

CONSULTING CASE INTERVIEW PREPARATION GUIDE

2005 - 2006 Recruiting Season -2nd Edition-

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MICHIGAN BUSINESS SCHOOL CONSULTING CLUB

The Case List

Note: Do not read all of these cases as soon as you receive this guide. While reworking 'completed' cases both alone and within groups is highly encouraged, pre-reading cases removes the element of surprise which stems from addressing a case for the first time, this sensation is very difficult to replicate.

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The cases

Format Introduction

In this case preparation guide you will find four types of slides. The type of each slide is noted in the upper left corner.

Establishing	the
Case	

This is where the initial business problem is posed and the interviewer is provided with any additional information they can provide to the candidate upon request. These slides are to be kept by the interviewer.

Candidate Handout / Assignment

This handout will eventually make its way to the candidate's hands. However, when this handoff occurs is at the discretion of the interviewer. Some interviewers may choose to overwhelm their candidate with a large amount of information early on to see them struggle, others may be reluctant to provide information unless asked specifically. Assignments for the candidate are exactly that, and should be expressly completed under the eye of the interviewer.

Additional Questions/ Information for Candidate These slides are a continuation of the 'Establishing the Case' slides, either adding more information to provide the candidate (upon request or due to timing), or taking the case in a new direction. These slides are to be kept by the interviewer.

Sample Solution Elements These slides suggest where the case could/should go based on the initial case information and backup data. These frameworks are by no means the only possible solution, but should provide the interviewer some structure for where the candidate should be heading. These slides are to be kept by the interviewer, but information can be shared as the interviewer sees fit.

As evidenced by the loose framework in each case, you are encouraged to establish variants on these cases for additional practice

Quick Brainteaser Case © 2005 Michigan Consulting Club

Case 1: Car Tires (I of I) McKinsey & Company, Round II

Problem Statement Narrative

Please estimate the number of passenger car tires sold each year in the United States.

Additional Information to **Provide Upon Request**

- About 10M new cars are sold each year
- Cars last about 7 years before needing replacement
- Tires last 45K miles
- People drive 15K miles/ yr
- Assume people purchase new tires when needed
- Assume no growth in 'installed cars'
- BONUS: New cars get 5 tires (includes spare), old cars get 4 new tires

Sample Solution Methodology

- There are 70M cars on the road
 - 60M old cars
 - 10M new cars
- Tires last three years
- 60M installed cars / 3yrs
 - 20M cars need new tires each year
 - 20M x 4 tires: 80M tires
- 10M new cars
 - @4 tires / car: 40M tires
 - @5 tires / car: 50M tires
- Total tires sold each year
 - 120M tires (no spare)
 - 130M tires (w/ spare)

Case 2: Super Pens (I of II) A.T. Kearney, Round I

Problem statement narrative

Your client is a bank vault manufacturer, mostly focusing on the large walk-in type. It's a very mature business and they are the largest supplier in the industry. In order to diversify their business and provide growth, the client has bought a company that specializes in high technology security devices. One of this company's biggest and most promising products was a pen that has the ability to distinguish if the person signing anything is in fact the owner of the pen.

The client would like you to define the following:

- Who would the customers of this technology be?
- How do we market to them?
- What is our value proposition?

Guidance for interviewer and information provided upon request⁽¹⁾

Information to provide upon request

- Pens cost \$20 to manufacture at capacity
- The technology is very compact, very thin, very reliable, and incredibly secure; essentially fraudulentproof.

Things to think about during case

- How did the candidate arrive at a list of potential clients and industries
 - Did the candidate use a specific framework for vetting target customers, etc.?
- How did the candidate construct a value proposition?
 - Asking questions around current customer costs/revenues and how the pen would improve this
- Who is the actual customer vs who may be buying?
 - i.e.: credit card companies, or individuals

⁽¹⁾ If detailed exhibits exist, they will be referenced in this box, and included in full on the following slide(s)

Case 2: Super Pens (II of II) A.T. Kearney, Round I

This is a potential customer solution, the case could (and should) be adapted for Banks, Government, Corporations, High Net Worth Individuals, Exclusivity/Loyalty programs, etc.

Interviewer should feel free to allow full market estimation scenario in all cases to allow for more robust mathematical analysis

A credit card substitute

\$10,000 in annual charges for each card in circulation

1%: Industry accepted fraud rate

100M cards exist across USA

...With viable economics...

\$20: Production cost per pen

0.001%: Anticipated fraud rate

... Creates potential value.

\$100/year in fraud per customer currently

\$0.01/year in fraud with pen

If pen costs <\$100, then beneficial for card companies

However, added costs...

\$500 per card reading site in modifications and training to accept new technology

100K card readers estimated across United States

...and incomplete reach...

Pens would only work at retail establishments, and would be insecure over internet, phone, and other 'unsigned' transactions

These transactions are estimated at almost 50% of all credit card transactions

...could negate proposition.

- Drawbacks:
 - Needing to keep track of a pen
 - Incomplete reach
 - Expensive replacement
 - Expensive infrastructure
- Adoption in the credit card industry may not be viable... perhaps another industry?
 - Swiss banks perhaps?

Case 3: HVAC Service Provider (I of II) The Boston Consulting Group, Round I

Problem statement narrative

Your client is an energy firm that has a lot of extra cash and wants to know if they should consolidate HVAC (heating, ventilation and cooling) service firms in the Atlanta area.

The client would like to know if this is a viable investment they should consider.

- Only provide additional information after being specifically asked by candidate.
- Atlanta market consists of 500 firms
 - Average annual revenue: \$10M
 - Revenue growth: 3%
 - Acquisition cost: Perpetuity cost of profits
 - Cost of capital: 13%
- Cost structure (% of revenues)
 - Labor: 50%, Technicians are 100% utilized
 - Equipment: 25%Administrative: 20%Profit: remaining 5%
- Savings areas:
 - Labor dispatching efficiency: 5% decrease in labor
 - Equipment5% decrease through bargaining power
 - Admin: 1% net decrease after IT and advertising investments
- Client's finance department requires a 3-yr break-even
- Assume all cost savings occur immediately
- Assume revenues will remain stable for each target

Case 3: HVAC Service Provider (II of II) The Boston Consulting Group, Round I

Candidate should	Cost Center	Cost (% rev)	Cost (\$)	Savings (% co	ost) Savings	New Cost (\$)
calculate implications of changing cost structure	Labor Equipment Administrative Profits	50% 25% 20% 5%	\$5M \$2.5M \$2M \$500K	5% 5% 1%	\$250K \$125K \$20K	·
	Current profit	Interest rate	Cos	t of firm	Expected profit	Undiscounted Break-even
Then want to conduct a break-even analysis.	\$500M	10% (CoC – growth)	•	\$5M	\$895K	5.58 years (stating: over 5 yrs is fine) TOO LONG = NO GO

A solid interview will address other potential risks...

