

# Darden Consulting Club Case Book

**2016-2017 Edition**

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# The Consulting Case Interview

# Structure of the Case Interview

The case interview typically lasts between 20-40 minutes and consists of:

- Case overview/ prompt
- Clarifying questions
- Structure/ framework building & explanation
- Problem solving & analysis
- Recommendation

More information on each of these sections follows.

In general, the bulk of your time should be spent on problem solving & analysis, with 2-3 minutes to build your framework and a <2 minute recommendation at the end.

The interview should be highly conversational and interactive. Depending on the firm, round, and seniority of your interviewer, some interviews will be more structured than others. Please see the subsequent section for more firm-specific information.

# Structure of the Case Interview

## Case Overview/ Prompt

- The case interview will start with the interviewer providing the overview of the client and the problem. Take diligent notes, as the overview contains crucial information you will need later in the case.
- Following the prompt, you should give the interviewer your initial synthesis of the case. Confirm the objective and the key facts. Don't simply repeat back word-for-word what the interviewer said – this is the first chance to prove that you can synthesize information quickly
- Occasionally, the interviewer will not frame a specific question – one way to handle this is to test the client's goals with clarifying questions and propose an approach before structuring the problem

## Clarifying Questions

- After the initial synthesis, you have the opportunity to ask some clarifying questions. This can be used to clarify a specific term used in the case prompt, to identify a concrete benchmark or goal for the problem(e.g. in a profitability case, can ask whether there are targets or time frames that the client has in mind) or to understand more about the client, their customer base, their competition, and their industry generally. Do not ask specific questions about the client at this stage, and do not ask more than 3-5 clarifying questions.

# Structure of the Case Interview

## Structure/ Framework Building & Explanation

- Following the prompt and clarifying questions, you should ask for some time to sketch out your framework
- Generally it is a good idea to write the objective at the top of your framework, and then structure it like an issue “tree”, with 2-4 buckets and a few supporting points underneath each
- Do not take more than 2 minutes to draw out your framework; then present to your interviewer
- It can be useful to read books like *Case in Point* that provide a bank of suggested frameworks, but **it is not recommended to try to memorize frameworks** as you run the risk of overlooking what is unique about each case situation and appearing robotic and overprepared

## Problem Solving & Analysis

- After talking through the framework with your interviewer, propose the area of analysis that you'd like to start with. Do not wait for the interviewer to prompt you with “Where would you like to start?”.
- At this point your interviewer may suggest a different path or present you more information, especially data. If the interviewer does neither of those things, you should continue down the path you proposed and start identifying potential issues and areas of analysis, and then ask if the interviewer has any related data
- In general, the analysis will start off with some calculations or chart-reading, and then will move into a more qualitative/strategic direction where you're asked to come up with some ideas. Keep in mind that this whole interview should be conversational in nature and listen carefully for hints.

# Structure of the Case Interview

## Recommendation

- Once you have worked through analysis and uncovered the main issues of the case, your interviewer will ask for a recommendation.
- You can ask for a minute to gather your thoughts, but some interviewers will say no. It is a good idea to make a habit of noting risks and next steps as you work through the case so that this step is quicker
- Your answer should:
  - Clearly state the recommendation
  - Support with a few key pieces of evidence (don't rehash analysis – get to the answer)
  - Identify risks
  - Suggest next steps
- Presentation of this should be no longer than 1 min (and sometimes the interviewer will ask for a shorter answer)
- If your interviewer gives you a minute to prepare, you can write out a recommendation slide and present it, similar to the framework at the beginning of the case. This is not necessary or possible in many case situations

# Frameworks

## Structure/ Framework Building & Explanation

- The most important thing to remember about frameworks is that there is no one-size-fits-all framework.
- That being said, the profit framework applies to a large number of cases; a framework for evaluating an investment decision is also useful.
- For a good overview of how various parts of a framework fits together in one monster diagram, refer to *How To Get Into the Top Consulting Firms* by Tim Darling book. There are good overviews of the most common frameworks in *Case In Point* and in the shared Consulting Club folder, but **do not memorize them**. Instead, you should be able to use your intuitive business judgment to determine the most relevant issues to examine.
- When constructing your framework, **remember to be MECE**, a McKinsey-coined term that stands for Mutually Exclusive and Collectively Exhaustive – meaning that your framework should cover all the key issues, without repeating issues across buckets.

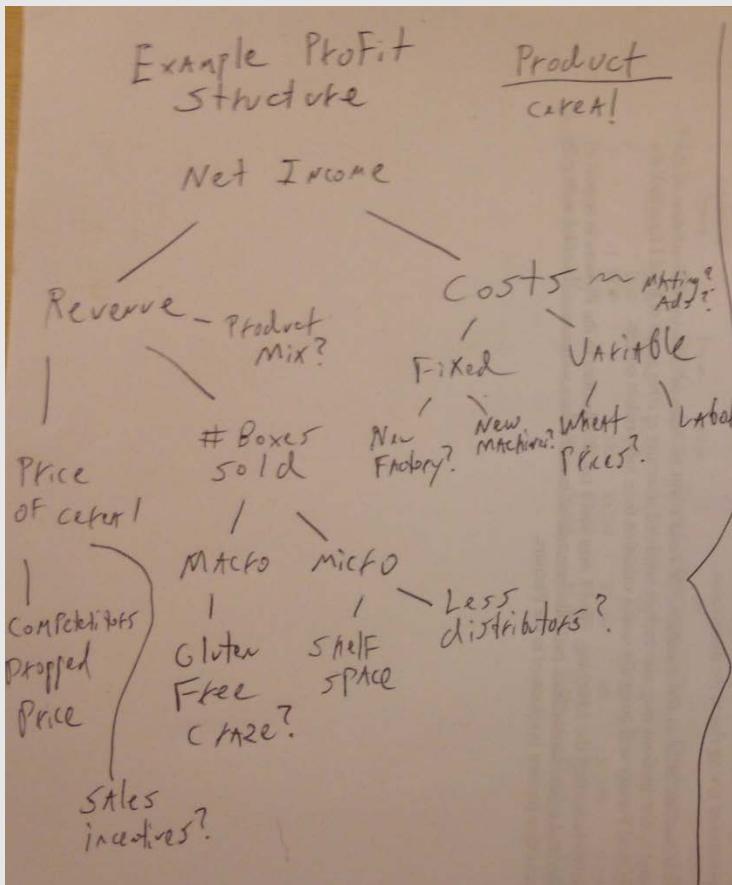
# Frameworks

## Additional advice

- Rehashing a generic framework like the BCG growth matrix or Porter's Five Forces in a consulting interview basically means interview suicide. Come up with your own framework (may be informed by Five Forces, etc) and make sure to customize the terms for the case: e.g. for a cable company, price is "subscription fee"; for a non-profit, price is "average donation amount".
- Practice structuring the problem by doing "practice starts", where you read the client problem and sketch out a framework. The advantage to this is that you can do it without a case partner.
- Talking through your framework
  - Once you have structured your framework, you will need to walk your interviewer through your thinking. The verbal communication of your framework is just as important as the structure.
  - Make sure you go through in a systematic, logical way, while being concise. Inserting a hypothesis when explaining your framework (eg. "It is my hunch that the profit decline is a result of a potential decline in the demand for razor blades due to a new trend of consumer dislike for shaving") will get you an extra gold star.
  - It is best to explain the framework at a high level by briefly introducing each bucket before drilling down into the issues listed within each bucket.

# Frameworks

## Example



## Things to Note

- The framework is customized for the product/market. This is an opportunity to show that you were listening and differentiate yourself from interviewees who will simply write generic trees ("revenue is composed of price, volume, and product mix" with little attention paid to the company and products given to them by the interviewer)
- Get creative. Note the use of known issues outside the case "Gluten Craze" combined with the details of the case.
- Dig past the 2<sup>nd</sup> and 3<sup>rd</sup> levels whenever possible
- There isn't a "correct" answer, just be creative, structured (MECE), and insightful

# Math

## The Math!

- For some people, doing calculations is the easiest part of the case. For others, it is the most miserable. The key is to be comfortable doing math on pen and paper with someone else watching you, which doesn't always come naturally. That's why it's critical to practice your "public math" through practicing cases with others.
- But keep in mind that 99% of the time, the math will be simple arithmetic, and keeping a cool head will prevent you from making mistakes. Additionally, your interviewer will frequently allow you to round to make the math easier (e.g. 50 week instead of 52)

## Sanity checking

- Once you come up with a number, "sanity-check" your answer – that is, make sure it makes sense in the context of the case. If you've sized the US cell phone market to be 10x the US population, you should verbalize to your interviewer that that doesn't seem to make sense and then work back through your calculation.

## Mistakes are OK

- You can recover from a math error – as long as you don't let it fluster you. Many of us made math errors in our final rounds of interviews and still received job offers.
- That said, it is best not to make the same mistake more than once, so if you're having trouble with the same issues (e.g. dropping zeros) in practice cases, focus on eliminating those errors.

# Math

## Talking through the process

- The toughest part about “public math” is learning not to fall completely silent while you’re doing multiplication. You can’t leave your interviewer hanging while you dive into calculations for several minutes, so it’s very important to come up for air and explain what you’re doing.

## Use shortcuts

- Remember to use shortcuts – round when you need to, or manage your zeros with scientific notation if that works for you.

## So what?

- The point of the case interview is not to showcase your mental acrobatics, but to actually do something with the numbers once you’ve calculated them. One of the most important qualities that interviewers look for is the ability to tie the number back to the point of the question (the answer isn’t “\$8B”, the answer is, “the potential market size is \$8B, which looks pretty attractive ...” and so on). It’s important to not only get the number but to understand how it fits into the overall problem and what it means you should do next.

## Practice!

- No one is a natural at all of these steps! It’s important to practice until you’re comfortable doing this in front of an interviewer.

# Math

## Example

How much money will be saved?

Current State	Material / Unit	# Labor / Unit	Volume	Total Cost
Product 1	15	10	1M	25M
Product 2	5	20	2M	50M

10% Labor Reduction on per unit basis

Future State	Material / Unit	# Labor / Unit	Volume	Total Cost
Product 1	15	9	1M	24M
Product 2	5	18	2M	46M

Savings = 5M  
 $75M - 70M$

## Things to Note

- The more you can structure information like an Excel spreadsheet, the better off you will be because:
  - You can better recover information
  - Your interviewer can follow what you are doing
  - It makes your look structured and organized
- Take the time to write prompts such as “How much money will be saved” and “10% labor reduction on per unit basis”
- Circle important numbers (\$5M in savings) that might be relevant to the recommendation or any additional prompt
- Go to the next level after the number is calculated → “I see the total savings is 5M, which represents about 6% of our total costs. This seems like a great reduction, but we would next want to know how this labor reduction is being generated and if there are any negative unanticipated consequences such as the threat of unionization, loss of great workers due to high stress, and/or high capital costs associated with getting to this higher level of labor efficiency

# Company Overviews and Interview Processes

## Firm Overview

“Whether it's business strategy, technology strategy or operations strategy, we shape value, new businesses and operating models for the future. That's high performance, delivered.”

## What they look for

- Accenture traditionally recruits on-grounds for its Strategy and Operations, Federal and IT Strategy practices.
- Accenture looks for well-rounded candidates who demonstrate a passion for creating client value through practical, implementable solutions.

Career Hierarchy
Managing Director
Senior Manager
Manager
Consultant (post-MBA)
Analyst

## Interview process

- First and second rounds are both on-Grounds, with little time between each round (may be next day)
- Second round interviews are likely to be conducted by at least one Managing Director
- Accenture's interviews are less quantitative
- Interviews exhibit a “conversational style,” where the focus of the case interview is how the candidate communicates his approach and thinking.

# A.T. Kearney or ATK

\Car-Knee\



## Firm Overview

"A.T. Kearney is a global team of innovative, insightful and collaborative experts who deliver creative, meaningful and, above all, sustainable results. Consultants that generates powerful strategic insights to address practical, real-world needs"

## What they look for

- ATK recruits on-grounds at Darden for its NA offices.
- Given ATK's national staffing model it makes little difference which office an applicant applies.
- ATK looks for candidates who are willing to work in its collaborative engagement model.
- ATK does not have a specific type of candidate that they look for and they actually take pride in the fact that their consultants are a diverse group with a wide range of personalities
- It is important to note that ATK does not recruit 2<sup>nd</sup> year MBA students and their entire class comes strictly out of the intern pool

Career Hierarchy
Director/ Partner
Principal
Manager
Associate (Post-MBA)
Analyst

## Interview process

- First round is on-grounds with Principal or Manager
  - Has two interviews in 1<sup>st</sup> round – 1 behavioral and 1 case (30min each)
  - First round case tests quant skills and ability to structure (can have a lot of math or almost no math; usually have cases built around operations strategy or sourcing and are not similar to the familiar profitability, market sizing or M&A cases)
- Second/Final round is at ATK office (need not be the one you are recruiting for)
- Second round has three components
  1. Written case with presentation to panel of Managers and Principals
    - A slide deck of about 15 slides is handed over to the candidate, will have lots of qualitative and quantitative information
    - Candidate has about 30mins to go through the information, build a slide deck with insights and recommendations on a flip chart and present it to the panel when they walk in
    - The case by itself is not complicated; the catch is to understand the data, pick the relevant insights and build a simple, coherent story on it
    - You will not have a computer but might have to do some math (ex. NPV) using a calculator (your phone's calculator is allowed)
  2. 2 Behavioral fit interview with Partners, similar to 1<sup>st</sup> round



## Firm Overview

“Bain & Company is the management consulting firm the world's business leaders come to when they want enduring results. Together, we find value across boundaries, develop insights to act on, and energize teams to sustain success. We're passionate about always doing the right thing for our clients, our people and our communities, even if it isn't easy..”

## What they look for

- Generalist practice – no specializations
- Strong emphasis on cultural fit due to local-staffing model
- Want to see a balance of quantitative ability and qualitative strengths
- “Answer first” structure to responses
- Focus on driving results for the client (originated “fees at risk” model)

Career Hierarchy
Partner
Principal
Manager
Consultant (Post-MBA) → Case Team Leader
Associate Consultant



## Interview process

- First round is at Darden (two cases, with behavioral questions at the start)
- Second round is in the office you are interviewing for; either:
  - 1 typical case, 1 written case, 1 behavioral interview
  - 2 typical cases, 1 written case

# The Boston Consulting Group



## Firm Overview

“Our customized approach combines deep insight into the dynamics of companies and markets with close collaboration at all levels of the client organization. This ensures that our clients achieve sustainable competitive advantage, build more capable organizations, and secure lasting results.”

