)

## □ Notes

- Write legibly, angle it such that the case-giver can see your work
- Use a new page for each theme you are exploring
- Circle/box insights for use in recommendations

## □ Math

- Draw math out clearly (especially for market sizing)
- Explain any assumptions (be reasonable with assumptions)
- Walk through your logic aloud and tie the result to the case

# 7 Tips to help you stand out in the case interview

15

- Ask questions that help clarify the scope of the case and the exact question to be answered
- Draw out as “MECE” (Mutually exclusive, collectively exhaustive) a framework / tree as possible
- Talk about the most important branches first and explain why they may be the key drivers; don’t just follow the sequence in which you wrote them
- When asking questions or for more data, preface them with contextual analysis, or even a hypothesis as to what you expect the data show
- When doing math, relate the numbers qualitatively to the case, and identify/verbalize the takeaways from your analysis
- ‘Brainstorm in buckets’: If asked to brainstorm, take a minute, identify the broad levers that can answer the question, and run-riot with ideas. Structure and a logical approach is always appreciated.
- When presenting recommendation – take a position! Be concise and top-down in your recommendation (i.e. recommendation first with supporting arguments, tie in numbers if possible). Then, mention the risks that invalidate your reasoning

# A note about frameworks

16

- There are an unlimited number of frameworks that can be successfully applied in case interviews...
- ...but knowledge of a few solid frameworks will go a long way (profitability, market entry, go/no go investment, etc.)
- Sample frameworks can be found in the following places:
  - ▣ Wharton, Ross, Stern, Tuck, Kellogg, and other school casebooks available on webcave
  - ▣ David Ohrvall “Crack the Case” and Mark Cosentino “Case in Point”
  - ▣ Your knowledge from management, marketing classes and prior work experience – **read the CORE CONNECTOR** published by the Wharton Consulting Club too
  - ▣ Your own logical problem-solving abilities
- Cosentino and Ohrvall both offer “systems,” but these systems are essentially combinations of individual case-type frameworks
- **Use what(1) You are comfortable with, and, (2) works for you. Be as original as possible: DEVELOP A FRAMEWORK THAT IS RELEVANT TO THE CASE PROBLEM QUESTION AND INDUSTRY!**
- Some sample frameworks are provided in the next few slides. But these are just meant to get you started – do develop your own frameworks for each case!



# Sample framework 1: Increase profits

17

## Overview

- Client's earnings / profits (or 'bottom-line' in Income Statement) has declined or stopped growing
- You need to recommend ways to increase profits

## Sample Framework

SAMPLE

### Market

- **Industry**
  - Growth (g)
  - Revenues (R)
  - Profits ( $\Pi$ )
- **Competition**
  - C1 market share (s1)
  - C2 market share (s2)
  - Etc.

### Revenues

- **Product mix**
  - Points of Parity / difference our products and competition prod.
- **Pricing (P)**
  - Competitive parity in prices
  - Can we  $\uparrow$  prices?
- **Volume (Q)**
  - What's our market share?
  - Enough capacity to meet demand?

### Costs

- **Client cost structure (Fixed / Variable)**
  - PP&E (Property, Plant & Equipment)
  - Overhead
  - SG&A
  - Labour
  - Materials
  - IT / Systems
- **Benchmarks**
  - How do our costs stack up vs. others?
- **Supplier power**

### Customer / Channel

- **Customer Segment**
  - Which segment do we serve?
  - Are they most profitable?
- **Channels**
  - Current sales mix?
  - Are they low-cost channels?
  - Do these channels attract high margin customers?
  - Incentive structures / performance

# Sample framework 2: Market entry; Investment and new technology

18

## Overview

- Client is considering entering a new market. Your goal is to recommend whether or not they should enter it
- For these types of cases what is common is that the company is considering spending money to get some kind of economic return. In addition to seeing whether the decision is financially sound, you have to test:
  - Likelihood of implementation success based on industry conditions and firm capabilities
  - Do a risk assessment

## Sample Framework

SAMPLE

### Strategic Logic

- **Why are they thinking of market entry?**
  - Growth?
  - Mature current market?
  - Response to competitor move?
- **Resources and capabilities**
  - What does the firm have that makes them think they can be successful?
    - Brand
    - Patents
    - Local expertise/partners

### Economics of decision

- **New market conditions**
  - Total Revenues (R)
  - Total Profits ( $\Pi$ )
  - Growth (g)
- **Competition in a new market**
  - C1 market share (s1)
  - C2 market share (s2)
  - Etc.
- **Economics**
  - Investment required
  - Expected share of revenues
  - Expected share of profits
  - Profitable? Payback period?

### Risks / Others

- **Execution/entry barriers?**
  - Channel access?
  - Regulatory barriers?
  - Does firm have \$ to make investment?
- **Risks**
  - Implementation risk
  - Political risks?
  - Currency risk?
  - Macroeconomic risk?

# Sample framework 3: M&A deal

19

## Overview

- Client is considering an M&A transaction
- Your goal is to recommend whether or not to do the deal

## Sample Framework

SAMPLE

### Strategic Fit

- **Basic deal rationale**
  - Cost synergy-focus?
  - Revenue-synergy focus?
  - Early-stage co. being acquired for technology?
  - Response to competitor move?
- **Type of deal**
  - Vertical integration
  - Horizontal
  - New market entry via deal
  - Diversification move

### Deal Economics

- **Valuation (Know basic DCF!)**
  - Revenue & Costs
  - CAPEX & Working Capital
  - PBT (profit before tax)
  - Taxes
  - PAT (profit after tax)
  - Cost of capital (R)
  - Value =  $(PAT / r)$
- **Deal Price**
- **Synergies**
  - Cost and Revenue
  - New Firm value
- **New Value > Deal Price**

### Risk Assessment

- **Has the company done acquisitions before?**
  - Capability test
- **Organizational cultures**
  - Compatible (high % of M&A deals destroy value as cultures are not compatible)
- **Need to manage PMI (Post merger integration process)**
- **Can investors not diversify by themselves**

# Sample framework 4: Outsourcing

20

## Overview

- Client is considering outsourcing an operation
- Your goal is to recommend whether or not to do the outsourcing
- Do NOT make a recommendation on cost savings alone – explore areas like customer service impact, premium customer segment impact etc

## Sample Framework

SAMPLE

### Strategic logic

- **Why are they thinking of outsourcing?**
  - Cost savings?
  - Market entry into BRIC/other markets?
  - Early-stage co. being acquired for technology?
  - Response to competitor move?
- **Customers affected**
  - Which segments?
  - What are their needs?

### Decision Economics

- **Current costs (in-house operation)**
- **Outsourced costs**
- **Initial investment required**
  - Outsourcing consultants
  - IT/System investments
- **Net cost savings**

### Risks / Others

- **Risks**
  - Implementation risk? Political risks?
  - Currency risk?
- **Partner capabilities**
  - Quality of service
  - Lead time
  - Technology
  - Customer service
- **Stakeholder mgmt.**
  - Stakeholders – job loss issues etc.
  - Manage media & community

**IMPORTANT:** Sometimes interviews might make a difference between Outsourcing and Off-shoring: former refers to functions that are done outside firm's boundaries. Latter refers to outsourced functions done in a distant location such as India or Ireland.

# Sample framework 5: Non-profit organizations

21

## Overview

- Client is a non-profit organization
- Your goal is to solve the specific problem for the organization
- Important to display that you understand that non-profits have fundamentally different drivers beside just the economics of a particular decision

## Sample Framework

SAMPLE

### Strategic Rationale

- **Mission of non-profit**
  - Health
  - Education
  - Poverty alleviation
  - Etc.
  - Response to competitor move?
- **Stakeholder opinions and likely reaction**
  - Donors
  - “Customers” – those who benefit from the non-profit’s services
  - Volunteers
  - Paid staff

### Deal Economics

- **Planned investment**
  - What will it cost?
  - Do we have the money?
- **Returns, if any**
  - Will we be getting back money?
  - Will organization make / lose money on this?

### Other

- **Required capabilities**
  - Does non-profit have what it takes to do this well?
- **Risks**
  - How will media perceive this decision?
  - Critical to factor in stakeholder reactions – will this alienate donors, volunteers etc?

# After developing a framework, problem solving requires smart follow-up questions & insights

22

## Examples

- Should client **enter new market**? What is NPV?
- Should client do **M&A**? Post-merger integration risk?
- How can client **increase profits**? Quantify increase.
- How can client **reduce costs**? By how much?
- Should client make **new investment**? What is NPV?
- How can client **increase share**? Quantify increase.
- How can client **grow revenues**? Quantify increase.
- Should client **outsource**? Compare/value alternatives.

- **Wide variety of decisions** businesses face
- Where possible, you will be guided to **quantify improvement (i.e. to do some basic applied math)**

## Some solution drivers

### Strategic analysis

- What are **industry trends**?
- Info on **competitors/market shares**?
- Strategic **rationale** underlying decision?

### Economic analysis

- What **products? Prices? Volume**?
- What's the **cost structure**?
- **Profit impact** for client?

### Customers / channels

- Which **customer segments**?
- What are **customer needs / wants**?
- What **channels? Sales force**?
- Any **regional/geographic** concerns?

### Catch-all / Other

- What are the **risks**?
- Any **regulatory issues**?
- Any **organizational** behavior issues?

- Not all issues/drivers will be relevant but list should let you quickly zone in on key to problem
- For these drivers, think about:
  - a. Changes over time?
  - b. Compare client with competition etc.
- This is meant to be a thought starter – not a comprehensive list

SAMPLE

# Tips for giving cases

23

One should broadly follow these steps when giving cases to fellow students

## Prepare yourself

- ✓ Read the case thoroughly
- ✓ Don't give a case that you have not studied yourself
- ✓ Have any exhibits ready for use during the case
- ✓ Be ready to take notes

## Ask questions

- ✓ Best way to make cases interesting to provide necessary hints indirectly - for ex by asking related questions
- ✓ Follow the case flow as provided in the original format – It helps in objective assessment

## Make it real

- ✓ Make the experience as close to real as possible
- ✓ Be serious during the case even if you give the case to your best friend
- ✓ Be tough – test candidate's ability to deal with a negative vibes from interviewer
- ✓ Control the time. Do not exceed 30-35 minutes for the case portion!

## Guide only when necessary

- ✓ Give out information only when right question is asked
- ✓ Idea is to let candidate stretch herself and get a feel for real situation

## Step wise approach

- ✓ Introduce the problem statement
- ✓ Allow 3~5 mins for candidate to gather her thoughts
- ✓ Answer any questions that candidate may have
- ✓ Guide the candidate accordingly if she is digressing from key issue

## Provide honest feed back

- ✓ Go back to your notes and think of both strengths and weaknesses
- ✓ Be specific – What was the mistake and what's the right approach
- ✓ Be Honest – its in candidate's best interest to make mistake with you and learn from them

Remember that there is no one answer to any case! A candidate can be creative enough to take a new approach towards the problem.

# Remember, cases are about problem-solving abilities, not whether you are an industry expert

24

## Background

- Case interviews span a broad range of industries. You may encounter everything from Financial Services to Mining to Education to Formula 1
- Those of you who have not worked as consultants before will likely not have any background in most of these industries
- This document can give you a **very high level view of some 'typical'** industries that cases focus on
- You **MUST** attend the industry primer series led by partners from various firms as they will capture key insights and latest trends in those industries that tend to be popular in cases

## Our belief

- We believe that having a very basic **overview of an industry helps to more effectively tackle a case**
- At the very least it helps you construct a framework that is most applicable to that particular problem context. Examples:
  - Consumer goods: **branding is an important driver of success**
  - Pharma: **generics manufacturers pose a major competitive threat**

## Important Warning!

- **Do not attempt to master industry specifics or memorize industry data**
- Your primary objective over the next few weeks/months is to **master case-based problem solving... not to become an industry expert**
- Spending a little time informing yourself about the basics of a few key industries should improve your problem-solving ability. The following pages will help in this endeavor.



# Contents

25

Section	Page #
□ <b>Introduction</b>	<b>3</b>
□ <b>Interview Preparation</b>	<b>5</b>
□ Interview Overview – Fit + Case	
□ Sample Frameworks	
□ <b>Practice Cases</b>	<b>26</b>
□ 12 Practice Cases	
□ <b>Links to Other Cases</b>	<b>95</b>
□ Cases from Firm Websites	
□ Other Case Resources	

# List of Practice Cases

26

<b>Case Description</b>	<b>Page #</b>
□ Case 1: New York Yoga Studio	27
□ Case 2: Case 2: Investment in PTA plant	32
□ Case 3: Zirgin Atlantic Airlines	35
□ Case 4: National Zoo	40
□ Case 5: Electronic Machines Division Turnaround	45
□ Case 6: Due Diligence on Clothing Retail Specialist	50
□ Case 7: Snacks Manufacturer Defending Market Share	58
□ Case 8: Princeton-Plainsboro Hospital	63
□ Case 9: Eat Co. Profitability / Turnaround	69
□ Case 10: Beverage Manufacturers	75
□ Case 11: Wine Supply Chain	81
□ Case 12: Office Supply Stores	88

# Case 1: New York Yoga Studio

## Introduction

27

### Problem Statement Narrative

A friend is considering purchasing a yoga studio that she is a member of. The yoga studio is located in the upper west side of Manhattan. The yoga studio is small and has a community-like environment that customers love. Currently, there are 10 teachers each teaching 2-4 classes/week, with a total of 100 classes/month offered by the yoga studio. The current owner has ran the yoga studio for 5 years and recently, the business suffered a loss. The lease ends at the end of the month, making it an appropriate time for the friend to acquire this yoga studio. What are the key factors that the friend should be considering?