- No industry experience
- Cultural issues (small operations purchased by large company)
- National entrants overpowering effort

And suggest improvements for break-even.

Reducing purchase price

Seek further cost improvements (IT systems, warranty costs, etc)

Improve revenues through advertising efficiency, brand name, referrals, etc.

Case 4: Multi-Purpose Tool (I of II) The Boston Consulting Group, Round I

Problem statement narrative

Your client is a diversified hardware manufacturer that produces a multi-purpose hand tool. For several decades, your client was the only company to make such a tool. Over the past 2 years, the company has seen a decline in revenue.

What is driving the decline, and what can you recommend as a solution?

- Only provide additional information after being specifically asked by candidate.
- Price: \$50, constant over time
- Current volume: 100M units/yr
- Channel: Hardware retailer- can not break contract
- Price elasticity of demand: 0.5 (20% reduction in price will raise demand 10% & visa versa)
- Several new competitors in past 2 years
 - Selling similar product for \$30
 - Channel: Discount retailers (Wal-Mart, Target)

Case 4: Multi-Purpose Tool (II of II) The Boston Consulting Group, Round I

Initial revenue driver questions...

Increased competition? Yes!

Substitute products? *Yes!*

Decline in market demand? No, demand is higher than ever with doit-yourself work (our market) increasing

Marketing budget reduction? No, been very stable.

Decline in distribution channels? *No- one stable contract.*

...Drill to increased competition.

Competitors competing on price (\$30 vs. \$50)

Competitors in different channel

Client can not change channel

Given contract, client must investigate price...

Price elasticity of demand is 0.5

Customers not very price sensitive

Increasing price by 20% to \$60 will reduce demand to 90M units, etc

Follow-up question:
Why not increase price
by 40%? To further
increase revenues?

A: Demand may be nonlinear, and unpredictable at large price changes

...And take action to improve revenues.

In the short run while contracts are tied with current channel, increasing price to increase revenues to \$5.4B from \$5B is recommended

Longer term, the client should investigate entering a broader array of distribution channels to ensure maximum product reach

Further, the client should explore a premium-value proposition to compete in price reduction market and retain margins

Case 5: United States Healthcare (I of II) McKinsey & Company, Round II

Problem Statement Narrative

I have just been talking with with Rick Wagoner, GM's CEO, about his company's skyrocketing health care costs. GM pays for the health care of about 1.1M families, which equates to about \$8-9B or \$1500 per car sold. After a while, he began discussing the United States' healthcare problem on a national level.

The US spends 15% of its GDP on health care while Japan spends 7-8% and Germany spends 10%. However, he says there is no evidence that health care is better in the US: average life expectancy is actually decreasing and about 45M people are uninsured.

He wanted me to explore possible causes and solutions for the increasing cost trend with decreasing effectiveness/quality. He made a point of saying he didn't want to discuss politics, and shied away from fancy frameworks in our discussion

Might you help me think about what to tell him?

- There is no additional information to provide. The purpose of this case is to test poise and pressured thought. If the candidate makes an assertion, play 'devil's advocate' and try to get the candidate to reverse him or herself. Some examples may include:
 - · Privatized vs. socialized medicine
 - Subsidized medicine development/sales vs. unsubsidized
 - Healthcare availability for all
 - Boutique hospitals vs. full service hospitals
 - Preventative vs. reactionary medicine

Case 5: United States Healthcare (II of II) McKinsey & Company, Round II

There are any number of responses to this open-ended case, therefore the interviewer is encouraged to allow the candidate to drive the case. Some common elements may include:

Supply

Higher drug costs in USA The US is essentially subsidizing word drug consumption by paying higher prices. US expenditure pays for the majority of R&D and risk-premium costs for the pharma industry. Possible solutions are to persuade drug companies to charge the same prices everywhere, or threaten re-importation. *Discuss long-term implications on R&D and curing diseases*.

Emerging modular Care There is a growing trend of wealthy citizens seeking out specialized care from private centers with providers accommodating by opening specialized clinics that only offer high-margin procedures (heart surgery), but are not burdened by low margin, but necessary, ER's, etc. This takes needed funds out of full-service facilities. *Discuss regulations or risks*.

Profit motive

Healthcare providers need to make lots of money. They have invested in careers, R&D, capital, etc, and need a return. This creates a motive of wanting to MANAGE disease rather than CURE disease to maximize return. All healthcare players make more money from a longer-term cash flow than onetime treatment. Discuss socialization vs. current model.

Demand

No proactive presymptom care Nutritional planning, exercise, no-smoking, etc. are much cheaper to promote rather than having to deal with complications (heart disease, diabetes) down the line. Possible solution: government (or employer) sponsored programs promoting prevention activities. Discuss healthcare incentive to do this... where is the financial return?

Doctors' ability to induce demand If a large number of doctors choose to live in a particular area (a large city, for instance), and there are not enough patients to sustain a normal practice, the doctors could order additional (and possibly unnecessary) tests to generate additional revenue. Possible solution: fees per patient rather than fees per service performed. *Challenge on practicality*

Lack of health care for lower class The US treats every patient in the ER regardless of insurance. However, it is much more expensive to handle something in the ER rather than when the problem first occurs (regular doctor visits, etc) Possible solution: Provide adequate health care for lower class before problems become emergencies. Possible free-rider and socialization discussions

Case 6: Software Product (I of IV) The Boston Consulting Group, Mock Interview

Problem statement narrative

Your client is a software maker that has one product.

The CEO would like to know whether the company should offer multiple products instead of one.