## What they look for

- BCG looks for intellectually curious candidates that are looking to grow with the firm and are open to new challenges.
- Fit with the firm's culture is important, so it is good to start developing relationships with BCGers early on in the process. There is no set professional background or profile that BCG is looking for in prospective Consultants.
- BCG wants to know why you are passionate about a certain location. Be prepared to network with BCGers at your office preference and explain why you want to work there

[http://careers.bcg.com/path/who\\_we\\_seek.aspx](http://careers.bcg.com/path/who_we_seek.aspx)

Career Hierarchy
Partner
Principal
Project Leader
Consultant (Post-MBA)
Associate

# The Boston Consulting Group



## Interview process

- Round 1: On Grounds
  - Two consecutive interviews will both contain a behavioral part and a case with roughly equal weight
  - Cases typically start with an open ended “brainstorming” phase followed by a quantitative phase.
  - Expectation is that the interviewee will “drive” the case with input from interviewer
  - Story of “why consulting, why BCG” are important, as is nailing the quant section. Less importance on office-specifics
- Round 2: In office (note that some offices do not have the 3<sup>rd</sup> written interview)
  - Three one-hour interviews typically with partners, maybe principals
  - Lots of probing into “office-specific” questions. Why this office in particular?
  - All interviews will have a behavioral and case component
  - Two interviews will have same structure of first round (similar length quant case)
    - Typically will be more “conversational”, and less structured than first round
    - Some partners will use cases from their own experience
  - Third interview consists of a written case and Q&A/ fit questions at the end
    - ~30 minutes to read 15-20 page slide deck and prepare recommendation
    - Present your recommendation using 3-4 selected slides
    - Interviewer will challenge your recommendation and you will jointly analyze the case

## Firm Overview

“As the world’s largest management consulting firm, we help organizations build value by uncovering insights that create new futures and doing the hard work to improve performance.”

## What they look for

- Deloitte recruits on-grounds at Darden its Commercial Strategy & Operations practice, although Federal, Technology and Human Capital are also a part of the consulting division.
- They look for well-rounded candidates who understand their mantra of “executable strategy” –
- Deloitte prides itself on not only doing the strategy assessment, but staying on for the implementation and execution of the strategy as well.

Career Hierarchy
Director/ Principal
Senior Manager
Manager
Senior Consultant (post-MBA)
Consultant
Business Analyst

## Interview process

- First and second round are back-to-back at Darden
- First Round
  - A behavioral interview
  - 30 minute case designed to heavily test quantitative ability
  - Deloitte interviews often feature a “data sheet” that presents all the information in advance, but it is still important to follow the standard case format
- Second Round
  - A behavioral interview
  - An individual case interview
  - A ~5 person group case in which you will play a specific functional role

## Firm Overview

“McKinsey & Company is a global management consulting firm. We are the trusted advisor to the world's leading businesses, governments, and institutions.”

## What they look for

- McKinsey looks for five aspects in its candidates. All areas are tested in the interview process; the case interview will test problem solving and the other skills will be tested through the experience interview. They are **Personal Impact, Entrepreneurial Drive, Problem-Solving Skills, Achievement and Leadership Abilities**
- McKinsey recruits MBAs into 3 different practices: Strategy, Operations, and BTO (Business Technology Office)

Career Hierarchy
Partner
Associate Principal
Engagement Manager
Associate (Post-MBA)
Business Analyst

## Interview process

- First round (on-grounds)
  - 2 interviews, each with 1 case and 1 experience question
  - First rounds normally conducted by Ems
  - McKinsey's interviews are less driven by the interviewee and more driven by the interviewer than other companies. Be prepared to structure your thoughts during each new prompt/phase of the interview, but keep in mind that each prompt from the interviewer is still part of the larger issue/ client need which is usually presented up front
  - Recommendations need to take into account takeaways from each prompt/phase of the interview
- Second round (in-office)
  - Generally 3 interviews, each with 1 case and 1 experience question
  - Second rounds are normally conducted by APs/ Partners

# The Parthenon Group



## Firm Overview

- The Parthenon Group is a strategy consulting firm with expertise in private equity and education. Additional practices include healthcare, industrials, and consumer and retail. Parthenon operates a “two-case model” and typically emphasizes light-travel. Parthenon was acquired by EY in September of 2014, but is maintaining a separate brand and operations.

## What they look for

- Parthenon recruits at Darden for its Consultant and Summer Consultant roles.
- Parthenon describes its consultants with the phrase “Smart. Nice. Driven.”

Career Hierarchy
Managing Director
Vice President
Sr. Consultant
Consultant (Post-MBA)
Senior Associate
Associate

# The Parthenon Group



## Interview process

- Format is the same for summer and full-time roles
- First Round: 2 interviews
  - Each interview will begin with a behavioral question
  - The first case interview will be a typical case
  - The second case interview will be a market sizing exercise (ex: “How many doughnuts are sold in the US each year”)
- Second Round:
  - 15 minute chat with a Managing Director
  - 1 hour case (30 minutes solo preparation, 30 minutes talking through the case with a vice president or managing director)

## Firm Overview

“From expansion into emerging markets, to new technologies such as cloud computing, companies are trying to sort through how to exploit new opportunities for growth. We have deep industry experience and deliver customer solutions to help our clients address their most complex business issues. Our professionals bring a diverse background of skills and education allowing us to provide clients with a unique and holistic perspective on their issues.”

## What they look for

- Fit, and the typical consulting analytical toolkit, as well as relevant background experience. PwC is functionally-based
- The major functions of PwC Advisory include: Strategy Consulting, Management Consulting, Risk Consulting, Consumer and Industrial Products (CIPS), Financial Services, Technology, Information, Communications and Entertainment (TICE) and Technology Consulting within Health Industries.
- PwC Advisory has offices in most of the major cities in the US. The firm is quite flexible in location. Relocation among offices within the US is common.

<http://www.pwc.com/gx/en/careers/index.jhtml>

Career Hierarchy
Partner
Director
Manager
Senior Associate (post-MBA)
Experienced Associate
Associate

## Interview process

- Round 1 (on-Grounds): 2 behavioral interviews, 30 min. of each, focusing on fit and relevant background experience
  - The interviewers are not necessarily from the office the candidates applied for
  - But candidates are interviewed by the function applied to
- Round 2 (in-office): 2 behavioral interviews + 1 written case interviews, all are around 30 min.
  - PwC Advisory usually organized the interviews in the offices in some hub cities instead of sending candidates to the offices they applied for
  - An associate level employee of PwC Advisory will be assigned to each candidate as the host for interview, and be accompany with the candidate during the breaks of the interviews
  - The written case background will be distributed 48 hrs in advance of review; the questions will be given out 30 min. before the interview

## Firm Overview

- A mid-sized management consulting firm focused on sales and marketing, primarily in healthcare
- The firm has growth initiatives in place for “PI” aka priority industries (Financial services, travel and transportation, energy, media, industrials)
- ZS is unique in their academic, non-hierarchical environment, casual, office-based culture, and the level of responsibility given to MBA hires. As a consultant at ZS, you are often given the responsibility of managing the project team and the project’s day-to-day operations.

## What they look for

- ZS recruits at Darden for its Consultant position.
- The firm values candidates with strong quantitative abilities and sales and marketing knowledge.
- A thorough understanding of the pharmaceutical and medical devices industries is valued, but not required. This is especially the case if recruiting for the PI or Tech practices.
- The firm looks for candidates who are team players, and have demonstrated the ability to work well in / manage teams.

Career Hierarchy
Principal
Associate Principal
Manager
Consultant (post-MBA)
Associate Consultant
Analyst

## Interview process

- First round interview held on-grounds at Darden
- These interviews are mostly behavioral, with one case
- Second round will probably be held on-grounds
- Second round will include back to back interviews, including a presentation to principals
- Quantitative skills (theoretical and actual), ability to synthesize large amounts of information, and presentation skills are rigorously tested

# Practice Cases

# Case Index

Case Name	Firm	Round	Difficulty*	Page Number
Bank Savings for Savings Bank CIO	McKinsey	2	2	35
To Automate or not?	BCG	2	3	43
Broche Laboratories	Bain	2	3	54
CEO of Your Favorite Company	McKinsey	2	1	64
Copier Co.	BCG	1	2	67
Henry's Furniture	BCG	1	1	76
CDC Pharmaceuticals	McKinsey	1	2	85
World Vision	Deloitte	2	2	91
Maxicure	McKinsey	1	2	100
Railroad Budget Blowout	BCG	2	2	106
Saving the Payphone Company	McKinsey	2	2	115
Selling Abayas in Bahrain	A.T. Kearney	1	2	124
Starbucks' Ice Cream Dream	Bain	1	1	132
Transportation TechCo.	Parthenon	1	2	139

\*Difficulty scale is 1-3 with 1 being the easiest and 3 being the hardest



# CASE 1: Bank Savings for Savings Bank CIO

Firm Style	Interview Round
McKinsey	2

## Case Question

Our client is the CIO of a large domestic bank. He's been tasked to cut \$100m of costs within 9 months. Is this feasible without disrupting service?

## Clarifying information (*provide only if corresponding questions are asked*)

Service disruption means any noticeable alteration to how customers interact with the bank

The office of the CIO supports internal and external information organization and access (i.e. manages internal systems that allow employees such as clerks to view customer accounts and manages external systems such as online banking that allow customers to view accounts)

# Bank Savings for Savings Bank CIO

- Framework
  - A good framework will be narrowly focused on cost and demonstrate creativity regarding the kinds of costs this client faces
- Once the framework and potential cost sources are thoroughly considered, show the candidate Exhibit 1

# Exhibit 1 - Bank Savings for Savings Bank CIO

Total Annual Costs equal \$3 billion

**Exhibit 1: Costs**

App Development	40%	New Development (40%) Maintenance (60%)
Shared Service	50%	Servers (25%) Mainframe (20%) Infrastructure (20%) Help Desk (15%) Other (20%)
CIO Office	10%	Management (50%) Other (50%)

\*80% of Maintenance cost is labor at \$90/hour

# Bank Savings for Savings Bank CIO

## Question #1:

We're considering two different plans to cut costs associated with Maintenance. Labor costs make up 80% of Maintenance costs and we can replace half of the existing maintenance labor force either with a domestic 3<sup>rd</sup> party supplier or an international 3<sup>rd</sup> party supplier. In either case, we will have to pay severance equal to 3 months of wages to the employees we let go. What are the savings associated with each of these plans?

- The domestic 3<sup>rd</sup> party supplier charges \$45/hour, and the international 3<sup>rd</sup> party supplier charges \$18/hour

# Question 1 Calculations

## Bank Savings for Savings Bank CIO

Total Costs (millions)	\$	3,000
	% of total costs	Costs (millions)
Application Development (40% of total)	40%	\$ 1,200
New Development (40%)	16%	\$ 480
Maintenance (60%)	24%	\$ 720
Shared Services (50% of total)	50%	\$ 1,500
Servers (25%)	13%	\$ 375
Mainframe (20%)	10%	\$ 300
Infrastructure (20%)	10%	\$ 300
Help Desk (15%)	8%	\$ 225
Other (20%)	10%	\$ 300
Office of CIO (10%)	10%	\$ 300
Management (50%)	5%	\$ 150
Other (50%)	5%	\$ 150
Maintainence labor costs ( $80\% \times \$720$ )	\$	576
Annual Maintainence Labor hours ( $\$576 \div \$90/\text{hour}$ )		6.4
Half of workforce hours		3.2
Hours for severence ( $3.2 \div 4$ )		0.8
9 months savings ( $3 \times 0.8 \text{ hours} \times \$90/\text{hour}$ )	45hr	216
Severence Cost ( $0.8 \text{ hours} \times \$90/\text{hour}$ )	18hr	216
Cost of new labor	\$	72
Savings in 9 months	\$	108
	\$	36
	\$	101

The savings associated with the domestic supplier comes out to \$36m over the next 9 months; \$101m for the international supplier

Cost of new labor calculated as  $(3.2 - .8) * \text{new labor hourly rate}$

# Bank Savings for Savings Bank CIO

## Question #2:

The international supplier looks promising. What else should we consider?

Things to look for in response:

- Possible disruptions to service levels caused by outsourcing.
- Possible legal/regulatory concerns associated with outsourcing sensitive banking services.

# Bank Savings for Savings Bank CIO

## Question #3:

- What are some ways to think about cost savings in the Help Desk?

Things to look for in response:

- Outsourcing similar to maintenance considerations.
- Staffing schedules: are there periods of overstaffing for demand requirements.
- Segmenting HD staff by type of issue (e.g. common issues resolved by specialists or through better self service options).

# Bank Savings for Savings Bank CIO

## Question #4:

- What would you recommend to our client?

Things to look for in response:

- “Answer first” recommendation
  - Supported by a few factors (with #'s!)
- Risks to recommendation
- Planned next steps

## CASE 2:

# To automate or not?



Firm Style	Interview Round
BCG	2
Case Question	
<p>After returning from a trade show, the CEO of a large grocery distribution center calls you. He enthusiastically describes a new technology which could be used to automate part of his company's process. He asks whether you think this would be a good idea for his business. Knowing that this CEO is a tech-enthusiast who loves innovation for the novelty of it, you ponder the implications. How would you tackle this problem?</p>	
Clarifying information ( <i>provide only if corresponding questions are asked</i> )	
<ul style="list-style-type: none"><li>The company does not have a specific goal in mind with this decision. This CEO trusts us and will do whatever we advise. This is to test the candidate's business judgment.</li><li>Shipments are made to roughly 50 grocery stores in the immediate area, and the company does 1M shipments per year</li><li>Costs to automate – (1) one-time outlay of \$4M, plus (2) recurring OH, training, and maintenance costs of \$1.4M (make the candidate request BOTH pieces of info)</li><li>The candidate should visualize the distribution process (i.e. receiving, holding &amp; picking, shipping) to think through this question</li></ul>	

# To automate or not? – Sample framework

- A strong framework could include:

- Revenues
  - Strong candidates will recognize that this is primarily a cost issue
  - The company is not experiencing capacity issues and is satisfying customer demand, so optimizing the distribution process will not result in additional revenues
- Costs
  - Existing
    - Fixed Costs – Rents/Mortgage/Leases, Overhead, Salaries
    - Variable – Hourly employees, repairs& maintenance, inventory holding, shipping
  - Incremental –
    - One-time – Initial cost of automating, cost of initial training, downtime (there is none), severance pay for any employees terminated, etc.
    - Ongoing – Servicing, repairs, additional costs of running upgraded facility (i.e. energy, insurance, etc.)