### Overview for Interviewer

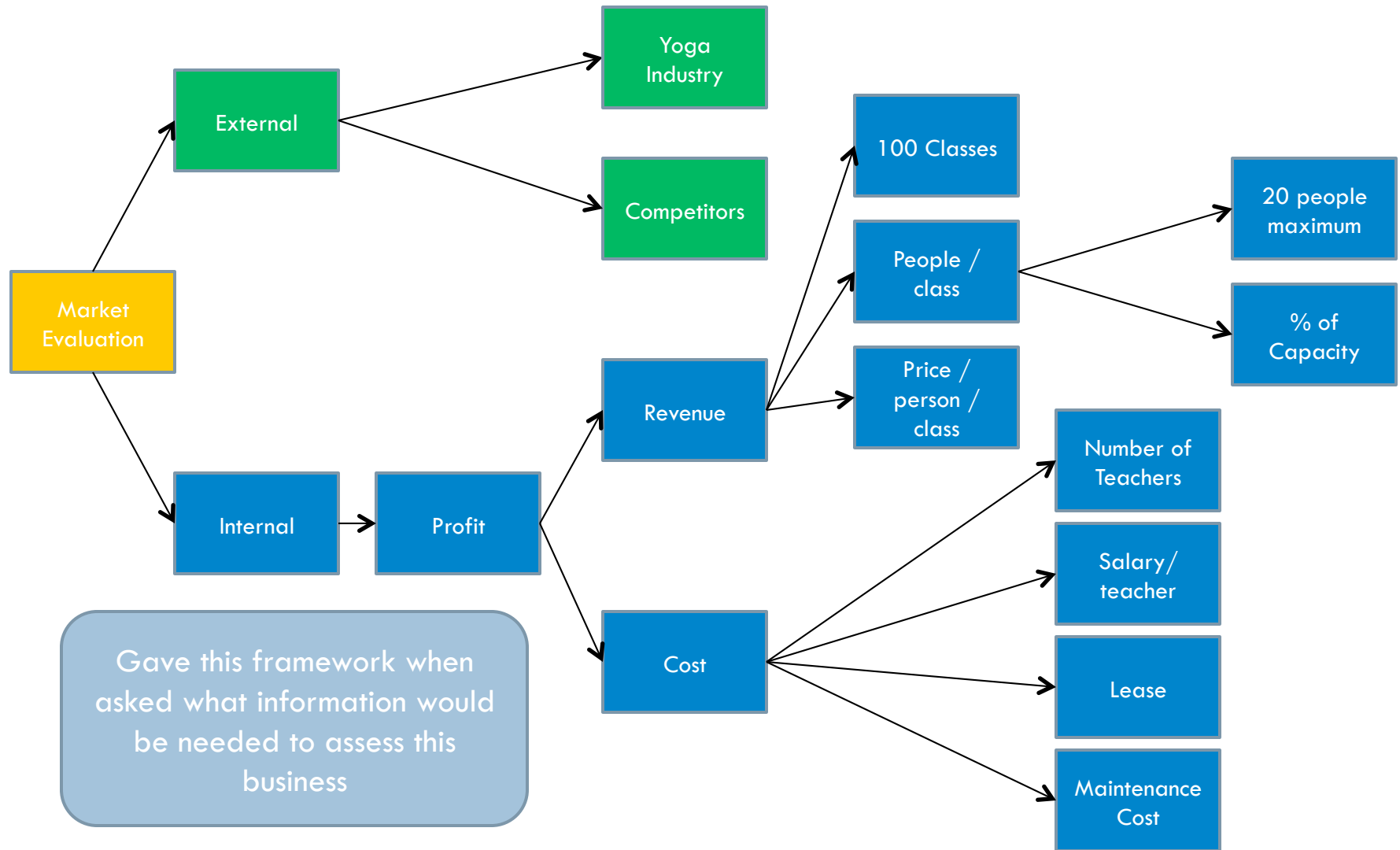
This case has two main components. First, evaluate the financial attractiveness of acquiring the yoga studio and second, measuring future prospects. Some cost and pricing information will be provided to do this.

Case Type: Market Sizing, Profitability

# Case 1: New York Yoga Studio

## Q1: Key Factors to Consider Framework

28



# Case 1: New York Yoga Studio

## Question 2a – Breakeven Point

29

### Question 2a

The profit has decreased substantially in the past 2 years.

2010 → Profit of \$24,000

2011 → Loss of \$24,000

**If they offered 100 classes/month and charged \$10/student, what is the break even point (number of students/class needed)?**

### Information to be Provided If Asked

- Cost has been consistent → Revenue has gone down by \$48,000 between 2010 and 2011
- Total monthly cost is \$8,000
- Currently there are 100 classes

### Calculations

- Loss of revenue means that # of classes decreased or / and # of students per class decreased
- Breakeven Point: Revenue = Cost
- Cost = \$8,000
- Revenue = \$8000 = 100 classes x \$10/student x # of students / class = \$1000 x # of students / class
- # of students / class (Breakeven point) = **8 students / class**

# Case 1: New York Yoga Studio

## Question 2b – Breakeven Point

30

### Question 2b

In 2011, they had a loss of \$24,000. What was their average enrollment of students per class? By what percentage does the yoga studio need to increase enrollment by to breakeven?

### Calculations

- Losing \$2,000 each month ( $\$24,000 / 12$ )
- Revenue is \$6,000 per month ( $-\$2,000 = \text{Revenue} - \$8,000$ )
- Revenue = # of students per class x 100 classes  $\rightarrow$  # of students per class = **6 students per class on average**
- Enrollment Increase:  $(8-6)/(6) = 33\% = \text{Need to increase enrollment by } 33\% \text{ per class on average}$

# Case 1: New York Yoga Studio

## Conclusion

31

### Conclusion

Based on your findings, what would you recommend your friend do?

I would advise my friend NOT to acquire this business, especially if she is looking for short-term profit. Just to breakeven with the variable costs, enrollment needs to increase by 33%. In order to make a profit, the number of students needs to increase by more than 33%, which is difficult in a short time span and in a small community where many yoga studios already exist. There may also be high switching costs if people have already purchased annual yoga passes. The friend would also need to invest a large amount of money initially to purchase the business from the current owner (fixed cost), making it even more unlikely that the friend will be able to earn money from entering this deal.

# Case 2: Investment in PTA plant

## Introduction

32

### Problem Statement Narrative

Our client is a large producer of PET. PET is a type of plastic that is used mainly for producing bottles, such as the ones you find in grocery stores. The main component of PET is PTA. Our client has a PET plant in the US and serves clients both in the US and Europe. They have made the decision to build a PET plant in Europe to be closer to the clients. They have asked you to evaluate whether they should also backward integrate and purchase a PTA plant and locate both plants next to each other.

### Overview for Interviewer

This is a relatively difficult case to structure. Leave it up to the interviewee to structure as he/she wishes and give him/her information as requested. If the interviewee gets stuck, feel free to direct them towards what needs to be evaluated.

### Information to be Given throughout the Case

#### **Plant stand-alone evaluation**

Cost of purchasing PTA plant of \$750MM

No taxes

Plant producing at capacity (capacity of 1million metric tons per year)

Current price of \$920 / metric ton

Plant cost of \$800 MM which stays for 50 years

Raw Material cost of \$690 / metric ton

Energy cost of \$30 / metric ton

Overhead and logistics cost of \$80MM per year

#### **Synergies evaluation**

Overhead savings of \$20MM per year

Logistics savings of \$20 / metric ton

#### **Market Assessment**

Prices declining, expected to reach \$800 / metric ton in 3 years



# Case 2: Investment in PTA plant (cont'd)

## Analysis

33

### Potential Approach to Solving the Case

Evaluate the:

- a) Plant on a stand-alone basis
- b) Synergies achieved from backward integration
- c) Market evaluation and risks

### a) Plant on a Stand-alone Basis

#### Things to consider:

- Capacity
- Revenue
- Fixed costs (plant)
- Variable costs (Raw materials, energy, overhead and logistics)

#### Calculations:

Plant producing at capacity of 1million metric ton

PTA price of \$920 / metric ton

Plant cost of \$800MM, which can be used for 50 years => Assuming straight line depreciation of \$16MM / year

Raw Material cost of \$690 / metric ton

Energy cost of \$30 / metric ton

Overhead and logistics cost of \$80MM => At capacity \$80 / metric ton

=> Marginal profit of \$120 / metric ton

Annual profit of  $\$120 \times 1 \text{ million} - \$16\text{MM} = \$104\text{MM}$  (stand-alone)

# Case 2: Investment in PTA plant (cont'd)

## Analysis (cont'd) and Recommendation

34

### b) Synergies Achieved from Backward integration

Overhead savings of \$20MM by co-locating the plants next to each other  
Logistics savings of \$20 / metric ton => At capacity saving of \$20MM  
Total synergies achieved = \$20MM + \$20MM = \$40MM  
=> Annual profit of plant (after co-locating) is \$104MM + \$40MM = \$144MM

### c) Market Evaluation and Risks

Main risk being prices declining due to:

- Imports from cheaper manufacturing countries (e.g., China)
- Decline in demand due to increased recycling of plastic bottles
- Decline in demand due to increased 'green' movement in Europe
- Decline in demand due to innovation in product design (bottles requiring less plastic)

Other benefits from purchasing PTA plant:

- Guaranteed supply (however PTA is a commodity and there is no real impact)

In an outside assessment, it is expected that prices will be approx. \$800 / metric ton in 3 years

=> Annual profit = \$144MM – (\$920 - \$800)\*1 million = \$24MM

### Recommendation

It seems that the decreasing demand and increasing competition will be driving down prices.

The expected annual profit of the plant will be \$24MM, out of which \$40MM of synergies from cost savings.

Given that the cost of the plant is \$750MM, it seems like a very high price to pay.

# Case 3: Zirgin Atlantic Airlines

## Introduction

35

### Problem Statement Narrative

The CEO of Zirgin Atlantic Airlines, Richard Branford, is considering starting a new direct airline route from London to Montreal. Zirgin currently runs flights in and out of both cities (as well as other cities globally) but not directly between the two cities. The company is currently at maximum capacity on their existing jets so any new route would require the use of a brand new airplane.

Zirgin Atlantic operates a flat pricing structure for its customers and would like to charge all passengers \$500 for a round trip flight on this route (\$250 for a one-way ticket). Luckily, Zirgin Atlantic's strategy group has already conducted preliminary research and has discovered that in this current environment, this pricing could likely draw an average of 200 round trip passengers every day for the company.

Branford has approached us to recommend whether or not to open this new route for the company. If we do decide to go forward with the route, he only wants to use one incremental airplane in order to avoid being over capitalized.

Zirgin Atlantic operates flights around the world and this new route would be a small addition to its global network. In addition, Zirgin Atlantic is a subsidiary of Zirgin, a global conglomerate that also operates in the media and entertainment industry. However, Branford has wanted to provide direct transportation to London for business people in Canada for some time. As a benchmark, the company targets a 6 year payback period on its investments.

### Overview for Interviewer

This case has three main components. First is the stand-alone economics of opening up this new airline route by purchasing a new plane. The interviewee will be asked to calculate a payback period and compare this to the company's target payback period.

Second, the interviewee will be asked to consider an alternative financing scenario where a plane is leased instead of purchased. He/she will evaluate the economics of this scenario and to provide thinking on the benefits/drawbacks to leasing versus buying.

The third component is qualitative and asks the interviewee to consider upside catalysts and downside risks of opening the new airline route.

### Information to be Provided Up Front

The problem statement gives some initial information. The rest of the information should be given as the interviewee works through the problem. The actual numbers should make for fairly straightforward calculations. The data assumes that prices, demand, and costs stay the same year after year so no need to consider growth or inflation. All the costs are also bundled into a generic variable / fixed split to make calculations easier.

# Case 3: Zirgin Atlantic Airlines

## Introduction

36

Part 1: If Zirgin decides to purchase one new plane to be used exclusively for the new route, does this investment meet Zirgin Atlantic's corporate investment criteria? Assume that demand, pricing, and costs stay the same year after year, and that a new plane has a useful life of 25 years.