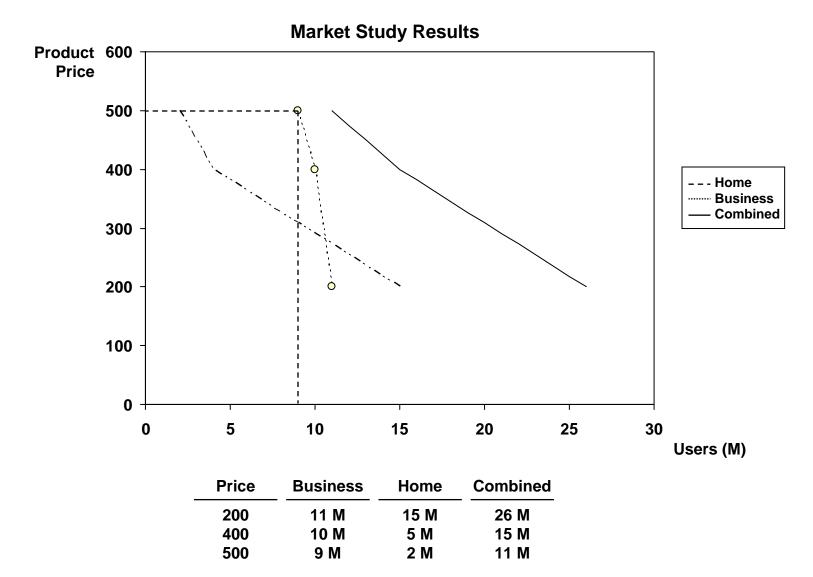
Information provided upon request⁽¹⁾

- Client goal: grow revenues
- Product: Document authoring software (MS Word, etc)
- Possible product segmentation considered: business vs. home products
- Company recently completed market study: see next page for results
- Currently only offer product to business market (business curve on chart)

If detailed exhibits exist, they will be referenced in this box, and included in full on the following slide(s)

Candidate Handout (upon request)

Case 6: Software Product (II of IV) The Boston Consulting Group, Mock Interview



Additional Questions

Case 6: Software Product (III of IV) The Boston Consulting Group, Mock Interview

Use this slide as 'interviewer's guide' after providing graph to candidate

Additional questions for candidate

- If we are currently selling to businesses for \$500, what is our total revenue?
- If we segment our demand and sell separate products to separate markets, what do our revenues look like?
- Is there anything else to think about?

Solution guide

• 9M units x \$500 = \$4.5B revenues

Price	Home	Business	Combined
200	200x15M = \$3B	200x11M=\$2.2B	\$5.2B
400	\$2B	\$4B	\$6B
500	\$1B	\$4.5B	\$5.5B

- Segmentation shows the revenue max price is \$400 (w/ revenue of \$6B) if price discrimination is impossible
- If price discrimination is possible, charge \$500 to business, and \$200 to home users

Case 6: Software Product (IV of IV) The Boston Consulting Group, Mock Interview

Incremental Costs

- The candidate may discuss elements needed to create two versions of the product- these may include:
 - Programming
 - Testing/ QA
 - Packaging
 - Sales/marketing
 - Distribution
- The interview can go in this direction, asking the candidate to outline a viable cost structure per segment

Product Differentiation/ Cannibalization

- Little/no ability to create different products for different markets could lead to price-led cross-segment product cannibalization
- Creating switching barriers would allow company to differentiate between product lines without concern for cannibalization

Licensing

- •Related to the product/market differentiation issue, the firm could gain incremental revenue by either:
 - Establishing separate product sales/licensing costs for business/ home users (\$200 for 1-3 licenses, and \$550 for additional, etc)
 - Approaching other vendors for bundling deals to attach product with other products

Complimentary Products

- Rather than separating current product into two separate products-
- Client could offer a series of complimentary products to their core product, adding incremental revenue and segmenting their customers based on how many additional features they wanted (i.e.: adding interrelated programs at a price)

Case 7: Frozen Dough (I of II) A.T. Kearney, Round I

Problem statement narrative

Your client is a Consumer Packaged Goods company. More specifically, they produce frozen dough for uses in making bread loaves, pizza crusts, cookies, bagels, etc. This is a family-owned company with \$2 billion in annual sales with two primary distribution channels.

You have been hired to assess a problem the company is experiencing with spoilage. The client is experiencing a significantly higher spoilage rate than that of competitors.

Competitors' spoilage rates average about 2.5%, however, the client's rate last year was 10%. They succeeded in reducing the spoilage rate to 7.5% by implementing a strict First-In-First-Out inventory management system at its warehouses and by instituting a program that carefully tracks the number of days left in the shelf life of the dough and once it gets close the inventory is donated to a charity for a tax break.

Despite all the effort, they are still significantly higher than competitors. What can be done to further reduce the spoilage rate?

Information provided upon request

- Distribution Channels:
 - Wholesale restaurant suppliers
 - Supermarket chain bakeries
- Dough is not branded- no customer differentiation
- Shelf life is 180 days, with customers requiring 60 days
- Very similar recipes across industry
 - High recipe switching costs
- Spoilage occurring at client distribution centers, not customer locations

Case 7: Frozen Dough (II of II) A.T. Kearney, Round I

Candidate should want to investigate along value chain for weaknesses/ benchmark differences

		Demand Forecasting	Purchasing/ Materials sourcing	Manufacturing	Sales & Distribution	Customers
1	Indications (only provide to candidate upon request)	Rather old forecasting tool has tended to generate overly cautious production numbers, but does not account for all spoilage cost		Old production equipment Foreman told us in interview that he tends to hedge against forecasting by overproducingit is a pain to retool the machines all the time	3 Distribution centers (DCs): West, Midwest, East US sales only Will sell dough for any use- regardless of sales volume Some products have very low customer-turn	Same customers as competitors
ı	Potential recommended actions	Improve forecasting tool to better reflect demand		Long term: invest in updated machinery with expedited retooling times	Customer-level SKU rationalization, eliminating low-volume SKUs	

Overall Recommendation: Overproduction and low volume SKUs are leading to spoilage, improving forecasting and equipment while rationalizing SKUs will dramatically improve situation

Case 8: Fertilizer Innovation (I of II) McKinsey & Company, Quick on Your Feet

Problem statement narrative

Your client is an agricultural products manufacturer. They invented a product called "Green Nutrient". This is going to help the farmers by allowing a variable fertilizer rate.

The company is interested in a pricing strategy and goto-market options.