# To automate or not? – Sample framework

- Product
  - Considerations around changes to product quality (there are none)
  - Ability to distribute additional types of product, etc. (none)
- Other
  - Potential for future synergies (i.e. could the new technology interface with other future tech)
  - Impact on relationships with employees, grocers, and/or suppliers

# To automate or not?

## Guidance:

- If the candidate hasn't already visualized the process flow for a distribution center, press them to do so.
- After they've conceptualized the company's business tell them that the 3 phases of the company's distribution process are 1) Receiving, 2) Holding & Picking, 3) Shipping

## Brainstorm:

- Move them into brainstorming exercise around the potential costs associated each phase:
- Potential examples: Labor (time), equipment (forklifts, etc.), insurance, storage (i.e. cold and dry)
- After the interviewer is satisfied with the depth and breadth of the brainstorming, provide Exhibit 1

# To automate or not?

Exhibit 1 – Current Process

Receiving

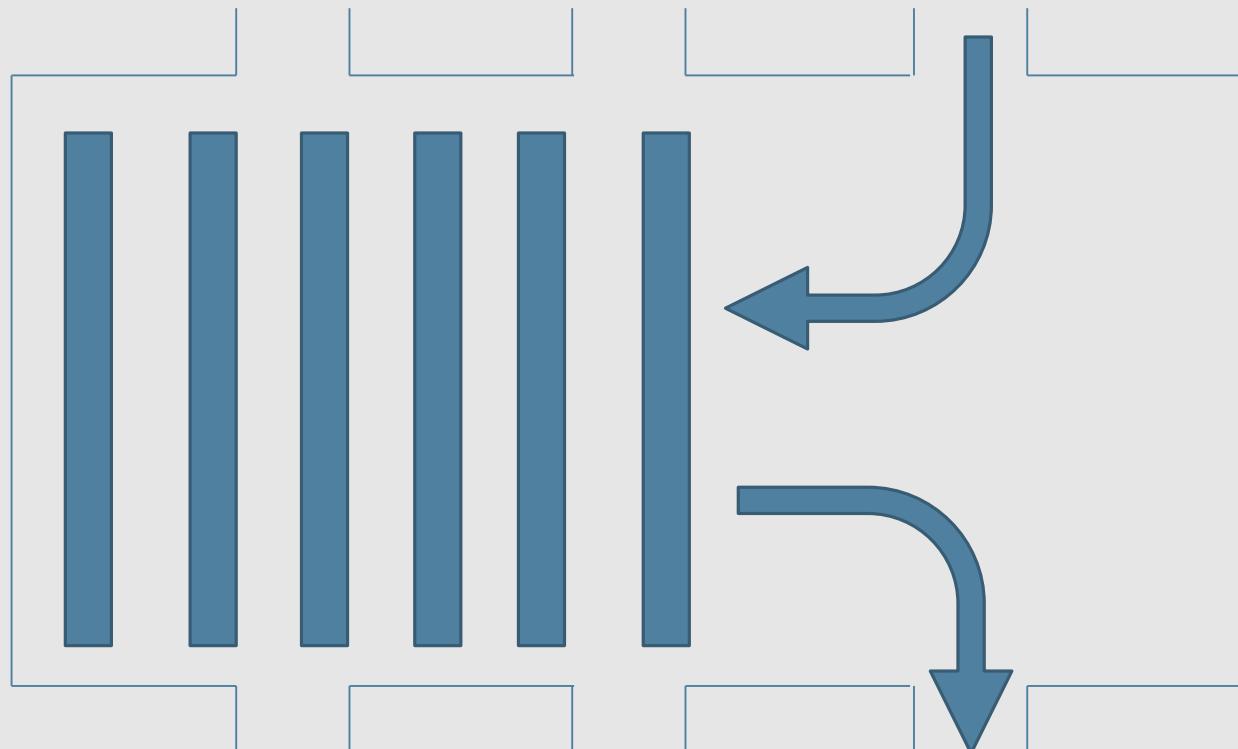
2,000 hrs.

Holding &  
Picking

10,000 hrs.

Shipping

3,000 hrs.



\* All units are hours per week

# To automate or not?

## Guidance:

- After confirming their understanding of the process flow, candidates should focus in on the total time required for the existing process
- Candidates should attempt to quantify the hours in terms of dollars of cost for each area of the process
- Info to provide upon request:
  - Each employee works 40 hours per week
  - Employee pay per hour is as follows: Receiving - \$12/hr, Holding & Picking - \$17/hr, and Shipping - \$14/hr
- Once they obtain the above info, ask the candidate to calculate the total number of employees required in each function and the annual cost of labor (NOTE – Force them to use 52 weeks instead of 50 weeks)

	Total Hours	# Employees Required	Cost/Hour	Cost per week
Receiving	2000	50	\$ 12.00	\$ 24,000
Holding & Picking	10000	250	\$ 17.00	\$ 170,000
Shipping	3000	75	\$ 14.00	\$ 42,000
				\$ 236,000
			x 52 Weeks per year	
				\$ 12,272,000

# To automate or not?

## Guidance:

- After doing the above calculations, strong candidates will want to see how automating the process would change the data above
- Once they ask for this info, provide Exhibit 2

# To automate or not?

## Exhibit 2 – Automated Process

Receiving

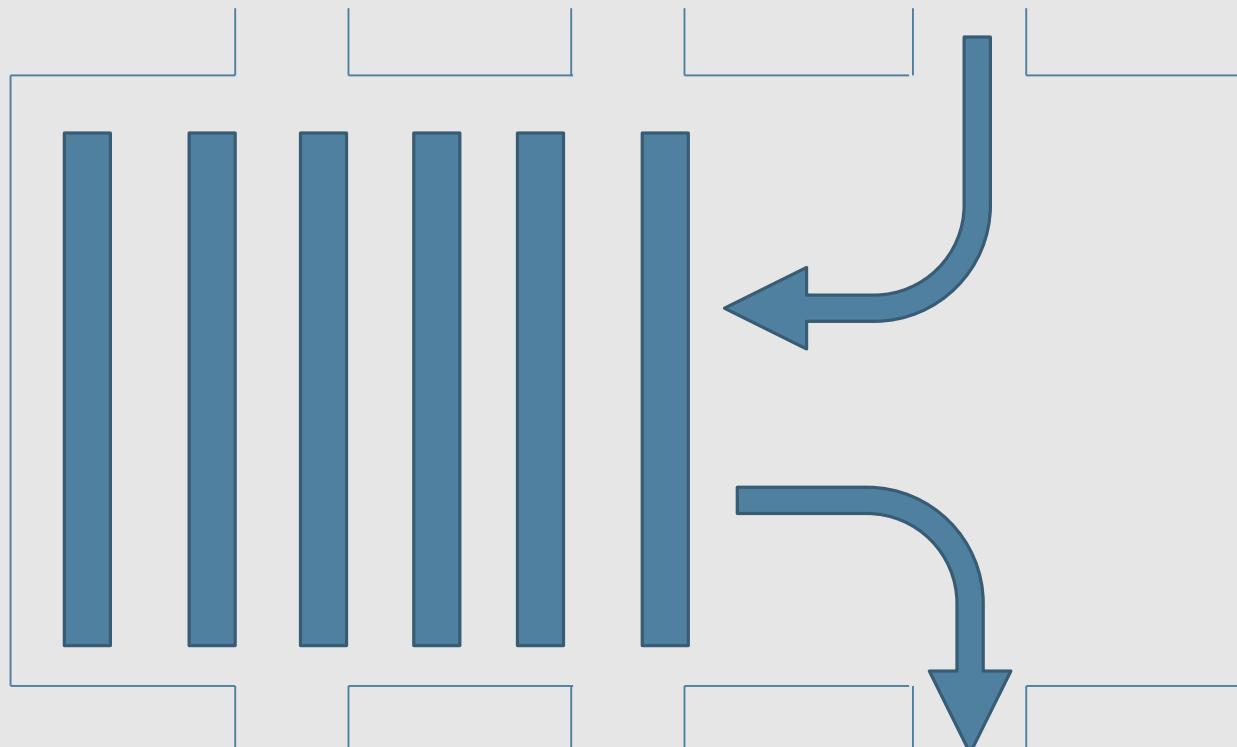
2,000 hrs.

Holding &  
Picking

5,250 hrs.

Shipping

6,000 hrs.



# To automate or not?

## Guidance:

- Once they obtain the above info, ask the candidate to calculate the change in the # of employees required in each function and the change in the annual cost of labor

	Total Hours	# Employees Required	Cost/Hour	Cost per week
Receiving	2000	50	\$ 12.00	\$ 24,000
Holding & Picking	5250	131.25	\$ 17.00	\$ 89,250
Shipping	6000	150	\$ 14.00	\$ 84,000
				\$ 197,250
				x 52 Weeks per year
				\$ 10,257,000

Current	Automated	
# Employees Required	# Employees Required	Change
50	50	0
250	131.25	119
75	150	-75
	Employee Decrease	44

Current	Automated
Annual Costs	Annual Costs
\$ 12,272,000	\$ 10,257,000
Annual Savings	\$ 2,015,000

# To automate or not?

## Guidance:

- Strong candidates should revert to the prompt and answer the initial question posed. This requires the candidate to compare the annual cost savings to the costs of automating.
- Ask the candidate to calculate a break-even in years for this investment:

Annual Savings:	\$ 2,015,000
Annual Increm Costs:	\$ 1,200,000
Annual Increm CM:	\$ 815,000
One-Time Outlay:	\$ 4,000,000
Break-Even Years:	4.91

- Ask the candidate whether a break-even of 5 years seems attractive
  - There is no correct answer, and the Company does not have any policy on such matters. This should be used as an opportunity to test the candidate's business sense.
  - Attentive candidates will consider the attractiveness of this payback period in light of the prompt. For example, if the CEO is potentially interested in the technology simply because of his love for innovation, would he really be willing to tie up his firm's cash for 5 years?

# To automate or not?

## Recommendation:

- “The CEO is about to call you to ask for your recommendation. What would you say?”
- A strong recommendation will include:
  - Bottom Line – Automate or Do not automate
  - 2-3 Supporting Reasons
  - Risks pertaining to the bottom line
  - Next steps
  - Recommendations should be rooted in the prompt and should include numbers/data

# CASE 3: Broche Laboratories



Firm Style	Interview Round
Bain	2

## Case Question

Our client is the newly appointed CEO of a pharmaceutical company, Broche Laboratories, located in the United States that has seen stagnant growth over the last 10 years. The Board of Directors has tasked her with improving growth in the next six months. The new CEO has brought on our team to provide recommendations for achieving this new growth goal before her meeting with the Board next week.

## Clarifying information (*provide only if corresponding questions are asked*)

- *What type of growth?* The Board wants to see bottom-line, profit growth in the next six months.
- *Any specific targets for profit growth?* The target is 10% improvement.
- *Product offerings and scope?* The company currently produces three drugs based on the same key compound in one therapeutic area and sells globally.
- *Production capacity and demand?* Currently operating at full capacity in production facilities, but demand is unlimited for company's drugs.
- *Why has growth been stagnant over the last 10 years?* No change in leadership during time period and no focus on marketing efforts because constant demand for products.

# Broche Laboratories

## Framework / Structure

Question 1: What options does our client have to achieve profit growth in the next six months?

The interviewer is looking for (i) organic and inorganic growth opportunities (ii) breadth and creativity of thinking in identifying the company's key drivers for profit. Below is an example of a strong MECE framework.

### **Organic:**

- *Profit improvement*
  - Sales
    - Expand operations in other markets
    - Consider price changes on drugs in relation to patent years remaining
    - Improve salesforce approach/marketing tactics
  - Operations
    - Analyze capacity of current production facilities
    - Distribution network improvements
    - Reduce costs- labor, raw materials, SG&A
  - Innovation
    - Increase R&D focus
    - Other approved uses for drug compound currently not being marketed

### **Inorganic:**

- *Acquisition*
  - Opportunity to acquire a drug patent, compound or company in a different therapeutic area
- *Joint Venture/Partnership*
  - Seek partnership with complementary products
  - Leverage expertise of another company to bring drugs to market more quickly

# Broche Laboratories

## Interviewer Tips

- With the recommendations, the interviewee should note if the option would require additional expenditures (i.e. acquiring a company) to achieve the profit growth and the risks associated.
- The interviewee should also mention regulatory concerns for bringing new drugs to market and the amount of time involved if recommending this option.
- Push the interviewee to continue thinking beyond a typical profit tree if she has not already done so.
- Remind the interviewee of the six month timeline for achieving growth in any recommendations.
- Once the interviewee has provided an initial recommendation, move to **Exhibit 1**.

# Broche Laboratories

## Exhibit 1

	Axaflax	Bentazine	Cialtrix
2015 Volume (doses)	80,000	35,000	50,000
Production Time (days)	5	4	1
Price (\$ per dose)	\$30	\$10	\$15
Variable Cost (\$ per dose)	\$5	\$7	\$13

*Note: All pharmaceuticals are made at Broche Laboratories' Trenton, NJ facility.*

# Broche Laboratories

- **Question 2:**

- Show Exhibit 1: “This exhibit summarizes the production statistics for the three drugs currently in Broche’s portfolio. Do you have any recommendations based on this information.”
  - Candidate should calculate current contributions from each drug.
  - If candidate asks about meaning of production time, tell her that it is the number of days that it takes to create one batch and that batch sizes are the same for all three drugs.
  - If candidate asks about demand, explain that capacity is limited but we are not meeting demand for Bentazine and Cialtrix. Assume demand is not a constraint on these drugs.
  - If the candidate has not asked about capacity, you should inform her that *“manufacturing facility is currently running at capacity”* after the initial analysis of the slide.