### Revenue

**Information to provide:**

Daily passengers = 200 round trip passengers (or 300 one-way)

Avg ticket price = \$500 for round trip (or \$250 for one-way)

Days operational / year = 300<sup>(1)</sup>

**Calculation:**

Daily revenue = Daily passengers \* Average ticket price =  $200 \times \$500 = \$100,000$

Annual revenue = Daily revenue \* days operational/year =  $\$100,000 \times 300 = \$30M$

### Expensed Costs

**Information to provide:**

Average variable costs<sup>(2)</sup> = \$40,000 for a round trip flight

Fixed costs (excluding price of plane)<sup>(3)</sup> = \$3M / year

**Calculation:**

Annual variable costs = Cost / round trip \* Days operational =  $\$40,000 \times 300 = \$12M$

Total annual costs = variable costs + fixed costs =  $\$12M + \$3M = \$15M$

### Payback Period

**Information to provide:**

Cost of purchasing a new plane (capital investment) = \$75

**Calculation:**

Payback period = Capital investment / Annual profit =  $\$75M / \$15M = 5$  years

### Questions / Answers

**Optional mini-questions:**

1. Why would the days operational per year be 300 days instead of 365? *It is impossible for planes to be utilized all the time due to controllable factors (scheduled maintenance) and uncontrollable factors (weather).*
2. What are some examples of variable costs for this case? *Fuel, on-board labor, food/drinks*
3. What are some examples of fixed costs for this case? *Gate fees, terminal labor, insurance*

**Main question:**

Does the investment meet Zirgin's corporate investment criteria? Yes, on a standalone economic basis, purchasing a new plane should generate a 5 year payback period assuming no growth/decline in demand or in pricing. This is below the company's target of a 6 year payback. The useful life factors into this analysis because, in order for the service to continue, the company will have to buy a new plane in 25 years. However, since this useful life is fairly long, the route will payback the initial investment 5x before a new plane is required.

# Case 3: Zirgin Atlantic Airlines

## Introduction

37

Part 2: Richard Branford comes back and tells you that instead of buying a new plane, the company can also lease a plane \$12M a year, renewable at the same cost year after year in perpetuity. Do you think the company should pursue this new route with this lease? Assume that demand, pricing, and costs stay the same year after year.

### Annual Profit

**Information to provide:**

Annual cost to lease a plane = \$10M

**Calculation:**

Annual profit = Annual profit excluding lease costs – annual lease costs = \$15M - \$10M = \$5M

### Questions / Answers

- 1. Is leasing a new plane economically profitable for Zirgin Atlantic?** Yes. If Zirgin decides to lease a plane, then they will generate a profit of \$5M a year without having to buy a new plane.
- 2. What are the financial and risk implications of buying a new plane versus leasing a plane?** If Zirgin buys a plane, the company needs to invest \$75M in order to generate \$15M a year, or \$375M total over the 25 year useful life of the plane. On the other hand, if the company leases a plane instead, then the company generates \$5M a year without the heavy initial investment. Just looking at pure numbers, the company will generate a lot more overall profit in a long period of time by buying a new plane. However, buying a plane also encompasses more risks. First, the purchase of a new plane increases the PP&E/asset base of the company, which some investors may be wary about. Second, if the company buys a plane and the route ends up being unsustainable, then the company needs to resell the plane or use it for another route. Leasing a plane presents a much more attractive exit option. Third, buying a plane requires significant initial capital and depending on the financial strength of the company, Zirgin may want to conserve this capital for other means. This capital can also be used for other projects that may generate even better returns.

# Case 3: Zirgin Atlantic Airlines

## Introduction

38

Part 3: It seems like based on your analysis and the assumptions used thus far, it is financially attractive to open up this new route. Aside from the pure economics of the route, what are some other potential upsides and risks to the plan?

### Potential Upside (among others)

1. **Increase exposure / marketing:** *Even if the route was not financially attractive on a standalone basis, opening up a new direct route between cities could generate exposure for the Zirgin brand, especially because of Branford's desire to increase the company's presence in Canada.*
2. **Synergies with other routes:** *The new route may provide both revenue and cost synergies when combined with existing operations. On the revenue side, a new direct route could mean new alternatives for transferring passengers (which could mean additional demand for other routes). On the cost side, the new route can share administrative and labor costs with existing operations.*

### Potential Risks (among others)

1. **Cannibalization:** *The case mentioned that Zirgin already operates flights in and out of Montreal and London. Opening a direct route between the two cities may cannibalize customers that already make a similar trip (with stops or between nearby cities)*
2. **Competition:** *Entering this new route invites competition from other airlines, especially among those with similar routes*
3. **General airline industry risks:** *There are inherent risks in the airline industry including high sensitivity to consumer spending levels, large fluctuations in energy costs, administrative risks associated with doing business on a multinational level, etc*

# Case 3: Zirgin Atlantic Airlines

## Introduction

39

Part 4: You run into Richard Branford in the elevator as he is on his way to a meeting. He knows that you haven't completely finished your analysis yet but he wants a quick 30 second update on what your recommendation is.

### Recommendation

*The new proposed route seems attractive for Zirgin Atlantic. The economics appear most favorable if the company buys a new plane, but depending on the capital situation and risk tolerance of the company, the rental option is also financially viable. We should of course view this in relation to other opportunities that the company is investing. There are also risks to consider including how the new route will impact competition and existing Zirgin operations. However, given the good economic implications of this opportunity, my recommendation is to pursue the new route.*

# Case 4: National zoo

## Introduction

410

### Problem Statement Narrative

The national zoo hires you to decide whether they should buy a panda. The client is looking to increase their revenues and profits.

### Overview for Interviewer

The candidate should treat the case as an investment: explain how the revenues could increase and write down the cost structure of acquiring a panda.

Provide information when asked.

Bonus:

- Compare the zoo to other entertainment options
- Look for other sources of revenue, related or not with the acquisition of the panda
- Financial risks, and how to finance the investment

### Information to be Provided If Asked

Visitors per year: 600,000 (50% children)

Ticket price:

- Adults: \$15
- Children: \$10

Panda costs:

- Acquisition: \$890,000
- Transportation: \$335,000
- Maintenance: \$300,000/annual
- Enclosure: \$1.475M
- Panda Consultant: \$200,000

After buying a panda, the San Diego zoo increase their number of visitor by 12% (and maintained this number from then)



# Case 4: National zoo

## Acquisition of 1 Panda

2

### Math (1 Panda)

	Adults	Children	Initial Investment	(2,700,000)
Tickets	300,000	300,000	Acquisition	(890,000)
+ 12%	336,000	336,000	Transportation	(335,000)
Incremental	36,000	36,000	Enclosure	(1,475,000)
Cost per ticket	15	10		
<b>Incremental revenues</b>	<b>\$ 540,000</b>	<b>\$ 360,000</b>		

	t0	t1 => future
Incremental revenues		\$ 900,000
Initial Investment	\$ (2,700,000)	
		\$ (300,000)
CF	\$ (2,700,000)	\$ 600,000
NPV	= -\$2.7M + (\$0.6M/.20)	
NPV (1 panda)	\$ 300,000	

### Overview for Interviewer

The candidate should estimate the incremental revenues if a Panda is acquired.

Then calculate the initial investment (the cost of the consultant should be considered as a sunk cost, since the zoo is paying you prior and regardless the final decision).

The cost of maintenance is annual.

Assume the panda will live 100 years, perpetuity can be used.

### Partial Conclusion & Next Question (Would it be a good investment to buy 2 pandas?)

Since the NPV is positive, it seems to be a good investment.

If it is a good investment, what if the zoo decides to buy a second panda? Would it be a good idea?

And what else could happen if they buy 2 pandas? (Imagine they can procreate and there is a 90% chance the zoo could sell the baby panda next year)... Would it be a good investment to buy 2 pandas?

# Case 4: National zoo

## Acquisition of 2<sup>nd</sup> Panda – 2<sup>nd</sup> Panda bought at the same time as 1<sup>st</sup>

3

### Overview for Interviewer

Provide information when asked. The candidate should not automatically assume all the figures used in acquiring the 1<sup>st</sup> panda will apply in acquiring the 2<sup>nd</sup> panda.

Two possible solutions – 2<sup>nd</sup> panda bought with the 1<sup>st</sup> panda at the same time, or the 2<sup>nd</sup> panda is bought after the 1<sup>st</sup>

A second panda will drive an additional 10% increase in attendance (tickets).

The zoo will incur in the same amount of cost to acquire a second panda.

They would sell the baby panda at market price (\$890,000).

There's a 90% probability that the pandas procreate and the zoo can sell the baby panda.

### Math (Acquisition of 2nd Panda)

	Adults	Children	Initial Investment	(2,700,000)
Tickets	300,000	300,000	Acquisition	(890,000)
Incremental (10%)	30,000	30,000	Transportation	(335,000)
Cost per ticket	\$15	\$10	Enclosure	(1,475,000)
Incremental revenues	\$ 450,000	\$ 300,000		

	t0	t1 => future
Incremental revenues		\$ 750,000
Initial Investment	\$ (2,700,000)	
		\$ (300,000)
CF	\$ (2,700,000)	\$ 450,000
NPV	= -\$2.7M + (\$0.45M/.20)	
NPV (panda 2)	\$ (450,000 )	

Sale of baby panda	= -\$0.89M * (90%)
Sale of baby panda	<b>\$801,000</b>
NPV (baby panda)	= 0.801/1.20
NPV (baby panda)	<b>\$ 667,500</b>
NPV (panda2+baby panda)	= -\$2.7M + (\$0.45M/.20) + (0.801/1.20)
NPV (panda2+baby panda)	<b>\$ 217,500</b>

# Case 4: National zoo

## Acquisition of 2<sup>nd</sup> Panda – 2<sup>nd</sup> Panda bought after the 1<sup>st</sup>

3

### Overview for Interviewer

Provide information when asked. The candidate should not automatically assume all the figures used in acquiring the 1<sup>st</sup> panda will apply in acquiring the 2<sup>nd</sup> panda.

Two possible solutions – 2<sup>nd</sup> panda bought with the 1<sup>st</sup> panda at the same time, or the 2<sup>nd</sup> panda is bought after the 1<sup>st</sup>

A second panda will drive an additional 10% increase in attendance (tickets).

The zoo will incur in the same amount of cost to acquire a second panda.

They would sell the baby panda at market price (\$890,000).

There's a 90% probability that the pandas procreate and the zoo can sell the baby panda.

### Math (Acquisition of 2nd Panda)

	Adults	Children	Initial Investment	(2,700,000)
Tickets	336,000	336,000	Acquisition	(890,000)
Incremental (10%)	33,600	33,600	Transportation	(335,000)
Cost per ticket	\$15	\$10	Enclosure	(1,475,000)
Incremental revenues	\$ 504,000	\$ 336,000		

	t0	t1 => future
Incremental revenues		\$ 840,000
Initial Investment	\$ (2,700,000)	
		\$ (300,000)
CF	\$ (2,700,000)	\$ 540,000
NPV	= -\$2.7M + (\$0.54M/.20)	
NPV (panda 2)	\$ 0	

Sale of baby panda	= -\$0.89M * (90%)
Sale of baby panda	<b>\$801,000</b>
NPV (baby panda)	= 0.801/1.20
NPV (baby panda)	<b>\$ 667,500</b>
NPV (panda2+baby panda)	= -\$2.7M + (\$0.54M/.20) + (0.801/1.20)
NPV (panda2+baby panda)	<b>\$ 667,500</b>

# Case 4: National zoo

## Conclusions

4

### Question

Should the National Zoo acquire a Panda?

### Recommendation

#### Acquire 2 pandas:

- NPV (Panda1) = \$0.3M
  - NPV (Panda2) = \$(0.45) or \$0M
  - NPV (Baby Panda) = \$0.67M
- NPV Total = \$517, 500 or \$967,500**

### Risks

- Not procreating
- Life expectancy: biggest risk, significant value of the PV is driven by the assumption of perpetuity
- Concurrency (other zoos' actions)
- Not reaching target of incremental revenues (amount of tickets)

### Next Steps

- The current analyses are based on one single factor, increased visitors, in generating value. The zoo should also explore other revenue sources to the acquisition of panda to mitigate the risk.
- Increase revenues through merchandise related to pandas
  - Increase the price of tickets (price sensitivity analysis)
  - 2-part tariff (to see the pandas)
  - Memberships
  - Rent the pandas
  - Why a panda?

# Case 5: Electronic Machines Division Turnaround

## Introduction

45

### Problem Statement Narrative

Our client is a \$500M machine manufacturing company with 5 business units in the U.S. He hired us to work with the Electronic Machines division, which is a \$25M business and 5% EBITA.

He envisioned to grow the division to a \$100M business and 20% EBITA. This machines are used to manipulate steel in different industries (not relevant which industries) and are about the size of a PC.

The client wants to know whether this goal is possible or what he should do with this business unit.

How would you approach this question and what would you recommend him?

### Information to be Provided Up Front

The information provided in the statement is all the candidate receives at this point. Once the candidate asks the right questions, information should be given (see next page).

### How would you approach this question and what would you recommend him?

The candidate should :

- Understand the problem and what 5% EBITA means
- Explore the industry (introduction of new technology), competitors (2 big players), and sales channel (distribution)

Focus next on how to increase revenues, then how to improve profitability (reducing costs)

# Case 5: Electronic Machines Division Turnaround

## Revenue stream

46

### Overview for Interviewer

(Information to be provided if asked)

#### About the industry:

- The electronic machine is a \$1B industry, stable (not growing, not shrinking)
- Our client is the #3 out of 10 players (the candidate should infer there are 2 main competitors)
- The 2 biggest competitor have 40-42% market share each one
- All companies offer products with same quality, same service, same warranty, etc. (there's no point of differentiation)
- The machines are sold through distributors (regional, local...size of distributors is not relevant)
- Distributors only carry 2 brands each, they won't carry more because they need to keep inventories of spare parts, etc.
- Sales of the machines represent only 5% of their revenues. Distributors make money by selling consumables.