- "Green Nutrient" measures the amount of fertilizer required, allowing for a "variable fertilizer rate"
- Two main benefits: Reduces overuse (reduce costs) and increase under-use (increase yield)
- Benefit #1: 20% reduction in fertilizer cost per acre
 - 1 bag / acre @\$15/ bag
- Benefit #2: Improve yield 2%
 - Current average yield: 100 bundles/ acre @\$ 2.5/ bu
- No competition
- Farms average about 400 acres
 - 1000 Large farms: 1000 acres
 - 3000 Medium farms: 400 acres
 - 6000 Small farms: 200 acres
- Product lasts 10 years
- Product production cost: \$10K per unit
- Unit works the same regardless of farm size
- Discount rate: 0%

Case 8: Fertilizer Innovation (II of II) McKinsey & Company, Quick on Your Feet

Requisite Math

\$3.00 fertilizer savings per acre (0.30 * \$15) \$5.00 yield increase (\$2.5 * 100* 0.02)

WTP per acre: \$8.00 or \$3.2K per average farm per year

Second-Best Answers

- 1. Large: If we price the product at \$80k we sell 1000 profit \$70M
- 2. Large & Medium: If we price the product at \$32k we sell 4000; profit \$88M BEST OPTION
- 3. All farms: If we price the product at \$16k we sell 1000 profit \$60M

First-Best Answers

- 1. Skimming: start by pricing at \$80k and then \$32k and then \$16k;
- 2. Offer a service to the farms at up to \$8/acre that will achieve a price discrimination based on acreage. (perfect price discrimination)

Case 9: School Buses (I of II) A.T. Kearney, Round I

Problem statement narrative

Your client is a school bus manufacturing company that has just been purchased by a leading international truck manufacturing company.

The CEO of the truck company has asked the president of the newly acquired school bus company to improve his organization's profits. The president of the school bus company has in turn, asked us to help determine what areas will provide the best results.

Guidance for interviewer and information provided upon request⁽¹⁾

Information to provide upon request

- Company is open to any and all ideas
- Bus market is growing with population
- Customers: Schools, counties, local governments
- 3 players (including client) with 33% share each
- Prices have been historically high given concentrated market, not likely to change
- 1 plant in 'renaissance zone' with low taxes
- All production equipment fully depreciated
- Comparatively low labor costs
- Material costs are high but comparable with others
- One competitor struggling financially, one unknown

Tips for interviewer

- This is not a numbers case- pay attention to how candidate frames problem and tackles solutions
- Take liberty with story, allowing candidate to drive direction and pace; fill in details as you see appropriate

⁽¹⁾ If detailed exhibits exist, they will be referenced in this box, and included in full on the following slide(s)

Case 9: School Buses (II of II) A.T. Kearney, Round I

Improving internal operations

Offshore/

High domestic raw material costs raise the question: can we do better elsewhere?

Offshore/ Near-shore

Sourcing parts globally may reduce raw material costs and increase profitability

Compete on Price

This is a dangerous ploy. Leveraging low cost labor and low tax production may lead to increased short term sales (and potentially higher profits)

However if a competitor is able to follow, customers may see all benefit and there is no going back if it is a mistake

Seek new markets

Our low cost of production position may lend to a favorable position in a complementary industry. Luxury, and other custom bus production requires high labor element, where we have advantage. Further, higher margins make for attractive target

Exploring synergies with new parent company

Sourcing	If trucks and buses purchase parts from similar original equipment manufacturers (OEMs), then consolidating purchasing operations may add buyer power and eliminate purchasing duplication
Modularity	Buses and trucks are built on similar platforms. Scale may exist in R&D for any new products as well as stocking duplicative components, when eliminated would reduce inventory and handling costs
Act as supplier	If the bus plant is not operating at full capacity, it may take advantage of tax situation and low labor to cheaply supply parts to truck company
Co-leverage	Selling buses to those who purchase trucks and visa

Co-leverage sales & distribution

Selling buses to those who purchase trucks and visa versa adds to the potential client list of both companies, potentially allowing for steal-share growth in a stagnant industry

Bundling

How many other bus manufacturers can offer bundled goods to governments and schools requiring trucks as well? By bundling pricing, the group can become a central supplier for transportation equipment

Case 10: Pharmaceutical Distribution (I of II) A.T. Kearney, Round I

Background information to read to candidate

Your client is a large pharmaceutical distributor in a market primarily consisting of three main players. The three firms have a combined market share of 96%. The client has been growing via acquisitions, and it operates in four business segments which are all operated independently:

Drug Distribution is the core business representing 85% of sales. Our client buys drugs from pharmaceutical firms and distributes them to hospitals, etc. They typically buy and sell both brand name and generic drugs, and this area has historically low margins.

Manufacturing and distribution of medical products, includes instruments, ER kits, supplies, etc.

Pharmacy Services is the "other" category comprised mostly of acquisition targets with no other logical home. Services include temporary staffing and owning and operating retail pharmacies.

The drug vending machines segment supplies machines to hospitals that distribute high frequency drugs to aide nurse productivity.

<CONTINUED IN NEXT BOX>

Questions to ask candidate after providing background information

The client has a long history of profits, but for the past four quarters, profits, the company's stock and employee morale have all been down.

The CEO has called you in to provide an assessment of how to improve profits.

How would you approach this meeting?
What areas would you look at to improve profits?

Interviewer Note:

This is a structuring and thought case- a solid performance would establish how the divisional structure's silos can be eradicated for tremendous cost savings

Allow candidate to walk through profitability framework, but guide the discussion toward reducing costs among business units

Ask candidate (if not already doing so) to outline what they would imagine the primary corporate-level cost buckets to be)

Case 10: Pharmaceutical Distribution (II of II) A.T. Kearney, Round I

	Admin. / Overhead	Purchasing	Manufacturing	Sales	Distribution
Interviewer guidance for each area (do not read verbatim)	Separately run between divisions, but not very scalable	Scale appears to exist in maintenance, repair and operations purchasing	Only one division- medical products - uses manufacturing and it is not a core competence, perhaps outsourcing?	Run as separate organizations between divisions, selling to the same clients- large benefit in combining	Run as separate facilities across country for each division, all running at about 50% capacity
Possible candidate recommendation		xtbook case for 'de-silo-ing nization will be able to run v enues			
Current Siloed System	Distribution Mfg. & Dist. Admin & Overhead Overhead	Pharmacy Services Admin & Overhead Purchasing Sales Drug Vend. Machines Admin & Overhead Purchasing Drug Vend. Machines Admin & Overhead Purchasing Dist.	Proposed Matrix System	Pharma Distribution Med. Equi Mfg. & Distribution Mfg. & Distribut	

Case 11: Tissue Paper (I of II) A.T. Kearney, Round II

Problem statement narrative

Your client is a tissue paper manufacturer. Their products includes facial tissue, napkins and bathroom tissues. The client has a consumer business and a commercial business.