# Broche Laboratories

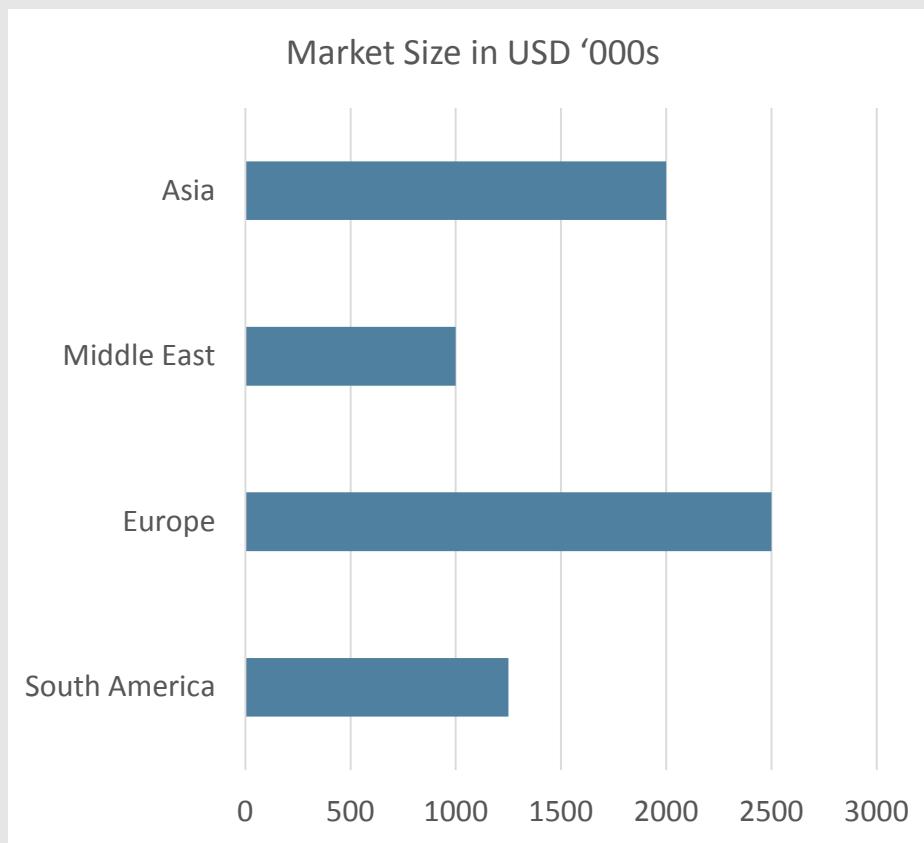
## Exhibit 1 (Calculations for Interviewer)

- Profit made on Axaflex:  $(30-5)*80,000 = 2,000,000$
- Bentazine:  $(10-7)*35,000 = 105,000$
- Cialtrix:  $(15-13)*50,000 = 100,000$
- Moving Bentazine capacity to Cialtrix:
- Incremental volume:  $50,000*4 = 200,000$  doses
- **Incremental profit:  $200,000*(15-13) = \$400,000$**
- **18% Profit Improvement**

# Broche Laboratories

## Exhibit 2

### International Bentazoate market



	Market Growth	Broche Potential Market Share
Asia	30%	20%
Middle East	1%	35%
Europe	3%	25%
South America	6%	40%

# Broche Laboratories

- Question 3:

- Show Exhibit 2: “The client also provided this information with estimates of the international Bentekoates market. Should we consider focus on marketing Bentazine internationally?”
  - Candidate does not need to calculate what these market sizes would represent for Broche.
  - Instead candidate should brainstorm pros and cons of expanding internationally.
  - Pros:
    - Exposure to future growth – share price effects
    - Revenue growth
    - Gain international know-how – second order effects on marketing other portfolio drugs internationally
  - Cons:
    - Requires up front investments in extra capacity
    - Need to get Bentazine approved by other pharmaceutical regulatory agencies
    - Need to invest or acquire local salesforce knowledge.
    - Margins may not be the same in other markets
- Ask candidate to identify first market to enter as a follow up question

# Broche Laboratories

## Recommendation

Question: Of the two options discussed, which one do you recommend our client proposing to the Board next week?

The candidate's recommendation should include a discussion of: (i) profit impact from producing Drug B to Drug C, (ii) ability to achieve growth target of 10% profit improvement, (iii) risks around switching production from one drug to the other, and (iv) next steps.

- *Recommendation:*
  - The client should recommend moving forward with the production change from Bentazine to Cialtrix, because it will increase profits by 18% which is over the 10% target set by the Board. It will also require no additional capital investment and can be operational quickly.
  - The option to pursue sales in international markets is a riskier option and would require more investment from Broche.
- *Risks:*
  - If demand changes for the three drugs, the company runs the risk of overproducing Cialtrix and delaying entry to international markets could jeopardize future market share.
- *Next steps:*
  - The client should develop an implementation plan for the production change after discussing with the Operations managers.
  - Once the change has been implemented, the company can begin to focus on developing additional production capacity to serve emerging markets.

# Broche Laboratories

## Recommendation Interviewer Tips

- Push the candidate on her recommendation to ask why she did not select the other option. How would she justify this to the Board?
- The candidate should also remember the profit target and timeline for achieving set by the Board.
- A key insight is that no additional investment would be required to gain the additional \$400,000 from the production change.
- A great answer will include implementation as a next step and discussing with the production managers.



# CASE 4: CEO of Your Favorite Company

Firm Style	Interview Round
McKinsey	2

## Case Question

Talk to me about a company that you're passionate about. Why are you passionate about it? Imagine that you were the CEO of this company. How would you change the business to make it better? How would you execute on this plan?

## Clarifying information (*provide only if corresponding questions are asked*)

- Candidates should be imaginative and not worry about financial constraints since the execution portion of the prompt forces the candidate to be realistic
- The interviewer has no data or exhibits, so candidates should drive the case while remaining engaging & conversational
- This case is meant to be highly ambiguous. The interviewer is looking for candidates to remain highly structured while exhibiting business acumen, thoughtfulness, & passion

# CEO of Your Favorite Company

- Interviewer guidance:

- Candidates should use a structure to guide their discussion of the company and (1) what they would change (2) how they would execute.
- Given that the first portion of the prompt forces the candidate to talk about the company of their choice, the interviewer should have a base understanding of the company's business, etc.
- Press the candidate hard on how they would execute their plan for change. Listen to their planned approach and force them to brainstorm alternative ways to execute beyond what they've offered
- If candidates mention launching a new product/business line, dropping a product or business line, or moving into a new space at any point in the case press them to estimate/quantify the impact of any such changes

# CEO of Your Favorite Company

Question #1: Why do you want to improve upon or change this particular area?

Question #2: What risks do you see to making the change suggested? What risks do you see to your execution plan?

- Candidates should remain engaging, passionate, and structured throughout this case
- Again, If candidates mention launching a new product/business line, dropping a product or business line, or moving into a new space at any point in the case press them to estimate/quantify the impact of any such changes

Question #3: Can you structure a recommendation about the business as if you were speaking to the real CEO?

- Strong interviewees will lead with their recommendation, provide supporting evidence, and address key risks to their recommendation

# CASE 5: Copier, Co.



Firm Style	Interview Round
BCG	1

## Case Question

Copier, Co. is a national distributor of office equipment, particularly commercial-grade copiers. The firm sells the equipment directly to companies for use in their offices, as well as provides regular service including maintenance, repairs, and replacing disposable parts. Recently, the company has experienced declining profit margins; we have been hired to determine why this is happening and what to do to reverse the trend.

## Clarifying information (*provide only if corresponding questions are asked*)

*Sales Process* – The company actually bids on contracts; contracts are typically awarded to the lowest bidder. The bid consists of a per copier cost which includes 1 year of maintenance as part of sales price. Salesmen have free reign to determine bid price and are compensated based on commission (% of overall sales)

*Competition* – One major competitor (American Copiers), but a new, low-cost competitor (Bottom Dollar Copier) has recently entered the market. These three companies are distributors and service technicians, NOT manufacturers.

*Product* – This case will focus on one identical copier sold/distributed by multiple firms

# Copier, Co.

- **Question #1 - Framework/Structure**

A profitability framework will serve the candidate well, but they should also consider other factors to attempt to diagnose WHY profitability is declining.

**Financial:** Profit = Revenue – Costs

Revenue:

Volume: Number of copiers sold/contracts awarded

Price: Average copier sale price/bid price

Costs:

FC: Sales force (base), warehousing, overhead

VC: Service/labor costs, COGS, transportation, sales force (commission)

**Non-Financial:** These should address some of the clarifying questions/information and how it helps solve the problem

Competition: Size and share of competitors (AC, BDC), bidding process

Product: Product quality and characteristics,

Customer: Changing customer preferences, different markets

Company: Salesforce compensation, product mix

# Copier, Co. – Exhibit 1

- **Question 2 - Examining declining profit margins**

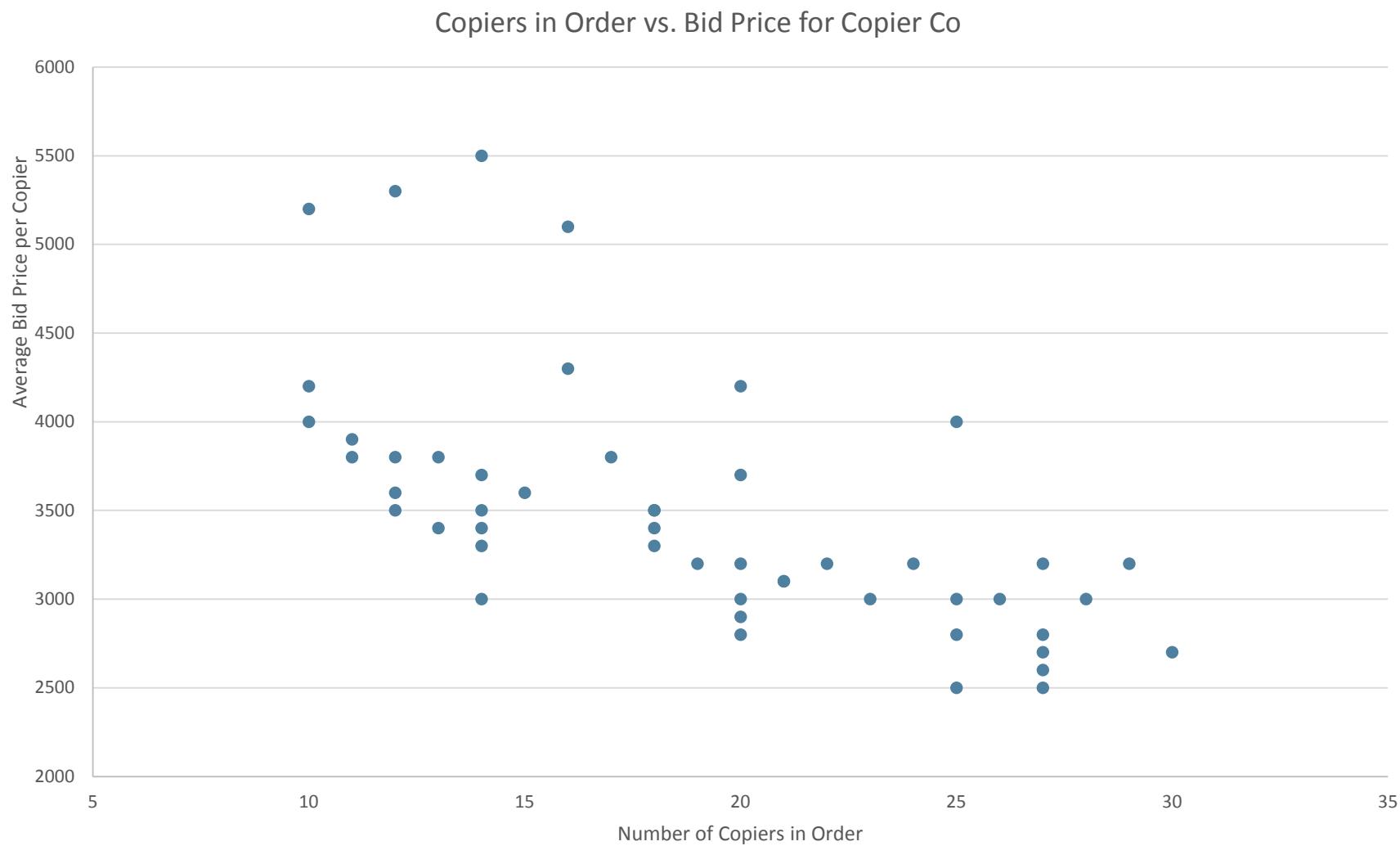
The candidate should begin by asking for data related to revenue and costs to help determine why profitability is declining. Let the candidate probe until they ask for information regarding unit price and copier quantity. Then, show them Exhibit 1 and ask for reactions.

Good response: Candidate should realize that there is a negative correlation – the more copiers in the contract, the lower per copier bid price (price wars for more contribution). A candidate should hypothesize why that may be so - perhaps the salespeople may be lowering bid price in effort to increase commission (due to higher sales from larger quantity contracts) or looking to increase overall profit while overall margins are smaller.

Great response: Candidate should point out that there are a few contracts with high bid prices. With the information about the new competitor in hand, candidate should ask for information for average sales price based on the competitors for the contract.

Let candidate probe until they ask for information relevant to Exhibit 2. If candidate is struggling, ask about those high bid price points on Exhibit 1 and why they might be happening.

# Exhibit 1: Copier, Co.



# Copier, Co. – Exhibit 2

- **Question 3 – Determine margin based on different competitors**

The candidate should start by determining profit for bids against American Copier only – if he/she does not immediately begin the profit calculation, prompt them to do so.

Common pitfalls will be failing to realize the pages printed are provided in months (needs to multiply by 12 months to get annual) and that service is only included for one year.

After the candidate calculates profit for bids against American Copier, ask them whether the other bidding scenarios are profitable. If candidate begins by laying out the math similarly to their American Copier calcs, ask them to just answer without doing the entire extent of the math.

Good response: Candidate should recognize that bids against Bottom Dollar Copier are profitable (but less so) and that bids against all three competitors are generally not profitable, **due to a contribution margin of zero**. A good candidate would do profit calculations on a contribution basis (rather than total revenue and total cost).

Great response: Candidate should transition into possible solutions to the problem  
(Question #4)

# Exhibit 2: Copier Co.

## Copier Co Successful Bid Info

	Competing against American Copier ONLY	Competing against Bottom Dollar Copier ONLY	Competing against both A.C. and B.D.C.
Average Bid Price	\$5,000	\$4,000	\$3,000
Average Copiers in Order	20	25	30
Cost of Copier	\$3,000	\$3,000	\$3,000
Service cost* (per page printed)	\$0.05	\$0.05	\$0.05
Average pages printed per copier (per month)	1,000	1,000	1,000

\*Service for 1 year included

# Exhibit 2: Copier Co. (Solutions)

Copier Co Successful Bid Info	Competing against American Copier ONLY	Competing against Bottom Dollar Copier ONLY	Competing against both A.C. and B.D.C.
Average Bid Price	\$5,000	\$4,000	\$3,000
Average Copiers in Order	20	25	30
Cost of Copier	\$3,000	\$3,000	\$3,000
Service cost* (per page printed)	\$0.05	\$0.05	\$0.05
Average pages printed per copier (per month)	1,000	1,000	1,000
*Service for 1 year included			
Contribution per copier	\$2,000	\$1,000	\$0
Service cost per copier	\$600	\$600	\$600
Profit per copier	\$1,400	\$400	(\$600)
Total Profit	\$28,000	\$10,000	(\$18,000)

# Copier, Co.

- Question 4 – Solutions to small margins (Brainstorming)

Have the candidate brainstorm solutions to the low bid issue. Don't allow the candidate to stop with 'don't bid on contracts with all three competitors'. Let them know that the firm's management wants to bid on all contracts and they need to come up with creative solutions to solving the profitability problem in those scenarios.

Possible answers include:

- Minimum allowable bid prices for sales people
- Change compensation structure
- Offer different packages (no service component, multi-year service contracts)
- Negotiate better pricing for copiers
- Offer complementary products to copier sales (paper, other equipment, etc)
- Joint Venture with competitors on large orders

# Copier, Co.

- Question 5 – Recommendation

The CEO is anxiously awaiting your analysis a recommendation – what answers do you have for Copier Co?

Candidate should succinctly identify that the new competitor and commission based compensation structure is resulting in lower bid prices and thus lower margins. That candidate should identify one or two actionable solutions they generated from Question #4 and elaborate on how they would instigate those changes tomorrow.



# CASE 6: Henry's Furniture

Firm Style	Interview Round
BCG	Round 1

## Case Question

Henry's is a local furniture retail store in Houston, TX. Henry, the owner, has called in BCG because he has seen declining profits in the last few years and would like your help. How would you advise Henry?

