



Darden 2021-2022 Casebook

Darden School of Business





Darden Case Book 2021-2022 Foreword



**Prep
Material +
12 Total
Cases**

The cases featured in the 2021-2022 Case Book are some of Darden's best cases from prior years

This case book includes a consulting industry guide and 12 total cases

**6 New
Cases**

The 2021-22 Case Book features 6 brand new cases that will test a broad array of knowledge areas and math concepts

**6
Writers**

The 2021-2022 Darden Case Book has been edited and compiled by Jacob Rosenstock and Meghan Cabell (Class of '22) and features case writing by Joel Hensel ('21), Josh Union, Kate Allen, Chris Kraft, Joe Ciborowski, and Jacob Rosenstock ('22)



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The Case Interview Process



Non-Verbal Communication (Tips for Success)



Communicating the correct message non-verbally is as important as the content that is communicated in a case interview. In order to recommend a candidate, interviewers must:

- 1. Feel comfortable putting the candidate in front of a client**
- 2. Believe they would enjoy spending 60+ hours a week with the candidate on a project team**

You Need to Convey

- Trustworthiness
 - Confidence
 - Competence
 - Honesty
- Positivity
- Curiosity
- Passion

How to Develop These Traits

- Practice and gain proficiency in the technical requirements of a case – free up mental energy to focus on connecting with the interviewer
- Practice positive self-talk – the best way to demonstrate these traits is to truly believe you have them
- Practice quickly connecting with people about non-work subjects – building rapport before diving into the interview makes an enormous difference (Note: Not always possible)



What Is A Case Interview?



A case interview is a simplified, condensed version of a complete consulting project. The candidate is in the driver's seat and is expected to explore the data and provide solutions to an issue that a client paid the firm for.



From Bain's Website (but representative of all firms):

The case interview is an example of a real business problem based on your interviewer's past work experiences. The problems you will encounter are not designed to be brainteasers, or theoretical problems designed to stump you, but rather to reflect the challenges that our clients face. These real-life examples allow you to learn more about the type of work we do and the impact we have with our clients.

The firms look for:

- The approach you take to solving a problem
- How analytical and creative your thinking is
- Your usage of data to quantify your recommendation(s)
- Your communication skills in conveying your ideas
- How you would suggest implementing those proposals"



Consulting Case Themes



The following case themes are the most popular topics tested and they are ranked in descending order of frequency. Please note that there are plenty more case topics than the 5 listed below.

π

Profitability: Analyze potential sources of profit declines and identify ways to improve profitability



Market Entry / Market Sizing: Analyze the client's opportunity to expand and quantify the viable market for any new products



Growth: Identify opportunities for the client to optimally grow revenues or increase market share



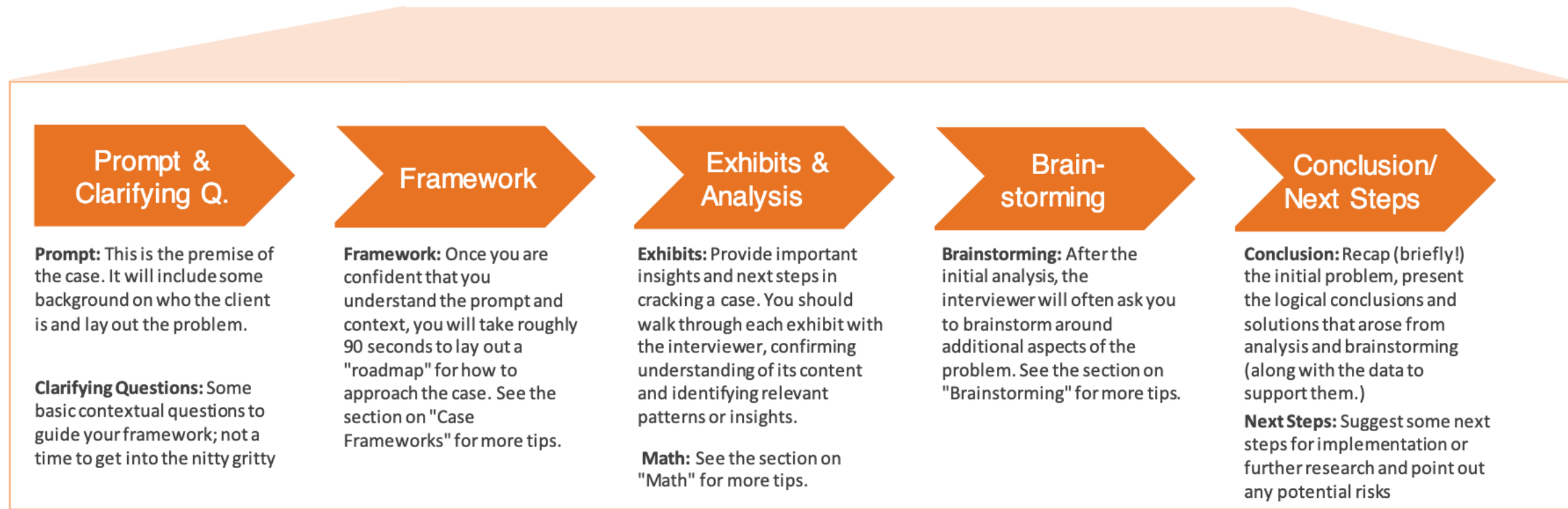
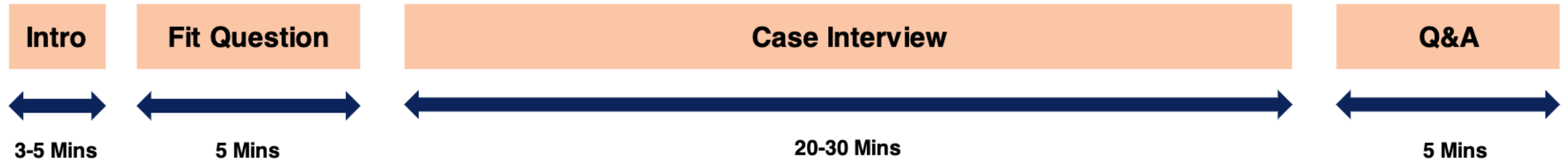
Acquisition / Sale: Determine whether the client should purchase another business or sell an existing part of the company



Industry Assessment: Assess the health and attractiveness of a particular industry to advise a client's decision



Case Interview Format



Note: This format may differ by firm or by interviewer



Fit / Behavioral Question Overview



Consulting firms are assessing your ability to successfully work with teams and judge how well you understand their firm and yourself

Tell Me
About
Yourself

- **Your pitch should include:** Where you have been / what you have done, who / where you are now, and what you are interested in going forward
- **All answers must include:** Relative skills & experiences, key transition points in your career, and a career objective
- **Strong answers have:** Powerful “hook” –your value proposition that highlights how you have the competencies they are recruiting for

Why
Firm X or
Consulting

- **Firm & industry fit:** Interviewee should have a deep understanding of a firm’s culture, functional expertise, and working style
- **Industry interest:** Interviewee should highlight experiences they want to gain and skills they can bring
- **Strong answers have:** This question answered in opening pitch, structured reasons why, and answers tailored to your prior experiences and future aspirations

Tell Me
About A
Time
When...

- **Experience/ behavioral:** Interviewee should demonstrate leadership ability, “drive” –taking initiative, and professionalism
- **CAR: Context / challenge** you faced, the **action** that you demonstrated, and the **result** of your actions
- **Strong answers have:** Concise response, a learning element if the situation helped you grow, utilizes structure, and engages the interviewer with energy, emotion, and authenticity



The Prompt and Clarifying Questions



The Prompt

- All case prompts will introduce the company name, industry, and a brief description of what the client wants
- Some prompts tend to leave the primary objective to be vague
- Most prompts leave out the business context of the clients core products or operations in question



Clarifying Questions

- Clarifying questions should always be high level (ex. Context on products, core goal of the client, how client makes money)
- Don't ask for detailed insights that you can include in framework (ex. Details on profitability drivers, market trends, etc)
- Feel free to ask further clarifying questions as you are building framework



The Case Framework



By laying out a framework for analysis at the beginning of a case interview, you are not only keeping yourself organized, but you are providing a visual roadmap for the interviewer to see how you are thinking and where you are going.

Characteristics of Great Frameworks

- **MECE:** Mutually Exclusive, Collectively Exhaustive
- Detailed but not lost in the weeds
- Thorough but not wasteful
- Insightful but not presumptive

Incorrect Framework Myths

- There is one perfect framework for every case
- There is a finite number of possible frameworks that will provide answers to every case
- Frameworks are not that important to the overall interview



Framework Example

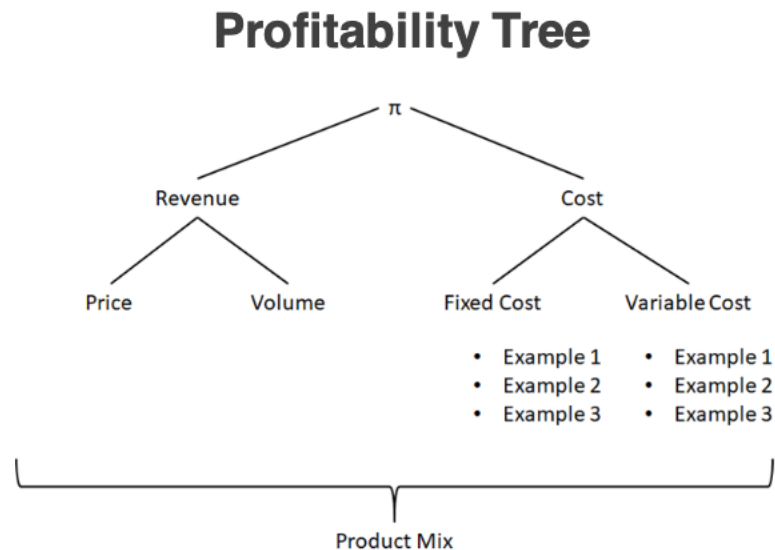


Some frameworks are better than others to address a particular case. There are always multiple approaches that can yield the same answer.

A simple framework example:

Key Question in the Prompt

Notes +
Clarifying
Answers



Market / External

- Competitors
- Economic Health
- Regulation / Government
- Industry Trends
- Geography / Climate

Customer / Company

- Internal Capabilities
 - Acquisitions
 - Manufacturing Capacity
 - Distribution Networks
- Brand Perception
- Exit Strategies
- Consumer Preferences



Other Framework Examples



While being exposed to many frameworks can help build a strong repertoire of framework components, remember that no amount of specific framework memorization will cover every possible case a candidate could encounter.

Before & After

- Compare current with future
- Ideal for a go/no-go decision
- Can be used with profit tree (profits before and after)



	Before	After
Evaluation Criterion 1		
Evaluation Criterion 2		
Evaluation Criterion...		

M&A (similar to Before and After)

- Compare Company A, Company B, and Company A+B along various meaningful criteria



	Company A	Company B	Company A + B
Evaluation Criterion 1			
Evaluation Criterion 2			
Evaluation Criterion...			

Alternative I Evaluation Criteria Matrix)

- Alternatives listed across the top
- Evaluation criteria listed along the left
- Use +, -, o, or check marks to go through the list

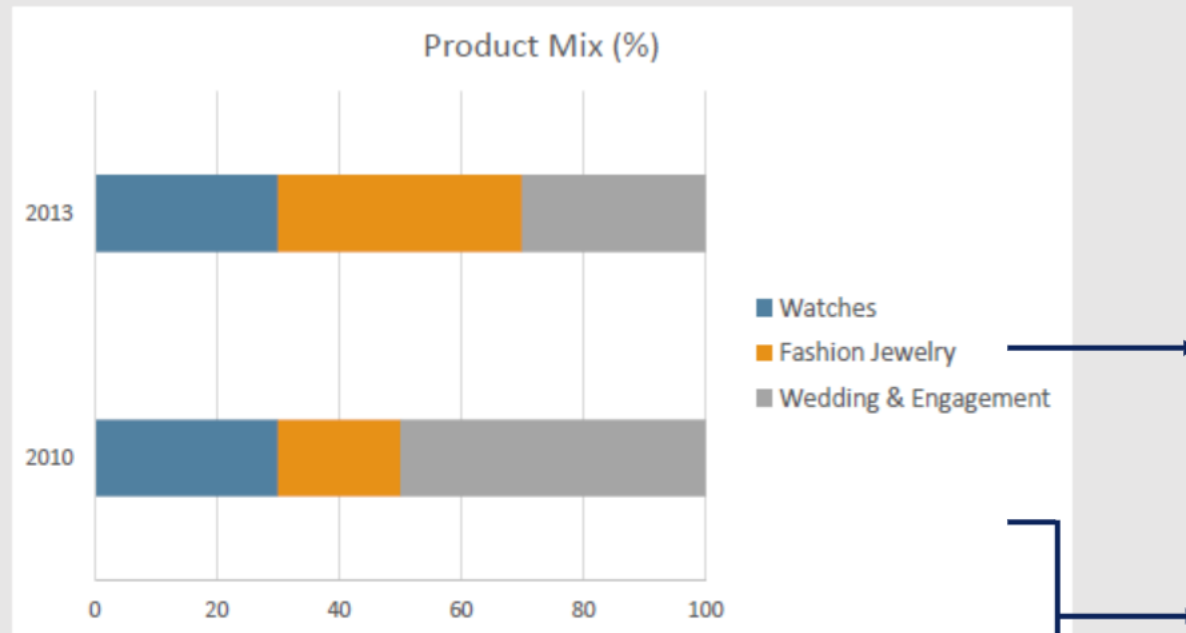


	Option 1	Option 2	Option 3	Option 4...
Evaluation Criterion 1	+	-	-	+
Evaluation Criterion 2	-...			
Evaluation Criteria...				

Jewelers-R-Us: Exhibit 1



For the years ended 2010 and 2013



- Annual Revenues were constant at \$1.5M



Read The title of the exhibit to have a clear understanding of the information

Observe The legend and gauge the sizes of any bar graphs for insights

Pay Attention To the footnotes for vital information



Guide to Math Analysis



Although most case mathematics will involve simple arithmetic, it is still very easy to make mistakes. Follow the tips below to ensure that you are set up for success.

Tips for Success



Sanity Check

Make sure your numbers make sense in the context of the case



Mistakes are OK

You can recover from mistakes, just don't make the same mistake twice



Use Shortcuts

Round when needed and manage your zero's appropriately



Talk it Through

Explain each step that you are doing with your interviewer



So What

Tie the numbers back to the question and explain the implications



Practice

practice until you're comfortable doing math in front of an interviewer



Guide to Math Analysis



Tricky Math Examples

Net Present Value

- A. Calculates the discounted return on investment over time
- B. Requires cash flows (revenues - costs over a time period), discount rate, timeframe, and an upfront cost
- C. Some cases will assume a calculation into perpetuity (timeframe = forever).
- D. **Perpetuity:** $(\text{Cash Flow per Period} / \text{Discount Rate}) - \text{Upfront Cost}$

Payback Period

- A. Calculates the amount of time required to pay back an upfront investment
- B. Requires cash flows per period and an upfront cost
- C. Payback period will be extremely long, extremely short, or you will be given some type of specific criterion the client uses (e.g. 5 years)
- D. **Payback Period** = $\text{Upfront Cost} / \text{Cash Flows per Period}$

Break-even Sales

- A. Calculates the number of units sold to pay back an upfront investment
- B. Requires per-unit selling price, per-unit costs, and upfront investment cost
- C. **Break-Even Sales** = $\text{Upfront Investment Cost} / (\text{Per-Unit Selling Price} - \text{Per-Unit Costs})$



Guide to Math Analysis (Things to Take Note)



Example Scenario

How much money will the client save?

Current State	\$ Mater./ Unit	# Labor/ Unit	Volume	Total Cost
Product 1	15	10	1M	= \$25M
Product 2	5	20	2M	= \$50M
				= \$75M

10% Labor Reduction on a per unit basis

Future State	\$ Mater./ Unit	# Labor/ Unit	Volume	Total Cost
Product 1	15	9	1M	= \$24M
Product 2	5	18	2M	= \$46M
				= \$70M

Total Savings = \$5M

- A. **Structure** is crucial. The more you can structure information like an Excel Spreadsheet, the better
 - I. Helps you recover information
 - II. Your interviewer can follow along
 - III. It makes you look organized
- B. **Write** down prompts such as “How much money will the client save” and “10% labor reduction per unit” to keep the goal fresh in your mind
- C. **Circle** any important numbers (Total Savings = \$5M) that may be relevant to your final recommendation
- D. **Go Deeper** by speaking to the context of the number, ex: “*I see the total savings is \$5M, which represents about 6% of our total costs. This seems like a reasonable deduction but we should figure out how this labor reduction is being generated and seek to understand any negative unanticipated consequences as a result of it.*”



Tips For Brainstorming



The key to brainstorming is structure. The candidate should first devise two or more "buckets" or categories to organize his/her thoughts. These constraints make it easier to be creative and provide a more vivid mental model to pull from.

Example Brainstorming Frameworks:

Internal vs. External

- Internal represents any aspect internal to the client, (e.g. products, brand, financials, leadership, etc.)
- External represents factors external to the client, (e.g. market trends, geopolitical dynamic, competition, etc.)

The Supply Chain

- Each step in the supply chain is a category: raw materials, manufacturing, warehouse, transport, retail, customer, etc.
- Useful for exploring causes or solutions to cost problems

Financial vs. Non-Financial

- Financial includes things like costs, hurdle rates, cash flow, etc.
- Non-financial would be everything else

Stakeholders

- Clients, employees, investors, suppliers, regulators, etc.
- How are they affected, or what are they looking for?

Long-term vs. Short-term

- Useful for examining potential consequences of a decision

Customer Journey

- AIDA – Attention, Interest, Desire, Action
- Useful for increasing sales



Conclusion & Next Steps



There are three key elements that the interviewer should include while wrapping up the final portion of the case.