The CEO of the firm is facing pressure to improve the firm's profitability. To improve profitability, the CEO is considering increasing the average price on commercial products by 10% and wants to know whether he should do it.

You have two weeks to conduct the assessment.

Guidance for interviewer and information provided upon request

- Only provide each piece of information after being asked for it specifically by the candidate
- An assessment of historical price vs. quantity data showed that the price elasticity of demand for the product is 2.0
- Piloting the price change is not possible given timeframe

• Product Price: \$100/ton

• Product sales volume: 1000 tons

• Fixed Costs: \$20K

• Variable Costs: \$70/ton

Current market share: 40%

• 3 players control 90% of market

Case 11: Tissue Paper (II of II) A.T. Kearney, Round II

Base profit scenario

Revenue

\$100/ton x 1000 tons = \$100K

Costs

Fixed: \$20K

Variable: \$70/ton x 1000 tons = \$70K

Profits

\$100K - \$70K - \$20K = \$10K profit

10% price increase profit scenario

Revenue

\$110/ton x 800 tons = \$88K

Costs

Fixed: \$20K

Variable: \$70/ton x 800 tons = \$56K

Profits

\$88K - \$56K - \$20K = \$12K profit

Increases profits by 20%

Areas candidate should be concerned about...

- Competitors stealing share
 - Industry is operating at capacity, and it would take a long time for competitors to add production ability to steal our market share
 - This is a long-term concern
- •Decrease in volume will lead to overall revenue reduction, however increased price offsets and leads to increased profits

Case 12: Charcuterie Processor (I of III) A.T. Kearney, Round I

Problem statement narrative

Our client is a consumer goods company. We are consulting to the food division.

They sell processed pork products like sausages. The product is a retail branded product available in retailers such as Kroger.

The client's profitability has been declining. They would like to know why has this been happening and what your recommendation for correcting the situation is.

Guidance for interviewer and information provided upon request⁽¹⁾

Information to provide upon request

- The client's value chain is available on the next page as a handout to the candidate
- The market is mature and stable
- Market Share:
 - Client: 30%; major competitor: 30%; new entrants (primarily forward integrating packers and growers): 40%
- Packers process hogs only 8% of material applicable to our market
- Costs: 50% material (rising) / 50% other (stable)
- New entrants approaching retail with very low prices
- Client revenues are down with stable prices, can not currently compete on price

⁽¹⁾ If detailed exhibits exist, they will be referenced in this box, and included in full on the following slide(s)

Candidate Handout (upon request)

Case 12: Charcuterie Processor (II of III) A.T. Kearney, Round I

Client Value Chain

Hog producers grow and sell hogs

Packers
Prepare material for processing

Processors
prepare consumer
products (client)

Retail/ Distribution Sell final products to end-users

Case 12: Charcuterie Processor (III of III) A.T. Kearney, Round I

Client Value Chain: What the candidate may see

Hog producers grow and sell hogs

Prepare material for processing

Processors prepare consumer products (client)

Retail/ Distribution products (client)

Areas the candidate may chose to focus for solutions

Backward-integrating	 The client may choose to backward integrate to Packing and/or Producing in order to beat the packers at their own game SOLUTION: This does not make strategic sense, as sausage material is only ~8% of the packing business
Partnering	 The client may choose to approach packers who have not yet forward-integrated into processing and establish exclusive purchasing deals SOLUTION: Two major packers have not yet forward integrated, and would likely be very interested in a deal
Acquiring	By consolidating the sausage manufacturing business, the client would have increased buyer power over suppliers and would be better positioned to combat rising material prices SOLUTION: If the packers do not lower material prices, they will still steal all price-conscious customers
Branding	 Position the client product as a premium brand. A long history of production and 'secret spices' may convince customers that value may not be something you are looking for in a sausage SOLUTION: This would effectively segment the market by premium/value- addressing profitability via higher margins

Case 13: Music Retailer Loyalty (I of II) DiamondCluster, Round I

Problem Statement Narrative

Your client is a music retailer that has grown through acquisitions, acquiring 45 retailers in the past 5 years. They operate 750 stores nationally. They have already decreased costs through operational improvements, but the firm now has 15 brands, which has left customers confused, so the client is undergoing a re-branding effort.

They are concerned that they have no information on their customers, only sales data, and therefore cannot segment customers across product lines or genres.

The client wants to implement a loyalty program to identify and understand their customers. They want you help the figure out how to construct the loyalty plan. How would you develop the business case for this initiative, quantify the benefits, and determine the cost?

- This is a qualitative case covering a quantitative subject. Walk the candidate through HOW they would establish the program, not actually establishing it.
- Products offered are media-specific:
 - CD's
 - DVD's
 - Posters
 - Accessories
 - All genres

Case 13: Music Retailer Loyalty (II of II) DiamondCluster, Round I

Acquisition / Program Type

Monetary

Rewards such as free CDs or DVDs, or even cash, after a certain dollar value of purchases is reached

Informationa

Provide 'members' with proprietary artist or concert information such as a fan club.

Promotiona

Provide customers with promotional material that the client receives for free from record labels, such as concert tickets, t-shirts, stickers, etc.

Revenue/ Efficacy Measurement

Pilot Program

Conduct pilot in one region and compare it with another (this is what they actually did), essentially setting an experiment and control population using statistical analysis to compare the two populations.

Requirement fo Deals Have customers enroll in the program system-wide by only allowing members access to special reduced prices (similar to grocery stores).

Cost Measurement

Startup Costs

- Purchase:
 - In-store equipment
 - Data mining software
 - Advertising

Continuing Operations

- •Major cost:
- Cost of incentives (CD's, etc)
- •Other costs:
 - Tracking & upgrading system
 - Marketing & segmentation analysis

Case 14: Retailer Discounting (I of II) A.T. Kearney, Round II

Problem statement narrative

Our client is a retailer in New York State. They have 120 stores across the state and they are constantly competing with other retailers for customers. They are NOT a low-cost retailer in the state but on certain days they give out heavy discounts on their products to attract customers. They create brochures for weekly deep discounts and deliver them to their customers by inserting them in newspapers in the morning.