## Clarifying information (*provide only if corresponding questions are asked*)

- Henry's is a singular store located in a popular shopping area in Houston
- Henry's revenues are through brick and mortar sales only. Henry's does not sell online.
- Henry's does not sell anything outside of furniture
- Henry's is a typical retailer. It orders furniture from various manufacturers and distributors throughout the US and sells a variety of popular brands to end customers
- There is no specific profit goal or other objectives
- Specific numbers will be given later in the case, Henry has seen declining profits for the last 3 years

# Henry's Furniture

- Candidate should recognize quickly that this is a profit question and begin constructing an appropriate framework including a breakdown of the components of profit, revenues and costs. Candidate should also think of some external factors and drill into the state of the industry as a whole.
- This case will center on a cost comparison, make the candidate move to analyze costs. Stating that Sales and Revenues have not decreased in the last 3 years. The industry is currently strong. Henry has not analyzed the competition.
  - Average Response: addresses revenues and costs. Does not consider external factors or specific details relating to Henry's business (generic framework)
  - Good Response: Mentions some external factors and has detailed specifics on different components of revenues and costs
  - Great Response: thoroughly constructs a framework analyzing fixed and variable costs, external factors, competition etc.

# Henry's Furniture

- While still on the candidate's framework, push the candidate to give specific examples of the types of costs incurred by Henry's furniture. Explain how these might be attributing to a lack of profitability in recent years.
- Once the candidate has gone through the variety of costs incurred by Henry's, offer them Exhibit 1 to analyze
- Some examples include:

Fixed Costs	Variable Costs
Lease / Mortgage of store	Cost of Goods Sold – purchase price of furniture from manufacturers
Management expenses (fixed labor)	Variable Labor (sales force in store)
	Overhead / SG&A
	Delivery expenses
	Marketing / Advertising

# Henry's Furniture

## Exhibit 1 - Financial Data – 2015 (All in '000)

Sales	\$495
COGS	\$300
SG&A	\$105
Marketing / Advertising	\$65

# Henry's Furniture

- If the candidate does not automatically do so, have the candidate calculate the gross profit and operating profit for 2015.

Exhibit 1 - Financial Data – 2015 (All in '000)		Margin
Sales	\$495	
COGS	\$300	
<b>Gross Profit (\$495 - \$300)</b>	<b>\$195</b>	<b><math>(\\$195/\\$495) = 39\% \text{ (can round to 40\%)}</math></b>
SG&A	\$105	
Marketing / Advertising	\$65	
<b>Operating Profit (\$195-\$105-\$65)</b>	<b>\$25</b>	<b><math>(\\$25/\\$495) = 5\%</math></b>

- Probe the candidate to ask what they want to do with this information. They should want to compare it to profits across the industry.
- Hand the candidate Exhibit 2, financial data from IKEO, a furniture chain that manufacturers and sells its own furniture and sells via stores and online

# Henry's Furniture

## Exhibit 2 - Financial Data – 2015 (All in '000) - IKEO

Sales	\$5000
COGS	\$1000
SG&A	\$500
Marketing / Advertising	\$250

# Henry's Furniture

- Because these stores are of different sizes, it is only appropriate to compare the margins between them

Exhibit 2- Financial Data – 2015 (All in '000) - IKEO		Margin
Sales	\$5000	
COGS	\$1100	
<b>Gross Profit (\$5000 - \$1100)</b>	<b>\$3900</b>	<b><math>(\\$3900/\\$5000) = 78\%</math></b>
SG&A	\$500	
Marketing / Advertising	\$250	
<b>Operating Profit (\$3900-\$500-\$250)</b>	<b>\$3150</b>	<b><math>(\\$3150/\\$5000) = 63\%</math></b>

- Candidate should immediately recognize the difference in Gross Margin between IKEO and Henry's

# Henry's Furniture

- Have the candidate brainstorm reasons why IKEO's Gross Margins are so much higher than Henry's
- Some key reasons are:
  - Online sales are cheaper than store sales
  - Furniture manufacturing has become increasingly expensive and Henry's costs (buying furniture) are vastly different than IKEO's because he is paying for manufacturers, distributors etc. (Margin stacking)
- Ask the candidate whether they believe Henry's should develop their own website for buying furniture online – this is a creativity question. Make sure they address risks, skills gaps, necessary infrastructure, competition etc.

# Henry's Furniture

- Final Recommendation – Can Henry's regain profitability?
  - Average Response: candidate does not give a firm recommendation, offers some advice, does not give next steps
  - Good Response: candidate firmly says YES or NO with valid reasoning behind their response, addresses some risks, and gives next steps
  - Great Response: encompasses a Good Response but clearly relates recommendation to the data given in the case and quantifies the issues we discovered

# CASE 7: CDC Pharmaceuticals



Firm Style	Interview Round
McKinsey	Round 1

## Case Question

Our North Dakota-based client, CDC Pharmaceuticals, manufactures and distributes over-the-counter cold, allergy and flu medicines sold in convenience stores across the United States. CDC's current manufacturing plant is severely outdated, and the company's management team is in the process of evaluating two options for future production. CDC would like our help in determining whether it should build a new plant or outsource production to a third-party manufacturer.

*Since this is a McKinsey interviewer-led case, you should quickly guide the candidate to the first question.*

## Clarifying information (provide only if corresponding questions are asked)

- **Construction Logistics:** the new plant would be built in North Dakota, and operations would continue throughout the project (no lost production)
- **Pricing:** there would be no impact on price (CDC would achieve the same selling price, regardless of how/where the products are manufactured)
- **Capacity:** non-issue for both options
- **Volume:** CDC currently manufactures 50 million units/year

# CDC Pharmaceuticals

- **Question 1:** How would you evaluate the two options under consideration, and what are some of the factors you would explore in order to help CDC make its decision?
  - Candidate should immediately recognize this question as a prompt to create a framework for comparing the two options
    - **Average** responses address only the financial advantages/disadvantages of the two options via a profit tree or some comparable framework
    - **Good** responses introduce non-financial criteria into a primarily financial analysis
    - **Great** responses thoroughly evaluate the two options using both financial and non-financial decision-making criteria

*Response example included on next slide*

# CDC Pharmaceuticals

- Question 1 Answer:

Financial		Non-Financial			
Revenues	Costs	Operations	Product	Industry/ Competition	Image/ Strategy
<ul style="list-style-type: none"><li>• Price:</li><li>• Impact of manufacturing method on price (quality, consumer preference)</li><li>• Volume:</li><li>• Breakeven</li><li>• Capacity</li><li>• Current production volume vs. demand</li></ul>	<ul style="list-style-type: none"><li>• Variable:<ul style="list-style-type: none"><li>• Manufacturing</li><li>• Distribution</li></ul></li><li>• Fixed:<ul style="list-style-type: none"><li>• Annual fee to third-party?</li><li>• Savings due to outsourcing?</li></ul></li><li>• Set-up:<ul style="list-style-type: none"><li>• Contract for third-party</li><li>• Investment in plant</li></ul></li></ul>	<ul style="list-style-type: none"><li>• CDC's manufacturing capabilities/expertise</li><li>• Production volume flexibility</li></ul>	<ul style="list-style-type: none"><li>• Quality control</li><li>• Ability to diversify/add products</li></ul>	<ul style="list-style-type: none"><li>• Is the industry trending toward/away from outsourcing?</li><li>• Are competitors using third-party manufacturers?</li><li>• Competitive response?</li></ul>	<ul style="list-style-type: none"><li>• Community ties gained/lost by building?</li><li>• Benefits to producing locally</li><li>• Impact on employee satisfaction (relocations, layoffs, improved conditions)</li></ul>

# CDC Pharmaceuticals

- **Question 2:** At what unit volume are the two options equally attractive for CDC?
  - Interviewer should provide the candidate with the following information only (candidate should calculate unit contribution and set up equations)
    - **Clarification:** for the third-party option, the manufacturing cost is \$0.75/unit for the first 20 million units and \$0.25/unit for all additional units

	New Plant	Third-Party	
		<u><math>\leq</math>20 million units</u>	<u><math>&gt;20</math> million units</u>
Selling Price	\$3.00	\$3.00	\$3.00
Manufacturing Cost	\$0.50	\$0.75	\$0.25
Set-Up Cost	\$52.5 million		\$0

# CDC Pharmaceuticals

- **Question 2 Answer:**

- Candidate should first calculate the contribution margin under each scenario and set up an equation to solve for the unit volume that makes the two options equally attractive

	New Plant	Third-Party	
		<u>≤20 million units</u>	<u>&gt;20 million units</u>
Contribution Margin	\$2.50	\$2.25	\$2.75

- **Equation:**
  - $2.50*(x \text{ units}) = 2.25*(20 \text{ million units}) + 2.75*(x-20 \text{ million units})$
  - Where  $x$  = the unit volume that generates the same contribution under both options
- **Solution:**
  - $x = 40 \text{ million units}$
- **Excellent** candidates will:
  - Recognize that 40 million units is less than CDC's **current annual production** of 50 million units
  - Calculate the **break-even** volume for the new plant ( $\$52.5 \text{ million} / \$2.50 = 21 \text{ million units} = 42\% \text{ of annual volume} \rightarrow \text{CDC will recover investment cost in less than 1 year}$ )
  - Make the interim determination that CDC should build the new plant

# CDC Pharmaceuticals

- **Question 3:** Suppose you are the governor of North Dakota. What factors might you consider in encouraging CDC to build the new plant and maintain its operations in your state?

Personal	State Government
<ul style="list-style-type: none"><li>• Re-election</li><li>• Display of corporate favoritism?</li><li>• Image (association with industry, support of environmental consciousness, etc.)</li></ul>	<ul style="list-style-type: none"><li>• Employment</li><li>• Taxes (initial incentive but future base)</li><li>• National credibility</li></ul>

- This question is intended to test the candidate's creativity and ability to pivot in the case. There is no right or wrong response; however, it is crucial that the candidate demonstrate his/her ability to generate a comprehensive and structured list of factors. The interviewer should probe and challenge the candidate's reasoning until an exhaustive, justifiable list has been established.
  - **Average** response: candidate brainstorms a short, unstructured lists of factors
  - **Good** response: candidate comes up with a number of ideas without issue but lacks structured thinking
  - **Great** response: candidate considers various perspectives and proactively creates a structure to discuss a comprehensive list of factors

# CASE 8: World Vision



Firm Style	Interview Round
Deloitte	Second Round (Strategy)

## Case Question

Our client is a non-profit organization whose mission is to bring better vision care and access to third world African countries. The organization currently only offers services in one country and provides vision care to 20,000 people a year through its three service locations. The non-profit has contacted Deloitte to develop a strategy to reach more of the population and cover operating expenses. What are your recommendations?

# World Vision

## Clarifying information (*provide only if corresponding questions are asked*)

Q: What is the total population for the country?

A: Total Population is 2M, which means a 1% penetration rate

Q: Where are the service locations?

A: In the three largest city centers in the country, but the majority of the population lives in rural areas

Q: How does the organization currently cover operating expenses:

A: The eye health exams are free to anyone who visits a location, but the revenue comes from the purchase of a pair of eye glasses (includes case, cleaning clothes, etc.). Each pair of eye glasses costs \$150, which is 10x the daily income for the average person in the country.

Q: How many people purchase eye glasses?

A: 50% of the population served purchase glasses and report improved ability to earn a living

Q: What are the penetration and financial goals of the organization?

A: Reach as much of the population as possible and cover operating expenses

Q: What are the operating expenses for the locations?

A: The total operating expenses for the organization are

# World Vision

- **Question 1: What are your recommendations for reaching more of the population and covering operating expenses?**
  - The interviewee should develop a framework analyzing the financial and market penetration requirements of the non-profit.
  - For market penetration, a good framework would include discussion of:
    - Awareness/Education of benefits for regular eye health exams
    - Access to service locations since the majority of the population lives in rural communities and it can take up to a day of travel to reach one of the locations for many
    - Marketing tactics used to drive awareness (should consider the target population's reading ability and access to media such online, print vs. word of mouth)
    - Operating hours of the locations compared to daily lives and work schedules
  - For the financials, a good framework would include discussion of:
    - The current budget deficit from revenues compared to operating expenses and the need to sell an additional 1,000 pairs of glasses to break-even.
    - Interviewee should remember the organization is a non-profit trying to achieve its mission not maximize profits.
    - Cost cutting options (there are none)
    - Pricing of the glasses kits- organization firmly believes in not charging for routine health exams and the kits are already 10x the average daily income
    - See next slide for calculations
  - Interviewee should conclude with a strong recommendation realizing the significant growth opportunity available in the country to expand services given the 1% penetration rate, but needs to find better ways to reach population

# World Vision

Population	2M
People Served	20,000
Penetration Rate	1%
Percent of People Served Buying Glasses	50%
Eye Glasses Sold	10,000
Price for Eye Glasses Kit	\$150
Cost for Eye Glasses Kit	\$50
Total Current Contribution from Kits	\$1M
Total Current Expenses for Locations	\$1.25M
Budget Deficit	(\$0.25)M
Additional Number of Kits Required to Cover Deficit	2,500

# World Vision

The interviewee should have identified the need to sell an additional 1,000 pairs of eye glass kits to cover current operating expenses. Provide additional information as needed to drive to this conclusion.

- **Question 2:** Given the goal of expanding World Vision's reach and the need to sell an additional 1,000 pairs of eye glasses, what are your recommendations for marketing the service? (brainstorming session)
  - A good response would include discussion of the need to educate the population and drive overall awareness of the benefits for eye health.
  - Additionally, the interviewee should keep in mind the limitations of operating in a third world country.
  - Possible recommendations might include-
    - Referral incentives to increase word of mouth advertising
    - Vision health ambassadors in rural areas
    - Traveling days for eye exams, where the optometrists go to the communities as opposed to staying in one of the locations
    - Changing the schedule to better align with work days and daily life routines
    - Volume discounts for families
    - New forms of marketing materials- pamphlets, portable speakers with audio messages
  - The more creative the better!

# World Vision

- **Question 3:** Finally, the non-profit did want us to consider a possible change in product offerings. World Vision is considering offering different levels of eye glass kits as opposed to the standard one offered today. What are your thoughts on the packages World Vision has developed?
- Remember we will still not charge the eye health exam.
- (Provide Exhibit 1)

# World Vision Exhibit 1

Packages	
<b>Premium</b>	
Price per Kit	\$350
Cost per Kit	\$250
Percent of Sales	10%
(Includes second pair of sunglasses and better quality lenses)	
<b>Standard</b>	
Price per Kit	\$200
Cost per Kit	\$125
Percent of Sales	30%
(Includes better quality lenses)	
<b>Basic</b>	
Price per Kit	\$150
Cost per Kit	\$50
Percent of Sales	60%
(Current offering)	

# World Vision Exhibit 1 (For Interviewer Only)

Packages			
Premium		Margin Per Kit	Total Contribution
Price per Kit	\$350		
Cost per Kit	\$250	\$100	
Percent of Sales	10%		\$100,000
(Includes second pair of sunglasses and better quality lenses)			
Standard			
Price per Kit	\$200		
Cost per Kit	\$125	\$75	
Percent of Sales	30%		\$225,000
(Includes better quality lenses)			
Basic			
Price per Kit	\$150		
Cost per Kit	\$50	\$100	
Percent of Sales	60%		\$600,000
(Current offering)			<b>\$925,000</b>

- Total Contribution calculations based on current 10,000 units sold
- Interviewee should realize the Total Contribution is less with the new package model because of the higher costs of goods for the Premium and Standard Kits. The budget deficit would now be -\$0.325M.