1. Recommendation

Say the action that the client should take and cite the key insights in your analysis that have led you to the conclusion

2. Risks & Concerns

Mention the factors in the case that the client should be aware of that may impact the client or the recommendation –(Concerns should not contradict your overall recommendation)

3. Next Steps

Highlight at least one action the client should do to either help mitigate any concerns or any actions needed to move forward with the recommendation

While you can take a minute before you gather your recommendation, it is crucial to keep this segment concise



Industry Overview

Please note that these are commonly tested industries; This list is not exhaustive of all the industries tested



Industry Overview – Consumer / Retail

Key Industry Trends

- **Digital Marketing:** CPG (Consumer Packaged Goods) companies are pivoting to digital marketing solutions like Facebook and YouTube more than ever for smarter and more targeted advertising.
- **Big Data:** Consumer companies & retailers are ramping up the use of consumer shopping behavior data now more than ever to create curated/ personalized shopping experiences and targeted advertisements
- **Retail Omnichannel:** Large brick & Mortar retailers are pivoting to an “order online, pick-up in store” mix while also building out their online fulfillment capabilities to cater to the consumer. and keep up with Amazon). Store foot-prints are also getting smaller to reduce inventory
- **Private Label & Amazon Effect:** Private label consumer products are eroding market share of large name brand products. This is partially driven by “the Amazon effect” of quick and cheap replacement fulfillments. -Brand loyalty is getting harder and harder to win.
- **Direct to Consumer vs. In-store Experience:** Brand names are slowly shifting resources to sell directly to consumers as some retailers struggle. Retailers with large brick & mortar footprints are focusing on in-store experiences to attract customers

Important Terminology

- **SKU:** Stock Keeping Unit – Refers to a unique item sold in a store
- **In-stock:** Percent of items that are on the shelves and available for sale vs. what the total display can hold
- **CRM:** Customer Relationship Management: Strategy & tools designed to boost profitability and strengthen customer loyalty by using data – also the name for software that facilitates this
- **Loss Leader:** Merchandise sold at a loss to attract new customers or stimulate other profitable sales
- **Mark-up:** Percentage added to the cost of product to get selling price

Important Calculations

1. Inventory Turnover:

$$= (\text{Sales} / \text{Inventory})$$

2. Gross Margin:

$$= \frac{(\text{Revenues} - \text{COGS})}{\text{Revenues}}$$

3. Contribution Margin (CM):

$$= (\text{Sales} - \text{Variable Costs})$$

$$\text{CM Rate} = \frac{(\text{CM})}{(\text{Sales})}$$



Industry Overview – Energy

Key Industry Trends

- **Clean Renewable Energy:** Wind, solar, and biomass power are increasingly replacing the use of fossil fuels in developed and developing countries with some projections indicating 80% of the world's energy needs being met by renewable energy by 2050
- **Technology:** Advancements in drilling techniques like “fracking” and horizontal drilling have significantly boosted the output of US oil companies and substantially reduced the cost and risks associated with drilling for oil
- **Shale:** Newly found abundance of shale basins in the USA has helped to boost US oil production output and has almost eliminated US dependence on foreign oil
- **Natural Gas:** Given its cheap and abundant supply, natural gas has become the primary source of energy in the US, replacing crude oil and coal
- **(Important) Petroleum Products:** Gasoline, jet fuel, natural gas, fertilizer, plastics, detergent, propane, diesel, lubricant

Important Terminology

- **Upstream (E&P):** Exploration and Production – Process involving the finding, drilling, and producing of crude oil and natural gas or liquefied natural gas (LNG)
- **Midstream:** Focuses on the processing, storage, marketing, and transportation of oil and natural gas. (Most pipe-line companies fall in this category)
- **Downstream:** Includes oil refineries, petrochemical plants, petroleum products distributors, retail outlets and natural gas distribution companies
- **OPEC:** Organization of Petroleum Exporting Countries – Cartel of 14 nations that coordinate petroleum policies. –Often influences output and thus oil prices

Important Calculations

1. Return on Investment (ROI)

$$= \frac{(\text{Profits} - \text{Cost of Investment})}{\text{Cost of Investment}}$$

2. Breakeven Point

$$= \frac{(\text{Fixed Costs})}{\text{Contribution Margin (CM)}}$$

Important Considerations:

- **Transportation/ Distribution costs**
- **Storage Costs**
- **Production Costs: Labor + Materials**
- **Plant Development Costs**
- **Depreciation & Taxes**
- **Overhead**



Industry Overview – Transportation

Key Industry Trends

- **Airline Capacity Additions:** Airline ticket prices have been steadily on the decline driven by companies adding more routes to cities across the globe –led by low-cost carriers such as JetBlue, Southwest
- **Fuel Efficiency:** Airline companies have been investing heavily in upgrading their fleet to more fuel efficient aircrafts to reduce their biggest cost driver
- **EV (Electric Vehicles):** Auto manufacturers are all racing to create battery powered vehicles
- **Autonomous Vehicles:** Autonomous vehicles are expected to hit the road as early as 2019 and will cause major disruption to auto manufacturers, bus systems, taxis, insurance companies
- **Shortage of Truckers:** Transportation companies have been struggling to keep up with the booming demand for cargo shipments due to a massive shortage of truck drivers –thus causing significant increases in labor costs

Important Terminology

- **Load Factor:** Measures the capacity utilization of transportation services and is equal to the average actual utilization divided by the maximum capacity
- **PRASM: Passenger Revenue per Average Seat Mile** –Or RASM (revenue) is the revenue generated per available set miles in which ASM = number of seats available x number of miles flown.
- **Logistics:** The detailed coordination of complex operations involving many people, facilities, or supplies.
- **FOB: Free On Board** –Represents the point at which the sale of a freight cargo is considered complete. “FOB shipping” means ownership is transferred once the product is shipped of, “FOB shipping point” means ownership is transferred once the product is delivered
- **LTL & FTL:** LTL (Less than Load) – Small freight that doesn’t fill a truck which is generally more expensive to ship, (FTL) Full Truck Load) – Large shipments that fill a trailer and are thus cheaper to ship

Important Calculations

1. Potential Savings by Switching Equipment

= {New Profit – Old Profit} or

{ [(New Capacity x Price) – (New efficiency x cost)] – [(Old Capacity x Price) – (Old efficiency x cost)]}

Important Considerations:

- **Gasoline /Fuel Prices**
- **Carrying Capacity**
- **Range / Distance**
- **Destination Routes**
- **Maintenance Costs**
- **Depreciation**



Industry Overview – Manufacturing / Agriculture

Key Industry Trends

- **D2C: Direct to Consumer:** More manufacturers are leveraging their own sales platform to market, sell, and ship their products to the customer rather than use third party distributors or retailers to boost profitability
- **Data Driven Analytics:** Manufacturers are using predictive analytics and algorithms to improve product design, optimize production cycles, and improve demand forecasting
- **Trade-war & Tariffs:** In response to the US tariff on steel and more, Canada, the European Union, and China have all implemented retaliatory tariffs of close to 25% on agricultural and automobile goods produced in the US.
- **Sustainable Food Systems:** Vertical farming has been a growing trend in urban locations to minimize environmental foot-prints and bring produce to major cities

Important Terminology

- **(JIT) Just-in Time Inventory:** “Pull demand” inventory system in which assembly materials and support items are delivered as needed to minimize raw material inventory
- **Commodity:** An interchangeable non-differentiated product or material that is sold freely. (Most agricultural products are commodities)
- **Bottleneck:** The resource in a manufacturing process that is working at max capacity and thus limits the output of the entire production
- **Bushel:** A unit of dry measure (1 cubic foot) for grain, fruit, etc., equivalent to 8 gallons of liquid
- **Out-source:** Process of contracting an outside party to complete a production or service task for a business. –Typically done to save cost or due to a lack of expertise

Important Calculations

1. Potential Savings with New Equipment

$$= (\text{New Equip. Expenses} - \text{Old Equip. Expenses})$$

$$[(\text{Old Time} \times \text{Old Labor}) + (\text{Raw Material Cost} \times \text{Old Quantity}) + \text{Old Depreciation}]$$

$$- [(\text{New Time} \times \text{New Labor}) + (\text{Raw Material Cost} \times \text{New Quantity}) + \text{New Depreciation}]$$

Important Considerations:

- **Raw Material Costs**
- **Labor & Wages**
- **Capacity Constraints / Bottlenecks**
- **Commodity or Not?**
- **Overhead Costs**
- **Supplier & Buyer Relationships**
- **Depreciation**



Industry Overview – Financial Services

Key Industry Trends

- **AI, Block-Chain & Crypto Currencies:** Digital distributed ledgers offer a cheaper and more efficient way for firms to verify and facilitate transactions. Crypto currencies have proven themselves to be an alternative set of asset investments that rival equities, precious metals, and debt holdings
- **Digital-Only Banks & Payments:** The prevalence of more digital transactions have eroded the need for cash for most daily use, which has in turn lead to the proliferation of online banks that offer higher savings account interest rates and comparable services
- **Financial De-regulation:** Congress passed legislation easing some of the restrictions from Dodd- Frank that exempts smaller banks from certain capital requirements which frees up room for more loans
- **More Transparency in PE Funds:** With greater pressure to produce results that outperform their benchmarks, more PE investors have been demanding greater transparency within their funds and firms have been using transparency to attract investors

Important Terminology

- **AUM:** Assets Under Management: Market value of all the financial assets that a firm manages on behalf of all of their clients and themselves. –Includes capital raised by investors and leaders of a firm
- **Private Equity:** Composed of investors and funds that invest directly into private companies or convert public companies to private companies to improve the target company’s operations and financials with the goal of extracting a financial return from the company and reselling it another firm or the public at a profit
- **M&A:** Mergers & Acquisition: Mergers are when two companies comes together to make a new entity (Dow Chemical & Dupont) = DowDuPont, while an acquisition is where the smaller company is consumed by the larger company (Amazon + Wholefoods) = Amazon

Important Calculations

1. NPV (Net Present Value)

$$= (CF) \times \frac{1}{(1+i)^n} \quad \text{Where } n = \# \text{ of periods}$$

2. Pay Back Period

$$= \frac{(\text{Fixed Costs})}{\text{Contribution Margin (CM)}}$$

Important Considerations:

- **Current Portfolio**
- **Exit Strategy & Time Horizon**
- **Acquisition Price**
- **Employee & Customer Relationships**
- **Market Trends**
- **Tax & Regulatory Implications**
- **Client Risk Profile**



Industry Overview – Information Technology

Key Industry Trends

- **Artificial Intelligence (AI)/ Machine Learning:** Artificial intelligence is the ability for a computer program to think and learn. The emergence of AI has enabled the rise of self-driving cars, smart homes, advanced search algorithms, and smart digital assistants
- **Cloud Computing:** Is the practice of using a network of remote servers hosted on the Internet to store, manage, and process data, rather than a local server or a personal computer. More companies are moving to this platform for security, convenience, and cost savings
- **Internet of Things (IOT):** Smart devices that are all connected and communicate with each other via the internet are rising in demand due to value of strategic data that they provide
- **Blockchain:** a digital ledger in which transactions made and recorded chronologically and publicly. – Important for security and transfer verification purposes. Ex. include Bitcoin, and other cryptocurrencies
- **GDPR:** General Data Protection Regulation: Data protection regulation protecting privacy for all individuals in the European Union.

Important Terminology

- **IP (Intellectual Property):** A category of property that includes intangible creations protected by trademarks and copyrights (e.g. software, code, algorithms, etc.)
- **Unicorn:** a start-up company valued at more than a billion dollars, typically in the software or technology sector
- **Freemium:** A pricing model used by many digital services, a “freemium” model is one where the majority of users are able to engage with a product or service entirely for free (perhaps in exchange for data collection or being served advertisements)
- **SaaS:** “Software as a service” - a software distribution model in which a third-party provider hosts applications and makes them available to customers over the Internet –Like Salesforce or Workday

Important Calculations

1. Addressable Market size:

Top-Down: Total Population >>> Number of users >>> Market share >>> # of Units per User x Price per Unit

Bottom-Up: Current Customer Population >>> Potential Customer Base (Estimated using consensus data or industry info) >>> Future user base x units per user x price

2. Customer Acquisition Cost:

$$\frac{\text{Marketing Expenses}}{\text{Newly Acquired Customers (Yearly)}}$$



Industry Overview – Media & Entertainment

Key Industry Trends

- **Cord Cutting / Over the Top Streaming:** The rise of Hulu, Netflix, YouTube, & Amazon Prime video has left many to abandon traditional cable and opt for online streaming services to get the content they want
- **Content is King:** Media giants have been spending heavily to curate high quality content to hook subscribers to their service and maintain and grow their subscriber base
- **Ad-model Shift:** Cable advertisement has been trending downward while digital online advertisements have been trending up. As online viewers opt for ad-blockers, AI and big data are helping marketing agencies personalize advertisements and increase user engagement
- **Augmented Realty (AR)/ Virtual Reality (VR):** While still in their early stages, AR and VR capabilities have been gaining traction in the industry as a way to enhance storytelling and improve sporting coverage
- **Music Streaming:** The rise of Spotify, Apple Music, & YouTube Music has almost eliminated the physical disc music market as most artist now prioritize online platforms to release albums and new songs
- **Gaming & E-Sports:** The video gaming industry has been one of the fastest growing segments in entertainment led by mobile gaming and game streaming experiences via Twitch and E-sports. Many video game creators are focused on a “games as a service model” as they monetize video games overtime by selling in-game customizable perks

Important Terminology

- **Digital vs. Linear:** Linear is traditional broadcast or cable television. Digital is online (streaming, etc.)
- **Ratings:** A measure of viewers of a particular program or time segment in television. Nielsen is the largest provider of ratings data in the US, but has been slow to provide digital ratings
- **Box-Office:** The total revenue generated by movies shown at theaters

Important Calculations

1. Profitability

(Revenues – Costs)

(Price x Quantity) – (Quantity x Var. Cost)
– (Fixed Costs)

Important Considerations:

- Revenue Factors
 - Advertising Rev.
 - Ticket sales (Price x Quantity)
 - Merchandising
 - Tours / licensing / Endorsements
- Cost Factors
 - Artist fees
 - Commission
 - Promotion advertising
 - Venues
 - Content creation costs



Industry Overview – Healthcare & Life Sciences

Key Industry Trends

- **Wearable Medical Devices:** Activity trackers help patients stay more active and healthier on their own while also monitoring health metrics reducing the need to visit doctors frequently
- **Smart Technology & Data:** Data on a patient's background and conditions allow more personalization options, targeted treatments, and faster recommendations at hospitals
- **Gene Therapy:** The transplantation of normal genes into cells in place of missing or defective ones in order to correct genetic disorders. –Growing trend using CRISPR to treat previously incurable diseases
- **Price Transparency:** As drug companies receive criticism on the rising cost of their drugs, more states are considering independent efforts to improve transparency in drug pricing and cost controls
- **Government:** With the repeal of the Affordable Care Act (ACA), legislation has stagnated on fixing the rising cost of healthcare and Medicaid in the US, thus leaving a continued rise in insurance premiums
- **Bundled payment, episode-of-care payment, etc.:** Generally describes paying for the whole treatment at once, rather than by individual tests or visits – an attempt to incentivize improved outcomes

Important Terminology

- **Orphan Drug:** A pharmaceutical drug that remains commercially undeveloped due limited potential for profitability as a result of a small curable population size
- **FDA:** “Food & Drug Administration” Federal organization tasked with protecting and promoting the safety of food and pharmaceuticals in the US. FDA approval is needed for almost all drugs sold in the US
- **Generic Drugs:** A prescription drug that has the same active-ingredient formula as a brand-name drug but sold at a cheaper cost. –Typically occurs when name branded drugs lose patents
- **Biotech vs. Pharmaceutical:** Biotech firms use live organisms like bacteria and enzymes to manufacture their medicines while pharmaceutical companies primarily use chemicals synthesis
- **Auto-immune Diseases:** A disease in which the body's immune system attacks healthy cells

Important Calculations

1. Market sizing:

Top-Down: Total Population >>> Number with Illness >>> Number Diagnosed >>> Market share of Drug >>>> (Dosage per Time Frame) x Price per Dosage = Market Size per Time Frame

Important Considerations:

- Regulations
 - FDA Approvals
 - Patent Rights
 - Foreign Government Laws
- Competition / Cannibalization
- Drug Effectiveness
 - Cure vs. Treatment
 - Time to Market
 - Side Effects
- Manufacturing Capabilities
- Pricing, Costs (Fixed / Var.), Dosage



Industry Overview – Telecommunications

Key Industry Trends

- **5G Network Service:** Next generation of mobile internet connectivity with faster speeds, more reliable connections, and 100x more bandwidth capacity than 4G.
 - Network operates mainly on the cloud
 - Allows for “network slicing:” Creates separate wireless networks on the cloud for users to have their own personalized network
 - Roll-out may be 2020 in North America due to high infrastructure costs associated with development
- **Network Consolidation:** The third and fourth largest cell phone carriers T-Mobile and Sprint are in the process of merging, a move that will consolidate the telecom market to 3 major players
- **Content Integration:** High profile acquisition like AT&T of Time Warner and Verizon of Yahoo illustrate a push to either get into the content creation game or to build out their advertising network

Important Terminology

- **Carrier:** A company that is authorized by regulatory agencies to operate a telecommunications service system: AT&T, Verizon, T-Mobile
- **OEM:** Original Equipment Manufacturer – A company whose goods are used as components in the product of another company that sells the finished goods to users
- **LAN:** Local Area Network: Locally owned and administered data network that runs primarily through cables –ex. Ethernet connection
- **Fiber Optic:** Transmission connectivity via glass strands which are 100x more faster than traditional copper wires for more efficient cell phone and internet connections

Important Calculations

1. Return on Investment (ROI):

$$\frac{(\text{Future Profits} - \text{Cost of Investment})}{(\text{Cost of Investment})}$$

2. Customer Acquisition Cost:

$$\frac{\text{Marketing Expenses}}{\text{Newly Acquired Customers (Yearly)}}$$

Important Considerations:

- Regional Competition
- Competitors
 - New Entrants
 - Barriers to Entry
 - Substitutability
- Contract lengths & stipulations
- Infrastructure

Darden Casebook

2021-2022



UNIVERSITY
of VIRGINIA

DARDEN SCHOOL
of BUSINESS

CHARLOTTESVILLE, VA

WASHINGTON, DC

SAN FRANCISCO, CA

SHANGHAI, CHINA



Darden Case Book 2021-2022 Index



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*(OVR) Denotes overall case difficulty

(N) Denotes new case, (R) denotes recycled



Darden Casebook Guide

To get the most authentic casing experience, you should aim to do at least one behavioral interview question at the start of each case and have your interviewer take note of your timing



Indicates the overall difficulty of the case with a combination of mathematical technicality and creative thinking ability. It is advised that you start with single star cases and work your way up to three star cases



Indicates the degree of math difficulty in the case. Harder cases typically have multiple stages of calculations with multiple opportunities for mistakes



Indicates how creatively intensive the case will be. The more qualitative, the more thorough your framework should be. These cases will place more emphasis on the brainstorming elements

Grading Rubric

Case Execution

High scorers should be well structured, demonstrate coachability, and make insightful connections

Communication

High scorers should demonstrate confidence, speak clearly, and have a tidy case work

Behavioral

High scorers should give clear and concise answers that are relevant



Sticky Surfactants

Round 1 | Chemicals



STICKY SURFACTANTS

Round 1 | Chemicals

Prompt:

Your client, CavalierChem, is a global chemicals manufacturer. CavalierChem recently acquired a manufacturing facility that makes surfactants as part of a larger purchase of competitor assets. Surfactants are a specialty chemical used for a variety of purposes, including laundry detergent, and the client has very little prior experience with this type of product. The manufacturing facility is not currently generating profits, and the client wants your help in determining what to do.