#### About the products:

- There are 2 types of machines: old technology (it has been in the market for 40 years) and new technology (10 years)
- 90% of the market is old technology. Despite the benefits of the new technology, customers are not willing to pay the price
- Prices: old technology sold at \$1,800 and new technology sold at \$2,800

#### About the company:

- They entered the market 10 years ago, by inventing the new technology. Hence, 60% of their revenues comes from the new technology machines sales.
- Other business units are more profitable

What could the client do to transform a \$25M business to a \$100M one?

The candidate should have understood the competitive landscape, that the company is “new” in the industry and is not leader in the market.

Type of machines	Market (\$1B)	Client (\$25M)
Old technology	90% (900M)	40% (10M)
New technology	10% (100M)	60% (15M)

The company must sell through distributors, and does not have power of negotiation with distributors. The top 2 competitors have most of the old technology market.

In order to increase its revenues, it needs to convince distributors to carry its products.

It needs to disrupt the market and create demand of the new technology machines. It could lower the price to make it more attractive to customers and distributors.

BUT, how much it could lower the price and maintain/increase profitability?

# Case 5: Electronic Machines Division Turnaround

## Cost stream

47

If the company decides to sell the new technology machines at the same price that the old ones. What could they do?  
(Remember that the client want to improve the business)

The candidate should ask what is the current cost, and write down a cost structure.

By how much do they need to reduce costs?

The candidate should explore options to improve costs. However since the client would need to reduce costs almost by 45% (from \$2,660 to \$1,440 = \$1,220), the candidate should come with the idea of outsourcing production or moving it to another country.

Where could they produce (which countries)?... Mexico, China and Malaysia. Provide information upon request (see math in next page).

The company should move the operation to Malaysia.

The candidate should mention risks, such as impact on quality, learning curve, culture, leading with government, response of competitors; and opportunities, such as entering new markets.

### Information to be provided If asked

- Materials: 60% of COGS
- Labor : 15% of COGS
- Fixed costs: 15% of sales

This is all the information needed (remember EBITA)

a) Materials:

- China: 50% (vs. current cost)
- Mexico: 50%
- Malaysia: 60%

b) Labor :

- China: \$2/hr
- Mexico: \$4/hr
- Malaysia: \$2/hr
- US: \$15/hr

c) Fixed costs: same

d) Other costs? Distribution

- China: \$50/machine
- Mexico: \$20/machine
- Malaysia: \$50/machine

# Case 5: Electronic Machines Division Turnaround

## Math

48

By how much do they need to reduce costs?

		Current Situation		Proposal
Price		\$ 2,800		\$ 1,800
Total COGS		\$ 2,240		\$ 1,170
Materials	60%	\$ 1,344		
Labor	15%	\$ 336		
Overhead	25%	\$ 560		
Fixed costs	15%	\$ 420		\$ 270
EBITA	5%	\$140	20%	\$ 360

TOTAL COST	\$ 2,660	\$ 1,440
------------	----------	----------

Where should they produce?

	US	China	Mexico	Malasya
Price	\$ 2,800	\$ 1,800	\$ 1,800	\$ 1,800
Variable Cost	\$ 2,240	\$ 993	\$ 1,066	\$ 892
Materials savings		50%	50%	70%
Materials	\$ 1,344	\$ 672	\$ 672	\$ 403
Cost per hour	\$ 15	\$ 2	\$ 4	\$ 2
Labor	\$ 336	\$ 45	\$ 90	\$ 45
Overhead savings		60%	50%	30%
Overhead	\$ 560	\$ 224	\$ 280	\$ 392
Distribution	\$ -	\$ 50	\$ 20	\$ 50
Fixed costs	\$ 420	\$ 270	\$ 270	\$ 270
TOTAL COST	\$ 2,660	\$ 1,263	\$ 1,336	\$ 1,162
EBITA	\$ 140	\$ 537	\$ 464	\$ 638



# Case 5: Electronic Machines Division Turnaround

## Conclusions

49

### What would it be your overall recommendation to the client?

To move the production from the U.S. to Malaysia, to reduce costs and improve EBITA to 20%.

Negotiate with distributors, offer regional exclusivities. And once the operation is stable (quality, distribution, etc), the company can decrease the price (or run promotions) to drive demand from the old technology to the new technology in the US, as the current obstacle on replacing old technology is primarily due to pricing.

At the new price, they could sell the new machines in Asia, under a different brand, and generate extra revenues.

Risks: Competitors can lower price as well.

# Case 6: Due Diligence on Clothing Retail Specialist

## Introduction

50

### Problem Statement Narrative

A PE fund is thinking about acquiring a clothes retail specialist, leader on the French market. **The French clothing retail market is composed of 2 segments:**

- Urban: trendy, high quality, quite expensive
- Suburban: mass market, lower quality, low prices

We only have a few data on the target: total annual sales \$800m, 800 stores, 4 brands on both the urban and suburban markets.

The PE fund hired us to help them do the due diligence of the firm, in order to assess if it's worth bidding for it or not.

### How would you approach this question and what would you recommend him?

This is similar to a strategy case, in which you have to assess the market opportunities, competition, and the companies competitive advantage.

In a real due diligence project in consulting firm, the project team will develop framework and identify key areas to assess, and then ask questions to the target. Therefore, an ideal candidate in this case interview should be able to come up with a framework that is appropriate to assess a clothing retail company, and be able to ask relevant questions in each aspect.

The format of this interview is largely driven by the interviewer. However, an ideal candidate should be able to drive insights and implication on each question asked by the interviewer, and used those to form a view and the conclusion

# Case 6: Due Diligence on Clothing Retail Specialist Framework

51

## Step 1: Develop an overall framework to assess the target

### Market:

- Size & growth (volume and price)
- Trends
- Market segments characteristics
- Drivers of this market
  - Buyer & supplier powers
  - New entrants & substitutes
  - Competition
    - Market shares & their evolution
    - Market fragmented or not?
- Distribution channel
- Regulations

### Company standalone:

- Business and revenue models (how do they generate cash?)
- Competitive advantage?
- Specific asset, knowledge, resources, capabilities?
- Key financials & cost structure
- Management

### Deal itself:

- Synergies with PE portfolio
- Risks (implementation, regulation-trust, environment, etc.)

# Case6: Due Diligence on Clothing Retail Specialist

52

## Step 2: Interviewers will probe questions according to the framework developed

### Market:

- The market is flat in value over the last 5 years (~\$25Bn) but volumes have been growing over the same period (~2% per year).  
What could explain this?
  - According to market value = volume x price, the only reason that can explain this situation is a decrease in price offsets the increase in volume
- What could be the drivers of the decrease in prices?
  - Candidate should explore different reasons based on what might be relevant, combining and distilling from various 4Cs, 5Cs, 4Ps concept. Here, customers, competitions and supply chain are most likely to explain cost drivers
  - Change in demand: consumers asking for lower prices; customers are buying more clothes in each season and look for cheaper options
  - Development of new types of players: H&M and Zara with trendy but low price products
  - Decrease in supply cost, such as outsourcing to lower cost countries such as China, Vietnam, Cambodia, Philippines, etc.

# Case 6: Due Diligence on Clothing Retail Specialist

53

## Step 2: Interviewers will probe questions according to the framework developed

### Company:

- Cost structure: which type of indicators could you use to assess the profitability of a retail store? Especially if you want to benchmark stores from the same brand.
  - An ideal candidate should have basic understanding that retail is driven by floor space
  - Indicators: sales / sq feet, (or sales / employee)
- For one given brand, we have: 15 suburban stores: average size = 1500 sq ft and average profitability (sales / sq ft) = \$1,500 per sq ft, 20 urban stores: average size = 800 sq ft and average profitability = \$2,800 per sq ft. What is the total annual sales of this brand?
  - Basic quant question.
  - Suburban:  $1500 \times 1,500 \times 15 = \$33.75\text{m}$
  - Urban:  $800 \times 2,800 \times 20 = \$44.8\text{m}$
  - Total = \$78.55m
- If I tell you that the sum of the sizes of the stores (both urban and suburban) is 40,000 sqft, what would be the profitability margin (in sales/sqft) of the brand?
  - Total sales / total size =  $\$78.55\text{m} / 40,000 \text{ sqft} = \sim \$2,000 / \text{sqft}$
  - Basic quant question following the previous question. An ideal candidate should cross-check this result with data given: answer should be in the range between \$1,500/sqft and \$2,800/sqft based on the data given in previous question

# Case 6: Due Diligence on Clothing Retail Specialist

54

## Step 2: Interviewers will probe questions according to the framework developed (con't)

### Company:

- We'd like to speak about a concept which is very common in the retail industry. To do so, let's look now at the target's investment plan:
  - Year 1 – it opened its first store and gross margin was 10%
  - Year 2 – same store but gross margin increased to 25%
  - Year 3 – same store but gross margin remained flat to 25%. Manager decides to open new stores from now on
  - Year 4 – 1 additional store: total gross margin =  $\sim 18\%$
  - Year 5 – 3 additional stores: total gross margin =  $\sim 17\%$
  - Year 6 – 10 additional stores: total gross margin =  $\sim 16\%$
- Overall gross margin kept decreasing over those years and the PE fund is worried about that. Is the fund right to worry about it? Why/why not?
  - Ideal candidate should distinguish the difference between individual store gross margin and total gross margin, the concept of “average”
  - Candidate should also ask for additional questions and draw curves to visualize the situation. For example, ask evolution of sales for 1 store, then evolution of costs; could also ask what happened in year 1, 2, 3, etc.
  - Hints from interviewer would be given when candidate probe the right question: 1) all stores are similar, 2) no cannibalization or coordination diminishing returns, and 3) mainly fixed costs
  - **Key concept:** the ramp-up concept in retail industry. One given store reaches its full potential only after a 2 year ramp-up period. The total gross margin will depend on the mix of new stores and matured stores.
    - The gross margin of a new store is 10% after 1 year, 25% after 2 years and remains flat afterwards
    - In year 4, two stores – one new and one matured, the average gross margin =  $10\% + 25\% / 2 = \sim 18\%$
  - The fund should “de-average” the total gross margin and look at the margin evolution of the same stores, i.e. the SS (same store) margin. If the SS margin of a matured store decreases when new store is opened, the fund should be worried as the market might be saturated. However, if the total gross margin is due to the store mix, then the fund should not worry about it.

# Case 6: Due Diligence on Clothing Retail Specialist

55

## Step 2: Interviewers will probe questions according to the framework developed (con't)

### Company:

- Based on your answer, if there were 3 additional stores and 2 stores in year 7 and 8 respectively, what was the evolution of the overall gross margin?
  - The total gross margin should increase as the expansion slowed down and more existing stores would reach their mature state. The overall impact of new stores on total gross margin would decrease.
  - ➔ An ideal candidate should be able to draw on this question to identify the conclusion and implication. Candidate should state that if the target's total gross margin increased after year 7 and 8, then the fund should not worry as the decrease in total gross margin in previous years were due to rapid expansion.

# Case 6: Due Diligence on Clothing Retail Specialist

## Recommendation

56

### Can you summarize what we did together in 1 min?

An ideal candidate should be able to summarize the key facts during the discussion and draw implication.

- Despite the total market value is flat but business volume is increasing. The decrease in price may drive the less competitive players out of the market.
- During this period, the target seems to have maintained a healthy margin and the interim drop in margin was due to the rapid expansion. It also seems that there are still rooms for further expansion until the market becomes saturated.
- In order to make a more informed decision on the investment, we might need to look into how other competitors are playing in the market, the supply chain management to maintain cost competitive. However, with information we have now, there is no significant risk observed yet and hence should still be a “go” before assessing other aspects.



# Case 7: Snacks Manufacturer Defending Market Share Introduction

57

## Problem Statement Narrative

Our client is PLD, a global manufacturer of snack foods and beverages. PLD has been a market leader in China's potato chips (PC) market for over two decades now but is facing increasing local competition. Most notably this year, the company's volume share in South China region declined from 60% to 20%, and the company hired us to find out why and how to react.

## How would you approach this question and what would you recommend him?

This is a competitive strategy case.

For the first part, the interviewer should diagnose the root cause of share loss by understanding changes in both market size and the client's volume ( $\text{Vol. Share} = \text{Vol.} / \text{Market Size}$ ) in South China region. After realizing that the share loss is primarily driven by Market Size increase due to a disruptive innovation brought by a new local competitor, the interviewer should guide the discussion on whether this is a real competitive threat – given the client's volume had been relatively stable and their user base intact.

For the second part, interviewer should guide creative thoughts on innovation, supply chain management and sales/marketing strategies to react to the situation. This is the fun part and the interviewee can recommend several strategic choices in both short term and long term.

Case Type: Competitive strategy case / innovation

Case Style: Guided in part 1, open end in part 2

# Case 7: Snacks Manufacturer Defending Market Share Introduction

58

## Overview for Interviewer

(Information to be provided if asked)

### Products

- Consumers see current potato chips products as commodities, so average price is similar across competition. Currently all potato chips are fried but PLD is considering to introduce baked products which use minimal or no oil in production.

### Consumer

- There're primarily two groups of consumers in the PC market – the Fun Seekers who prefer current fried products for crispy mouth feel and the LOHAS group who strongly demand baked products with less or no oil. Fun Seekers make 80% of total market consumption but more people are switching to the LOHAS group.
- Assume no seasonality in consumption.