# World Vision

- **Question 3:** Based on your analysis, what are your final strategy recommendations to World Vision for its goals of reaching more of the population and cover operating expenses?
- **Recommendation-**
  - Interviewee should recommend that World Vision stay with its basic kit offering as opposed to the new package offerings to better cover operating costs and focus on increasing sales of kits by at least 2,500 units.
  - Interviewee should also include a few of the top ideas from brainstorming session to increase awareness and expand reach.
- **Risks-**
  - Should be relevant to above recommendations.
- **Next Steps**
  - Should be relevant and actionable to above recommendations and risks.

# CASE 9: Maxicure



Firm Style	Interview Round
McKinsey	1

## Case Question

Your client Maxicure manufactures and sells an over-the-counter cough and cold medicine. Their sole plant in Kentucky is aging, and its increasing maintenance costs are leading to low margins on their products. How would you advise Maxicure proceed to solve this problem?

## Clarifying information (*provide only if corresponding questions are asked*)

- There are 2-3 large players in this over-the-counter business who have distribution across the country. Maxicure is one of them.
- Maxicure sells all of its products in the US
- Objective is to reduce production costs while maintaining product quality (cost, quality and brand image all matter to customers)

# Maxicure

Question 1: What options does Maxicure have for purposes of tackling this problem, and what factors would you consider in deciding which option(s) to choose?

- A good answer would include the options:
  - Refurbish old plant
  - Rebuild plant at the same site
  - Rebuild plant at a different location (different city/state/country)
  - Outsource manufacturing
- Factors to consider:
  - Investment cost of each option
  - New per unit cost of medicine for each option
  - Potential financial/non-financial benefits of relocation (e.g. tax breaks, labor rates, etc.)
  - Effect of each option on the quality of medicine
  - Opportunity for improvement of capacity/technology if new plan option chosen
  - Proximity of plant to distribution centers

# Maxicure

Question 2: Maxicure has narrowed down it's decision to 2 options:(1) build a new facility next to the old plant, or (2) outsource the manufacturing to a competitor. With the information given below, how many bottles of medicine would Maxicure need to sell for the in-house option to be more profitable than the outsourcing option?

Note: After the calculation, push the candidate to select an option and give reasons why.

- Selling price per bottle: \$4.50
- In-house:
  - Initial Investment: \$50M
  - Total cost per bottle: \$2.00
- Outsource:
  - Total cost per bottle (<20M bottles): \$2.25
  - Total cost per bottle above 20M bottles: \$2.50

# Maxicure

## Question 2 Solution:

- Margin in-house : \$2.5
- Margin outsourced: \$2.25 <20M and \$2 >20M
- Let's say Maxicure needs to sell 'x' bottles to make the two options have equal margins.
- In-house margin =  $2.5x - 50M$
- Outsource margin=  $(x-20M)*2 + 2.25*20M$
- Equaling the profits gives:  $2.5x-50M=((x-20M)*2)+(2.25*20M)$
- Or  $x= 110M$  units

# Maxicure

- Question 3: Maxicure has decided to build a new production facility, but it wants to build the plant in Indiana instead to be closer to a major distribution center. How should it convince the Governor of Indiana to offer Maxicure the necessary tax breaks to make the move more profitable for the firm?
- Good responses may include:
  - More tax collection for the state, stimulating the economy
  - More job creation
  - Good press for the Governor
  - Might attract other manufacturers
  - Suggestions to conduct community-building initiatives like building schools, parks etc.

# Maxicure

- Question 4: What is your final recommendation to the client?
- Good responses should include:
  - Answer first
  - 2-3 pieces of supporting, data-driven evidence
  - Key risks
  - Next steps
  - Re-state answer

# CASE 10: Railroad Budget Blowout



Firm Style	Interview Round
BCG	2

## Case Question

Our client is an Eastern U.S. railroad that is required to implement a new technology mandated by the government. The new technology involves installing signal readers at various points along the tracks to communicate train locations and improve safety measures over the next 12 months. They have exceeded their budget on the first 3 installments and have asked us to help them solve the problem.

## Clarifying information (*provide only if corresponding questions are asked*)

Q: What is the total budget for the project?

A: The total budget is \$100M

Q: Do we know how far over budget they are?

A: It varies by installment but they have been over by an average of 15%

Q: Is there a reason why costs have increased?

A: The client is unsure and has asked us to help them figure out the cause of increases.

Q: How many more installments do they have?

A: 10 left

# Railroad Budget Blowout

## Clarifying information (*provide only if corresponding questions are asked*)

Q: What is the process to install the new technology?

A: For each location, the installation team travels to the site daily, works 8AM-5PM, Monday-Friday. They are each assigned a task once they arrive and have the tools to get started.

Q: Has the same team done each of the installations?

A: It's a core team of installers for each region who travel to various sites. They are the only ones with this type of experience in the regional areas.

# Railroad Budget Blowout

## Framework / Structure

This interviewer is looking for (i) identification of whether this is a company-specific or industry-wide problem and (ii) breadth and creativity of thinking in identifying the cost buckets for the projects and potential opportunities to reduce costs, which can be done by reducing the labor or increasing efficiency. Below is an example of a strong MECE framework.

### Reasons for Cost Increases

- *Labor*
  - Wages
    - Taking longer than expected (Overtime)
    - Union Involvement
    - Higher minimum wage than budgeted
  - Process
    - Requiring more people to complete task
    - Composition of workers - skilled vs. unskilled
- *Materials*
  - Cost of inputs
  - Transportation of materials
  - Development / Infrastructure costs
  - Inventory Control

### External:

- *Competitors experiencing the same thing*
- *Weather interference – causing longer project times*
- *Supplier Issues*
- *Technology Failures*

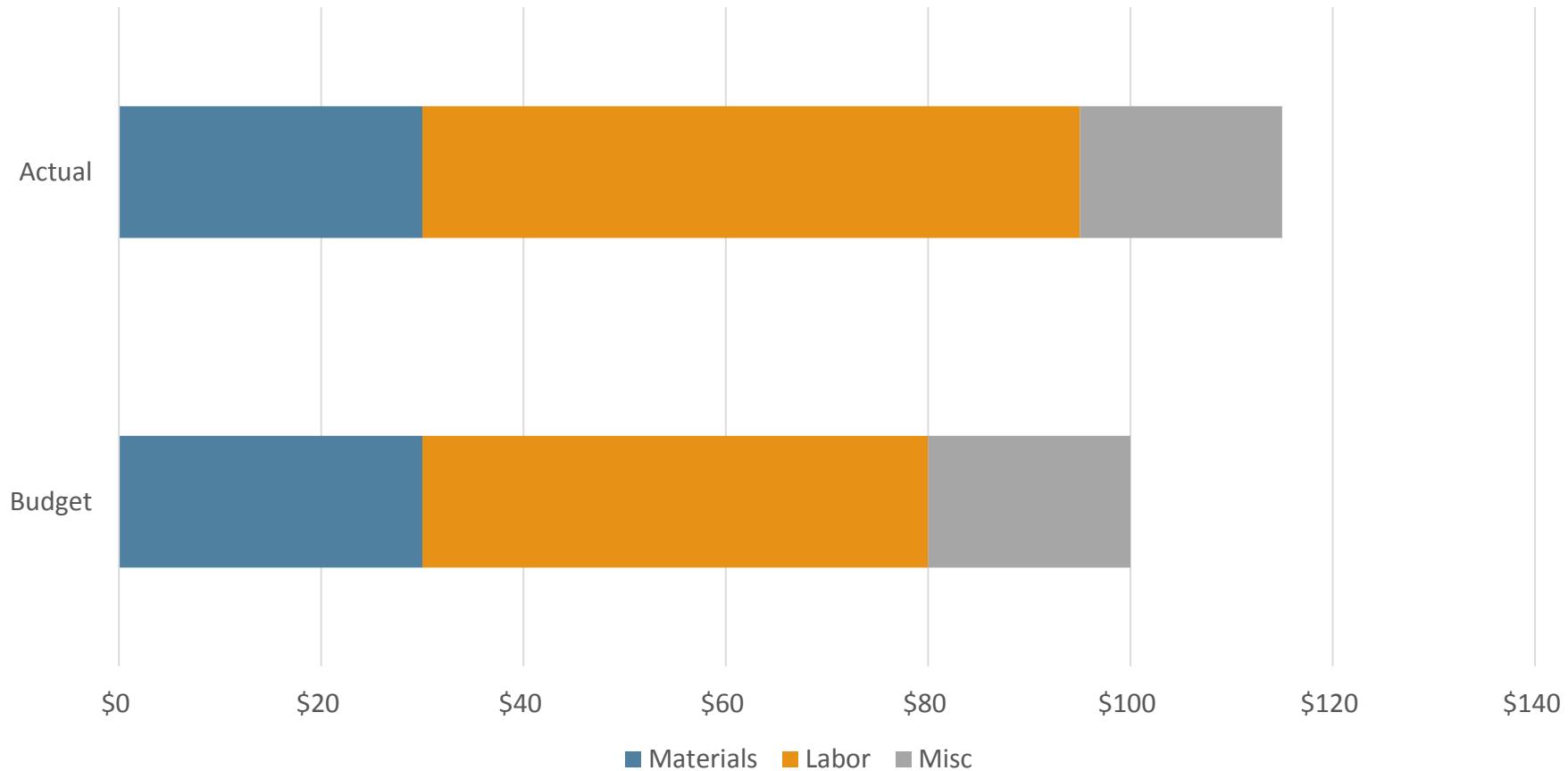
# Railroad Budget Blowout

## Interviewer Tips

- Amongst several other issues / opportunities, the candidate should identify the main factors to be considered as the labor and materials for the project.
  - If they do not identify these buckets, push them to brainstorm.
- Once asked for specific costs/budget-to-actual info, provide Exhibit 1
  - After review, candidate should identify that labor is the main source of increased costs
  - Encourage the candidate to brainstorm ways to investigate labor costs
- After some discussion, mention that a study was done to observe workers in the field and provide Exhibit 2
  - Candidate should look for opportunities to reduce non-value add activities
  - If needed, prompt candidate to consider which activities add value and which do not
  - Candidate should use this data to calculate savings opportunity per worker
    - Reference “Calculation” slide for additional information
  - If needed, prompt candidate to quantify the savings by reducing non-value add activities
- The rest of the case should focus on identifying specific actions to increase efficiency and reduce costs
  - Candidate should make assumptions and do calculations to determine amount of cost savings that can be realized by implementing solutions

# Railroad Budget Blowout

Exhibit 1



# Railroad Budget Blowout

**Exhibit 2**

Observed Daily Activity	Average Time (per worker)
Arrival and daily set up	20 mins
Gather materials	20 mins
Team meeting	30 mins
Signal installation	5 hours
Breaks (smoking, bathroom)	40 mins
Lunch	1 hour
Quitting early*	40 mins
Waiting for new task	30 mins

\*Sometimes workers don't start a new task if its nearly the end of the day

# Railroad Budget Blowout

## Candidate should immediately drive to insights

- There are many non-value add activities that can be eliminated
- By reducing non-value add activities, we can increase productivity by 33%

## Interviewer Guidance

- Company policy includes 2x10 minute breaks per shift & 1 hour of unpaid lunch
- Team meetings are mandatory
- Arrival & gathering materials can be reduced by 75%
- Non-value add activities to eliminate – push candidate to reduce these categories by amounts below
  - Quitting Early (40 mins)
  - Half of breaks (20 mins)
  - Waiting for new tasks (30 mins)
  - Reduce Arrival & Gathering Materials (30 mins)
- Total Non-value add time to eliminate is 2 hours
- Assume all non-salary workers make the same hourly wage & that salaried workers are not causing the increase

## Calculations

- Total non-value add time per worker: 2 hours (120 mins) per day
- Total non-value add time per worker (%): 25% of the day

# Railroad Budget Blowout

## Brainstorm Solutions

Candidate should naturally make suggestions to improve areas they identify as needing improvement – interviewer may need to prompt the candidate to brainstorm solutions. Some possible solutions include:

- *Operational Improvements*
  - *Work site management & organization to improve setup time & gathering material*
  - *Streamline task communication to reduce early quit times*
- *Training*
  - *Supervisor training to allocate work correctly to minimize wait time*
  - *Policy training and reinforcement*

# Railroad Budget Blowout

## Recommendation

The candidate's recommendation should include a discussion of: (i) a clear explanation for the increased costs, (ii) the opportunities for increasing efficiency in the field and the savings that can be realized, and (iii) a return to the original framework and the specific recommendations for achieving the opportunities listed.

### "Go Recommendation"

- *Weak:*
  - The client should try to get more efficient labor to reduce costs. They should be more strict about lunch breaks and working hours to help not exceed their labor budget. They should also try to get a discount on the supplies.
- *Strong:*
  - The client should conduct training and implement new operational strategies to reduce non-value add time and increase productivity to get the project budget back on track. By reducing non-value add activities such as excessive breaks and quitting early, they can realize 25% reduction in labor costs. Additionally, they can streamline task assignments and inventory control methods to improve efficiency. Some risks could be downtime during training and maintain employee morale while managing pushback. Next steps would be schedule implementation based on priority and ease of implementation.

# CASE 11: Saving the Payphone Company



Firm Style	Interview Round
McKinsey & Company	2

## Case Question

Our client is an American payphone company that installs and maintains payphones in commercial and residential buildings. Payphones is a dying business globally. So the client has contacted us to help figure out how they can preserve and improve profitability in existing business for as long as possible. The CEO has already communicated that the firm is not interested in entering new markets or adding more services to this business.