Clarifying Information: *Note: Provide this only if corresponding questions are asked.*

1. Does CavalierChem have a target in mind?

The client wants to make the highest return from this facility as possible in the next 5 years

2. What is CavalierChem's core business/how do they make money?

80% of CavalierChem's revenues come from the sale of commodity plastics to other manufacturers. The other 20% comes from a wide mix of products that are either downstream or byproducts of their core business.

3. Why did they make this acquisition?

The manufacturing facility in question was part of a bundled acquisition of other manufacturing assets that are of strategic importance to CavalierChem. CavalierChem now wants to evaluate the surfactant factory on its own.

4. What does the surfactant market look like?

The market for this particular surfactant is \$300M annually. CavalierChem and one other competitor are the only significant manufacturers.



BEHAVIORAL INTERVIEW QUESTION:

1. Tell me about a time that you led a team. What challenges did you face?



01 | CASE: STICKY SURFACTANTS

Framework Guidance:

Note: There are many possible alternatives to this framework. These are only provided as possible suggestions.

Increase Profitability

Revenues

- Price
 - Contracts
- Market Share
 - Increase sale to customers
 - Find new customers
- Research new uses

Costs

- Variable
 - COGS
 - Hourly Labor
 - Utilities
- Fixed
 - Overhead
 - Maintenance
 - Salaried
 - SG&A

Repurpose

- What products have similar manufacturing processes?
- What do the markets look like?
- CapEx and OpEx for new products
- Timeline for adjustment

Divest

- What price could CavalierChem get?
- Would the competition have a monopoly?
- Effect on customer relationships
- Effect on employees

How to Move Forward:

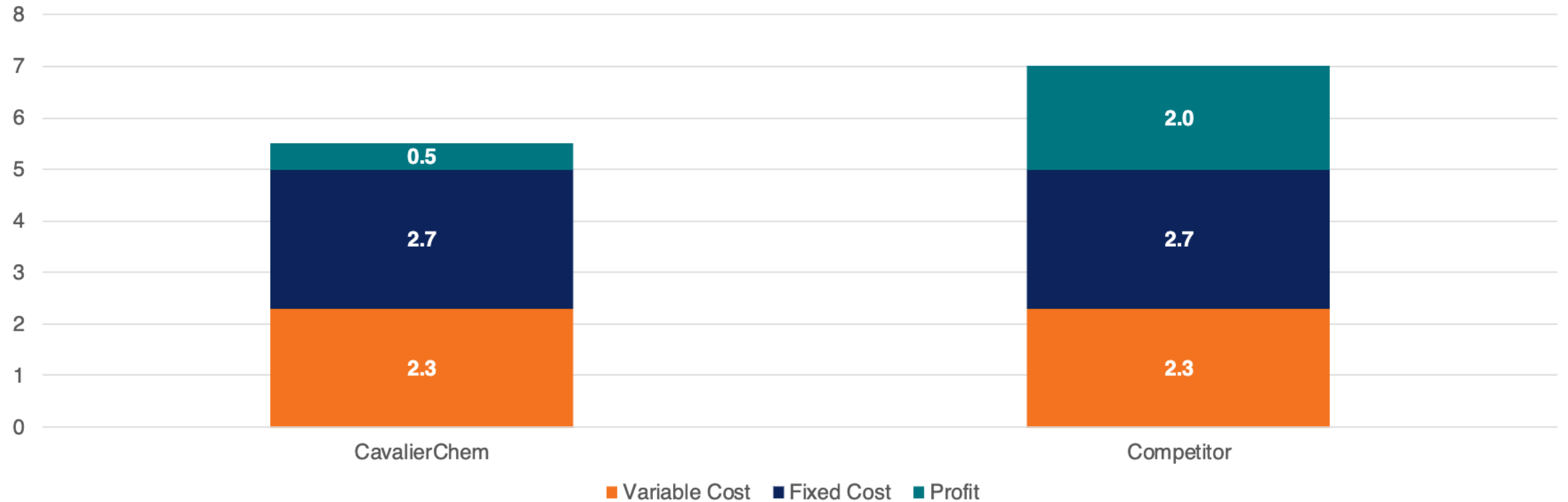
Candidate should identify at least 2 of these 3 options, if they only focus on profitability push them to think of alternatives. After they get 2/3, move onto Exhibit 1. A **good** candidate should not bring acquisition price into account, as it is a sunk cost.



01 | CASE: STICKY SURFACTANTS

EXHIBIT 1

Average cost and profit breakdown for surfactants in cents/lb





01 | CASE: STICKY SURFACTANTS

Question 1 (The location of these question slides in your case is completely up to you)

- What does this exhibit tell you about CavalierChem's prospects for raising profits?

Exhibit or Question Guidance:

The candidate should notice that costs between the client and competition are identical, but the competition experiences 4x profits. They should then realize the main lever to pull would be on the revenue side, primarily pricing as this information is on a per pound basis. When/if they ask about sales structure and revenues, you should provide the following information:

- CavalierChem sells 1.4 million tons per year (can give 2000 lbs/ton if asked)
- 75% of sales are done on contract, the other 25% are sold on the spot market
 - Average CavalierChem contract price is 5.67 cents/lb
 - Average Competitor contract price is 7.67 cents/lb
 - Average spot price (for both CavalierChem and competition) is 5 cents/lb

Candidate should use this information to calculate increased profits from matching competitor's pricing

- 1.4 million tons * 2000 lbs/ton * 75% on contract = 2.1 billion pounds sold on contract
- 2.1 billion pounds * (7.67 cents/lb – 5.67 cents/lb) = 4.2 billion cents/100 = 42 million dollars in incremental profit



BRAINSTORMING

Now that we know our revenues are below those of our competitors, how are some ways we can raise that per pound price?

Brainstorming Guidance:

Note: This is just one possible set of categories and answers. Many more are possible, and interviewers should assess both the volume and relevance of answers.

Customer focused

- Change sales mix of contract vs spot
- Change sales mix to emphasize highest paying customers
 - Develop strong relationships with top paying customers
 - Sales dinners, events, etc.
- Renegotiate contracts
- Increase advertising of company overall to develop premium brand

Product focused

- Make product production process more sustainable and charge a premium
- Modify product to reduce customer use costs and capture some of their savings

Best candidates display:

Great candidates will structure their brainstorming, and finish by driving the case forward wanting to investigate the other options (divest or repurpose) that were discussed in the framework section



OTHER OPTIONS

Ideally, the candidate also outlined options at the beginning of the case around repurposing or divesting. Lead the candidate back to those options if they do not bring them up themselves and provide the following information

Repurpose:

- 50 million CapEx, 75 million in incremental annual profits, start-up in two years

Divest:

- Highest bidder willing to pay 200 million

Candidate should calculate following cash flow totals:

- Renegotiate contracts – 210M
- Repurpose – 175M
- Divest – 200M

Best candidates display:

Candidate should remember from the clarifying information that CavalierChem is interested total cash flow over the next 5 years. If they ask about discount rate, tell them to ignore for now.



CONCLUSION

We are having a meeting with CavalierChem's CEO in 5 minutes, what do you think we should recommend?

Recommendation:

- CavalierChem should renegotiate contract prices to match the competition at 7.67 cents/lb
- Annual profits will grow by 42 million

Risks:

- Some customers may not be able to afford higher prices
- The market may contract

Next Steps:

- Look into customers cost structure and see if there is room for higher prices while also soliciting alternative bids for asset sale

A candidate could recommend any of the three options with sound reasoning, the NPVs with 10% discount rate are roughly equivalent



INTERVIEWER FEEDBACK FORM

Case Name _____ Interviewer _____

Case Book _____ Case Type _____ Difficulty _____

Case Execution:

- Clarifying Questions + Framework
 - Good Questions 1 2 3 4 5
 - Structured
 - MECE
 - Creativity

Feedback:

- Exhibits + Quantitative Ability
 - Accuracy 1 2 3 4 5
 - Speed
 - Insights Presented
 - Errors / Guidance Needed

Feedback:

- Brainstorm + Conclusion
 - Creative & Structured 1 2 3 4 5
 - Good Business Judgment
 - Recommendation Strength

Feedback:

- Presence & Non-Verbal
 - Confidence
 - Poise / Posture 1 2 3 4 5
 - Clear & Concise
 - Body Language
 - Coachability

Feedback:

Total: _____ / 20



NFL in Mexico

Round 1 | Entertainment



NFL IN MEXICO

Round 2 | Entertainment



Prompt:

Your client is a wealthy former founder and CEO of a multi-national company interested in a new investment opportunity. The National Football League (NFL) wants to expand into Mexico by establishing an expansion franchise in Mexico City. This will be the NFL's first internationally based franchise, although the NFL has recently featured some games between American-based teams in Mexico City and London. The NFL is seeking owners for the team. Our client has sought our advice on whether they should pursue ownership.

Clarifying Information: *Note: Provide this only if corresponding questions are asked.*

1. Does the client have a financial target in mind?

The client wants a positive NPV on owning and operating the team.

2. How do NFL franchise owners make money?

Teams make money through a league-wide share of TV-contract revenues and a mix of team-specific revenue streams such as advertising, tickets, etc.

3. What kind of company did the wealthy client found?

The telecoms industry. The company has a reputation as a highly innovative company, including recent technology boosting mobile internet connections in high-density places. Although our client is no longer involved with day-to-day operations, as founder he retains a strong relationship with the company.

4. Does our client have any experience with sports franchises?

No, this would be their first foray into the sports industry

BEHAVIORAL INTERVIEW QUESTION:

1. Where do you see yourself in 5 years?

2. What do you think makes you a great fit for our firm?



02 | CASE: NFL IN MEXICO

Framework Guidance:

Note: There are many possible alternatives to this framework. These are only provided as possible suggestions.

Financials

- Initial CapEx: team purchase, stadium construction, ...
- Annual revenues
 - Tickets
 - Advertising
 - ...
- Annual expenses
 - Player salaries
 - Back-office
 - ...

Mexican Market for Football

- Plentiful substitutes
 - Soccer!
 - TV/Movies
 - ...
- Government relations and interventions
 - Public funding for stadium construction
 - Mayoral support for team
- Market research for a novel “product”
 - Willingness to pay
 - Viewing experience preferences (in-stadium, TV, mobile)
- Ease of doing business in Mexico
 - Construction permitting
 - Security
 - Infrastructure, like transportation to stadium and broadband

Owner considerations

- Alternate investment opportunities
- Time remaining in harvest period (and alignment with sports team opportunity)
- Synergies with other portfolio companies
- Expertise in sports ownership
- Exit strategy

How to Move Forward:

Given the positive NPV goal, the candidate should drive directly towards the NPV analysis by seeking information on any of its components (CapEx, Revenues, Expenses, ...).



02 | CASE: NFL IN MEXICO

Question 1 (The location of these question slides in your case is completely up to you)

- What is the NPV of the team ownership?

Exhibit or Question Guidance:

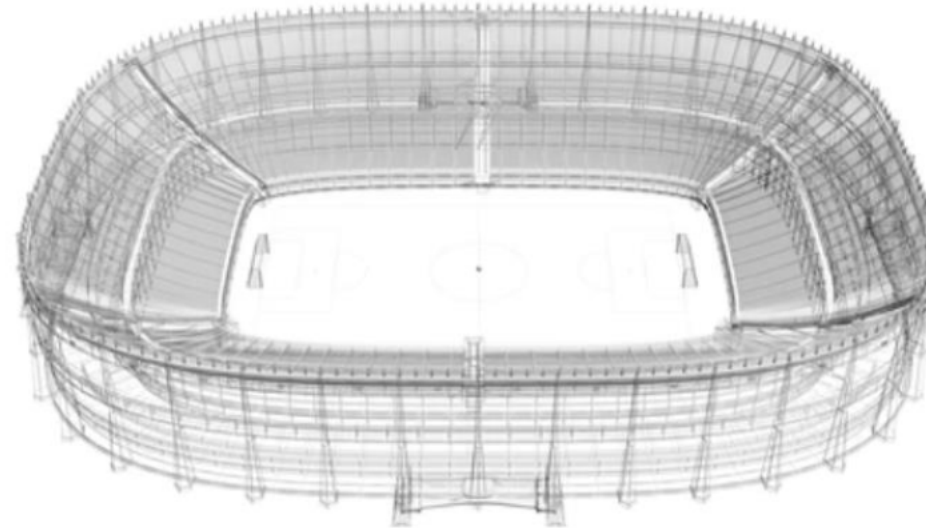
The candidate should break down the problem into the following elements

- **Cost to buy team** – The team will cost \$2.25B plus a \$250M expansion franchise fee
- **Startup costs (e.g. building stadium, offices, etc.)** – This is \$500M
- **# of games per year** – 17 total per year, 8 of which will be played at home
- **Annual revenues (see “Revenue Breakdown”)**
 - Interviewer should work with the candidate to brainstorm the list of revenue drivers, if not covered in framework already, then give quantities.
 - When ticket revenues are brought up, show the candidate Exhibit 1
- **Annual expenses (see “Expenses Breakdown”)**
 - Interviewer should work with the candidate to brainstorm the list of cost drivers, if not covered in framework already, then give quantities.
- **Holding period** – Client does not plan to sell team anytime soon, assume cash flows in perpetuity
 - Hurdle rate of 14%, growth rate of 4%
- **NPV Calculation**
 - **Initial CapEx** - $2.25B + 0.25B + 0.5B = 3.0B$
 - **Annual Profit** - $530M - 250M = 280M$
 - **NPV** – $(280M/[14\% - 4\%]) - 3.0B = -0.2 B$



EXHIBIT 1

Ticket breakdown

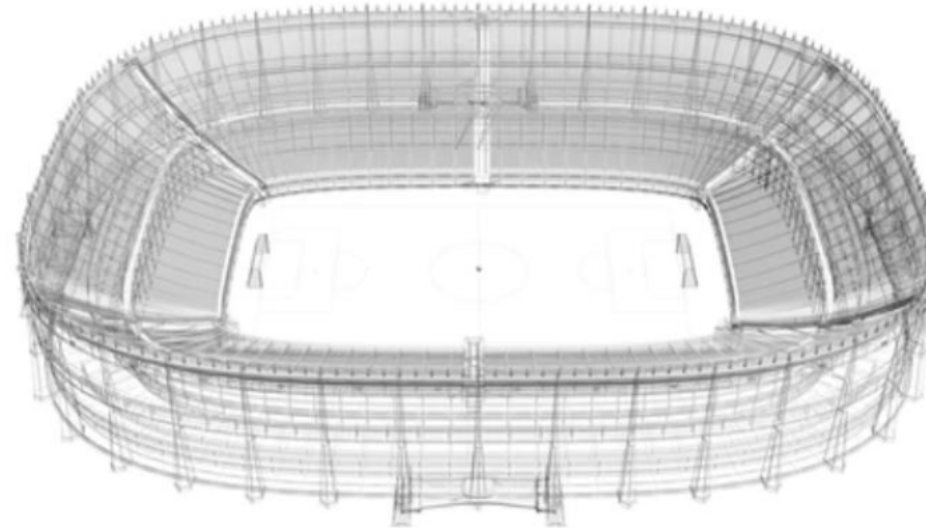


Ticket Location	Quantity	Price	Expected Occupancy
Lower Bowl	20,000	200	90%
Mezzanine	35,000	100	80%
Upper-Deck	80,000	50	75%
Luxury Box	1,200	500	100%



EXHIBIT 1 (INTERVIEWER)

Ticket breakdown



Ticket Location	Quantity	Price	Expected Occupancy	Revenue per Game
Lower Bowl	20,000	200	90%	3,600,000
Mezzanine	35,000	100	80%	2,800,000
Upper-Deck	80,000	50	75%	3,000,000
Luxury Box	1,200	500	100%	600,000
Total	-	-	-	10,000,000



INTERVIEWER EXHIBIT

Revenue breakdown

Revenue category	Per Game	Annual	Per Year
Tickets	10 M	-	80 M
Advertising	7 M	-	56 M
Merchandise	8 M	-	64 M
Concessions	5 M	-	40 M
TV Contract	-	290 M	290 M
Total (have candidate calculate)	30 M	290 M	530 M

- Candidate should be careful around units – some revenues are on a per game basis while other revenues are on a per year basis
- “Advertising” can include both on-jersey and in-stadium ads
- Tickets are calculated using tiered-pricing from Exhibit 1



INTERVIEWER EXHIBIT

Cost breakdown

Cost category	Amount (per year)
Salaries	200 M
SG&A	30 M
Maintenance	10 M
Travel	10 M
Total (have candidate calculate)	250 M



BRAINSTORMING

How could the owner drive more revenue from this asset to increase its NPV?

Brainstorming Guidance:

Note: This is just one possible set of categories and answers. Many more are possible, and interviewers should assess both the volume and relevance of answers.

New revenue streams:

- Utilize the stadium for non-football events
- Host training camps for local colleges or high schools
- VIP experiences or tours

In-game revenue:

- Paid stadium wifi
- In-game gambling
- Purchase of messages to be displayed on jumbotron screen

Change league structure:

- Advocate for more home games
- Playoff payouts
- Re-negotiate revenue sharing model

Best candidates display:

Good candidates should generate ideas that do more than squeeze additional dollars out of existing revenue streams. A candidate can rely on their own stadium experiences to recommend monetization opportunities that haven't been covered so far. An excellent candidate will recognize that the owner owns the stadium, which is only utilized a few days per year for games.



CONCLUSION

To conclude, the candidate should provide the following:

Recommendation:

- The owner should not invest in the football team
- The NPV is -0.2 B

Risks:

- Given the novelty of this opportunity, many of the estimates used (i.e. stadium occupancy) have high uncertainty. The “real” NPV could be much higher!

Next Steps:

- Find an alternative investment that generates a higher return

• A candidate could also recommend investing. To do this, the candidate should acknowledge that the NPV is negative but lean heavily on the ideas cited in the brainstorming session to argue that there is opportunity for increased profit.



INTERVIEWER FEEDBACK FORM

Case Name _____ Interviewer _____

Case Book _____ Case Type _____ Difficulty _____

Case Execution:

- Clarifying Questions + Framework
 - Good Questions 1 2 3 4 5
 - Structured
 - MECE
 - Creativity

Feedback:

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Feedback:

- Brainstorm + Conclusion
 - Creative & Structured 1 2 3 4 5
 - Good Business Judgment
 - Recommendation Strength

Feedback:

- Presence & Non-Verbal
 - Confidence
 - Poise / Posture 1 2 3 4 5
 - Clear & Concise
 - Body Language
 - Coachability

Feedback:

Total: _____ / 20



A Golden Ticket?