### Market Size and Competition

- Last year, PLD recorded 500,000 tons of sales in national PC market with 40% share, followed by WWT (10%) and DLT (5%)
- South China Region accounts for 10% of overall PC market. Last year PLD sold 120,000 Tons of PC in this region with 60% market share. Rest of the market goes to WWT (20%) and DLT (20%).

	South China	Volume	National	Volume
PLD	60%	120,000	40%	800,000
WWT	20%	40,000	10%	200,000
DLT	20%	40,000	5%	100,000
Total		200,000		2,000,000

# Case 7: Snacks Manufacturer Defending Market Share Introduction

59

## Step 1: Diagnose the change in volume share (60%→20%) in South China:

Volume share = Volume / Market Size (Discussion based on South China region)  
Volume share = Volume / Market Size (Discussion based on South China region)

a) What's our volume this year? It's 100,000 Tons till end of Sep.

- Interviewee should realize this is about 10% volume growth, as last year 90,000 Tons ( $12,000 \times 9/12$ ) was sold by end of Sep, assuming no seasonality.
- The interviewee should also realize market size grew dramatically ( $100,000 / 20\% = 500,000$  Tons by Sep, versus 200,000 Tons full year last year)
- Interviewee should then understand the market share loss was not caused by volume decline, but by a jump in market size.

b) How were competitors doing? WWT and DLT volumes are also growing at 10%

- Interviewee should realize WWT and DLT were growing at the same rate as us so were not driving market growth; it must be that new competitors entered the market.
- Most importantly, the new competitors now command a majority market share. (volume by PLD+WWT+DLT =  $200,000 \times (1 + 10\%) = 220,000$  tons, which is less than half of the nowadays market of 500,000 tons)

# Case 7: Snacks Manufacturer Defending Market Share Introduction

60

## Step 2: Understand what are the new competitors doing and the implication to PLD:

Discussion based on South China Region.

a) Could you tell me about the new competitors?

- There was only one new competitor, XCD which entered the market in the middle of this year
- This competitor was doing exceptionally well. An excellent candidate would quantify XCD's performance by looking at its monthly sales – XCD was in the market for only 3 months (now is Sep) but generated 280,000 tons of sales! It means XCD's monthly volume was more than 8 times of ours ( $280,000 / 3 = 93,000$  tons, for us it's  $100,000 / 9 = 11,000$  tons)

b) Why this competitor is doing so well?

- Explore 4P: Product, Price, Place and Promotion (in a less rigid way).
- The interviewer will hint that the key is product – they introduced a baked product
- Interviewee should realize it was the LOHAS group who was buying the newly launched baked product.

c) What do we know about LOHAS group in South China? LOHAS group was only 20% of the market volume but now more than half. Frequency of eating potato chips has not changed for either of the two groups.

- Interviewee should start thinking where the new LOHAS consumers came from.
- Apparently most of them were NOT “switchers” coming from the Fun Seeker group, considering LOHAS is now bigger than Fun Seekers despite Fun Seeker groups were actually growing (volume growing with frequency stable).
- An excellent candidate would reason that the majority of LOHAS consumers this year were previous non-users of potato chips. Reasons could be that these people concerned about oil in the fried product. They are now coming into the category to buy XCD's baked product which is not oily.

# Case 7: Snacks Manufacturer Defending Market Share Introduction

61

## What would it be your overall recommendation to the client?

### a) Is this a real threat?

- A good candidate should consider both short term and long term.
- In the short term, XCD seems to be growing on its own without stealing users from us, and they are only selling in a small regional market (South China only 10% of national volume).
- But in the long term, giving the LOHAS trend and XCD's huge success in South China, XCD is likely to go nationally. In fact, South China was only a test market for them.

### b) How should we react?

- In short term, focus on protecting our business in South China and other regions by increasing marketing investment, do promotions or introducing new flavor to excite the Fun Seekers group.
- In long term, come up with our own baked product or consider buying the new competitor.

# Case 8: Princeton-Plainsboro Hospital

## Introduction

62

### Problem Statement Narrative

Princeton-Plainsboro Hospital is a large New Jersey single-site hospital serving a wide range of patients. The hospital's board is concerned because they have noticed a decline in the hospital's earnings from medical services even though the number of patients have remained static. The hospital has hired you to help them figure out what the problem is and come up with a strategy for increasing earnings.

### Overview for Interviewer

This case has two main components. First, investigate the decline in earnings for the hospital, then use that as a basis to develop a new corporate strategy. The investigation of earnings will be more structured with defined information and calculations to be completed. However, the strategy development is open-ended and gives the interviewee the opportunity to be creative.

### Information to be Provided Upfront

No specific information is needed upfront except to note that the hospital is large and serves a very wide range of patients.

Please also hand candidate the exhibit entitled "Average reimbursement per patient at Princeton-Plainsboro."

# Case 8: Princeton-Plainsboro Hospital

## Discussion Points

63

### Key Discussion Points

#### 1. Industry overview

- The discussion begins with some overview of the hospital industry, particularly where a hospital's earnings come from.
- Answer any questions related to the industry either with specific information from the following discussion points, from personal knowledge, or just state that they are irrelevant to the case but assumptions can be made.
- Health reform is a good discussion to have, but unnecessary for the case.

#### 2. Earnings Calculation

- Provide information as requested by the interviewee.
- Have the candidate speculate on sources of revenue for the hospital.
- Have the candidate speculate on sources of costs for the hospital.
- After discussing revenues and costs, give the candidate the attached revenue and costs charts.
- Public insurance includes Medicare and Medicaid.

#### 3. Strategic Discussion

- Once the cause of the earnings decrease is known, talk about some solutions to the problem.
- Corporate development (merger/acquisition, joint venture, partnership) needs to be explored.

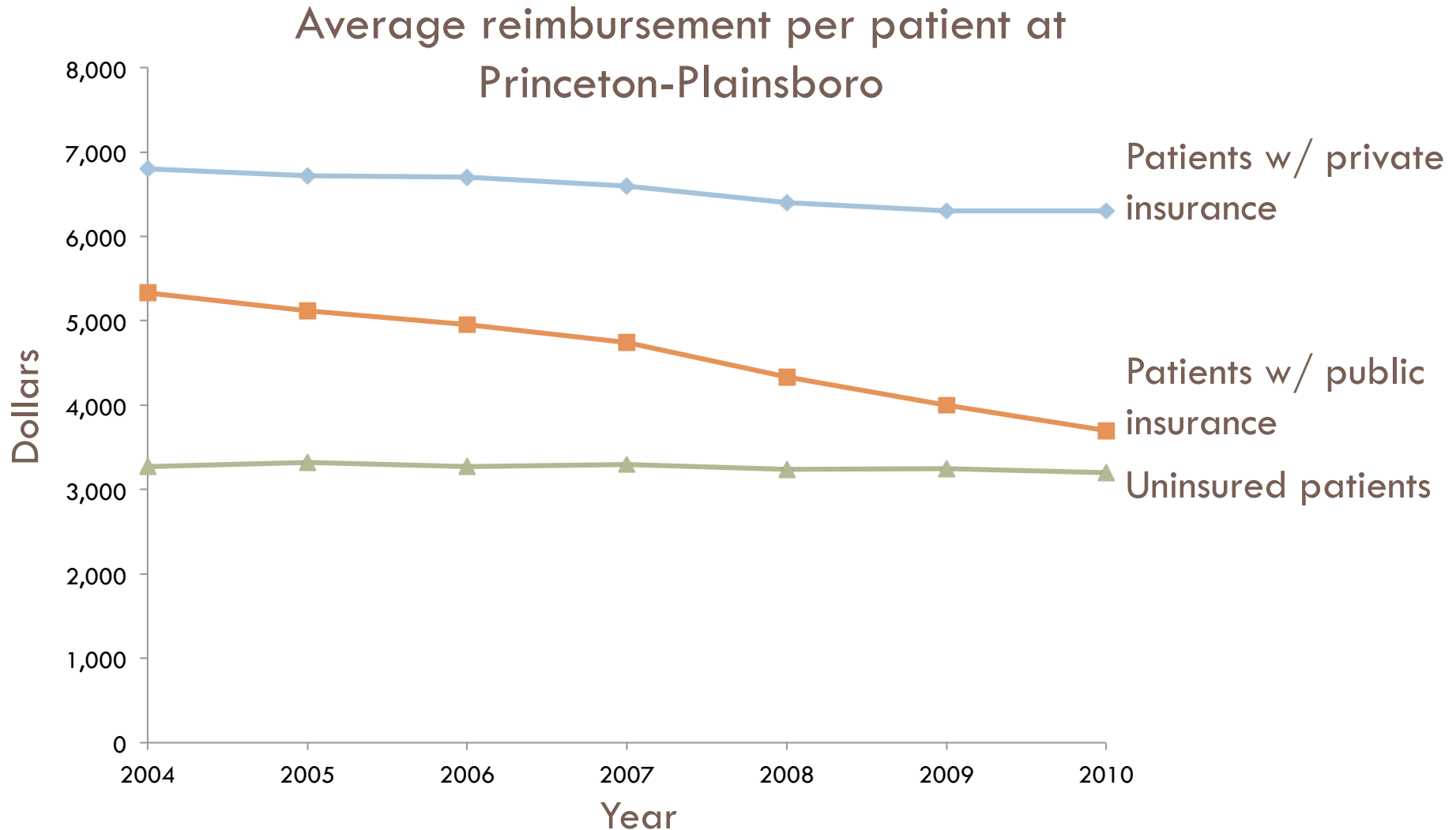
#### 4. Presentation

- Discuss risk and rewards.
- Concise delivery of conclusions to CEO.

# Case 8: Princeton-Plainsboro Hospital

## Financial Analysis of Investment Options

64





# Case 8: Princeton-Plainsboro Hospital

## Earnings Analysis

65

### Question

Given the attached chart, what was the operating margin for the hospital in 2004 and what is it in 2010?

### Information to be Provided If Asked

*Per patient costs:*

- 2004: \$4,000; 2006: \$4,400; 2008: \$4,600; 2010: \$4,800

*Patient Mix by Insurance type was constant over time:*

- Private: 50%
- Public: 40%
- Uninsured: 10%

### Calculations

- 2004: Average per patient revenue for all patients =  $6,800 \times (50\%) + 5,300 \times (40\%) + 3,300 \times (10\%) = \$5,850$ . Margin =  $(\text{Rev} - \text{Costs}) / \text{Rev} = (\$5,850 - 4,000) / \$5,850 = 31.6\%$
- 2010: Average per patient revenue for all patients =  $6,300 \times (50\%) + 3,700 \times (40\%) + 3,300 \times (10\%) = \$4,960$ . Margin =  $(\text{Rev} - \text{Costs}) / \text{Rev} = (\$4,960 - 4,800) / \$4,960 = 3.2\%$
- Actual number of patients do not matter as we are just looking for margin
- Assumptions/rounding can be made, adjust answers accordingly

### Why are Earnings Declining?

Problems:

- Operating margin has dropped ten fold from 32% to 3.2%
- Biggest problem is drop in public insurance (Medicare/Medicaid) reimbursement amounts.
- Private reimbursement also fell
- Costs are rising steadily over time
- Overall, revenues are dropping

# Case 8: Princeton-Plainsboro Hospital

## Strategic Recommendation

66

### Question

Given the answer to the first question, what would you recommend the hospital do?

### Information to be Provided If Asked

Market: There are no other large hospital direct competitors within a 20 minutes drive. There are specialty clinics and other small private practices that cater to niche patient groups.

### Areas to Cover (lead candidate through)

- Make sure the candidate considers corporate development with a local specialty clinic that has desirable (profitable) patients
  - Can acquire by purchasing
  - Can enter into a joint venture or partner to provide some services in hospital, split profits with external specialist doctor
  - Can try entering niche specialties alone by opening up a new office and hiring staff

### Suggested Strategies

#### Revenue:

- Charge more for services (could partner with other hospitals in state when negotiating reimbursement rates)
- Attract more high margin private insurance patients via advertising, etc.
- Acquire, joint venture, or do some sort of corporate development with local specialty clinic that serves private insurance patients with high reimbursement
- Lobby the government to raise public reimbursement rates

#### Costs:

- Buy supplies for less (could partner with other hospitals in state when negotiating prices)
- Attract lower cost patients with selective advertising, etc. (e.g. target young rather than old, etc)
- Find efficiencies/synergies somewhere with a purchase of a clinic

# Case 8: Princeton-Plainsboro Hospital

## Wrap Up

67

### Key Discussion Points

Make sure the candidate wraps up the case by describing what was explored and what the recommendations are to the CEO.

Candidate needs to first cover calculation of margins and implications. Then the candidate needs to cover relevant strategies with their potential risks and rewards.

# Case 9: Eat Co. Profitability / Turnaround

## Introduction

68

### Problem statement narrative

Our client is a prepared food company known for its tasty and organic products, Eat Co. The company sells its products in supermarkets for home preparation and also to delis for on-site preparation. Eat Co has experienced a steady decline in its profits. The company's main source of revenue is from its deli products. The deli products segment had revenue of \$120 million in the most recent financial year. The client has engaged us to determine (i) why profits are declining and (ii) how to turnaround its profitability.