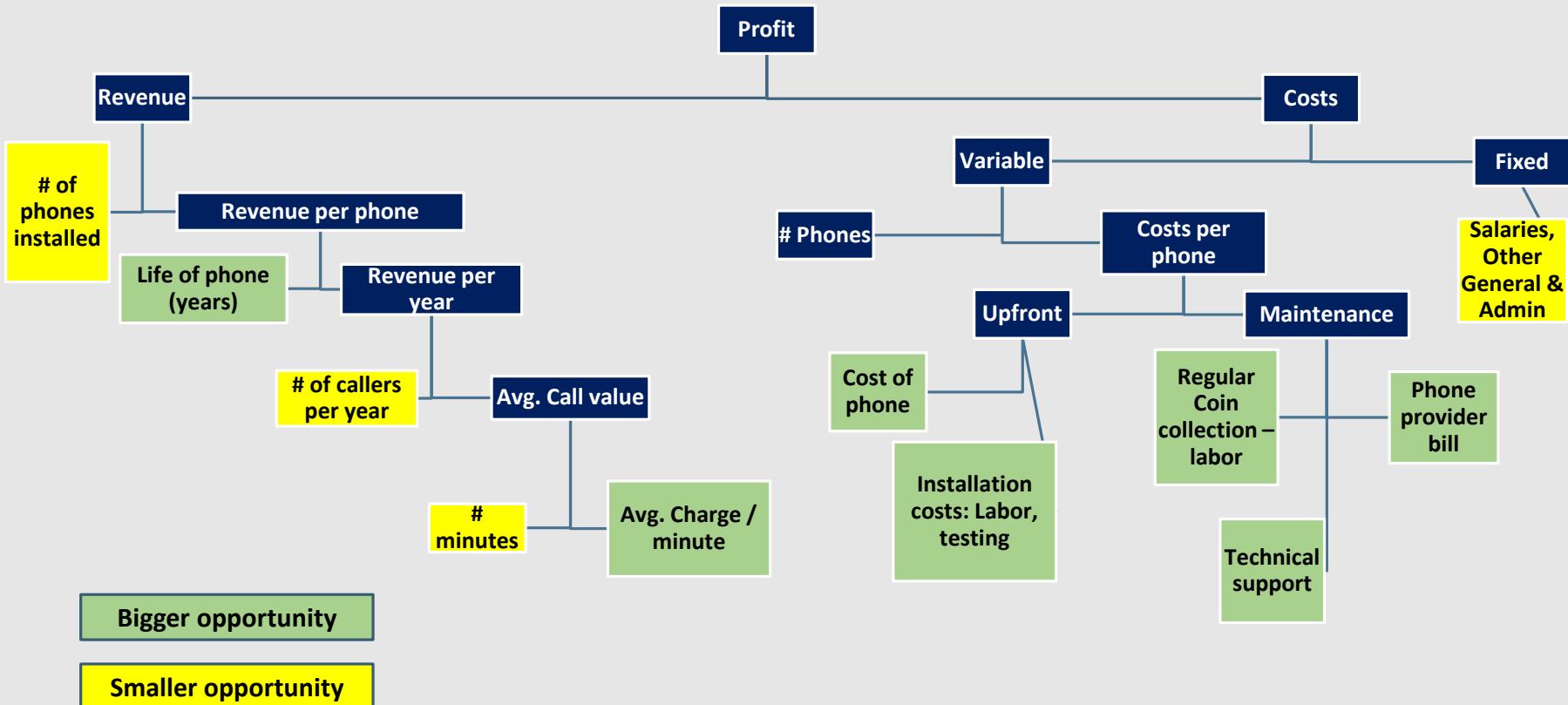
## Clarifying information (provide only if corresponding questions are asked)

How do they make money? / Do they share profits with the builder?	Once our client get a contract from the builder to install a payphone, all the costs and revenues are attributed to the client. Builder is not involved post the initial contract phase.
How do you collect revenues from the phone?	In addition to revenues from initial installations, coins are collected from traditional payphones when the coin box is full.

# Saving the Payphone Company

Question 1: What ideas do you have to increase profits for the clients?

Sample structure:



# Saving the Payphone Company

## Good candidate:

- Builds a profitability framework and identifies various revenue and cost drivers
- Recognizes that this is a mature business and thus suggests cost cutting measures such as reducing maintenance costs and SG&A

## Better candidate:

- Builds a quick and concise MECE framework that is specific to the payphone business
- Realizes that increasing number of payphone contracts, number of phone users and number of phone calls might not be feasible
- Suggests specific cost cutting measures such as reducing costs of the phones installed, decreasing maintenance costs, lowering downtime of the phone, negotiating contracts with network service provider and reducing labor costs to collect coins from the box at regular intervals.

## Interviewer guide:

Push the candidate to think about reducing the cost of phone devices our client installs. Move to Question 2 once the candidate starts talking about using old phones / refurbished phones etc.

# Saving the Payphone Company

**Question 2: Our client has two options to reduce the up-front cost of phone devices.**

Option 1:

Install brand new phones which have a microchip fitted inside. The new technology directly tells the maintenance department when the coin box is full and they can send maintenance support to empty the coin box. Additionally, since this phone is a high-tech phone it does not break. Hence it has no downtime throughout its life.

Option 2:

Install refurbished phones which are based on traditional technology. Our forecasting department essentially tells the maintenance guy when to go and collect the coins from the coin box of the phone. Historically, whenever the maintenance guy visits based on these forecasts, the coin box is half full. Additionally, these phones have a downtime of almost 10 days a year.

We are helping our client figure out which phone to choose. So what information do you need to decide and which phone would you recommend?

# Saving the Payphone Company

Interviewer:

Provide the information below after the interviewee asks for it. Press the interviewee to think about what information they need:

	Microchip Phone	Refurb. Phone
<b>Phone device cost (\$)</b>	\$ 700	\$ 200
<b>Revenue per day (\$)</b>	\$ 2	\$ 2
<b>Coin box capacity (\$)</b> <b>(Assume devices only take in \$1 coins)</b>	\$ 72	\$ 72
<b>Downtime days per year</b>	-	10
<b>Labor cost (\$ per visit)</b>	\$ 10	\$ 10
<b>Network provider cost (\$ per year)</b>	\$ 100	\$ 100
<b>Life of phone (years)</b>	10	10

Assume there are 360 days in a year.

# Saving the Payphone Company

Math	Microchip phone	Traditional phone
<b>Days in operation / year</b>	360	350
<b>Revenue per year</b>	= $360 * \$2 = \$720$	= $350 * \$2 = \$700$
<b>No. of maintenance visits per year to empty coin box</b>	= $\$720 / \$72 = 10$	= $2 * (\$720 / \$72)$ =20
<b>Maintenance costs per year</b>	= $10 * \$10 = \$100$	= $20 * \$10 = \$200$
<b>Network provider cost per year</b>	\$100	\$100
<b>Contribution per year</b>	= $\$720 - \$100 - \$100$  =\$520/year	= $\$700 - \$200 - \$100$  =\$400/year
<b>Profit over life of phone</b>	= $\$520 * 10 - \$700$  =\$4500	= $\$400 * 10 - \$200$  =\$3800

Years to breakeven the cost of microchip phone when compared to old phone

$$= (\$700 - \$200) / (\$520 - \$400) = 4.2 \text{ years}$$

# Saving the Payphone Company

## Insights:

- Microchip phone is more profitable over the life of the phone
- The difference in profit between the two devices is driven by savings in maintenance cost due to efficient coin collection
- Breakeven period to compensate for high initial cost of high-tech phone vs old phone is 4.2 years
- Hence, if we improve the forecasting for old phone, then we do not need to buy new phones.

## Question 3: Do you think the new, high-tech option or the old phone option is better? Why?

This question is meant to test the candidate's business acumen. While there is no correct answer to this question, the candidate should support his/her response adequately. One acceptable response could be that it does not make sense for the client to install new phones given the long break-even period relative to the dying technology.

Next, push the candidate to think about ways to save costs without buying new phone particularly by improving the forecasting method for the old phones and reducing the number of visits.

# Saving the Payphone Company

**Question 4: In order to generate new revenue, the client has asked us to look for ideas on places where more payphones can be installed across US. How would you come up with the list?**

- Good candidate:
  - Categorizes ideas in a structured way. Suggests possibilities in different residential and commercial spaces.
- Better candidate:
  - Classifies the contracts that payphone providers have in a MECE way.
  - Recognizes that people use payphones either when
    - They do not own a cell phone
    - They cannot use a cell phone due to lack of network, battery or calling minutes
    - They are not allowed to use cell phones

Sample classification:

## Commercial buildings:

- High security buildings such as FED, government offices, embassies
- Private companies: data security
- Schools, colleges, airports

## Residential buildings:

- Housing societies in cities
- Phone booths in remote locations

# Saving the Payphone Company

What would be your final recommendation to the client?

- Note to interviewer: DON'T allow interviewee a moment to prepare an answer
- A strong interviewee will provide the recommendation in the first sentence, support recommendation with arguments and acknowledge risks.
- Risks could include:
  - No buffer days to collect coins might lead to down time of phones in some cases
- Next steps could include:
  - Identify new revenue opportunities by doing an in depth competitor / market analysis

# CASE 12: Selling Abayas in Bahrain



Firm Style	Interview Round
A.T. Kearney	1
Case Question	
<p>The CEO of your client “Middle East Textile” just called you to know whether he should buy a new machine for \$1 million which will effectively double his capacity of Abaya production. He has asked you to provide an answer within the next half-hour. How will you advise him?</p>	

## Clarifying information (*provide only if corresponding questions are asked*)

Q: What does the company do?

A: The company exclusively manufactures and sells Abayas in local Bahrain market.

Q: What is an Abaya?

A: Abaya is a full-body garment worn by women in middle east.

Q: What is the company's preferred payback period?

A: The company typically wants its initial cost back in 5 years.

Q: Is there a company discount rate?

A: You can ignore discount rate for this case.

# Selling Abayas in Bahrain

## Framework / Structure

This interviewer is looking for:

- (i) Identification of key parameters you should look at to calculate the profitability of this decision
- (ii) Look at drivers of market growth for the company to sell additional abayas manufactured after the purchase of this machine

### Internal:

- *Profitability*
  - Volume & Price
    - Increase the total number of Abayas sold in Bahrain
    - Explore making Abayas for various age groups and design
    - Exporting Abayas to other countries
  - Costs
    - Variable cost of production from the machine
    - Any other fixed costs such as land, SG&A, etc.

### External:

- *Competitor capacity and response*
- *Increasing / Decreasing demand for Abayas*
- *Macro market trends*
- *Customers*

# Selling Abayas in Bahrain

## Interviewer Tips – Provide this info if asked

- The candidate should start with talking about the profitability of buying the machine. He/She should discuss relevant costs (increased expenses, land costs, etc.) and revenues (increase units sold or increase price)
- After the candidate mentions customers, mention that the client exclusively makes Abayas for women in age group of 19 – 50 years.
- For competition, the client has 3 competitors in the market, each has 25% market share (with our client having the remaining portion). All competitors are operating at maximum capacity as of now.
- The rest of the case should focus on market sizing and a break-even analysis surrounding the purchase of new machine.
- Market demand is stable and women buy an average of 2 abayas per year in the target age group (19 – 50 years).

# Selling Abayas in Bahrain

## Question #1

**You have some idea about the market and decision now. Can you estimate the number of Abayas sold by the client in the Bahrain market?**

Tip: Candidates should begin market-sizing by verbalizing their formula/approach to size the market. For each variable they lay out, candidates should verbalize what information they think they'd need to solve for that variable (i.e. sometimes there will be multiple layers) and then confirm that the approach is reasonable to the interviewer. This will help candidates identify potential "traps" in the market-sizing. The candidate should then ask for the relevant info as they tackle each variable in solving the market-sizing problem.

(1)

(2)

(3)

(4)

Example : Bahrain population \* % of pop wearing abayas \* % target demographic \* # bought per person per yr

(1) Population of Bahrain: 1 million

(2) % Wearing abayas: 50% women \* 20% of population is domestic (the other 80% are expats who don't wear traditional garb)

*Candidates can assume that 50% of the domestic population are women. Additionally, candidates should distinguish permanent residents from expats (candidate should ask about both)*

(3) Target demographic: 40%

*Population distribution: 0 -18 yrs = 45%, 19 – 50 yrs = 40%, 50+ years = 15% (provide this info if candidate asks)*

(4) # Bought per person per year: 2

*(If candidate doesn't already have this info, prompt them to use 2 per person per year)*

Total Abayas market size =  $1m * (50\% * 20\%) * 40\% * 2 = 80k$  per year

Total sold by Middle East Textile =  $80k * \text{market share of } 25\% = 20k$  per year

# Selling Abayas in Bahrain

## Question #2

**Can you evaluate now whether the client should buy the machine?**

Breakeven calculation:

- Average selling price of an abaya is \$200
- Average variable cost of an abaya is \$150
- Outside of the \$1m up-front, there are no other fixed costs (assume we already have land, SG&A capacity etc.)
- There is no discount rate so candidate can also evaluate breakeven period.
- Candidate should be able to identify that even though market demand for women is stable, the population distribution will increase number of women in our target age group increasing total market size.
- Since competition is already at capacity, we can capture the whole 100% of increased market size if we increase our production capacity.
- Work with the interviewee to drive them towards increased market size and capacity constraints with competitors.

# Selling Abayas in Bahrain

## Calculations

- Total female domestic population:  $1M * 50\% * 20\% = 100K$
- Increase in target age group population per year:  $(45\% / 18) \times 100K = 2,500$
- Decrease in target age group population per year:  $(40\% / 32) \times 100K = 1,250$
- Net increase in target age group population per year:  $2,500 - 1,250 = 1,250$
- Total incremental sale of Abayas per year:  $1,250 \times 2 = 2,500$
- Contribution increase per year =  $2,500 \times (\$200 - \$150) = 125K$
- Year 1: 125K, Year 2: 250K, Year 3: 375K, Year 4: 500K, Year 5: 675K
- **Total contribution in 5 years: 1,875K**

## Insights

- Candidate should immediately realize that the cost of machine is much lower than the increased contribution. The company breaks even in roughly 3.5 years.

# Selling Abayas in Bahrain

## Recommendation

There is a clear case for “Go” recommendation in this case. The candidate’s recommendation should include a discussion of:

- (i) a clear “go” or “no go” recommendation regarding the purchase of new machine
- (ii) the project’s breakeven analysis and the client’s criteria
- (iii) risks around purchasing the machine
- (iv) a return to the original framework and the identification that there are expansion possibilities for the company

# Selling Abayas in Bahrain

## Recommendation (continued)

### “Go Recommendation”

- *Weak:*
  - The client should purchase the new machine. The contribution in next 5 years will exceed the buying cost of the machine and result in net profit.
- *Strong:*
  - The client should purchase the new machine. The contribution in next 5 years of \$1,875K exceeds the buying cost of the machine and will result in net profit of \$875K.
  - However, even if one more competitor expands its capacity and splits the current contribution equally we will make a loss on the purchase of about \$62.5K
  - To avoid that risk, the company should look into either increasing its market share locally (potentially via price reduction) or expanding its business to export in other countries since even after 5 years, the client will only be utilizing about 62.5% of our extra 20K capacity from the machine.



# CASE 13: Starbucks' Ice Cream Dream

Firm Style	Interview Round
Bain	1

## Case Question

Put yourself in the shoes of a Starbucks executive. You have been asked how you would think about launching a new product, specifically soft-serve ice cream. What would you think about?

## Clarifying information (*provide only if corresponding questions are asked*)

Q: Does Starbucks have a goal for launching ice cream?

A: There is no specific financial goal.

Q: Is this in the United States or worldwide? All stores or just some?

A: Consider this for all US stores.