Round 1 | Consumer Goods

A Golden Ticket?

Round 1 | Consumer Goods

Prompt: Your client is Whizzy Wilco's Chocolate Emporium, a global confectionery manufacturer based in the US that specializes in chocolate bars and unique candies. While Whizzy Wilco's has a long history of success in its industry, the company has projected negative operating profit this year. This has forced a change in management via a very unusual process. The new (very young) CEO has hired you to discover the root cause of the company's profitability problems and how to ensure the company's survival.

Clarifying Information: *Note: Provide this only if corresponding questions are asked.*

1. How does the company make money?

Whizzy Wilco's develops, manufactures, and distributes its products across the globe. It earns money by selling its products to retailers such as grocery stores, convenience stores, and specialty candy stores.

2. What is the goal/what does success look like?

The CEO wants to return to profitability as soon as possible, ideally in a year or less.

3. What's the story with the change in management and the new CEO?

The new CEO, Charles, opened a bar of chocolate and found a golden ticket inside. After a rigorous interview process, Charles was hired.



BEHAVIORAL INTERVIEW QUESTION:

1. Why consulting?
2. Tell me about a time when you had to convince someone to take a particular course of action.



03 | CASE: A GOLDEN TICKET?

Framework Guidance:

Note: There are many possible alternatives to this framework. These are only provided as possible suggestions.

Financial	Marketing/Sales	Outsourcing	External Factors
<ul style="list-style-type: none">• Revenues<ul style="list-style-type: none">○ Product pricing○ Unit sales• Costs<ul style="list-style-type: none">○ Variable<ul style="list-style-type: none">■ Labor■ COGS○ Fixed<ul style="list-style-type: none">■ Factories■ Warehouses■ Shipping fleet	<ul style="list-style-type: none">• Any laggards in product mix?• Underperforming markets?• New revenue streams<ul style="list-style-type: none">○ Confectionaries○ Other products (drinks? snacks?)○ Customers (direct-to-consumer? wholesalers?)	<ul style="list-style-type: none">• Manufacturing• Distribution• Product development	<ul style="list-style-type: none">• Competition• New management• Global supply chain• Economic conditions

How to Move Forward:

To move forward, the interviewee should call out that this is a profitability case and ask to see Whizzy Wilco's most recent financial information.

The interviewee should create a framework centered around the root cause of the profitability issue as well as ways to turn it around. Additionally, the interviewee should make a hypothesis regarding the root cause of the problem. For example, the interviewee may note that Whizzy Wilco's is highly vertically integrated and hypothesize that outsourcing at least one of these functions could return the company to profitability.



EXHIBIT 1

Consolidated Statement of Operations

	2018	2020	2021
Sales	14,000	14,700	15,400
COGS	6,000	6,300	6,600
SG&A	7,000	8,050	9,100
Operating Profit	1,000	350	(300)

*Dollars in millions



03 | CASE: A GOLDEN TICKET?

Question 1

Provide Exhibit 1 and allow candidate to give insight

Exhibit or Question Guidance:

To move forward, the interviewee should notice that SG&A costs have increased faster than net sales, indicating that Whizzy Wilco's should consider cutting those costs. The interviewee should then request to drill down into those SG&A costs.

A strong interviewee will quantify how sales and costs are growing. For example, net sales are projected to grow 10% in 2 years, which is equal to the growth of COGS. Meanwhile, SG&A costs are projected to grow 30% in 2 years, or at a rate 3x net sales.

BONUS QUESTION

If desired, you may ask the interviewee to brainstorm what SG&A costs the client may be incurring. While there are many possible answers, the interviewee should NOT list anything that isn't an SG&A cost (e.g. manufacturing costs, direct labor, R&D). Some possible responses are below:

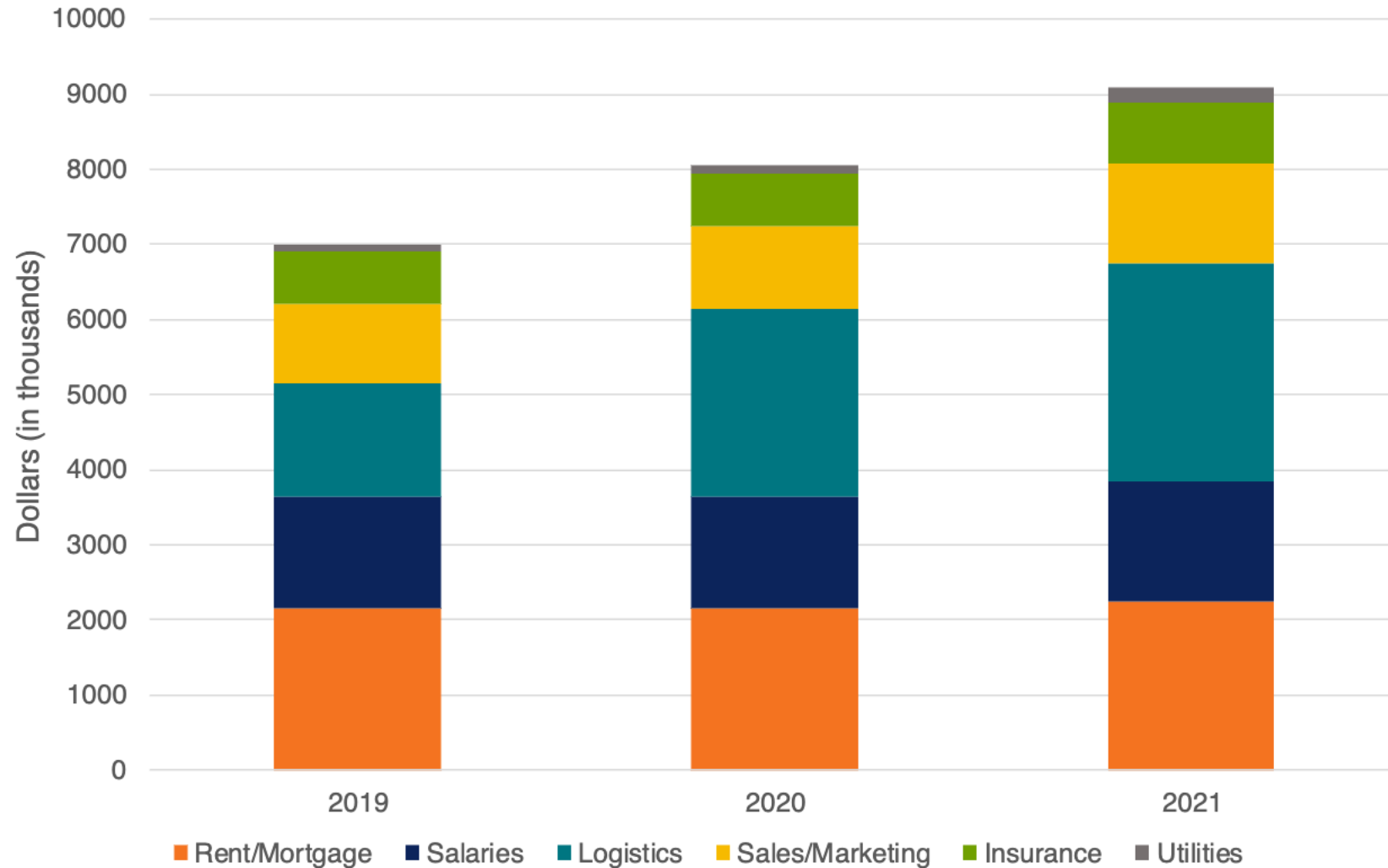
- Sales/marketing costs
- Administrative salaries
- Logistics/shipping costs
- Rent/mortgage
- Utilities
- Insurance



EXHIBIT 2

SG&A Graph

Whizzy Wilco's SG&A Costs





03 | CASE: A GOLDEN TICKET?

Question 2 (The location of these question slides in your case is completely up to you)

- Walk me through this chart describing our client's SG&A costs. What conclusions can you draw from it?

Exhibit or Question Guidance:

To move forward, the interviewee should notice that logistics (warehousing, inventory management, and order fulfillment) is the fastest growing cost category and is projected to become the biggest share of SG&A costs in 2021, overtaking rent and salaries. The interviewee should want to explore cutting those costs, which will lead into a brainstorming session about possible options.

Other possible takeaways:

- Rent/Mortgage was the biggest component of SG&A costs in 2019 but has been flat since then. This shouldn't be a surprise if the interviewee assumes rents and mortgages are fixed.
- Salaries were the second biggest component of SG&A costs in 2019. However, salaries stayed flat in 2020 and dropped in 2021. The interviewee might speculate as to why that is, but they should be guided to look elsewhere if they linger on this point.
- Sales/marketing costs have also grown, but not to the same extent as logistics costs.
- The interviewee should NOT conclude that they can determine cost numbers by looking at the tops of each colored segment (e.g. logistics = ~\$6.5B in 2021). Instead, interviewees may determine cost numbers by looking at the areas of each colored segment (e.g. logistics = ~\$2.9B in 2021)



03 | CASE: A GOLDEN TICKET?

BRAINSTORMING

What can Whizzy Wilco's do to reduce its growing logistics costs?

Brainstorming Guidance:

Note: This is just one possible set of categories and answers. Many more are possible, and interviewers should assess both the volume and relevance of answers.

Improve logistics operations

- Reconfigure network to maximize fleet efficiency
- Purchase new vehicles/ships/planes (more fuel efficient, lower maintenance)

Reduce logistics obligations

- Reduce warehouse footprint
- Reduce shipping to underperforming markets
- Adjust frequency of shipping (i.e. change review period)

Outsource

- Order fulfillment (DHL, UPS)
- Inventory management
- Warehousing

Best interviewees display:

The interviewee should at least mention outsourcing as a potential solution, so press them to include it if they don't mention it. The interviewee should stay structured in their brainstorming rather than give a laundry list of ideas. Strong interviewees might also discuss any assumptions being made, what evidence they would need to prove each option is viable, or potential risks.



EXHIBIT 3

Give the following information to the interviewee **VERBALLY**:

- I like the idea of outsourcing. Let's explore that further.
- We've drilled down into Whizzy Wilco's logistics costs. They are broken down as follows:
 - \$800M for warehousing, \$1.5B for order fulfillment, \$200M for inventory management
- Whizzy Wilco has received three bids for third-party logistics (3PL) services:
 - Daintree – largest 3PL company in the world, based in US
 - Bid terms: \$550M for warehousing, \$1.1B for order fulfillment, \$350M for inventory management software (required purchase, would replace Whizzy Wilco's inventory management system)
 - Original Logistics - mid-sized 3PL, based in Germany
 - Bid terms: \$600M for warehousing, \$1.2B for order fulfillment, no inventory management software
 - The Long Haul (TLH) – global courier service, based in US
 - Bid terms: \$1B for order fulfillment, no warehousing capability or inventory management software
- Any services not offered must still be performed by Whizzy Wilco's



03 | CASE: A GOLDEN TICKET?

Question 3

Should Whizzy Wilco's outsource their logistics functions? If so, which bid for 3PL services should Whizzy Wilco's accept?

Exhibit or Question Guidance:

Organizing data given verbally will be key to the interviewee's success in answering this question. For example, the interviewee may create a table like the one shown below:

	Whizzy Wilco's	Daintree	Original Logistics	TLH
Inventory Management	200	350	N/A**	N/A**
Warehousing	800	550	600	N/A**
Order Fulfillment	1500	1100	1200	1000
TOTAL:	2500	2000	2000	2000

*in millions of dollars

**N/A = Whizzy Wilco's costs in category

The interviewee should discover that all three 3PL bids equal the same amount: \$2B. Any vendor would save 20% in logistics costs, so Whizzy Wilco's should outsource. Since each vendor's bid equals the same amount, the interviewee may say any of the bids would be acceptable. However, a strong candidate should consider non-cost factors (e.g. Daintree has scale and expertise in all services but converting inventory management could be difficult) and choose a vendor based on that cost-benefit analysis. The interviewee should NOT say "I don't know which vendor to choose".

A strong candidate will also tie these numbers back to the client's goal. The client projected \$300M in operating losses in 2021, so outsourcing and saving \$500M will return the company to operational profitability.



03 | CASE: A GOLDEN TICKET?

CONCLUSION

Prompt the interviewee with the following:

We have a meeting scheduled with the new CEO tomorrow. If you were in the room with us, what would you tell him? Keep in mind: the CEO is younger than most, so you should keep your recommendation simple without insulting his intelligence.

Recommendation:

- I recommend that you outsource your logistics functions to a third-party company. Doing so will save the company \$500M, returning Whizzy Wilco's to profitability.
 - *The interviewee may also recommend a specific vendor. Many choices and justifications are valid.*

Possible Risks:

- This will require selling off assets and firing workers.
- Whizzy Wilco's will lose control over its logistics functions.
 - *The interviewee may also list risks of choosing a specific vendor. Many risks are valid.*

Next Steps:

- Enter negotiations with a third-party company and start transition process.



INTERVIEWER FEEDBACK FORM

Case Name _____ Interviewer _____

Case Book _____ Case Type _____ Difficulty _____

Case Execution:

- Clarifying Questions + Framework
 - Good Questions 1 2 3 4 5
 - Structured
 - MECE
 - Creativity

Feedback:

- Exhibits + Quantitative Ability
 - Accuracy 1 2 3 4 5
 - Speed
 - Insights Presented
 - Errors / Guidance Needed

Feedback:

- Brainstorm + Conclusion
 - Creative & Structured 1 2 3 4 5
 - Good Business Judgment
 - Recommendation Strength

Feedback:

- Presence & Non-Verbal
 - Confidence
 - Poise / Posture 1 2 3 4 5
 - Clear & Concise
 - Body Language
 - Coachability

Feedback:

Total: _____ / 20



MOOC Madness

Round 2 | Education



MOOC MADNESS

Round 2 | Education



Prompt:

Our client, Greg Wilkinson, is the Dean of the business school at a mid-sized, four-year university. They are experiencing declining application rates and have brought us in to help determine the reason for the decline and how to bolster converted admissions. He must present to the Board of Visitors on the topic later this week.

Clarifying Information: *Note: Provide this only if corresponding questions are asked.*

- 1. How is “application rates” defined? How is “converted admissions” defined?** Application rate is the number of applicants to the university. Schools like to see this number grow, indicating preference and prestige of the school. Converted admissions is the number of applicants who have been offered admission to the school and accept that offer to attend.
- 2. Why does Greg Wilkinson want to pursue this?** Schools need tuition dollars of a certain threshold to cover their operating budget, so a decline in quality, interested prospective students (i.e. declining application rates) makes that threshold more difficult to reach.
- 3. What is the business model for a university?** Universities receive “revenue” mainly through tuition dollars and endowment donations. They have a large set of fixed operating costs to cover, so budgets are typically tight.
- 4. What is the current state of the education industry?** More information later.
- 5. How will Greg measure success?** He wants to increase converted admissions to drive tuition dollars.

BEHAVIORAL INTERVIEW QUESTION:

Tell me about a time when you had to work on a project or in an area outside your comfort zone. How did you make an impact?



Framework Guidance:

Note: There are many possible alternatives to this framework. These are only provided as possible suggestions.

Student Value

- Quality of education
- Student experience
- Prestige of program
- Career opportunities
- Cost of attendance
- Likelihood of scholarship

University Financials

- Tuition (revenue)
- Endowment/Donations
- Scholarships
- Faculty/Staff salary
- Operating costs
- Capital expenditures

Industry Trends & Competition

- # of students attending secondary institutions
- 2-yr v. 4-yr programs v. trade school
- Online v. in-person education
- COVID impacts

A **good** candidate recognizes that there can be internal and external factors contributing to the decline in applications and can identify the importance of the student's perception of value.

A **great** candidate recognizes numerous internal and external factors, as well as the intricacies between the student perspective and the university's requirements to operate.

How to Move Forward:

The candidate should recognize that there could be changes in the university's value proposition, as well as broader competitive and industry trends that could be driving the decline in applications. Direct them toward considering broader industry trends.



EXHIBIT 1

Number of High School Students Pursuing Secondary Education by Category (millions of graduates)

Education Category	2015	2020
4-year Residential Universities	1.6	1.75
2-year Residential Universities	0.8	0.75
Online Universities	1.2	1.75
MOOC*	0.4	0.75

*MOOC = Massive Open Online Courses (ex. Google U, Coursera, etc.)



04 | CASE: MOOC MADNESS

Question 1

- What is the overall trend in secondary education? What category is the most threatening to Greg Wilkinson's program?

Exhibit or Question Guidance:

1. Candidates should recognize that the overall secondary education market is growing (from 4.0M applicants to 5.0M applicants).
 - 2015 calculation: $1.6M + 0.8M + 1.2M + 0.4M = 4.0M$
 - 2020 calculation: $1.75M + 0.75M + 1.75M + 0.75M = 5.0M$

Candidates may also add reasoning for the change, such as the accessibility and/or importance of secondary education rising.

2. Candidates should also notice that, while the number of 4-year residential university applicants is rising, the percentage share that they have in the industry is declining. Furthermore, other residential programs are also decreasing, while all online options are increasing. Therefore, the residential universities need to take action to combat their declining market share.
 - It is not essential that the candidate calculates all percentages, just what they need to recognize the trend.

Education Category	2015 = 4.0M	2020 = 5.0M
4-year Residential Universities	$1.6/4.0 = 40\%$	$1.75/5.0 = 35\%$
2-year Residential Universities	$0.8/4.0 = 20\%$	$0.75/5.0 = 15\%$
Online Universities	$1.2/4.0 = 30\%$	$1.75/5.0 = 35\%$
MOOC (ex. Google U, Coursera, etc.)	$0.4/4.0 = 10\%$	$0.75/5.0 = 15\%$

To Proceed Forward: Ask candidate to brainstorm ways for Greg Wilkinson to combat the competitive categories (see next slide)



BRAINSTORMING

What are some ways that Greg Wilkinson's school can combat the competition from online categories?

Brainstorming Guidance:

Note: This is just one possible set of categories and answers. Many more are possible, and interviewers should assess both the volume and relevance of answers.

Leverage Power of In-Person Relationships:

- Do more project and discussion based work (v. lectures)
- Partner with professionals in the field to do shadowing
- Leverage alumni and professors for 1:1 mentor relationships
- Other ways to increase "real world" experiences

Strategically Introduce Online Classes:

- Make lower credit hour classes "at your own pace"
- Integrate Coursera type classes to cover fundamental topics ahead of school

Integrate Technology into Traditional Classroom:

- Simulations
- Pre-recorded videos on specific topics
- Using platforms like polls and Wordles in class

Best candidates display:

A **good** candidate recognizes that cost of attendance is a difficult metric to change, given tight university budgets, and instead looks for ways to increase value of a residential program v. an online program.