The client's competitors are also doing the same and the problem is that this scheme is not generating enough return on investment for our client as compared to competitors. How would you analyze the situation to see where the problem could be and how would you compare the execution strategy of offering these discounts of our client with that of their competitors?

- Only provide each piece of information after being asked for it specifically by the candidate
- Campaigns are run on the same day as competitors
- Stores are as accessible (if not more so) than competitors
- Store product-mix is similar to competitors
- Our discounts are similar to those of our competitors (in price and product)
- We are using the same newspapers as our competitors

Case 14: Retailer Discounting (II of II) A.T. Kearney, Round II

Getting customers into stores

- On what days are we running these discounts compared to our competitors? Friday vs. Saturday?
- What newspapers are we using to deliver the brochures? Which is best for our customers: Times or Post?
- What is the layout of brochures compared to competitors?
- How accessible are the stores compared to our competitors?

Servicing customers once inside store

- Service levels on sales days- are customer service representatives readily available?
- · Is inventory adjusted in accordance with sale days?
- Back-end logistics: are prices updated in-store and in computer systems? (THIS WAS THE PRIMARY ISSUE- systems were not updated and customers were highly confused by discrepancy)
- Generating additional revenue from each customer on nondiscounted products?

Follow-up series of questions for candidate

- How do we figure out which items to put on sale, and which to feature in newspaper inserts?
- How do we sell non-discounted products to people entering the store purely for discounted items?
- How can we better manage our inventory around these sales periods without overstocking or stocking out?

Planning & Analysis

- Used electronic communication along supply chain to alert suppliers to anticipated dramatic demand shift for supply & restocking (at appropriate levels)
- Use retro-active demand analysis to determine which sales are the most effective for gross revenue purposes

Bundling

- By discounting one product (such as hamburger meat) and selling buns, ketchup, mustard, relish, tablecloths, paper plates, etc at full price nearby would dramatically increase revenues
- The same could be true with salad dressing, dessert toppings, etc.

Case 15: Book Retailer (I of II) Booz Allen Hamilton, Round I

Problem statement narrative

Your client is a book publisher who deals in fiction, and wants to increase profitability. Sales for the company are as follows (read this chart to the candidate- watch for notes organization):

Category	Profit/ Unit	Annual Volume	
Small Sellers	(\$3) to \$2	<500K	
Breakout Potential	\$10	500K – 1M	
Bestsellers	\$5	>1M	

The client wants to understand why profits look the way they do, and what it can do to improve profitability.

- Only provide each piece of information after being asked for it specifically by the candidate
- Book prices are \$15 regardless of category or size
- No difference in fixed costs across categories
- Material costs are the same for all books
- Bigger authors require higher royalties than smaller authors
- Author is the primary driver to determine a 'best-seller'
- There are huge economies of scale in printing
- Small sellers are primarily distributed via independent bookstores, requiring higher per-unit distribution costs
- 80% of space dedicated to small & breakout sellers
- Can not currently determine which books will become breakouts

Case 15: Book Retailer (II of II) Booz Allen Hamilton, Round I

Candidate may propose action in...

Interviewer possible follow-up

- What risks do you see in doing this?
 - Product Mix: slow sellers are required to get people to purchase bestsellers
 - Demand forecasting: Getting the breakouts wrong would be very costly
 - Logistics:
 - Little downside

Product mix in stores

It appears 80% of stores are geared toward sales of products with an expected profit of (\$0.50), perhaps reallocating this mix to be more favorable to bestsellers and breakout books would increase profits

Demand forecasting

- Forecasting which books may become breakouts would allow for massive headway on competition and big profits
- Suggested model inputs:
 - Media mentions
 - Fads
 - Pre-orders
 - Tie-ins
 - Online sales
 - Author's previous sales
 - Subject matter compared to recent hits

Back-end logistics

- Tying forecasting with book orders could reduce 'multiple small order' costs for small sellers that become breakouts
- Moving to a tiered model, selling small sellers online or in lower-overhead establishments (see risks to left)

Possible derivative case: Conduct analysis from publisher viewpoint

Case 16: Sheep Auction (I of VI) Bain & Co., Round I

Problem statement narrative

Your client is looking at investing a significant amount of money to create an online auction company that facilitates sheep sales from producers to large customers.

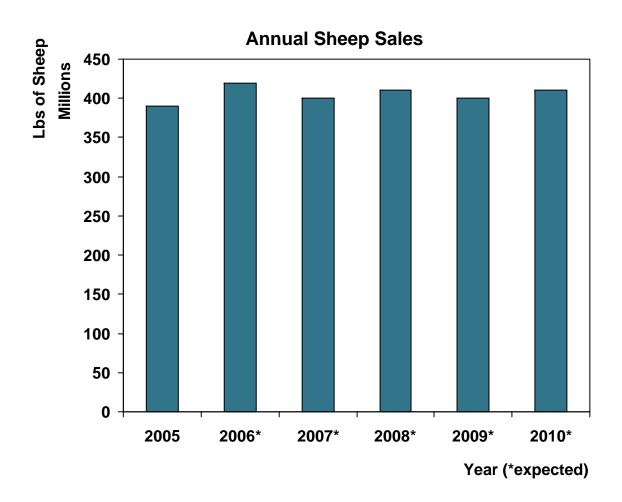
They will only do this if they could make roughly \$10 M annual profit in 5 years, and they have enlisted your help in determining the go/no-go decision.