# Case 9: Eat Co. Profitability / Turnaround

## Part 1: causes for declining profits

69

**Part 1:** The candidate should create the following framework to determine why profits are declining

EXTERNAL	FINANCIAL	INTERNAL
<ul style="list-style-type: none"><li>• Is the market growing or shrinking?</li><li>• Who are the competitors?</li><li>• What is happening in the economy?</li><li>• Are there any factors that are impacting our clients? For example, diet changes</li><li>• What factors influence our customers' purchasing?</li></ul>	<ul style="list-style-type: none"><li>• Are costs increasing? Cost breakdown</li><li>• Are revenues declining?</li><li>• What are our prices? How do they compare to our competitors?</li><li>• Do we have promotions and discounts and how are these impacting our sales volume and margins?</li><li>• What has our competitors been doing to market and develop their products?</li><li>• How do our products compare to our competitors?</li></ul>	<ul style="list-style-type: none"><li>• What is our product mix?</li><li>• Is it mismatched with the market?</li></ul>

### Additional information

An excellent candidate will look at both the external and financial factors before moving to the internal factors. This candidate will also lead the interviewer from one bucket to the other and address most of the points under each bucket. An excellent candidate will also ask for cost information, as this is a profitability issue.

# Case 9: Eat Co. Profitability / Turnaround

## Part 1: causes for declining profits

70

### Additional Information Provided by Interviewer

Provide the candidate with Exhibit 1 for analysis. The candidate should ask for costs, then provide Exhibit 2. If not, provide candidate with exhibit 2 once the candidate has concluded analysis of Exhibit 1.

### Exhibit 1: Average Product Information – EAT CO

	DELI	SUPERMARKETS
<b>Selling Price</b>	\$6	\$7
<b>Costs</b>		
<b>-Raw Materials</b>	\$3	\$3
<b>-SG&amp;A</b>	\$4	\$0.50

### Calculations

The candidate should calculate that delis have an average product loss of  $\$6 - (\$3 + \$4) = (\$1)$  and Supermarkets have an average profit of  $\$7 - (\$3 + \$0.50) = \$3.50$

At this point, the candidate should ask for competitor information and quantities sold for supermarkets. If the candidate asks for quantities sold for deli, remind the candidate that the revenues were given before and were \$120 million. Candidate should realize that quantity is 20 million. The supermarkets section sells 10 million units (provided by interviewer).

#### Deli Loss:

**Option 1: Deli Loss** = \$120 million (given at the start of the problem) –  $(\$7 * 20 \text{ million}) = \$20 \text{ million}$

**Option 2: Deli Loss** = 20 million \* \$1 (Loss calculated above) = \$20 million

#### Supermarket Profit:

**Option 1: Supermarket Profit** =  $\$7 * 10 \text{ million} - [(\$3 + \$0.50) * 10 \text{ million}] = \$35 \text{ million}$

**Option 2: Supermarket Profit** =  $\$3.50 * 10 \text{ million} = \$35 \text{ million}$

# Case 9: Eat Co. Profitability / Turnaround

## Part 1: causes for declining profits

71

### Additional Information

The candidate should conclude that the Eat Co is making profits from the supermarket division but the deli section is a loss maker. Eat Co's total revenue is \$190 million but its profits are \$15 million.

The candidate should suggest that the Eat Co consider (1) decreasing costs in the deli section and (2) re-focusing on the supermarket section. Finally, the candidate should say that the deli section provides the drag on the company's profitability even though deli products generates more revenues than supermarket products.

An excellent candidate will ask for (1) competitor information and (ii) calculate total profit/loss for each section and for the both sections. The candidate should ask for competitor information. If interviewee, doesn't ask for it then provide it to the interviewee.

### Exhibit 2: Average Product Information – Competitors

There are 7 competitors

	DELI	SUPERMARKETS
<b>Selling Price</b>	\$5	\$8
<b>Costs</b>		
<b>-Raw Materials</b>	\$0.50	\$3
<b>-SG&amp;A</b>	\$2	\$2.50
<b>Average quantity</b>	35 million	20 million

### Calculations

The candidate should calculate the competitor profits

$$\text{Deli Profits} = \$5 - (\$0.50 + \$2) = \$2.50$$

$$\text{Supermarket Profits} = \$8 - (\$3 + \$2.5) = \$2.50$$

At this point, the candidate should highlight that Eat Co has an advantage over its competitors in the supermarket section with higher average profits due to lower SG&A. The candidate should also point out that Eat Co's deli products have an average loss of \$1.00 while competitors have an average profit of \$2.50.

# Case 9: Eat Co. Profitability / Turnaround

## Part 2: Profitability Turnaround

72

### Part 2: Instructions for the interviewer

Ask the candidate to provide some ideas to turnaround Eat Co

### Ideas for the interviewee

Deli Section – Align costs with competitors. This will yield  $\$6 - (\$2.50) = \$3.50$  in profit per product. Total profit will increase by \$90 million  $(\$3.50 - (-\$1)) * 20 \text{ million} = \$90 \text{ million}$ .

Re-focus on the supermarket section and try to generate greater sales in this section. Eat Co can double sales from 10 million to 20 million. This will increase revenue by  $\$7 * 10 \text{ million}$  or \$70 million and can increase profit by \$35 million. It should be noted that this assumes that Eat Co can double its market share. Even a more conservative estimate of 20% growth, will increase profits by \$7 million  $(2 \text{ million} * \$3.50)$  and revenue by \$14 million  $(\$7 * 2 \text{ million})$

Eat Co can also increase its prices to \$8 to be in line with competitor prices once this price increase can be justified and generate additional revenue of \$10 million  $(\$8 - \$7) * 10 \text{ million}$  and additional profit of \$45 million  $(\$8 * 10 \text{ million} - (\$3 + \$0.25) * 10 \text{ million})$

Find another distribution channel : sell to schools for meal time preparation and airlines for onboard meal service

Close down the deli section if costs cannot be decreased and focus solely on the supermarket section. The total supermarket section has total market size of 140 million items (7 competitors in exhibit 2 and 20 million average items sold) and Eat Co has 10 million/140 million or about 7% of market share. The company can increase its marketing and try to gain market share



# Case 9: Eat Co. Profitability / Turnaround

## Recommendation

73

### Recommendation

I would recommend that Eat Co looks at (i) aligning its costs with competitors in the deli products segment, this will generate additional profit of \$90 million instead of its loss of \$20 million and (ii) developing its distribution to supermarkets as Eat Co has only 7% of the market and sells 50% less than its competitors in this segment. An increase of 20% in sales in this segment will increase profits by \$7 million. The risk is that competitors will retaliate to Eat Co's attempts to increase its market share in the supermarket section and there are risks to product quality when aligning costs with competitors if it compromises Eat Co's product quality. The next step would be to look more closely at cost reduction options in the deli section and how to gain share in the supermarket segment.

*An excellent candidate will drive the case, and make accurate calculations while coming up with conclusions to move the case forward. This candidate creates a thorough framework and needs little prompting from one step to the next. The candidate recognizes that Eat Co has under-developed opportunity in the supermarket segment based on the quantitative work and see that deli section can be re-tooled to increase overall profitability. The candidate makes a thorough conclusion using information in the case and provides next steps.*

*A good candidate is able to generate ideas and move the case forward with logical though not in-depth calculations. The candidate is also able to work through the math.*

# Case 10: Beverage Manufacturer

## Introduction

74

### Problem Statement Narrative

Our client is one of the top three beverage manufacturers in the U.S. They are thinking of launching a new flavored non-sparkling water product. The company is a vertically integrated beverage manufacturer that makes the drinks, has five bottling plants, and owns their own distribution channels.

They have asked us to determine whether or not they should launch the new product, how to do it, and what the marketing strategy should be.

### Overview for Interviewer

Let the interviewee ask questions based on his or her structure. They should quickly ask questions about some of the following issues:

- Size of the entire flavored water market
- Breakdown of the flavored water market by category (i.e. sparkling vs. non-sparkling)

### Information to be Provided Up Front

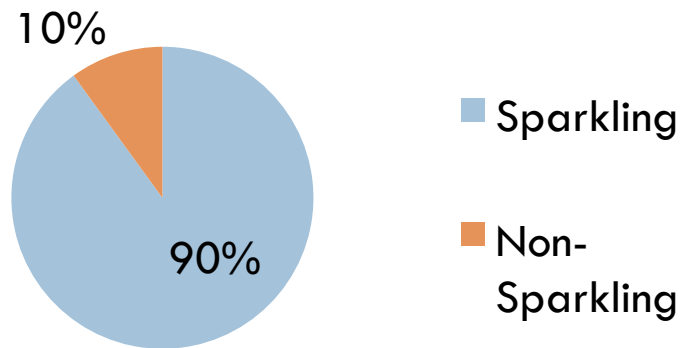
The information provided in the statement is all the candidate receives at this point. Once the candidate asks questions related to the market, please hand out the next page.

# Case 10: Beverage Manufacturer

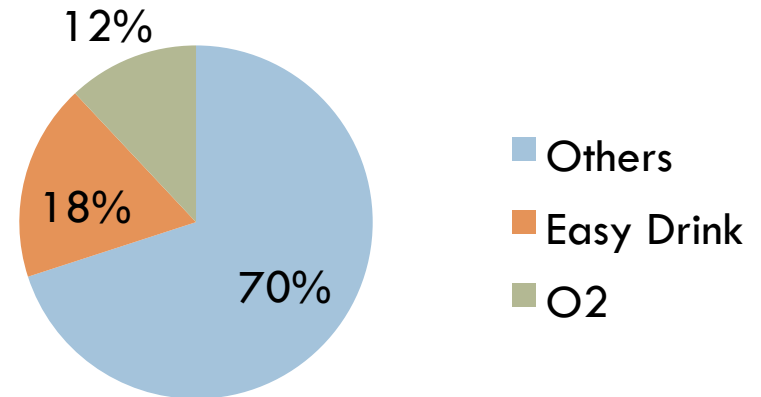
## Provided Data

75

### Flavored Water Market by Category



### Flavored Non-sparkling Water Market by Product



# Case 10: Beverage Manufacturer

## Market Sizing

76

### What insights do you draw from the information provided?

The interviewee should now volunteer some key insights, which should include:

- Non-sparkling water represents a small share of the overall market
- Only two competitors have large market shares → our client may have an opportunity to emerge as a third large competitor in this highly segmented market

### What is the potential size of the non-flavored water market?

The candidate should ask what units the market size should be calculated in (i.e. revenue, bottles sold, etc). In this case, ask the candidate to calculate both the size of the non-flavored water market in terms of number of bottles sold and revenue.

The following information should be provided to the candidate upon request:

- There are 8 million gallons of water sold in the entire flavored water market per year
- All drinks in the flavored non-sparkling water market are packaged in 16 oz bottles and our client plans to do the same
- There are 64 ounces in a gallon
- We can assume that drinks are priced, on average, at \$1 per bottle

### Math

The interviewee should go through the following calculations:

- $10\% \text{ of } 8 \text{ million gallons} = 800,000 \text{ gallons of non-sparkling water sold per year}$
- Each bottle contains 16 oz; since there are 64 oz in a gallon, then there are 4 bottles per gallon
- $800,000 \text{ gallons} * 4 \text{ bottles in a gallon} = 3.2 \text{ million bottles sold per year}$
- $3.2 \text{ million bottles} * \$1/\text{bottle} = \$3.2 \text{ million revenue per year}$

# Case 10: Beverage Manufacturer

## Breakeven Analysis

77

How long would it take the client to break even on a new product in the non-sparkling water market?

Information to be provided upon request:

- Variable cost per bottle of flavored non-sparkling water = 90 cents
- Start-up launch costs, including all initial R&D and marketing costs = \$400,000

### Math

$\$400,000 / 10 \text{ cent profit per bottle} = 4 \text{ million bottles need to be sold to breakeven}$

The interviewee should note that 4 million bottles is larger than the entire annual market for such products, so it will take a few years to reach this amount (assuming there is no change in the overall market size).