How to move forward:

Guide candidate toward thinking about how to leverage in-person relationships to create "real world" experiences and networks that online programs don't offer.



EXHIBIT 2

Cost and Impact Information for Experiential Education Program

Cost of Program	\$3.4 MM
Increase in # of Converted Admissions Offers*	2%
Average Annual Tuition Received per Applicant	\$40K
Tuition Available for New Program Funding	5%

*Converted Admissions Offers is defined as the % of admitted students that attend the program



04 | CASE: MOOC MADNESS

Question 2

- Greg Wilkinson has been approached by a local education consulting firm, Cavalier & Co., about designing a comprehensive experiential education program for his school, including simulations, mentorship programs, curriculum changes, etc. It is university policy that all large-scale expenditures have a payback period of 4 years. Should Greg move forward with the program?

Exhibit or Question Guidance:

Candidate should ask about current number of admitted students. When asked, provide the following information:

- Current # of applications: 50,000
- Current Acceptance Rate: 20%
- Current Admissions Offer Conversion: 3%
- % of Tuition Available for New Program Funding = 5%
- 0% Growth in Applications and 0% Drop-Out Rate

Calculations:

- Admitted Students = $50,000 * 20\% = 10,000$
- Increase in Student Conversion = $10,000 * 2\% = 200$
- Increase in Tuition = $40,000 * 200 = 8,000,000$
- % of Tuition Available to Business School = $8,000,000 * 5\% = 400,000$
- Payback Calculation = $400,000 + 800,000 + 1,200,000 + 1,600,000 = \$4.0 \text{ MM} > \$3.4 \text{ MM}$

A **good** candidate recognizes they need additional information and ties back to the payback period goal. A **great** candidate will recognize that the tuition increase realized from the program grows each year as the 2% increase propagates across admissions classes.



CONCLUSION

Recommendation:

- Greg Wilkinson should pursue creating an experiential education program with Cavalier & Co. to combat competition from online school offerings. It will add a “real world” component to the classroom, offering diversity in experiences.
- The project meets the university’s policy, with a payback period of less than 4 years.

Risks:

- Experiential education program will be a heavy lift for Greg’s school to integrate and operationalize
- Estimations of increase in converted applications may be inflated, affecting the payback period calculation

Next Steps:

- Any ideas that move toward execution of integrating the program into the classroom and promoting it to prospective students. Some ideas include:
 - Promote use of simulation to prospective students
 - Create training program for professors and school administrators
 - Develop integration plan and timeline
 - Conduct market research to confirm payback period assumptions



INTERVIEWER FEEDBACK FORM

Case Name _____ Interviewer _____

Case Book _____ Case Type _____ Difficulty _____

Case Execution:

- Clarifying Questions + Framework
 - Good Questions 1 2 3 4 5
 - Structured
 - MECE
 - Creativity

Feedback:

- Exhibits + Quantitative Ability
 - Accuracy 1 2 3 4 5
 - Speed
 - Insights Presented
 - Errors / Guidance Needed

Feedback:

- Brainstorm + Conclusion
 - Creative & Structured 1 2 3 4 5
 - Good Business Judgment
 - Recommendation Strength

Feedback:

- Presence & Non-Verbal
 - Confidence
 - Poise / Posture 1 2 3 4 5
 - Clear & Concise
 - Body Language
 - Coachability

Feedback:

Total: _____ / 20



Sourcing the Sauce

Round 2 | Restaurant



SOURCING THE SAUCE

Round 2 | Restaurant



Our client is the CEO of the fast-food chain Hot Indian. Hot Indian brings in \$3B in annual revenues around the U.S., with locations in most major cities. Started in Minneapolis as a small food truck in 2003, Hot Indian quickly became a local staple known for their quality of food, level of service, and distinctive “dance for 10% off” style gimmicks for customers. Hot Indian also keeps a lean menu, devised to keep operations simplified and allow for a Hot Indian location to have success in food courts, food trucks, and standalone locations alike. All restaurants are owned by the company, and each restaurant brings in about \$1.5M in annual revenue at 20% operating income.

We have been hired to figure out where Hot Indian should source their chutney. Currently, Hot Indian sources all sauce from a company owned manufacturing plant in Minneapolis and distributes the sauces to all locations around the country. Hot Indian has 500 additional restaurant openings planned in the next three years, and the plant will be out of capacity for the additional volume within two years.

Clarifying Information: *Note: McKinsey cases typically do not have hidden information, and the below information is not critical to solving the case.*

Important: *after the interviewee has finished their clarifying questions, move to the next question and ask the framework prompt. This is more typical of a McKinsey case.*

1. What is the value chain of a typical store? Fresh produce, meats, and supplies are typically supplied through a restaurant supplier or local provider. The chutney and marinades are created in the Minneapolis facility, then shipped through a third party distributor to restaurant locations.

2. What types of items does Hot Indian have on their menu? Hot Indian carries two main entrees: Kati Rolls and Rice Bowls. Both come with the same 3 fillings. They have 4 sides – labeled “Snacks”, and serve “Baba’s Masala Chai” in addition to traditional beverages found in fast food operations.

3. Is there a particular goal Amol Dixit has communicated? We’re at Day 1 of the project, and Amol would like to grow operating income at the restaurants. If possible, Amol would also like to keep operations within the Minneapolis community, where he grew up and has a vested interest in. He also wants to ensure that the quality of the food at Hot Indian remains quite high in comparison to competitors while keep operations lean.

BEHAVIORAL INTERVIEW QUESTION:

1. Describe a time when you felt excited about your work and its impact.



05 | CASE: SOURCING THE SAUCE

Framework Prompt: Its day one of the project, how would you get the team started on the project?

Note: There are many possible alternatives to this framework. These are only provided as possible suggestions.

Financials

- Current cost of Chutney production
- Cost to expand plant
- Cost of Third-party suppliers
- Cost to do in house

Operations

- Lead time for sauce orders
- Ease of ordering for restaurant managers
- Packaging difference impact on restaurant operations

Amol's Vision Consideration

- Minneapolis ties
- Quality of chutney
- Room to grow for the future

Some other “nice to have” numbers:

Operating Income is \$600M (20% of \$3B)

Hot Indian has 2,000 Restaurants currently, but we need to plan for 2,500 restaurants in the future

How to Move Forward:

- After the interviewee has given the framework, move onto exhibit 1.



05 | CASE: SOURCING THE SAUCE

Question 1

- The team has completed research into the different options for the new sauce sources. (Provide Exhibit 1) [give the candidate time to ask clarifying questions]
- Which sourcing option is the best for Hot Indian?

Exhibit or Question Guidance:

- 1) Interviewee should calculate that Hot Indian currently has 2,000 restaurants based on information in the prompt [$\$3B / \$1.5M$ average rev./rest. = 2K restaurants]
 - a) Additionally, the interviewee should take into account that there will be 500 additional restaurants built within the timeline and take that into consideration
- 2) Interviewee should mention the 2 year time limit of the project
- 3) **If asked about downtime...** there is no downtime, the construction project will not inhibit current production
- 4) Cost / Unit encompasses all the costs with the product and production (rent, lights, shipping to the restaurants, etc.)

The interviewee could go with any of the options depending on their argument and calculations.

Based on increasing operating income and maintaining high standards of quality, Hot Indian should build the new facility in Minneapolis and supplement their current volume with a third party supplier to manage the overload while the plant is being built.

Expansion Option	Construction Costs	Cost / Unit	Total Annual Cost / Restaurant	Annual Cost of Sauce	Total Costs
Create in Restaurant	\$5M [2500 loc. X \$2K/loc.]	\$10	\$10,000	\$25M	\$30M
Current Plant Expansion	\$1.5M	\$4	\$4,000	\$10M	\$11.5M
Build new facility in Minneapolis	\$5M	\$2	\$2,000	\$5M	\$10M
Third Party supplier	N/A	\$5	\$5,000	\$12.5M	\$12.5M



EXHIBIT 1

Cost information for different Sauce Options

Expansion Option	Construction Costs	Cost / Unit	Timeline	Quality Control	Capacity Increase
Create in Restaurant	\$2K / Restaurant	\$10	6 months for national expansion	Low	Unlimited (grow with restaurants)
Current Plant Expansion	\$1.5M	\$4	1 year	High	500 add'l restaurants
Build new facility in Minneapolis	\$5M	\$2	3 years	High	1,000 add'l restaurants
Third Party supplier	N/A	\$5	3 months	Medium	750 add'l restaurants

* Each restaurant uses approximately 1,000 units of sauce annually



BRAINSTORMING

The client is impressed with the sauce solution and would like the team to weigh in on an additional manner. Hot Indian is considering adding a line of lassis (an Indian yogurt beverage) to the menu. What should Hot Indian consider before adding the new item?

Brainstorming Guidance:

Note: This is just one possible set of categories and answers. Many more are possible, and interviewers should assess both the volume and relevance of answers.

Operations

- Fit into current operations
- How much demand will this place on the system
- Rollout of the implementation timeline

Costs:

- Are more employees needed?
- How much to install?
- Is this item high margin?

Customer:

- Will customers pay for it?
- Will it generate higher sales / order?
- Is this an entrance item to get people interested in trying other Hot Indian items?

Best candidates display:

A holistic approach to the problem that is organized and well thought out. Think through the entire value chain of the operation and brainstorm solutions for each part of it.



CONCLUSION

To conclude, the interviewee should provide the following:

Recommendation:

- Hot Indian should build a new plant in Minneapolis for their sauce sourcing.

Risks:

- The promised cost / unit of sauce may be too high – the key to choosing the new build is because of the low cost / unit
- May need to build another plant in the future if Hot Indian keeps growing at same rate

Next Steps:

- Create a 5 year growth plan to see if additional plant builds are needed for other areas of the supply chain



INTERVIEWER FEEDBACK FORM

Sourcing the Sauce _____ Interviewer _____

Case Book _____ Case Type _____ Difficulty _____

Case Execution:

- Clarifying Questions + Framework
 - Good Questions 1 2 3 4 5
 - Structured
 - MECE
 - Creativity

Feedback:

- Exhibits + Quantitative Ability
 - Accuracy 1 2 3 4 5
 - Speed
 - Insights Presented
 - Errors / Guidance Needed

Feedback:

- Brainstorm + Conclusion
 - Creative & Structured 1 2 3 4 5
 - Good Business Judgment
 - Recommendation Strength

Feedback:

- Presence & Non-Verbal
 - Confidence
 - Poise / Posture 1 2 3 4 5
 - Clear & Concise
 - Body Language
 - Coachability

Feedback:

Total: _____ / 20



Formula for Success

Round 2 | Automotive



FORMULA FOR SUCCESS

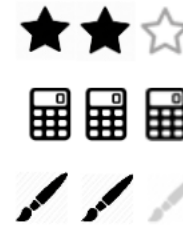
Round 2 | Automotive

Prompt:

Our client is a major high-end automotive brand (think BMW, Audi, etc.) looking to expand its racing footprint into the Formula 1 (F1) space. Our client understands that this is an area that would require significant capital to produce a competitive team capable of winning at least 3 races each year. Further, our client is interested in the different options of joining, either by sponsoring an existing team or creating a new team as a manufacturer (called a constructor) We are now tasked with helping our client to determine the viability of entering the F1 market.

Clarifying Information: *Note: Provide this only if corresponding questions are asked.*

- 1. What is Formula 1?** Formula 1 is a global racing league with 10 teams each consisting of 2 drivers. Teams can either be constructors (aka make their own cars and engines) or sponsors (aka purchase manufactured parts from a constructor and generate revenue through selling sponsor space on the car).
- 2. How many races are in a season?** 20 races in a season.
- 3. What is the client's objective?** Our client is looking for a net positive NPV project. They also base all new projects off a 10% discount rate.
- 4. How do F1 teams make money?** Evenly split distributions from F1, race winnings, and advertising.



BEHAVIORAL INTERVIEW QUESTION:

- 1. Tell me about a time you disagreed with a boss.**
- 2. Why our firm? Why this specific office?**



06 | CASE: FORMULA FOR SUCCESS

Framework Guidance:

Note: There are many possible alternatives to this framework. These are only provided as possible suggestions.

Constructor NPV	Sponsor NPV	Other Considerations (Internal)	Other Considerations (External)
<ul style="list-style-type: none">• Revenues<ul style="list-style-type: none">• F1 Payout• Race winnings• Advertisements• Costs<ul style="list-style-type: none">• CAPEX• Production• Race (fuel/tires/maint)• Contracts• Discount Rate	<ul style="list-style-type: none">• Revenues<ul style="list-style-type: none">• Details of sponsorship deal• Advertisements• Costs<ul style="list-style-type: none">• Driven by sponsorship deal• All relevant costs from constructor• Discount Rate	<ul style="list-style-type: none">• Cash on hand to execute<ul style="list-style-type: none">• Funding sources• Risk profile of company• Alignment with customer base• Technological feasibility to build successful racing car	<ul style="list-style-type: none">• Future of F1 – shift to electric?• Changing fuel costs• Driver pool – access to suitable drivers

How to Move Forward:

Include a brief description of what the interviewer should be looking for in the framework to move on to the next portion of the case

To move forward, the interviewee should call out the need to look at both revenues and costs to calculate NPV for the project.



06 | CASE: FORMULA FOR SUCCESS

Question 1

What are the potential sources for revenue?

Exhibit or Question Guidance:

Candidate should identify that racing earnings and advertising will be the largest sources of revenue. A deeper insight provides that the F1 governing body (FIA) will distribute funds to the teams.

Upon identifying distributed funds from the league, racing earnings, and advertising as revenue sources, provide the candidate with the following information:

- Total F1 revenues total \$1B
 - Half of funds are split evenly across the teams
 - Assume Constructors receive this whole amount, with none going to Sponsors. Assume that the teams would remain at 10 even if the client entered as a Constructor (e.g., another team would exit the league).
 - Half of funds are split evenly as race winnings (assume all winnings go to first place)
 - Assume the team will win 3 races per year
 - Assume that the Sponsorship opportunity the team is looking at provides winnings for the first 3 races won and nothing after, as a Constructor they would retain all winnings
- Advertising revenues for Constructors typically totals \$130M
- Advertising revenues for Sponsors is 20% that of a Constructor

Ask the candidate to calculate the annual revenue that can be expected as a Constructor and as a Sponsor. After finding that the client would make \$255M/yr as a Constructor and \$101M/yr as a sponsor, the candidate should push the analysis towards the cost side.

		Constructor	Sponsor
Total FIA Revenues	\$1,000,000,000		
Team Split	50%		
Total to teams	\$500,000,000		
Number of teams	10		
Total per team	\$50,000,000	\$50,000,000	\$0
Winnings split	50%		
Total to winnings	\$500,000,000		
Number of races	20		
Winnings per race	\$25,000,000		
Races assumed to win	3		
Total winnings	\$75,000,000	\$75,000,000	\$75,000,000
Constructors Advertising	\$130,000,000	\$130,000,000	
Sponsor	20%		
Sponsors Advertising	\$26,000,000		\$26,000,000
		\$255,000,000	\$101,000,000



EXHIBIT 1: COST ANALYSIS

	Constructor	Sponsor*
Factory CAPEX	\$525M	-
OPEX		
Annual R&D Budget	\$150M	50%
Annual Production (per car)	\$15M	50%
Fuel (per gallon)	\$15	-
Tires (per set)	\$4,000	25%
Maintenance (per race)	\$75,000	83.33%
Driver Contract (each)	\$5M	50%

*Sponsor costs are expressed as a % of constructor costs and are in addition to constructor costs



06 | CASE: FORMULA FOR SUCCESS

Question 2 (The location of these question slides in your case is completely up to you)

- Ask the candidate to analyze Exhibit 1.
- Upon completing total costs, ask for the NPV for both options.

Exhibit or Question Guidance:

- The candidate should acknowledge that this is the missing piece to calculate the NPV for both Constructor and Sponsor options.
- Provide the following when asked by the candidate:
 - CAPEX under the Constructor option would be incurred in Year 0 (aka no discounting) and would be a one-time expense.
 - R&D incurred is on a per team basis, Production incurred on a per car basis.
 - Fuel – assume F1 cars get 0.75 mpg, with approximately 300 miles run per race weekend, over 20 race weekends. Remember, there are 2 cars per team.
 - Tires – assume F1 cars go through 10 sets of tires on a race weekend, still with 20 race weekends and 2 cars per team.
 - Maintenance – 2 cars per team with 20 race weekends
 - Driver contract – team would need 2 drivers, assume both at same contract value.
 - Sponsor – under the deals of the sponsorship, the team would not incur any up front CAPEX nor any fuel costs for race weekends (covered by another sponsor). The remaining percentages are based off the percentage of Constructor (total) costs. If needed provide the candidate a shortcut noting that 83.33% is equivalent to 5/6.
 - Discount rate is 10%, assume a perpetuity.
 - Upon completion of cost analysis tell candidate to round operating costs to \$200M and \$100M for Constructors and Sponsors, respectively.



06 | CASE: FORMULA FOR SUCCESS

Exhibit or Question Guidance:

- Upon identifying the costs to the left, candidate should identify operating costs of \$195M and \$100M, with Constructors requiring a year 0 CAPEX of \$525M.
- Candidate should drive toward NPV on his/her own identifying that the Constructor yields a higher NPV of the two options.

Cost Exhibit Guidance	Constructor	Total Constructor OpEx	Sponsor	Total Sponsor OpEx
Factory CAPEX	\$525M		-	
OPEX				
Annual R&D Budget	\$150M	\$150 M	50%	75M
Annual Production (per car)	\$15M	15 x 2 = 30 M	50%	15M
Fuel (per gallon)	\$15	15 x 300/0.75 x 20 x 2 = \$0.24 M	-	
Tires (per set)	\$5,000	10 x 20 x 2 x 4000 = \$1.6M	25%	0.4M
Maintenance (per race)	\$75,000	75,000 x 20 x 2 = \$3M	83.33%	2.5M
Driver Contract (each)	\$5M	5 x 2 = \$10M	50%	5M
Total OpEx		~\$195M		~\$100M

NPV Calc	Constructor	Sponsor
CapEx	\$525M	-
Revenue	\$255M	\$101M
OpEx	\$195M	\$100M
Annual Profit	\$60M	\$1M
Discount	10%	10%
PV	\$600M	\$10M
NPV	\$75M	\$10M



BRAINSTORMING

What qualitative factors should our client consider surrounding this decision?

Brainstorming Guidance:

Note: This is just one possible set of categories and answers. Many more are possible, and interviewers should assess both the volume and relevance of answers.