Guidance for interviewer and information provided upon request⁽¹⁾

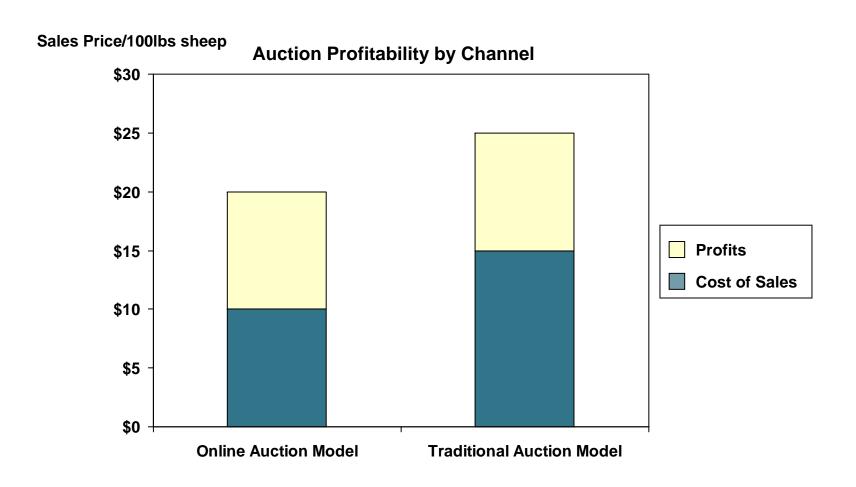
- Only provide each support slide after being asked for the information by the candidate
- Slides:
 - Overall market size (in lbs of sheep)
 - Sheep prices (in \$/lb)
 - Farmers (producers) who use computers
 - Sheep sold at auction vs. contract
- All large processors (buyers) use computers
- Sales via auction and contract will not migrate- there is no steal share between channels
- Follow up questions for candidate upon completion of the calculation (which should total far short of \$10M)
 - What would you do to achieve the \$10M level?
 - If launched, how would you market this product?

⁽¹⁾ If detailed exhibits exist, they will be referenced in this box, and included in full on the following slide(s)

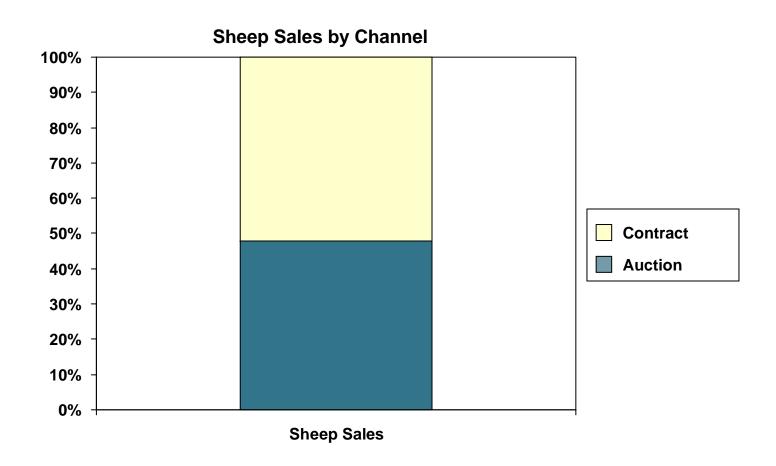
Case 16: Sheep Auction (II of VI) Bain & Co., Round I



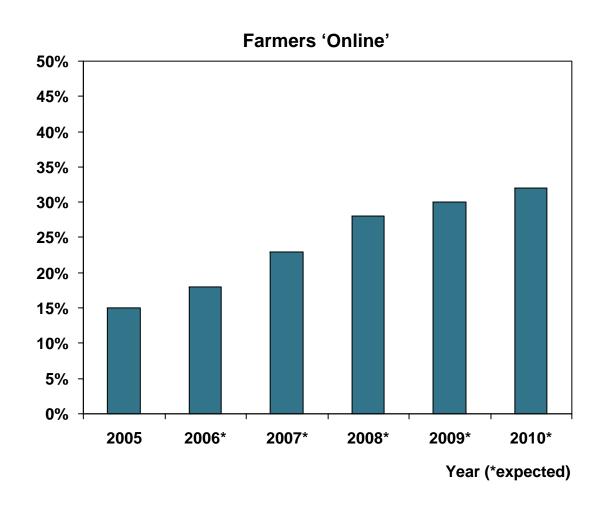
Case 16: Sheep Auction (III of VI) Bain & Co., Round I



Case 16: Sheep Auction (IV of VI) Bain & Co., Round I



Case 16: Sheep Auction (V of VI) Bain & Co., Round I



Case 16: Sheep Auction (VI of VI) Bain & Co., Round I

Expected
Calculation
(Approximate)

Use 2009 numbers to show 5-year 'maturity' and steady-state for profitability- this model assumes a 100% penetration- candidate should deduct that penetration is irrelevant given overall industry profitability

400M X 50% X 30% X \$10 \$6.66M Profit lbs sheep auctioned 'online farmers' per 100 lbs sold = Less than \$10M

Time permitting follow-on questions...

 What would you do to reach the \$10M profit level from here?

If this product were already launched, how would you choose to market it?

...And sample answers.

- Train farmers and sheep producers on computer use
- Provide central computer locations near farm sites to facilitate farmer interactions
- Expand the auction tool to other animals
- Trade magazine advertisements
- Door to door sales & training representatives
- Commissioned farmer representatives
- Relationships with sheep processors 'pull-driven'
- Value proposition: cost savings in moving heard to auction site: producers could pick heard up at farm

Case 17: Security Systems (I of VI) Bain & Co., Round I

Problem statement narrative

Your client is a financial investor interested in investing in a start-up national security company

The security company sells and installs alarm systems and then provides monitoring service, patrolling the neighborhood and following up if the alarm goes off.

The client has hired you to size the market and recommend if this is a good investment or not.

Guidance for interviewer and information provided upon request⁽¹⁾

- Only provide each support slide after being asked for the information by the candidate
- Slides:
 - Target company's current situation
 - Demographics and growth by income
 - Competitive landscape
 - Competitive estimated revenues and earnings
- 10M suburban households
- 1M new suburban households each year
- System is priced 'at-cost'
- 1-2 large local players per market
- Large local players are entering national market and competing with large national player

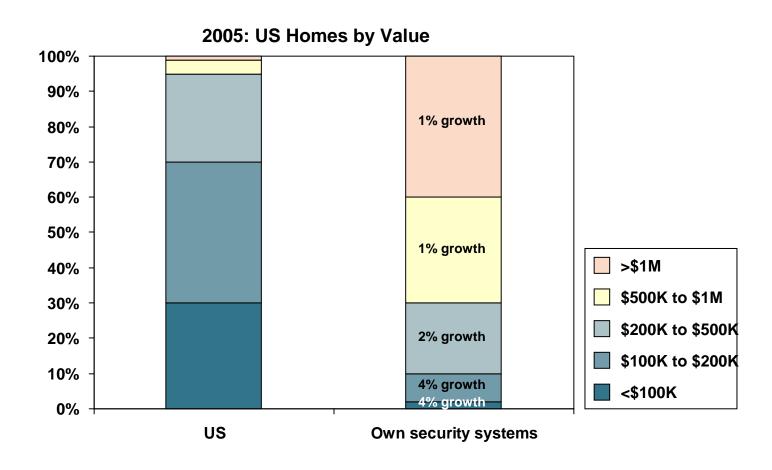
⁽¹⁾ If detailed exhibits exist, they will be referenced in this box, and included in full on the following slide(s)