The interviewee should determine a reasonable market share goal. The important thing is not to come up with an exact market share target, but to back up whatever assumption s/he makes with logical reasoning. For example, here is a possible thought process:

- Since the new entrant is a major company, it should have strong brand name power and distribution networks. Since the other main competitors have 12% and 18% and our product is backed by a strong company, our company will come in somewhere in that range. Let's use the mid-point 15% as an estimate.
- 15% of 3.2 million bottles = 480,000 bottles to sell per year → approximately 0.5 million bottles
- 4 million bottles to breakeven / .5 million bottles → it will take approximately 8 years to breakeven
- Candidate should note that 8 years is an "eternity" in a market like beverages where new beverages emerge constantly and trends change quickly

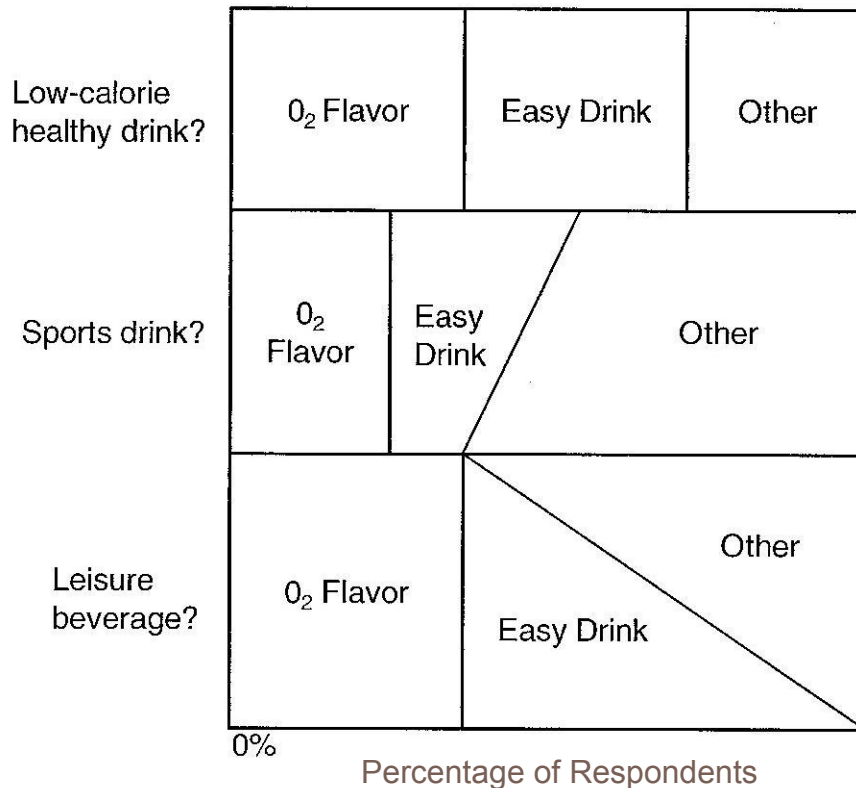
# Case 10: Beverage Manufacturer Positioning

78

If our client wanted to go ahead with the product launch, how should they position the product in the market?

The interviewee should ask for information on how the two main competitors are positioning their drinks currently. When s/he asks, provide them with the following results from a recent customer survey:

Respondents' preferred beverage type



# Case 10: Beverage Manufacturer

## Final Questions and Recommendation

79

### What insights do you draw about positioning from the previous chart?

The client's new product will be in the "other" category and should try to gain share among that sub-market

The client should position the product as a sports drink or leisure beverage, since those are the categories where "other" has the largest market share

### What risks should our client consider when thinking about proceeding with this venture?

Possible answers include:

- Changes in the customer preferences for beverages (i.e. flavored water is a fad)
- Response from competitors
- Cannibalization (i.e. how many other similar products does our client make?)
- Unfavorable breakeven time period given previous analysis

### Final recommendation to CEO?

A good response will include some variation of the following points:

- This is probably a questionable investment at best
- It will take a substantial amount of time to breakeven, probably longer than what is reasonable for a product in the beverage industry
- If the client still decides they want to launch a product in this space, they should leverage their strong brand and distribution network to market a sports drink and/or leisure beverage

# Case 11: Wine Supply Chain

## Introduction

80

### Problem statement narrative

Our client is a winery located in California and they sell wine all over the US. They produce various marketing materials to be used in the displays in stores where their wines are sold. These marketing materials are either pushed by the central Corporate Marketing team or pulled by regional sales field offices. These marketing materials are stored in a central warehouse in Chicago and over time a lot of obsolete materials have been accumulated. Our client needs our help in reducing obsolete materials and improving their bottom line.

### Overview for interviewer

The interviewee may ask some clarifying upfront questions related to the goal of improving the bottom line. The client is looking to improve their profitability by reducing obsolete materials and getting the right mix of marketing materials.

### Additional information related to the client's goal

This information may be provided upon request:

- Right now, the client spends \$20 million on marketing materials (\$3 million in freight, and \$17 million in materials)
- The corporate marketing team is large and pushes the marketing products without asking the field sales teams
- The field sales teams are regional and can pull marketing materials sometimes when they are needed



# Case 11: Wine Supply Chain

## Profitability enhancement

81

### Brainstorming ideas for increasing Profitability

The candidate should present a framework to tackle the problem.

#### External

- Competitors:** Are competitors also using marketing materials in the same way?
- Customers:** Are customers responsive to these materials? (maybe the company is not making the right ones)
- Suppliers:** Are the suppliers of these marketing materials efficient? (maybe they are not delivering the materials on time)

#### Internal

- Mix of Corporate and Field Sales Team:** Who is more effective?
- Corporate Marketing Team:**
  - How do they push the materials out?
  - Is the forecasting accurate?
- Field Sales Team**
  - How are materials pulled?
  - is the forecasting more accurate?

### Additional information related to the client's goal

The key should be the wrong mix of corporate marketing team pushing out materials and the field sales teams not pulling enough materials. The field sales teams are more knowledgeable in their markets and which materials will work.

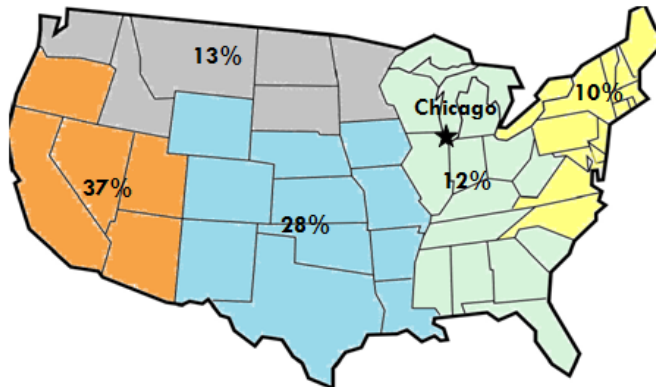
External factors are not so much at play as inaccurate forecasting by the corporate marketing team.

# Case 11: Wine Supply Chain

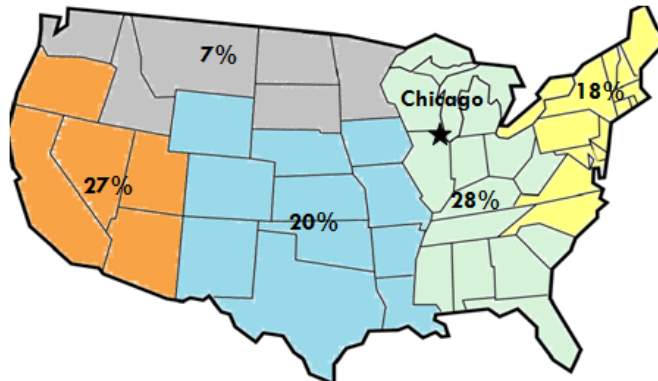
## Supply Chain Optimization

82

Supplier Map:



Retailer Map:



Instructions for interviewer:

Present Exhibit I and II to the interviewee.

Prompt: Given this network of suppliers of marketing materials and wine retailers where these marketing materials end up, what can you advise the client on how to reduce the obsolete materials and optimize their networks.

Key things the interviewer should notice from the maps:

- Many suppliers in the south west (blue) and orange (west) areas, with less suppliers near the warehouse in Chicago
- Many retailers in the south west (blue) and orange (west) areas, and green (midwest) areas
- Options for optimization might include:
  - Setting up a second warehouse between the west and the southwest areas
  - Moving the warehouse to the south west (blue) area so it is more central
  - Changing suppliers to be concentrated near the warehouses

# Case 11: Wine Supply Chain

## Follow up question

83

### Question

A third party operator has approached our client with the following offer: They will install a website based platform to manage the inventory and will reduce the inventory in the Chicago warehouse by 50%, and reduce inventory holding costs by 10%. The third party will charge \$5MM for this website. Should our client accept this deal?

### Calculation

- Benefits/Costs Analysis
- Benefits:
  - Inventory: Save \$8.5 Million ( $\$17\text{MM} \times 50\%$ )
  - Inventory Holding Costs: Save .1MM/Year ( $\$1\text{MM} \times 10\%$ )
  - Total Savings: \$8.6MM
- Costs: \$5MM
- Benefits in the first year outweigh the costs, and benefits will continue to be realized in the future
- The interviewee should also mention that there are other options as better firms or doing this internally which can even bring in more benefits

### Additional Information to be given during discussion

- The current inventory in Chicago is \$17 million and is not expected to grow in the future
- Inventory will be reduced by 50% only once to \$8.5MM going forward
- Inventory holding costs are \$1MM/year for \$8.5MM of inventory and will be reduced by 10% and the benefit will continue going forward

# Case 11: Wine Supply Chain

## Recommendation

84

### Recommendation

Interviewee should mention the following:

- Client should optimize its corporate marketing and field sales mix in terms of marketing materials
- Client should also consider moving/adding warehouses, but a cost/benefit analysis should be conducted
- Client should go ahead with a website based platform to optimize its supply chain but should also look at other options available

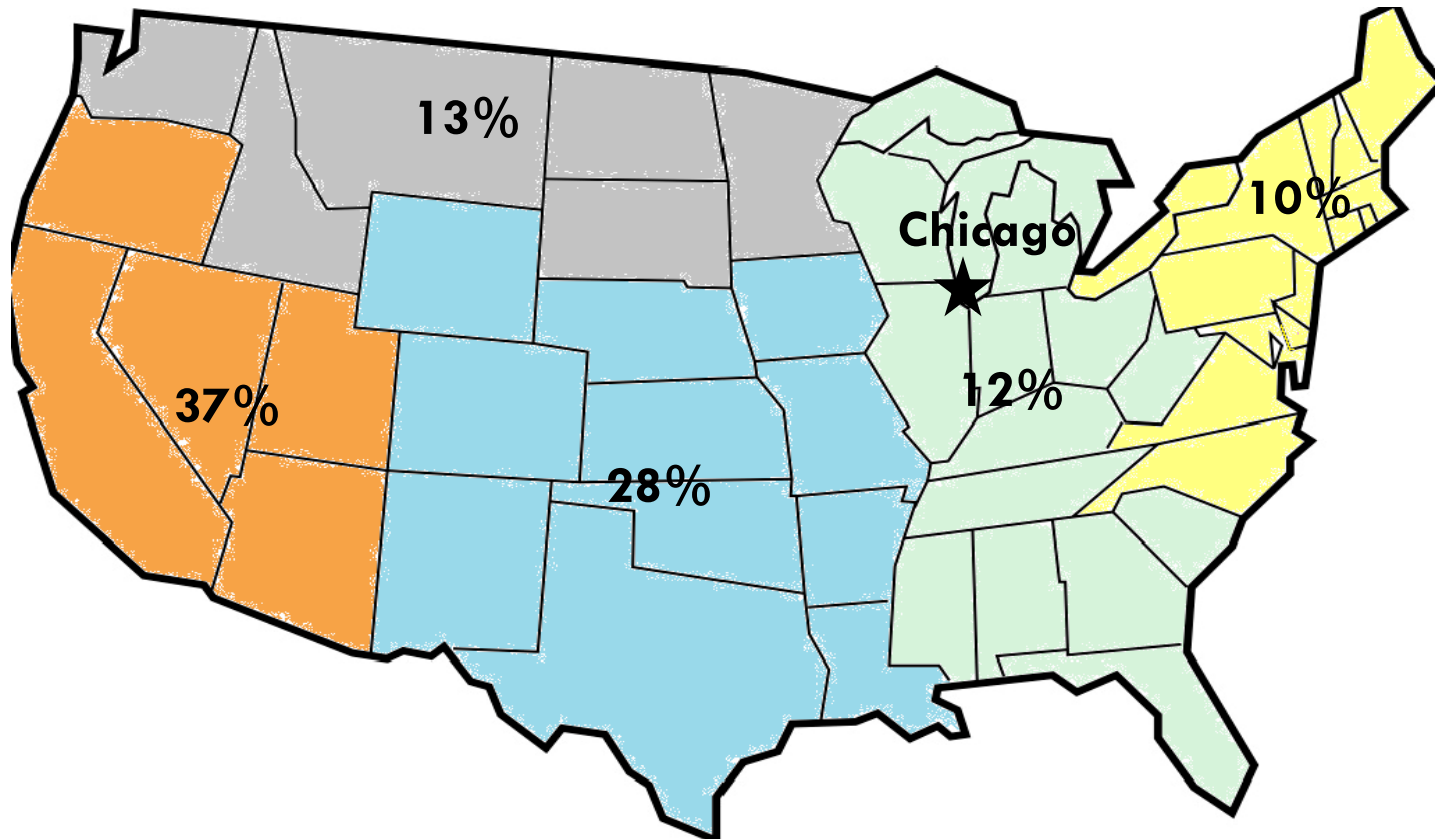
Interviewee should also mention any risks such as added cost of changing warehouses and risk of investing in a third party operator of their supply chain

# Case 11: Wine Supply Chain

## Exhibit I-Suppliers of Wine Marketing Materials

85

Suppliers of Wine Marketing Materials (% of total Marketing Materials Supplied)