Current Competitive Landscape

- All calcs based on 3 Race win assumption, is this possible?
- Are drivers available to sign?
- Do we have the cash on hand for the required CAPEX?

Future of F1

- Fuel Prices
- Shift to E vehicles
- Changes in annual production budget
- Changes in revenue split

Alternatives

- Other racing leagues
- Partnering w/ movies
- Sponsor league itself rather than a team

Best candidates display:

Standard brainstorming of internal/external and risk/reward could be used here, though higher level candidates with refrain and tailor a structure to F1. Additionally, ideas of a continued move across the board towards electric vehicles as well as operational feasibility of the entry into F1 should be discussed regardless of the structure.



CONCLUSION

To conclude, the interviewee should provide the following:

Recommendation:

- Our client should enter F1 by becoming a constructor, a move that would provide returns greater than the client's required rate of return of 10%.

Risks:

- Future of F1 changing to be misaligned with our company brand (e.g., focus on electric vehicles)
- Being competitive within the league early on to actually earn winnings on the projected 3 race wins

Next Steps:

- Competitive landscape analysis of other teams and drivers to identify the feasibility of obtaining a team that can win and win quickly.
- Note: one of many possible recommendations.



INTERVIEWER FEEDBACK FORM

Case Name _____ Interviewer _____

Case Book _____ Case Type _____ Difficulty _____

Case Execution:

- Clarifying Questions + Framework
 - Good Questions 1 2 3 4 5
 - Structured
 - MECE
 - Creativity

Feedback:

- Exhibits + Quantitative Ability
 - Accuracy 1 2 3 4 5
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Feedback:

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 - Good Business Judgment
 - Recommendation Strength

Feedback:

- Presence & Non-Verbal
 - Confidence
 - Poise / Posture 1 2 3 4 5
 - Clear & Concise
 - Body Language
 - Coachability

Feedback:

Total: _____ / 20



Seven Flags

Round 1 | Hospitality



SEVEN FLAGS

Round 1 | Hospitality

Prompt: Our client is a mid-size amusement park chain, with 10 parks around the U.S. serving over 10 million visitors each year. In their Richmond, VA park, it operates both a traditional thrill-ride section, as well as an animal experience. **(Show park map.)** Currently, the two sections are covered under one entry ticket price. However, management is considering offering a separate ticket for only the animal experience section. They have come to us to determine if this is a good idea.

Clarifying Information: *Note: Provide this only if corresponding questions are asked.*

- 1. Financial goal:** Management wants a payback period less than 10 years. (If the candidate asks, payback period = investment / on-going profit.)
- 2. Current price:** Tickets are currently \$20 and provide visitors full access to the park
- 3. Park attendance:** The Richmond, VA park is an average sized park within the client's portfolio
- 4. Business model:** The park is a typical amusement park (think Six Flags or Busch Gardens). Visitors buy a ticket for entrance (assume same price for adults and children), and all rides / amusements are accessible under the one ticket price. The park also sells merchandise and food / drinks separately.



BEHAVIORAL INTERVIEW QUESTION:

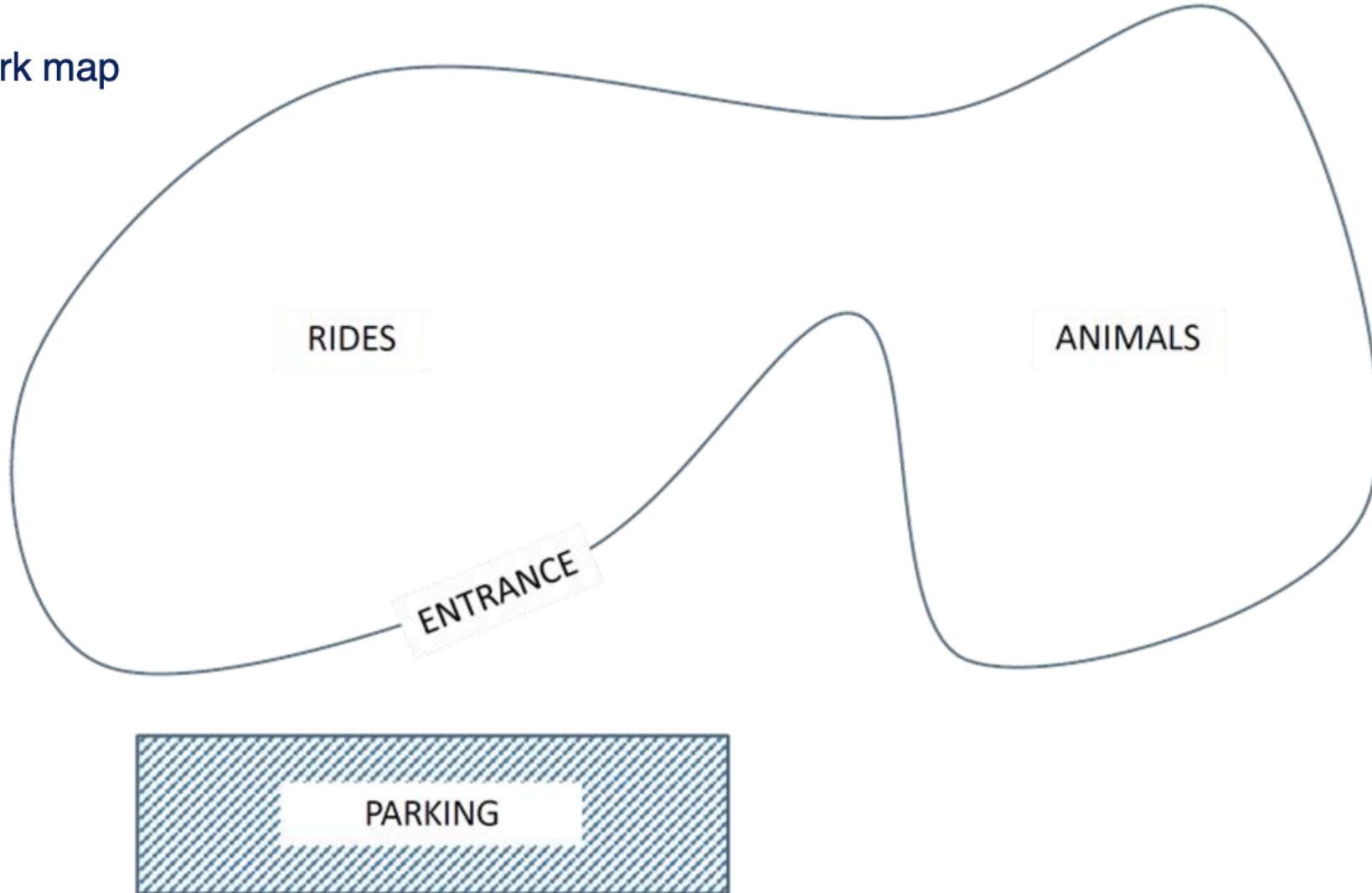
1. Tell me about yourself.

2. Tell me about a time you helped a team overcome a problem.



EXHIBIT 1

Seven Flags park map





07 | CASE: SEVEN FLAGS

Framework Guidance:

Note: There are many possible alternatives to this framework. These are only provided as possible suggestions.

Incremental profit

- Revenue: ticket prices, food & drink sales, merchandise, visitor volume, cannibalization of “ride + animal” ticket sales
- Existing costs: maintenance, animal care, labor/operations, COGS (merchandise, food)
- New costs: Build out of new entrance, wall between sections of the park, and new parking

Competitive landscape

- Other attractions in the area
- Zoos, petting zoos
- Museums
- Movie theaters
- State fairs
- All forms of family friendly recreational activities

Macro trends

- Changes in disposable income
- Weather conditions
- Consumer entertainment preferences

How to Move Forward:

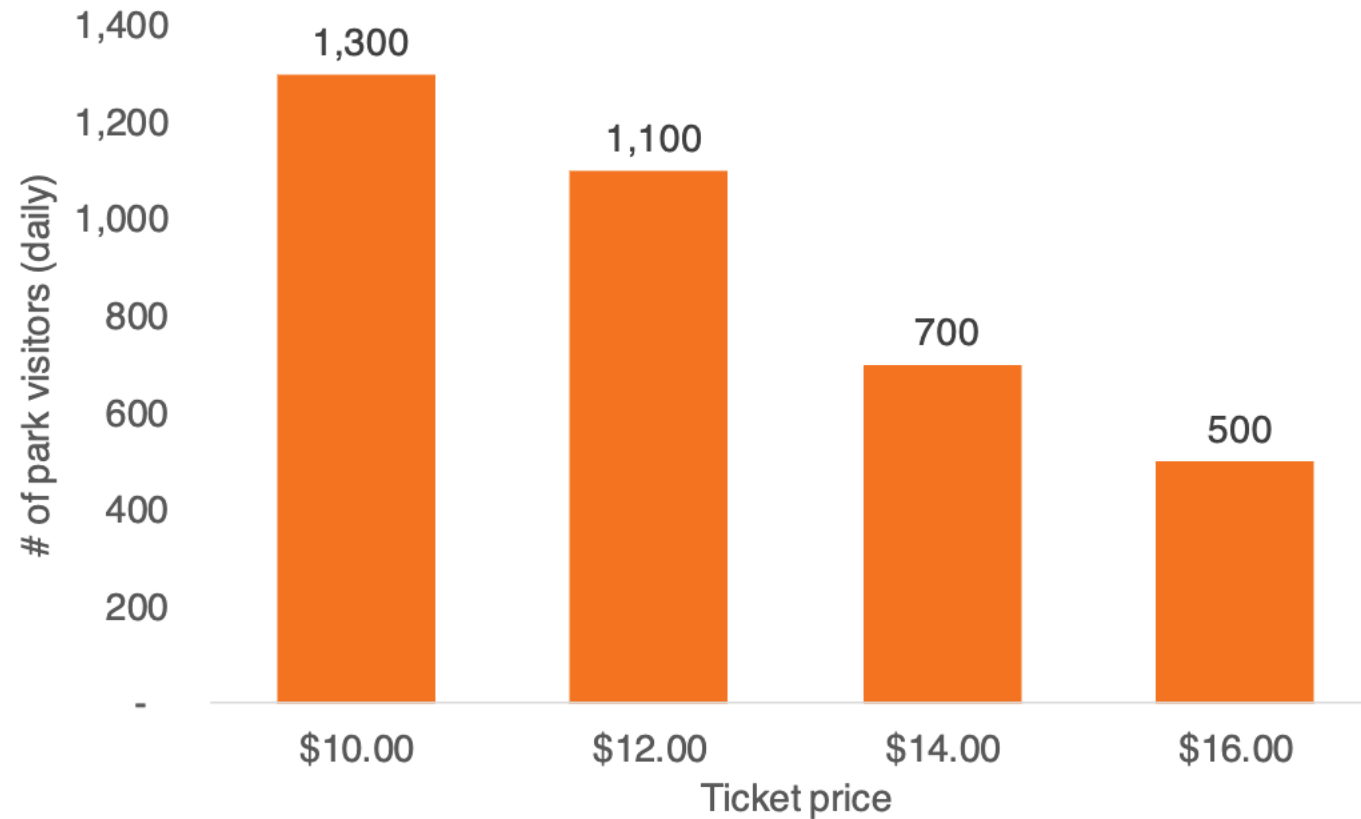
Key insights include pricing decision, cannibalization impact, and recovery of new fixed costs. If candidate does not identify these in his/her framework, push candidate to brainstorm incremental changes in revenue and costs.

When asked about pricing, ask candidate how he/she would determine price. After the candidate has brainstormed some ideas, present Exhibit 2.



EXHIBIT 1

Price elasticity of animal only admissions



1. Cannibalization rate is 50%
2. Establishment is open 350 days per year



07 | CASE: SEVEN FLAGS

Question 1 From Exhibit 2, candidate should want to discover which price would maximize revenue. See below for solution.

Exhibit or Question Guidance:

Ticket price	Number of Visitors	Cannibalization rate	New tickets	New ticket revenue	Cannibalized tickets	Cannibalized revenue per ticket (current ticket \$20)	Daily cannibalized revenue	Daily incremental revenue	Yearly incremental revenue
A	B	C	$D = B * (1-C)$	$E = A * D$	$F = B * C$	$G = A - \$20$	$H = G * F$	$I = H + E$	$J = I * 350$
\$10	1,300	50%	650	\$6,500	650	(\$10)	(\$6,500)	\$-	\$-
\$12	1,100	50%	550	\$6,600	550	(\$8)	(\$4,400)	\$2,200	\$770,000
\$14	700	50%	350	\$4,900	350	(\$6)	(\$2,100)	\$2,800	\$980,000
\$16	500	50%	250	\$4,000	250	(\$4)	(\$1,000)	\$3,000	\$1,050,000

- Revenue is maximized at a price point of \$16 per ticket for the animal only admission. This equates to ~\$1MM in incremental ticket sales or a 5% increase
 - From the prompt and clarifying questions, we know that Seven Flags sees about a million visitors a year at \$20 per visitor in ticket sales. Thus, current ticket revenue equals \$20MM.
- Great candidates will mention that incremental revenue is sensitive to the cannibalization rate assumption



BRAINSTORMING

Aside from ticket sales, what are some other considerations that will factor into the decision?

Brainstorming Guidance:

Note: This is just one possible set of categories and answers. Many more are possible, and interviewers should assess both the volume and relevance of answers.

Other revenue sources:

- Food / beverages
- Merchandise
- Parking
- Annual passes (individual / family)

Incremental costs:

- Build out of new entrance, building a wall to separate rides from animal enclosure, and additional parking
- Additional employees to serve higher visitor volume
- Payback period less than 10 yrs?

Best candidates display:

Great candidates will have asked about specific KPI's at the beginning of the case (i.e. projects must have a 10-yr. payback period or better). Candidates should remember on his/her own to evaluate the payback period of this project and ask for the relevant information.

This brainstorming activity is an opportunity for great candidates to leverage their framework. Great candidates will return to their framework to recall the primary objective and other ideas already generated.



07 | CASE: SEVEN FLAGS

Question 2 What is the payback period of this proposal?

- Great candidates should recognize that they need to do this calculation. If not, help the candidate recall that one metric Seven Flags uses to evaluate projects is a 10-yr. payback period.
- Provide only when asked: Fixed costs for constructing new entrance, wall, and parking lot is estimated to be \$2 million.
- Only consider incremental revenue from ticket sales
- Seven Flags profit margin in 20%

Exhibit or Question Guidance:

- Candidate only needs to calculate the payback period at the \$16 price point
- Payback period = investment / incremental profit
 - Incremental profit = incremental revenue x profit margin. Incremental profit = \$1,050,000 x 20% = \$210,000
 - Payback period = \$2,000,000 / \$210,000 = ~9.5 years



CONCLUSION

To conclude, the interviewee should provide the following:

Recommendation: There is no correct answer, but a likely response could be:

- Move forward with creating an animal only admission ticket
- Incremental revenue / profit is maximized at a price point of \$16.00 per ticket, leading to a 5% increase in ticket revenues and profits
- Given the \$2M investment, payback period is ~9.5 years – just below management’s requirement of 10 years

Risks:

- Incremental revenue / profit very sensitive to cannibalization. If actual cannibalization is higher, incremental profits will suffer and payback period will exceed 10 years
- Potential opportunity cost to invest in higher ROI projects

Next Steps:

- Payback period will decrease (improve) if animal park can sell additional merchandise, food, and beverages to new visitors. Size this opportunity and understand impact



INTERVIEWER FEEDBACK FORM

Case Name _____ Interviewer _____

Case Book _____ Case Type _____ Difficulty _____

Case Execution:

- Clarifying Questions + Framework
 - Good Questions 1 2 3 4 5
 - Structured
 - MECE
 - Creativity

Feedback:

- Exhibits + Quantitative Ability
 - Accuracy 1 2 3 4 5
 - Speed
 - Insights Presented
 - Errors / Guidance Needed

Feedback:

- Brainstorm + Conclusion
 - Creative & Structured 1 2 3 4 5
 - Good Business Judgment
 - Recommendation Strength

Feedback:

- Presence & Non-Verbal
 - Confidence
 - Poise / Posture 1 2 3 4 5
 - Clear & Concise
 - Body Language
 - Coachability

Feedback:

Total: _____ / 20



Maxicure

Round 1 | Industrials/Manufacturing



MAXICURE

Round 1 | Industrials/Manufacturing

Prompt:

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:

Note: Provide this only if corresponding questions are asked

- There are 2-3 larger 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).



BEHAVIORAL INTERVIEW QUESTION:

1. Tell me about an ethical dilemma you have faced.
2. Did you like your previous job? Why or why not?



QUESTION 1

What options does Maxicure have for purposes of tackling this problem, and what factors would you consider in deciding which options to choose?

Framework Guidance:

Note: There are many possible alternatives to this framework. These are only provided as possible suggestions.

Options/Considerations	Refurbish	Rebuild, same site	Rebuild, new location	Outsource
Investment cost				
New per unit cost				
Financial/non-financial benefits				
Effect on quality				
Opportunity to improve tech/capacity				
Proximity to distribution centers				



QUESTION 2

Maxicure has narrowed down its 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?

Data:

Candidate should ask for the following in order to answer the question:

- Selling price per bottle: \$4.50
- In-house:
 - Initial investment: \$50M
 - Total cost per bottle: \$2.00
- Outsource:
 - Total cost per bottle (first 20M bottles, regardless of total order size): \$2.25
 - Total cost per bottle (bottles after the first 20M, regardless of total order size): \$2.50



Question 2 Guidance:

- Margin in-house: \$2.50
- 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 = $(x - 20M) * 2 + 2.25 * 20M$
- Setting the profits as equal: $2.5x - 50M = ((x - 20M) * 2) + (2.25 * 20M)$
- $X = 110M$ Units

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



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?

Question 3 Guidance:

Note: There are many acceptable answers. The following are just examples.

- More tax collection for the state, stimulating the economy
- More job creation
- Good press for the governor
- Attract other manufacturers to the state
- Suggestions to conduct community-building initiatives like building schools, parks, etc.



CONCLUSION

What is your final recommendation for the client?

To conclude, the interviewee should provide the following:

Summary

- Recap the objective and important data and insights from the case

Recommendation:

- Make a recommendation about how the client should approach building the new production facility

Risks

Next Steps



QUESTION 4

What is your final recommendation to the client?