Q: Is this something any other competitors have done?

A: I don't have information, but it's something that you can think about.

Q: What kind of ice cream does Starbucks want to introduce?

A: That is up to you.

# Starbucks' Ice Cream Dream

- **Interviewer Tips**

- This case is designed to be intentionally ambiguous in order to assess the candidates' ability to ask for the data that they need, and quickly structure a large problem to drive to a hypothesis and recommendation. It is very strongly **interviewee-led**.
- There is no given data or exhibits available for this case. No hints should be given to the interviewee. A great candidate will not be frazzled by the lack of information and will focus on what they can pull from their own experience (without bias!) and business sense.
- The case has two important components:
  - **Qualitative:** In describing the customer and market landscape, a great interviewee will demonstrate an ability to weave their own personal experience, put themselves in the mind of the customer, and creatively structure pros and cons for a “launch” or “no launch” decision.
  - **Quantitative:** A great candidate will ask for data related to each part of their framework without being prompted to do so.

# Starbucks' Ice Cream Dream

## Framework/Structure

- The interviewer is looking for (i) identifying that the customers are the most important thing Starbucks must consider, (ii) breadth in framework that takes into consideration factors including the market, cost, revenue, cannibalization, (iii) creativity in evaluating customer preference and store implementation logistics.

## Customer

- Customer Segmentation
  - Who are the potential customers? What are their preferences? Are they growing?
- Willingness to Pay
  - Benchmark against comparable products. Is ice cream a premium product?
- Overall Trends
  - Healthier consumers, reduction in sugar consumption, specialty desserts, etc.

## Market

- Competitor Trends
  - Who are the competitors? How many are there? What is their market share?
  - (Ice cream vendors, specialty deserts, ice cream purchased in grocery stores, Starbucks' existing products)
- Barriers to Entry
  - Competitor market share concentration and existing brand recognition

# Starbucks' Ice Cream Dream

## Profitability

- Revenue

- Based on customers and market, how many people can we expect to buy ice cream and how much can we charge?
- Is this a bundling opportunity or will it cannibalize existing sales?

- Costs

- Fixed Costs (additional storage equipment, SG&A, marketing, training); Variable Costs (raw materials, additional labor)
- Opportunity Costs – if Starbucks takes this on, what else are they not doing?

# Starbucks' Ice Cream Dream

- Interviewer Tips

- In the first part of the case, push the interviewer to do an in-depth analysis of who the customer for this product will be.
  - A great interviewee will structure this discussion and include demographics, psychographics, and consider market and competitive factors.
- After diving into the customer, push the interview on whether they think it is a good idea to launch this product in stores. They should state an initial hypothesis, but recognize that a deeper market sizing and financial analysis is necessary.
- In describing the market, the interviewee should be able to further clarify whether their view of the market changes their initial hypothesis.
- Once the interviewee has walked through the customers and market, they should want to jump to defining profitability. If they do not do this or profitability is not in their framework, push them to do a deeper market sizing and financial analysis.

# Starbucks' Ice Cream Dream

- Interviewer Tips

- Ask the interviewee whether they think their decision is financially viable.
- If they do not jump to doing a market sizing and mock financials, push the interviewee by asking how they would prove their hypothesis is financially viable? Encourage them to look at the market on a per store basis.

- Sample:

- The actual numbers and structure can vary widely. The important parts are that the structure is clear and that they demonstrate their initial hypothesis is true or untrue.
- $(\text{No. of Customers Daily} = 200/\text{hr} * \text{Average Hours of Operations} = 10 \text{ hours}) = 2,000 \text{ customers/day}$
- Average Spend per Customer = \$4 \* 2,000 customers = \$8,000 Revenue/day
  - *Note: The interviewee can assume the average ice cream price is different than the average spend per customer*
- $(5\% \text{ of customers purchasing} - 4\% \text{ of customers cannibalized from other products}) * \$8,000$   
= \$80 in additional revenue
- If the interviewee does not immediately say whether the additional supports or disproves their hypothesis, ask what the number means.

- Optional

- Push the interviewee to talk about the costs needed to gain the additional revenue. Is it enough revenue to cover the costs?
- What risks do you see to implementation? (Employee confusion, additional training time, brand confusion, etc.)
- Does this add to Customer Lifetime Value or will these be mostly one-time purchases?

# Starbucks' Ice Cream Dream

- Interviewer Tips
  - The interviewer can justify either launching or not launching based on their analysis. A strong recommendation will focus on value to the customer, market for the product, and financial implications to support their recommendation.
- Sample: Launch
  - The additional revenue outweighs the cost of implementation.
  - Additional benefits include promotional opportunities to get more people in the store, additional brand recognition (whether or not it is profitable), diversification of product mix.
- Sample: Do not Launch
  - The additional revenue does not outweigh costs, or does so very minimally.
  - Interviewer believes this is a one-time purchase so there is no customer loyalty, market for this product is already saturated, the addition of ice cream damages Starbucks' current brand and existing customer loyalty.

# CASE 14: Transportation TechCo.



Firm Style	Interview Round
Parthenon	1
Case Question	
<p>Our client, Transportation TechCo., is a key player in the transportation technology space. Recently, the client developed an innovative GPS fleet tracking device which it believes could prove valuable to K-12 schools in the U.S. We have been engaged to help our client determine whether this product should be rolled out as a school bus tracking device.</p>	
Clarifying information ( <i>provide only if corresponding questions are asked</i> )	
<ul style="list-style-type: none"><li>The device transmits location and ETA info to schools and parents/legal guardians. Parents, bus drivers, and school administrators access transmitted data and messages via a proprietary phone/tablet application</li><li>The client's primary goal is to figure out the best context/industry in which this product should be rolled-out. Success is defined as profit maximization.</li><li>Our client will generate revenues by (1) initial sales of the device (2) technology service plans. For purposes of this case, we are primarily focused on (1)</li><li>The device would have a 5 year life span</li></ul>	

# Transportation TechCo.

- Interviewer guidance:

- Candidates should create a structure addressing the most salient issues concerning the question posed in the prompt. For example:
  - Customers – Who would our client be selling to in a school bus context?
  - Competitors – What, if any, similar products are being used?
  - Financial Considerations – (1) Potential market size and (2) profit tree
- Push the candidate to think through the buying process. If the candidate asks, you can tell them that purchasing decisions are made by different decision-making-units across school settings (i.e. district-level, school-level, bus drivers, etc.).
- If they don't do so on their own, push candidates to consider the specific benefits which could be derived from this product.
  - Force them to (very quickly) brainstorm how the product might benefit key stakeholders (i.e. schools, bus drivers, students, parents, etc.)

# Transportation TechCo.

- **Interviewer guidance:**
  - Candidates should think about the potential sources and drivers of revenues & costs associated with the product
    - If they exclude this from their framework or if you are unsatisfied with what they have provided, force them to brainstorm revenue & cost drivers. These should be case/industry specific!!
  - Once you are satisfied, move onto Question 1

# Transportation TechCo.

Question #1: What is the potential addressable year 1 market size for this device in the U.S. school bus space?

Tip: Candidates should begin market-sizing by verbalizing their formula/approach to size the market. For each variable laid out, candidates should verbalize what information would be needed to solve for that variable (i.e. sometimes there will be multiple layers) and then confirm that the approach is reasonable to the interviewer. This will help candidates identify potential “traps” in the market-sizing. The candidate should then ask for the relevant info as they tackle each variable in solving the market-sizing problem.

(1)

(2)

(3)

Example Formula: # School Buses in U.S. \* # units per bus \* Selling price per unit

(a)

(b)

(c)

(1) # School Buses in US= # K-12 students in U.S.\* % Students Riding Bus)/(# Students per bus))

- (a) Assume school-aged kids are 4-18; assume 320M people in U.S. evenly distributed across ages, with life expectancy of 80 yrs. (i.e. 4M per yr) =  $15 * 4M = \underline{60M}$
- (b) Assume 60% of students aged 4-13 ride and 30% of students aged 14-18 ride =  $(10/15 * 60\%) + (5/15 * 30\%) = 120\%/3 + 30\%/3 = 120\%/3 = \underline{50\%}$
- (C) Assume average bus has roughly 13 rows on each side and can seat 2 students per row =  $13 * 2 * 2 = \underline{52}$  students per bus (appropriate to round down to 50 or up to 60)
- $((a) * (b)) / (c) = (60M * 50\%) / 50 = \underline{600k buses}$

(2) # units per bus = 2 (give to candidate once they ask)

(3) Selling price per unit = \$200 (give to candidate once they ask)

Total potential addressable Yr 1 Market Size: (1) \* (2) \* (3) =  $600k * 2 * \$200 = \$240M$

# Transportation TechCo.

Question #2: If the client were to enter the school bus market, what do you think its year 1 new device sales would be?

- Year 1 revenues = Potential year 1 market size \* year 1 product adoption percentage
- There is no correct response to this question. Here the interviewer should be looking for the candidate to demonstrate business acumen and support his/her response. For example, most schools are very resource constrained, so year 1 adoption of 10% might be reasonable. Whatever the case, the interviewer should push the candidate for supporting rationale for the product adoption % chosen.

Question # 3: What would you expect to be the annual revenues (in terms of new product sales) in year 5?

- If they ask, candidates can assume that the overall market will not grow
- Year 5 revenues = (Potential year 1 market size - year 1 revenues - year 2 revenues – year 3 revenues - year 4 revenues) \* year 5 product adoption percentage
- Here the key is to remember that the product has a 5 yr. life, so any schools purchasing the device in years 1-4 would be “out” of the market in year 5
- Candidates should state their assumptions about adoption rates for years 2-5

# Transportation TechCo.

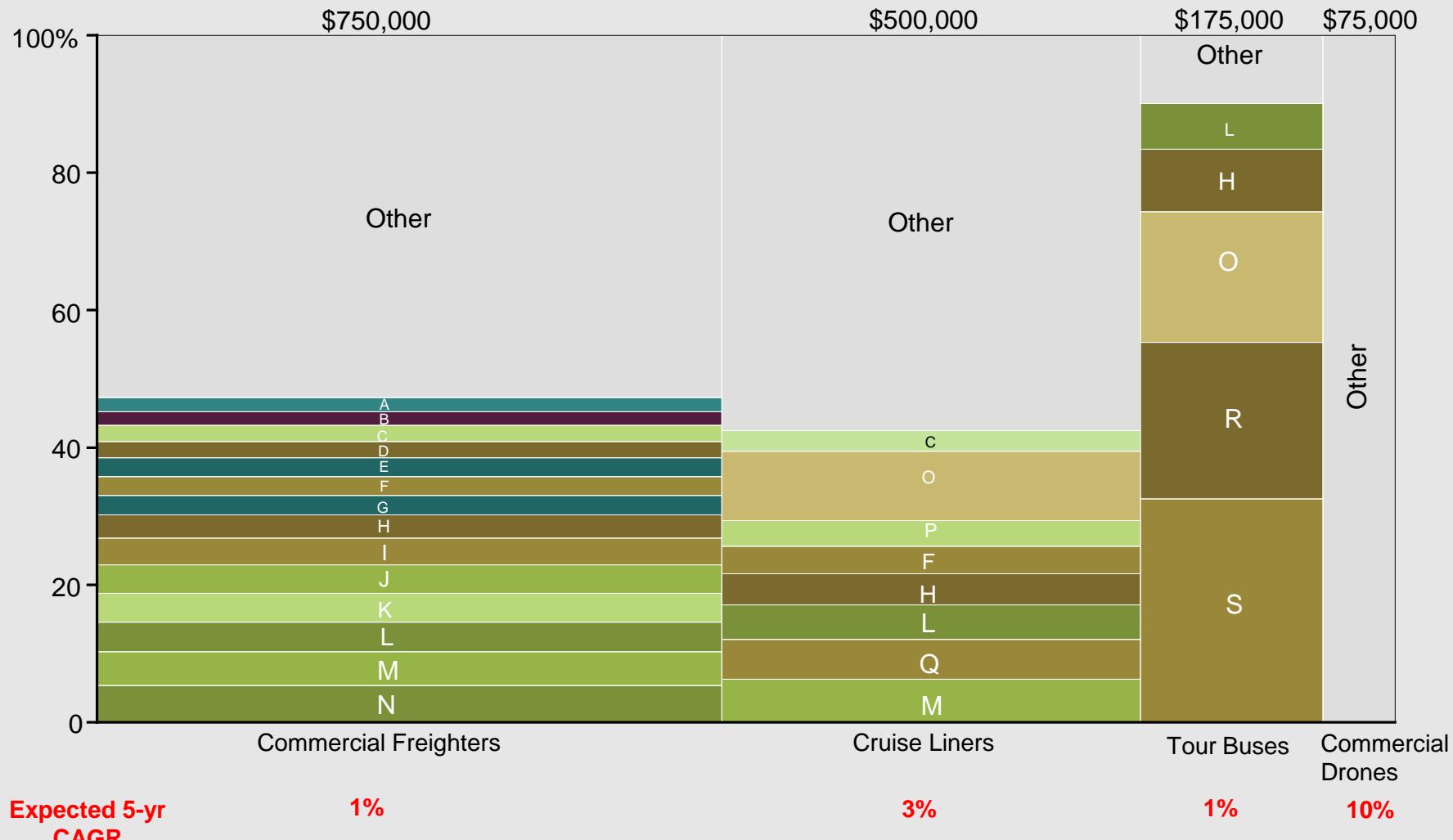
Question #4: What are some other sectors and outlets that could make sense for this new technology?

- Push the candidate to brainstorm
- Some examples might include commercial freight, shipping, public transportation, flight, cruise ships, rescue boats, tour buses, drone fleets, etc.

Question #5: Looking at the following data, which additional outlets do you think appear attractive? Why?

# Exhibit 1

Prior Year Sales by Competitor Product (in 000's)



Expected 5-yr  
CAGR

1%

3%

1%

10%

**Note:** Competitor break down does not represent or approximate real life industry landscape.  
All figures are made up for educational purposes. Colors represent competitor companies.  
Letters indicate products

# Transportation TechCo.

- Interviewer guidance:

- The candidate should avoid getting confused by the high amount of detail included within the Exhibit. They should quickly drive to insights once they understand the data presented.
- The key insights are that (1) commercial freighters and cruise liners are the two largest markets and lack dominant competitors (highly fragmented) (2) high growth rate in the commercial drone segment is not compelling enough to merit entry as annual segment sales would only reach \$120M in 5 years (using the rule-of-72, sales wouldn't double for 7.2 years), still making it the smallest segment.
- Thus, commercial freighters & cruise liners would be the two most attractive additional segments from the Exhibit → However this does not necessarily mean the client should necessarily launch into these segments

# Transportation TechCo.

## Question #6: How should the client proceed?

- A strong interviewee will provide a recommendation about whether the client should enter the school bus segment and why (using data from the case).
- Candidates should also discuss risks to their recommendation and next steps
- Recommendations should also address any other segments (commercial freight, etc.) which might be attractive for the product