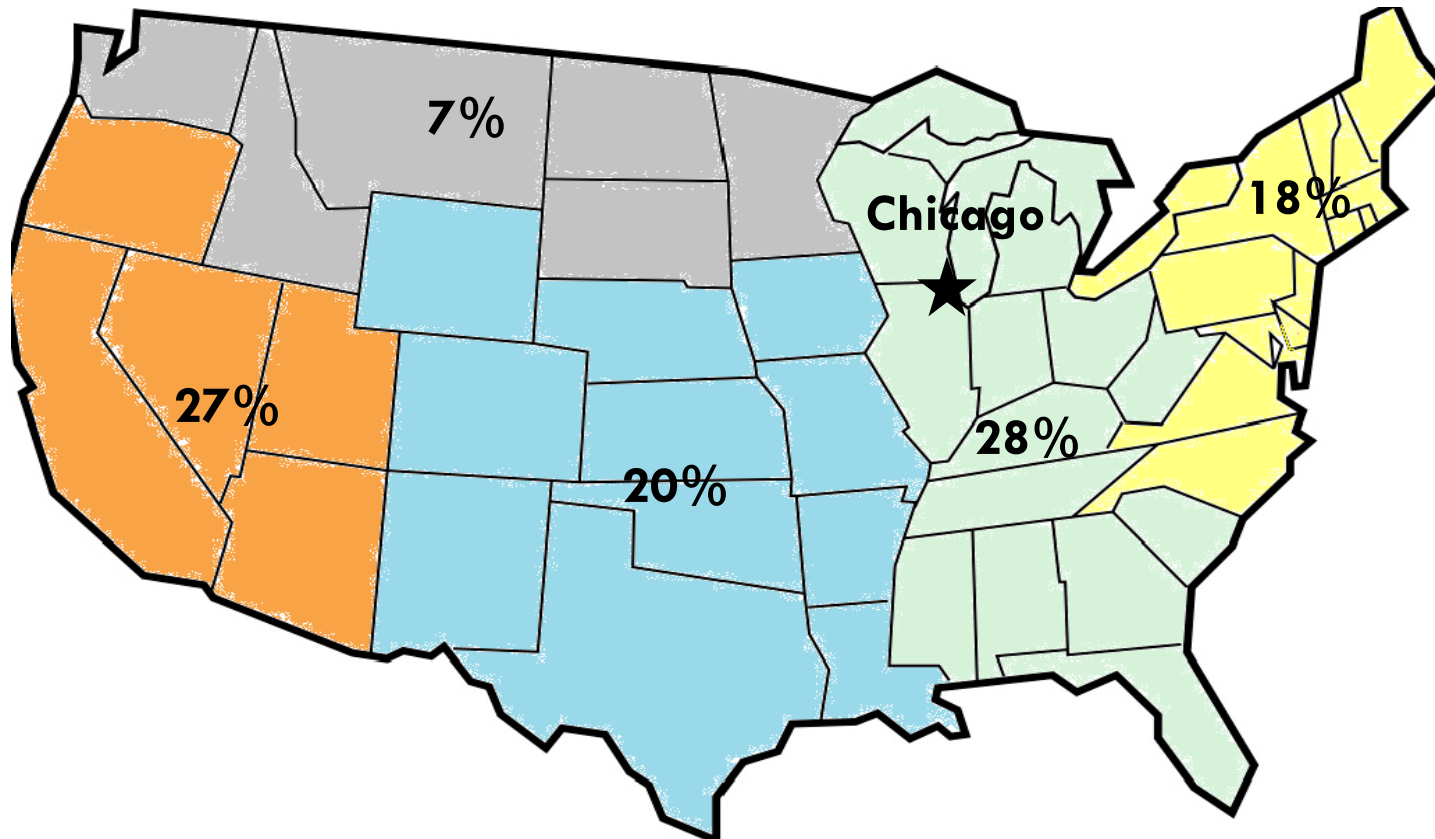


# Case 11: Wine Supply Chain

## Exhibit II-Retailers of Wine using the Marketing Materials

86

Retailers of Wine (% of total Marketing Materials Received)



# Case 12: Office Supply Stores

## Introduction & Discussion Points

87

### Introduction / Context

Our client is Office Supply Stores (OSS), a national office products company with revenue in excess of \$7 billion in its last fiscal year. OSS sells various office supplies and services, business machines and related products, and office furniture under national and private label brands. It also provides high-speed, color and self-service copying, other printing services, faxing, and shipping services. The company operates approximately 1,000 brick-and-mortar stores in the United States and Canada, an e-commerce division and catalog business. OSS has more than 12 million customers, comprising of small, medium and large businesses as well as individual consumers.

Over the past two years, Office Supply Stores has been experiencing declining profitability. The CEO has retained our firm to help determine what is causing the problem and how OSS might address those problems.

### What key areas would you want to explore in order to understand OSS's decline in profitability?

- ☐ Market
  - ☐ Industry (industry has seen decline in revenues, profits and/or growth)
  - ☐ Competition (more competition, such as online or new players, has reduced market share and revenue)
- ☐ Revenue
  - ☐ Product Mix (poor merchandising, sales in high margin services have declined faster than lower margin products)
  - ☐ Volume (sales have decreased, client is losing market share to existing competition or new entrants)
  - ☐ Price (discounting in response to competition, increased markdowns)
- ☐ Costs
  - ☐ Management/Overhead (too many middle managers, higher SG&A costs as percent of sales, distribution costs)
  - ☐ Store Operations (increases in store rent, labor costs, shrinkage/theft, renovations in store)
  - ☐ Cost of goods sold (lower gross margins, price increases from suppliers, higher transportation costs)
- ☐ Customers/Channels
  - ☐ Segments (losing more profitable customers, change in mix of business and personal customers)
  - ☐ Channels (sales decline in stores and catalog, more customers shopping online, Amazon)

# Case 12: Office Supply Stores

## Discussion Points (cont'd)

88

**Discuss possible solutions to the decline in profitability at OSS. Feel free to offer hypothesis.**

- ☐ Increase Revenue
  - ☐ Invest in online, mobile and multi-channel platforms to respond to changes in customers' channel preference
  - ☐ Segment customers and hire dedicated sales team to target business customers
  - ☐ Improve product mix and add higher margin services
  - ☐ Increase private label products to improve margins and reduce supplier bargaining power
  - ☐ Improve inventory management (avoid lost sales due to out of stocks and markdowns)
  - ☐ Evaluate price increases on niche products
  - ☐ Explore other sources of store revenue, such as offering national brands for store-within-a-store, increasing supplier-paid promotions and leasing parts of the store to complementary retailers (coffee, fast food)
- ☐ Reduce Costs
  - ☐ Reduce fixed costs, such as management/administration, SG&A costs and other overhead (management and store)
  - ☐ Re-negotiate leases with landlords
  - ☐ Work with suppliers to reduce product costs, find savings in distribution and/or offer special promotions
  - ☐ SKU rationalization (discontinue poor selling items and concentrate on best sellers)
  - ☐ Close underperforming stores
- ☐ Other
  - ☐ Consider M&A opportunities



# Case 12: Office Supply Stores

## Exhibit

89

### Additional Information (Provided by Interviewer)

After reviewing the basics of OSS's business, the team believes that one of the root causes of OSS's poor financial performance is a decrease in revenues and growth. The team decides to further investigate how OSS manages its customer segments and has gathered information on 4 segments: large, medium and small businesses, plus individual consumers. Please provide interviewee with Exhibit 1.

### Exhibit 1. Customer Segment Data

Segment	# of customers (in thousands)	Average purchases	Frequency	Avg gross margin
Large business	15	\$ 10,000	/quarter	15%
Medium business	50	5,000	/quarter	15%
Small business	300	2,500	/quarter	20%
Individual consumers	12,000	250	/year	35%

# Case 12: Office Supply Stores

## Calculations

90

Using Exhibit 1, what is the contribution margin of all segments (in dollars and percentage terms)?  
(OPTIONAL FOLLOW-UP) What is the share of sales and profit of one or more segments?

Segment	# of customers (in thousands)	Average purchases	Frequency	Avg gross margin	Annual sales (in thousands)	Contribution margin (in thousands)
Large business	15	\$ 10,000	/quarter	15%	\$ 600,000	\$ 90,000
Medium business	50	5,000	/quarter	15%	1,000,000	150,000
Small business	300	2,500	/quarter	20%	3,000,000	600,000
Individual consumers	12,000	250	/year	35%	3,000,000	1,050,000
Total	12,365				7,600,000	1,890,000

**Contribution margin (as percent) = \$1,890k / \$7,600k = ~ 25 percent**

Share of sales: Large (8%), Medium (13%), Small (39%), Individuals (39%) –OR– Business (61%), Individuals (39%)

Share of profits: Large (5%), Medium (8%), Small (32%), Individuals (56%) –OR– Business (44%), Individuals (56%)

# Case 12: Office Supply Stores

## Recommendation

91

### Other than profit, what other factors would you consider before choosing a segment to target?

- ☐ Market size, growth potential, trends, current market share and historical data of each segment
- ☐ Customer acquisition costs
- ☐ Internal capability and investments/costs required to serve the segment
- ☐ Customer lifetime value (CLV) and retention (business customers may face higher switching costs and be less price sensitive than small businesses and individuals)
- ☐ Ability to upsell services and increase sales to customers in the segment

### Based on your analysis, what segment would you recommend OSS target? Feel free to make hypothesis on the other issues noted in the previous question.

- ☐ Large & Medium Businesses
  - ☐ Benefits: Larger recurring orders, lower cost to serve (as percent of sales), do not require brick-and-mortar stores (lower costs), opportunity to upsell service contracts/warranties
  - ☐ Risks: Investments in dedicated national sales team, low margin, competitive, smaller population compared to small businesses and individuals
- ☐ Small Businesses
  - ☐ Benefits: Recurring orders, low cost to serve (as percent of sales), opportunity to upsell service contracts/warranties, better margin than medium and large businesses
  - ☐ Risks: Investment in dedicated sales team, require more upfront investment to find
- ☐ Individual Consumers
  - ☐ Benefits: Large population, high margin, multi-channel benefit (store/online)
  - ☐ Risks: Harder to retain (low switching costs, price sensitive), may prefer online (Amazon), require more service (as percent of sales)

\*\*\* Any answer is acceptable. It is more important to discuss the benefits and risks with targeting one or more segments.

# Case 12: Office Supply Stores

## Conclusion

92

**Based on what we have discussed, and any other ideas you have on improving OSS's profitability, what would you recommend to OSS's CEO? Please provide at least 2-3 recommendations.**

- ☐ Reiterate one or more segments to target, including a discussion of the benefits, risks and next steps (execution)
- ☐ Discuss ideas discussed in Q1 and corresponding solutions proposed in Q2 with similar structure
  - ☐ Revenue: Invest in multi-channel platforms, improve product and service mix, etc.
  - ☐ Costs: Reduce overhead, SKU rationalization, close stores, etc.
- ☐ Recognize the macro challenges facing brick-and-mortar businesses, such as office supply, electronics and book stores

*\*\*\* Any answer is acceptable. It is more important to provide the elements of a good answer.*

### *Sample Recommendation/Answer*

- ☐ Target small and medium businesses
  - ☐ Execution: Hire dedicated local sales team, pilot in small markets, expand sales team into larger markets, find products/services to upsell to increase margins
  - ☐ Benefits: Recurring orders, opportunity to increase current sales through upselling, better margins than larger businesses, lowers cost to serve (as percent of sales), easier to target than individual customers
  - ☐ Risks: Investment in dedicated sales team and acquiring small business customers, lose sales and profit from other customers (large businesses, individuals), competition
- ☐ Other recommendations
  - ☐ Invest in online, mobile and multi-channel platforms
  - ☐ Improve product mix and add higher margin services; increase private label products to improve margins
  - ☐ Re-negotiate leases with landlords
  - ☐ Work with suppliers to reduce product costs, find savings in distribution and/or offer special promotions
  - ☐ SKU rationalization (discontinue poor selling items and concentrate on best sellers)
  - ☐ Close underperforming stores
  - ☐ Consider M&A opportunities
- ☐ BONUS: Recognize the macro challenges facing brick-and-mortar businesses

# Contents

93

Section	Page #
□ <b>Introduction</b>	<b>3</b>
□ <b>Interview Preparation</b>	<b>5</b>
□ Interview Overview – Fit + Case	
□ Sample Frameworks	
□ <b>Practice Cases</b>	<b>26</b>
□ 12 Practice Cases	
□ <b>Links to Other Cases</b>	<b>95</b>
□ Cases from Firm Websites	
□ Other Case Resources	

# Recommended cases from company websites

94

Firm Name	Link to Case
McKinsey	<a href="http://www.mckinsey.com/Careers/Apply/Interview_tips/Practice_case_studies">http://www.mckinsey.com/Careers/Apply/Interview_tips/Practice_case_studies</a>
Bain	<a href="http://www.joinbain.com/apply-to-bain/interview-preparation/default.asp">http://www.joinbain.com/apply-to-bain/interview-preparation/default.asp</a>
BCG	<a href="http://www.bcg.com/join_bcg/practice_cases/default.aspx">http://www.bcg.com/join_bcg/practice_cases/default.aspx</a>
Oliver Wyman	<a href="http://www.oliverwyman.com/careers/61.htm">http://www.oliverwyman.com/careers/61.htm</a>
AT Kearney	<a href="http://www.atkearney.be/index.php/Join-us/preparation.html">http://www.atkearney.be/index.php/Join-us/preparation.html</a>

## Other Case Resources

95

Please see the Wharton Consulting Club webcafe for more casebooks from prior years and other schools

[https://webcafe.wharton.upenn.edu/eRoom/mba/consultclub/0\\_8cde4](https://webcafe.wharton.upenn.edu/eRoom/mba/consultclub/0_8cde4)