Conclusion Guidance:

A strong response should include the following:

Summary

Recommendation, with 2-3 supporting, data-driven pieces of evidence

Risks

Next Steps

Restatement of recommendation



INTERVIEWER FEEDBACK FORM

Case Name _____ Interviewer _____

Case Book _____ Case Type _____ Difficulty _____

Case Execution:

- Framework 1 2 3 4 5
 Logical approach Notes:
 MECE
 Creativity

- Quantitative Ability 1 2 3 4 5
 Accuracy Notes:
 Speed
 Analytical Approach
 Errors / Guidance

- Business Acumen 1 2 3 4 5
 Insightful Notes:
 Implementable
 Business Judgment
 Creative Brainstorm

Communication:

- Presence & Non-Verbal 1 2 3 4 5
 Confidence Notes:
 Poise / Posture
 Clear & Concise
 Body Language
 Coachability

- Case Materials 1 2 3 4 5
 Organized Page Layout Notes:
 Recognition of Errors
 Resource References

Behavioral:

- Overall Performance 1 2 3 4 5
 Quality of Answers 1 2 3 4 5
 Relevance 1 2 3 4 5
 Clarity & Time 1 2 3 4 5

Strengths:

Opportunities:

Case Execution: ____ / 15

Communication: ____ / 10

Behavioral: ____ / 15

Total Score: ____ / 40

Total Time: ____ : ____



Shisha: Just Blowing Smoke?

Round 1 | Market Entry



SHISHA: JUST BLOWING SMOKE?

Round 1 | Market Entry



Prompt:

Over the past five years, the government of Saudi Arabia has been focused on reducing economic dependence on oil by diversifying the domestic economy. As part of this effort, the government has evidenced a willingness to relax certain social norms. As part of the diversification initiative, the government hired us to forecast the potential revenue impact of taxing shisha consumption.

Clarifying Information: *Note: Provide this only if corresponding questions are asked.*

- 1. What is shisha?** Shisha is an instrument for vaporizing and smoking flavored tobacco. In the Arab world and Middle East, people smoke waterpipes as part of the cultural traditions.
- 2. How will the Saudi government make money off of shisha?** Institutions must apply and pay for an annual license to sell shisha. Additionally, sales tax and import tariffs are levied by the government as appropriate.
- 3. Is there a specific revenue target in mind?** No, the Saudi government only wishes to maximize revenue over a 3-year period.
- 4. How much revenue does the Saudi government currently earn?** 2.5 trillion Saudi riyal annually. Tobacco and other related products currently generate 500 million SAR in revenue.
- 5. Are there any social norms we should be aware of?** Islam is widely practiced by Saudis citizens and governs their personal, political, economic and legal lives. Additionally, public consumption of shisha is currently banned but is widely consumed at home.

BEHAVIORAL INTERVIEW QUESTION:

1. Tell me about a time you had an ethical dilemma.



09 | CASE: SHISHA: JUST BLOWING SMOKE

Framework Guidance:

Note: There are many possible alternatives to this framework. These are only provided as possible suggestions.

Revenue Sources

- Licenses
 - Type and quantity of businesses that will sell shisha
 - Application payment process for licensing: one-time fee vs. annual fees
 - Lifetime of typical business selling shisha
 - Adoption rate over three years
- Sales Tax
 - Consumer segments and spending habits
 - Adoption rate of public use
 - Sales tax rate
- Import Tariffs
 - Quantity of domestic vs foreign sourced shisha consumption
 - Tariff percentage

Cost Considerations

- Regulatory body
- Auditing and quality control
- Implementation vs on-going costs

Social Issues

- Public opinion of legalizing public consumption of shisha
- Health & well-being of citizens
- Job creation

How to Move Forward:

The candidate should include criteria to size the revenue opportunity over a three-year period and should want to naturally start exploring this aspect. If the candidate wants to explore something else first, ask why? Then point him/her in the direction of sizing revenue.

Note: Inform the candidate that the client is mainly interested in estimating revenue from issues licenses. Hand interviewee Exhibits 1 & 2.



EXHIBIT 1

Shisha licensing structures

Country	License Structure
Qatar	10,000 Saudi riyal one-time fee
Jordan	3,000 Saudi riyal one-time fee + 500 riyal monthly fee
United Arab Emirates (UAE)	6,000 Saudi riyal one-time fee + 3,000 Saudi riyal annual fee





EXHIBIT 2

Riyadh (capital of Saudi Arabia), restaurant market segmentation

Restaurant Type	Fast Casual	Casual Sit-Down	Fine Dining	Tea & Coffee Shops
Number of Businesses	5,000	2,000	1,000	6,000
U.S. market equivalents	Chipotle, Cava, McDonalds	Panera, Applebee's	C&O, Ivy Inn Restaurant	Starbucks

*The capital city of Riyadh represents about 20% of the domestic restaurant market

*The average lifespan of a restaurant is three years



09 | CASE: SHISHA: JUST BLOWING SMOKE

Question 1

- Which licensing structure should Saudi Arabia adopt? What is the estimated three-year revenue impact?

Supply only when asked: *Because of unusual economic growth, 1,000 new restaurants will be added to the Riyadh region each year for the next two years.*

Supply only when asked: *Related products have experienced an adoption rate of 5%, 10%, and 15% in years 1, 2, 3 respectively.*

Exhibit or Question Guidance:

After looking at Exhibits 1 & 2, candidates should be able to identify and call out the following:

- To maximize and forecast revenue, the candidate must execute two analyses: (1) identify which licensure structure to pursue and (2) apply license structure to restaurant industry to estimate four-year revenue impact
- Assume shisha licenses will only be sold to restaurants
- Jordan's license structure maximizes license revenue

	<u>One-Time Fee</u>		<u>Annual Fee</u>		
	Year 1	Year 1	Year 2	Year 3	Total
Qatar	10,000				10,000
Jordan	3,000	6,000	6,000	6,000	21,000
UAE	6,000	3,000	3,000	3,000	15,000



Exhibit or Question Guidance Cont:

Once the Jordan license structure has been identified, the candidate should calculate year 3 revenue:

- Calculate the number of total and newly participating businesses. This will enable you to calculate the one time fee in year 3.
- Annual fees (500*12) generate 6k riyal in revenue per participating business.
- Calculate total domestic revenue assuming Riyadh represents about 20% (i.e. multiply by 5).
- Great candidates will put the 85.5 million riyal into perspective
 - Current revenue related to Tobacco related products is 500 million riyal
 - This initiative will increase revenue by 17.1% in three years

	Year 1	Year 2	Year 3
Riyadh Businesses	14,000	15,000	16,000
Adoption Rate	5%	10%	15%
Total Participating Restuarants	700	1,500	2,400
Newly Participating Restaurants	700	800	900
<i>In Millions Riyal</i>			
One Time Fee (3k)	2.10	2.40	2.70
Annual Fee (6k)	4.20	9.00	14.40
Total License Revenue	6.30	11.40	17.10
Riyadh Percentage of GDP			20%
Estimated Domestic Revenue Impact (millions riyal)			85.5



BRAINSTORMING

Are there any other considerations the Saudi government should keep in mind before legalizing the public consumption of shisha?

Brainstorming Guidance:

This is a “what else” section. Below are some basics but ideally, you’re looking for the interview to be as creative as possible. As with most questions of this type, a bad answer will stop at one or two. A good answer will have a creative list. A great answer will have a structure that makes the answer MECE. A great answer should also prioritize the findings indicating which ones he/she thinks are the most important.

Key Points to Consider:

- Health and well-being of citizens given increased consumption of tobacco products
- Other distribution channels to sell shisha other than restaurants
- Associated costs with launching and governing program
- Public opinion – restaurants may not want to sell shisha and patrons may not want to smoke in public
- Reputation on the global stage. Many countries are restricting use of tobacco products
- Revenues related to sales tax and tariffs
- Job creation related to budding industry
- Three-year economic forecast



CONCLUSION

The minister of commerce is dialing in on Skype and expects a summary. Please share your findings.

Recommendation:

- Candidate should succinctly summarize findings, including the license structure that optimizes revenue and year 3 revenue opportunity.
- Great candidates will note that calculated figures are conservative as they do not include revenue from sales tax or import tariffs.

Risks:

- License revenue depends heavily on adoption rate
- Healthcare costs related to increased tobacco use

Next Steps:

- Market analysis of restaurant's willingness to sell shisha (i.e. adoption rate)
- Explore the financial and social costs related to the program



INTERVIEWER FEEDBACK FORM

Case Name _____ Interviewer _____

Case Book _____ Case Type _____ Difficulty _____

Case Execution:

- Clarifying Questions + Framework
 - Good Questions 1 2 3 4 5
 - Structured
 - MECE
 - Creativity

Feedback:

- Exhibits + Quantitative Ability
 - Accuracy 1 2 3 4 5
 - Speed
 - Insights Presented
 - Errors / Guidance Needed

Feedback:

- Brainstorm + Conclusion
 - Creative & Structured 1 2 3 4 5
 - Good Business Judgment
 - Recommendation Strength

Feedback:

- Presence & Non-Verbal
 - Confidence
 - Poise / Posture 1 2 3 4 5
 - Clear & Concise
 - Body Language
 - Coachability

Feedback:

Total: _____ / 20

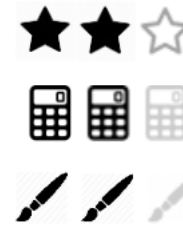


Digging for Gold

Round 2 | Mining



DIGGING FOR GOLD



Round 2 | Mining

Our client is an Australian mining company, whose main product is Gold, which it sells exclusively to China. This company is the largest producer in volume in the Chinese market with 200 tons sold each year. It is also the lowest cost producer at \$1000 per ounce of production costs. We estimate the total Chinese demand for Gold today to be around 1500 tons per year. Our client has won a concession to mine a new site adjacent to its biggest mine, and increases production to 300 tons per year (i.e. 100 additional tons per year). Is this worth doing?

Clarifying Information:

Note: Provide this only if corresponding questions are asked.

Are there any company criteria to approve projects? What typically constitutes success? Board typically approves projects with payback in less than 5 years. You can use payback with no discounting for your math

Geography related question... Mine is adjacent to the original mine

How is the market expected to grow? Consider that the market will remain flat at 1500 tons per year for the foreseeable future

How much upfront investment will be required for this project? Prompt to wait until we dive into case (\$750M)

What is the cost of this new volume of production? Are there cost synergies or is this a more expensive mine? Prompt to wait until we dive into case (same, \$1000/oz)

How does the competitive landscape look like? You can choose to give Exhibit A, but may throw them off receiving before framework

BEHAVIORAL INTERVIEW QUESTION:

1. Why do you want to pursue a career in consulting?



10 | CASE: DIGGING FOR GOLD

FRAMEWORK GUIDANCE NOTE: *THERE ARE MANY POSSIBLE ALTERNATIVES TO THIS FRAMEWORK. THESE ARE ONLY PROVIDED AS POSSIBLE SUGGESTIONS*

- Undiscounted Cash Flow
 - (plus) Incremental Revenues (volumes increase, but would \$/ton go down since it is a commodity)
 - (Minus) Direct Operating Costs (candidate should list some possible options)
 - Labor, Repairs & Maintenance, Royalties, Production Taxes, Freight (land & ocean) Processing/Cleaning Costs, Fuel, Utilities
 - +/- incremental indirect (synergies from shared overhead or additional semi-variable costs)
 - (minus) Upfront Investment
- Operational Challenges
 - Skilled labor Supply
 - Purchasing
 - Distribution
 - Royalty Negotiation with Australia
 - Safety stock for key machinery
- Macro risk Factors
 - China
 - Trade Relations
 - GDP slow down
 - Supply Shifts
 - Competitor Reaction
 - M&A Activity
 - Shipping Cost Shifts
 - Mining/Environmental Regulatory Changes

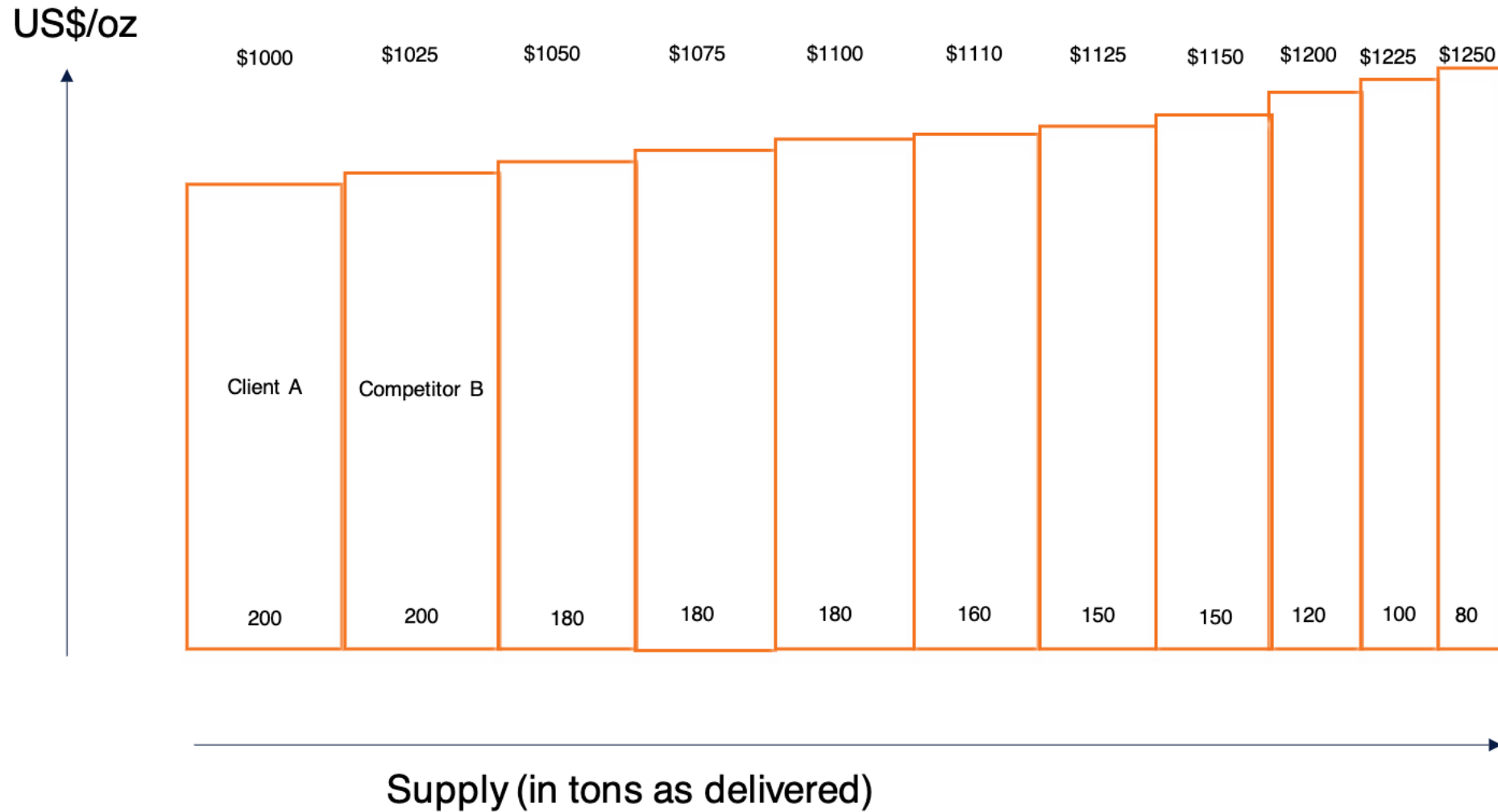
How to Move Forward:

*To get to the next portion of the case, the interviewee should ask to explore: **Current price/ton and how much that would change with the increased supply***



10 | CASE: DIGGING FOR GOLD

EXHIBIT 1 – CHINA'S GOLD COST CURVE (INCLUDES ROYALTIES AND FREIGHT)





10 | CASE: DIGGING FOR GOLD

Exhibit Guidance:

The interviewee should notice and verbally acknowledge the following in Exhibit 1. This is where you insert question and the answers to the question

Expected Insights:

1. Increasing capacity pushes out the supply curve lowering the sales price per ton
2. In commodity market, the price is set at the cost of the last ton demanded in the market. (i.e. ton 1,500 cost \$1,200). Adding 100 more tons of supply moves that to \$1,150
3. We need to understand if the increase volume is offset by lower price and investment cost

How to Move Forward:

They should prompt to calculate payback period of investment. Interviewer should ask for the following

Oz to ton conversion: 15 oz/lb, 2000 lb/ton

Investment cost: \$750M

Calculate

Before: $\$1,200 (\$/\text{oz}) - \$1,000 (\text{cost}/\text{oz}) = \$200 \text{ profit}/\text{oz} * 15 \text{ oz}/\text{lb} * 2000 \text{ lb}/\text{ton} * 200 \text{ tons} = \$1.2\text{B profit}/\text{year}$

After: $\$1,150 (\$/\text{oz}) - \$1,000 (\text{cost}/\text{oz}) = \$150 \text{ profit}/\text{oz} * 15 \text{ oz}/\text{lb} * 2000 \text{ lb}/\text{ton} * 300 \text{ tons} = \$1.35\text{B profit}/\text{year}$

Incremental Profit: $\$1.35\text{B} - \$1.2\text{B} = \$150\text{M}$. $\$750\text{M}/\$150\text{M} = 5 \text{ year payback}$



BRAINSTORM

Question 2: If you were competitor B, how would you react?

Interviewee should assess that competitor B will lose \$50 margin ($\$1200 - \1150 price drop), and therefore a total of $\$50 * 200 \text{ tons} * 15 \text{ oz/lb} * 2000 \text{ lb/ton} = \300M per year.

- Interviewee should consider a few options that competitor B has:
- Competitor B can increase his production if they have access to new mines (price will drop even further, but perhaps volume increase will compensate)
- Competitor B can temporarily reduce production to make prices go up again
- Competitor B can work to reduce costs
- Competitor B can assess M&A options (e.g. Higher cost players that are looking to sell, and can potentially have synergies with B's current operations)

A great answer would point out that competitor B needs to expand by another 150M tons (75% increase in capacity before the price would drop lower). Therefore, we are not as concerned about their reaction.



CONCLUSION

You can go either way with the conclusion, but recommend expansion option

Expand

Recommend client expand ~150M incremental profit will payback in 5 years. The larger scale will give us more scale for supplier power and flexibility to bring on/take off supply advantageously.

Concern and Next Steps (just one example of many options)

Shortage of skilled labor force – Partner to build a attraction and retention labor force strategy



INTERVIEWER FEEDBACK FORM

Case Name _____ Interviewer _____

Case Book _____ Case Type _____ Difficulty _____

Case Execution:

- Clarifying Questions + Framework
 - Good Questions 1 2 3 4 5
 - Structured
 - MECE
 - Creativity

Feedback:

- Exhibits + Quantitative Ability
 - Accuracy 1 2 3 4 5
 - Speed
 - Insights Presented
 - Errors / Guidance Needed

Feedback:

- Brainstorm + Conclusion
 - Creative & Structured 1 2 3 4 5
 - Good Business Judgment
 - Recommendation Strength

Feedback:

- Presence & Non-Verbal
 - Confidence
 - Poise / Posture 1 2 3 4 5
 - Clear & Concise
 - Body Language
 - Coachability

Feedback:

Total: _____ / 20



Canyon Capital Partners

Round 1 | Financial Services



CANYON CAPITAL PARTNERS



Round 1 | PE

Your client is Canyon Capital Partners (CCP). CCP is a long-established hedge fund headquartered in Hartford, CT. Hedge funds make money mainly out of management fees and carried interests. Over the past two years, CCP's profits have been declining. Its CEO and founder has hired you to help her understand why are profits trending down and what should she do to restore the firm to a more profitable route.

Clarifying Information:

Note: Provide this only if corresponding questions are asked.

What do hedge funds do? → Manage their investors' money to generate above market investment returns. CCP only invests in US public equity markets.

How much money does CCP manage? → Current assets under management (AuM) are \$ 2.1 billion. In the past three years, the fund has not had any new in or outflows of investor money.

What are management fees? → Fixed fees paid on the average balance of assets under management. CCP's management fees were 2.0% per year, but were reduced to 1.5% since 2016 because of competitive pressure.

What are carried interests? → Share of investment performance appropriated by the fund's managers as additional compensation. CCP takes 20% of all investment gains in excess of the 15% hurdle rate in the year.

BEHAVIORAL INTERVIEW QUESTIONS:

1. TELL ME ABOUT A TIME WHEN YOU WERE PART OF A HIGH PERFORMING TEAM. WHAT WAS YOUR ROLE IN ACHIEVING SUCCESS?

2. IF I TALKED TO YOUR LAST BOSS, WHAT IS THE ONE BEST THING HE OR SHE WOULD TELL ME ABOUT YOU?



11 | CASE: CANYON CAPITAL PARTNERS

Framework Guidance:

Note: There are many possible alternatives to this framework. These are only provided as possible suggestions.

- Revenues
 - Management Fees
 - Assets under Management
 - Carried Interests
- Costs
 - Employee Compensation
 - Office Rent
 - Research Materials
- External
 - Regulation
 - Competition
 - Market Trends

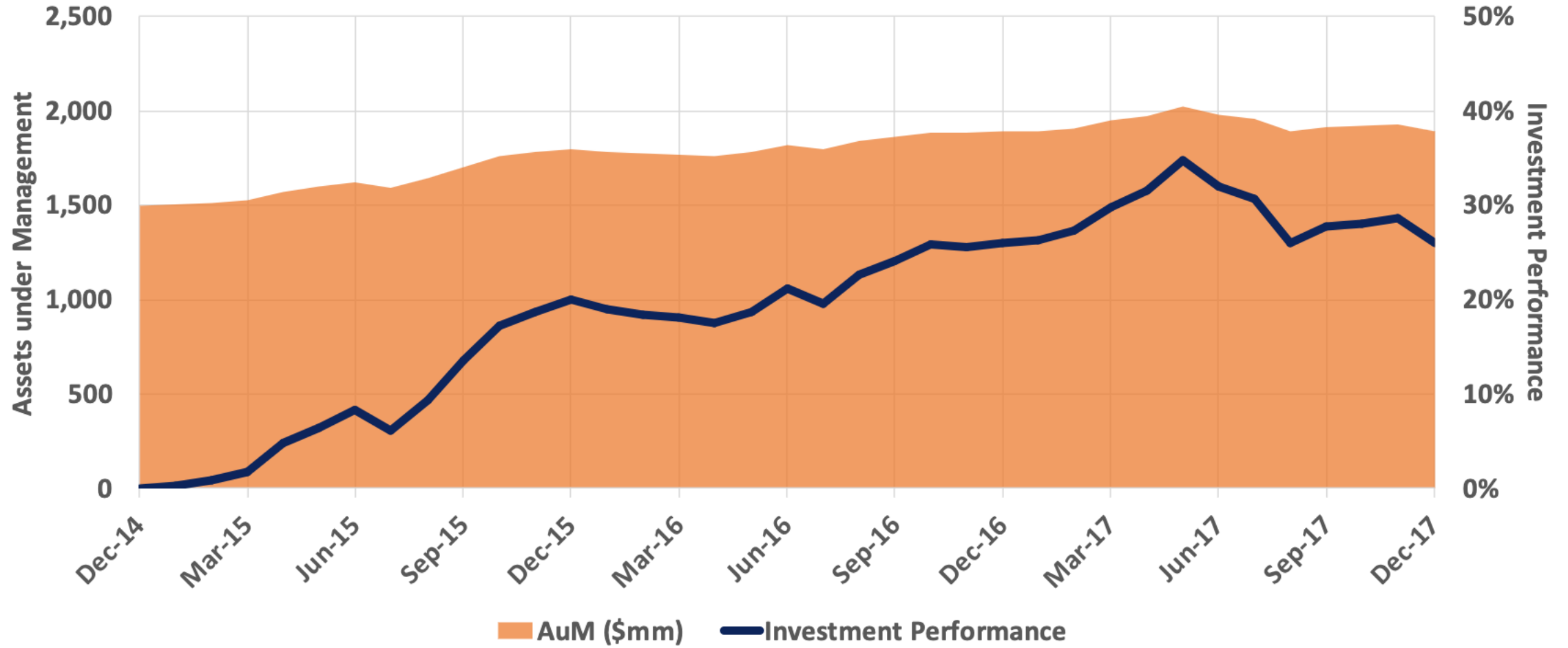
How to Move Forward:

To get to the next portion of the case, the interviewee should ask to explore:

- The interviewee should explore both trends in Revenues and Costs. External factors should not be explored in this analysis.
- Exhibit 1 should be given upon request of data on Revenues.
- Exhibit 2 should be given upon request of data on Costs.



EXHIBIT 1 – AuM & Investment Performance





11 | CASE: CANYON CAPITAL PARTNERS

Exhibit Guidance:

The interviewee should notice that AuM is steadily increasing and that investment performance was good in 2015, but disappointing in 2016 and 2017. The interviewee should proactively calculate total revenues per year.

NOTE: The interviewee may require coaching and should not be penalized for this, but he or she should drive the discussion. If interviewee asks for specific figures, ask them to estimate based on what is visible in the chart.

	2015	2016	2017		2015	
Average AuM (\$mm)	1,600	1,800	1,900			
Management Fee (%)	2.00%	1.50%	1.50%			
Management Fee Revenue (\$mm)	32.0	27.0	28.5	→		
Investment Performance	20%	5%	0%			
Carried Interests Revenue (\$mm)	15.0	0.0	0.0			
Total Revenues (\$mm)	47.0	27.0	28.5			
					Carried Interest Revenues	
					1 – Initial AuM (\$mm)	1,500
					2 – Total Return (%)	20%
					3 – Total Return (\$mm) [1×2]	300
					4 – Excess Return (\$mm) [3–1×15%]	75
					Carried Interests (\$mm) [4×20%]	15

How to Move Forward:

To get to the next portion of the case, the interviewee should ask to explore:

- If the interviewee started by exploring revenue trends, he/she should next ask about costs.



EXHIBIT 2 – Employee Headcount

	2015	2016	2017
C-Suite	3	3	3
Portfolio Managers	3	3	4
Associates	7	10	16
Analysts	13	11	9
Traders	3	3	3
Support Staff	7	8	9



11 | CASE: CANYON CAPITAL PARTNERS

Exhibit Guidance:

The interviewee should notice the increasing headcount and how the number of associates has been increasing rapidly while the number of analysts has decreased in the same period.

- When asked about compensation structure, disclose that each employee receives annual salaries according to the table below.
- Only C-suite and Portfolio Managers receive variable compensation. It is directly tied to fund profitability and therefore irrelevant to profitability analysis.

	Salary (\$)		Salary (\$)		2015	2016	2017
C-Suite	1,500,000	Analysts	100,000	Total Revenues (\$mm)	47.000	27.000	28.500
Portfolio Managers	500,000	Traders	200,000	Total Salary (\$mm)	10.175	10.800	12.675
Associates	250,000	Support Staff	75,000				

Directions:

To get to the next portion of the case, the interviewee should ask to explore:

- If asked about office rent, say that the fund has a long-term lease with minor annual price adjustments. Irrelevant to the analysis.
- If asked about research material costs, say that the fund has not made any changes to its research resources in the past years, nor have prices changed.
- If the interviewee started by exploring cost trends, he/she should next ask about revenues.



CONCLUSION

To conclude, the interviewee should provide the following:

Summary:

- CCP's revenues have trended down because of lower management fees and recent poor investment performance. Costs have been up because of increasing headcount and disproportionate ratio of associate to analysts.

Recommendation:

- ↑ Revenues → Increase management fee. Increase assets under management. Employ new investment strategies to improve returns.
- ↓ Costs → Promote employee turnover through meritocracy. Reduce number of associates and increase number of analysts.

Risks:

- Increasing management fee may scare off investors.
- Employee morale could be hurt by letting go of associates. Fund future growth could be hurt by decreasing headcount.

Next Steps:

- Create strategy for new round of fund raising.
- Which associates to let go. Set rules for employee turnover and promotion.



INTERVIEWER FEEDBACK FORM

Case Name _____ Interviewer _____

Case Book _____ Case Type _____ Difficulty _____

Case Execution:

- Framework 1 2 3 4 5
 Logical approach Notes:
 MECE
 Creativity

- Quantitative Ability 1 2 3 4 5
 Accuracy Notes:
 Speed
 Analytical Approach
 Errors / Guidance

- Business Acumen 1 2 3 4 5
 Insightful Notes:
 Implementable
 Business Judgment
 Creative Brainstorm

Communication:

- Presence & Non-Verbal 1 2 3 4 5
 Confidence Notes:
 Poise / Posture
 Clear & Concise
 Body Language
 Coachability

- Case Materials 1 2 3 4 5
 Organized Page Layout Notes:
 Recognition of Errors
 Resource References

Behavioral:

- Overall Performance 1 2 3 4 5
 Quality of Answers 1 2 3 4 5
 Relevance 1 2 3 4 5
 Clarity & Time 1 2 3 4 5

Strengths:

Opportunities:

Case Execution: ____ / 15

Communication: ____ / 10

Behavioral: ____ / 15

Total Score: ____ / 40

Total Time: _____ : _____



PharmaCo

Round 2 | Healthcare



PHARMACO

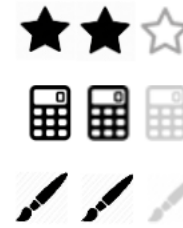
Round 2 | Healthcare

Prompt: PharmaCo is a pharmaceutical company with \$10 billion in annual revenue. It's corporate HQ and primary R&D centers are in Switzerland, with regional sales offices worldwide. PharmaCo is interested in entering a new, rapidly growing segment of drugs called "biologicals." To gain the R&D capabilities requisite for biologicals, PharmaCo is considering acquiring BioLead, a biologicals start-up in Austin. BioLead is privately owned and has an estimated valuation of \$1 billion. Our firm has been hired to evaluate the BioLead acquisition and to advise on its strategic fit with PharmaCo's biologicals strategy. What factors should the team consider when evaluating whether PharmaCo should acquire BioLead?

Clarifying Information:

1. What is PharmaCo's core business? GP has a long, successful tradition in researching, developing, and selling "small molecule" drugs. This class of drugs represents the vast majority of drugs today, including aspirin and most blood-pressure or cholesterol medications.

2. Is entry-by-acquisition the only approach we should consider? R&D for biologicals is vastly different from small-molecule R&D. Since its competitors are already several years ahead of PharmaCo in the biologicals market, PharmaCo wants to jumpstart its biologicals program via acquisition.



BEHAVIORAL INTERVIEW QUESTION:

1. Tell me about a time you worked with a difficult team member and how you resolved it.



12 | CASE: PHARMACO

Question 1

- What factors should the team consider when evaluating whether PharmaCo should acquire BioLead?

Exhibit or Question Guidance:

A **good answer** would include the following:

- The value of BioLead's **drug pipeline**, number of drugs currently in development, likelihood of success, estimated revenues and profits
- BioLead's **R&D capabilities** (future drug pipeline), scientific talent, intellectual property (for example, patents, proprietary processes or know-how for biologicals research), and buildings, equipment, and other items that allow BioLead's R&D to operate.
- BioLead's **marketing or sales capabilities**. Especially how promotional messages will be delivered, for example, relationships with key opinion leaders that can promote biologicals; key opinion leaders can come from the academic arena, like prominent medical school professors, or from the public arena, like heads of regulatory bodies or prominent telejournalists.
- **Acquisition price**

A **very good answer** might also include:

- BioLead's existing partnerships or other relationships with pharmaceutical companies.
- PharmaCo's **capability gaps** in biologicals, R&D, sales and marketing, etc.
- PharmaCo's **alternatives to this acquisition**. Alternative companies PharmaCo could acquire. Other strategies for entering biological segment, for example, entering partnerships rather than acquiring, and pursuing other strategies than entering the biological segment



BRAINSTORMING

The team wants to explore the value of BioLead’s current drug pipeline. Based on market research, BioLead’s only promising drug, SM1, is estimated to generate \$10B in sales if brought to market. That said, **what costs should be considered throughout the entirety of a drug’s lifetime?**

Brainstorming Guidance:

Note: This is just one possible set of categories and answers. Many more are possible, and interviewers should push candidates to be specific and comprehensive.

Research

- Highly skilled labor (scientists)
- Specialized equipment and labs
- Materials
- Phase I, II, III testing – proper testing and documentation
- Cost of failed drugs

Regulatory approval

- Regulatory fees paid to governing bodies
- Salary / wages for in-house council to file patents, trademarks, and other legal documentation

Commercialization

- Promotional materials
- Marketing campaigns
- Production costs (materials, quality, sourcing)
- Adding personnel (sales, marketing, administrative, regulatory)
- New facilities
- Packaging materials
- Distribution and shipment (logistics)
- Taxes
- Patent infringement

Best candidates display:

The best candidates will apply a customized structure and will brainstorm cost items specific to pharmaceuticals. Push candidate to produce a comprehensive list by asking “What else?” one or two times.



12 | CASE: PHARMACO

Question 3

- The team has pulled together the following data (show Exhibit 1). What is the value of BioLead's drug, SM1?

Supply the following information only when asked:

- Costs by phase: Phase I \$160M, Phase II \$125M, Phase III \$75M, Filing \$5M. Costs are incurred only if the drug reaches a particular phase.
- Costs of production: Manufacturing 5% of sales, Logistics 5% of sales, Other 10% of sales
- Lifetime revenue: \$10B – **great candidates** will recall that this information was previously provided

Question Guidance:

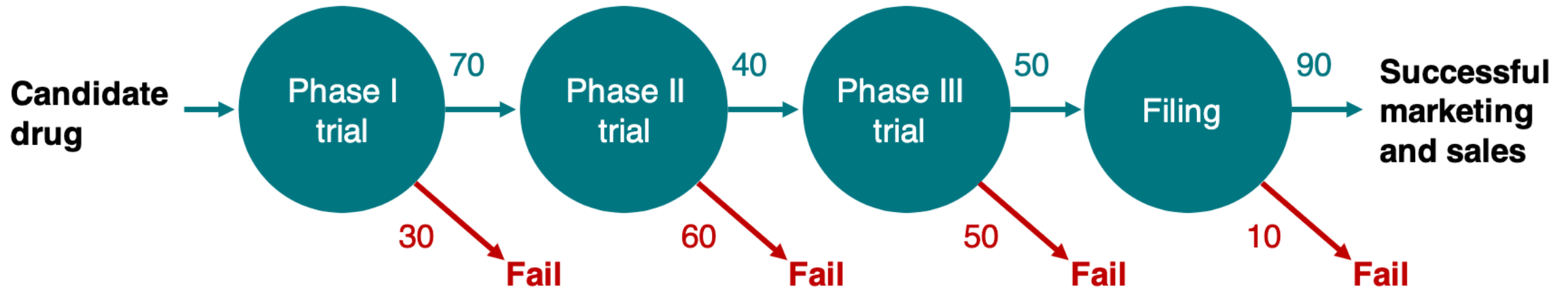
- Revenue (discounted by chance of success): $\$10B \times 70\% \times 40\% \times 50\% \times 90\% = \$1,260MM$
- Production costs: $\$10B \times (5\% + 5\% + 10\%) = \$2B$, then discounted by chance of success = \$252MM
- Phase 1 has a 100% chance of completion = \$160MM
- Phase 2 achieved 70% of the time (probability a drug completes Phase 1) = $\$125M \times 70\% = \$87.5M$
- Phase 3 achieved 70% x 40% of the time = $\$75M \times 70\% \times 40\% = \$21M$
- Filing achieved 70% x 40% x 50% of the time = $\$5M \times 70\% \times 40\% \times 50\% = \$0.7M$
- Revenue (\$1,260MM) – Production costs (\$252MM) – R&D costs (\$269.2MM) = **\$738.8MM SM1 drug valuation**

This drug valuation essentially represents known future cash flows of the business. **Great candidates** will compare this figure against the \$1B BioLead company valuation mentioned in the prompt and hypothesis why the figures are different.



EXHIBIT 1

Expected probability of success, by stage of research and development, %



Note: "Filing" is the process of submitting all of the clinical and safety evidence from Phase I, II, and III trials, and asking for regulatory approval to actually sell the drug.



12 | CASE: PHARMACO

Question 3

- What are your hypotheses on the major risks of integrating the R&D functions of BioLead and PharmaCo?

A very good answer would include the following:

- Little to no overlap in research or expertise leading to minimal collaboration
- Culture clash. PharmaCo is an established, mature business while BioLead is a young, entrepreneurial business
- Language barriers hinder communication and sharing of information
- Physical distance and time difference may lead to a poor sense of community
- Talent may leave BioLead after the acquisition – either as a result of newfound wealth from the sale of the business or because they don't want to be a part of a large corporation

The **best candidates** will recognize the human element of organizational change



INTERVIEWER FEEDBACK FORM

Case Name _____ Interviewer _____

Case Book _____ Case Type _____ Difficulty _____

Case Execution:

- Clarifying Questions + Framework
 - Good Questions 1 2 3 4 5
 - Structured
 - MECE
 - Creativity

Feedback:

- Exhibits + Quantitative Ability
 - Accuracy 1 2 3 4 5
 - Speed
 - Insights Presented
 - Errors / Guidance Needed

Feedback:

- Brainstorm + Conclusion
 - Creative & Structured 1 2 3 4 5
 - Good Business Judgment
 - Recommendation Strength

Feedback:

- Presence & Non-Verbal
 - Confidence
 - Poise / Posture 1 2 3 4 5
 - Clear & Concise
 - Body Language
 - Coachability

Feedback:

Total: _____ / 20