Case 17: Security Systems (II of VI) Bain & Co., Round I

Client Market Situation

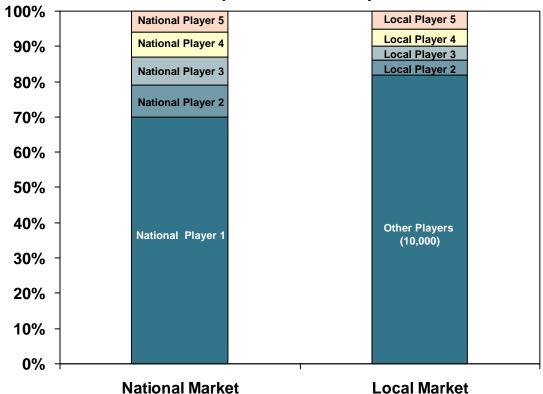
Number of homes in market	10 Million
Home growth last year	1 Million
Competitors	Largest national player appears to have financial difficulties
System Price	\$1,000 installed
Service Price	\$30 per month

Case 17: Security Systems (III of VI) Bain & Co., Round I

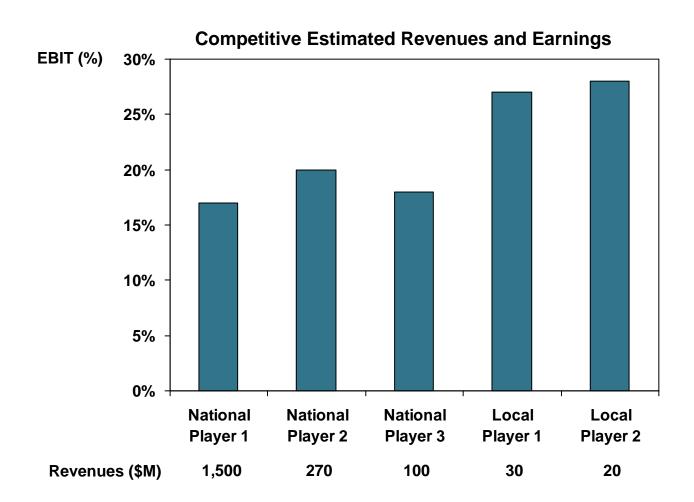


Case 17: Security Systems (IV of VI) Bain & Co., Round I

Competitive Landscape



Case 17: Security Systems (V of VI) Bain & Co., Round I



Case 17: Security Systems Company Market Entry (VI of VI) Bain & Co., Round I

Market Sizing (Annual Revenue)	\$1000 × 1M + \$30/mo × 12 × 10M = \$4.6B System New Homes Service Months Existing Homes Annual Revenue
Market Growth	70% of alarm buying market is growing at 1% per year, with the overall alarm buying market growing at or less than population growth This makes market growth unattractive
Competition Reach	The national market is dominated by one player with several other strong players making entry very difficult The local market is highly fragmented with apparently 1-2 major players in each market, making entry in this space equally difficult with local de-facto monopolies
Competitive Environment	Large national players appear to be operating with rather low EBIT numbers – this may be due to spread out infrastructure and inefficient utilization of resources Smaller local players have stronger EBITs, however this leaves them in a strong position to compete, and entry will be difficult

Market does not appear to be attractive at this time

Case 18: Termite Control (I of V) The Boston Consulting Group, Round I

Problem statement narrative

Your client is a termite control company that provides solutions for eliminating termites from homes. Their current solution involves setting up baiting systems (a similar concept to mouse traps) – the baiting system consists of stations that are set-up around the house to attract and kill termites.

A competitor has come up with a new solution that involves liquid sprays for killing termites. They have just started selling this treatment. How should the client respond?

Guidance for interviewer and information provided upon request⁽¹⁾

- Only provide information and each support slide after being asked for the information by the candidate
- Client has 20% share with 100K new installations/yr
- Some customers perceive spray as health risk some new customers will switch, others won't (%'s unknown)
- Assume existing customers will not switch
- Client has capability to produce spray
- Systems are equally effective
- Slides for candidate to review:
 - Client and competitor pricing
 - Client and competitor cost structure
 - Customer retention rates

⁽¹⁾ If detailed exhibits exist, they will be referenced in this box, and included in full on the following slide(s)

Case 18: Termite Control (II of V) The Boston Consulting Group, Round I

Pricing By Channel

	Baiting System	Spray System
Initial Installation	\$1500	\$1000
Annual Renewal & Prevention	\$300	\$200

Case 18: Termite Control (III of V) The Boston Consulting Group, Round I

Fully-Loaded Cost By Channel

	Baiting System	Spray System
Initial Installation	\$1100	\$750
Annual Renewal & Prevention	\$250	\$100

Case 18: Termite Control (IV of V) The Boston Consulting Group, Round I

Client Historical Retention Rates

Percentage of customers in year 0 that renew their subscription in subsequent years

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
90%	80%	70%	60%	50%	40%	30%	20%	10%	0%

Case 18: Termite Control (V of V) The Boston Consulting Group, Round I

Candidate should look at the profitability of each option	Initial Ir Annual Renewal & F	nstallation Prevention			Baiting Sy \$400 \$50					\$250 \$100	
And realize declining expected annual renewals negate majority of profit differences.	Expected profit per custom Bait system profit Spray system profit Summed Baiting Profits Summed Spray Profits	Year 0 400 250 400 250	Year 1 45 90 445 340	Year 2 40 80 485 420	Year 3 35 70 520 490	Year 4 30 60 550 550	Year 5 25 50 575 600	Year 6 20 40 595 640	Year 7 15 30 610 670	Year 8 10 20 620 690	Year 9 5 10 625 700

Aggregating indications between systems...

- Discounting would virtually eliminate profit difference between products (all spray profit over bait is 5 yrs out)
- Incumbent client can leverage built-in fear for customers (toxicity) of new, cheaper, product
- If there is a low/no startup cost for new product, there is little/no downside risk of entry

...Allows for a concise client-tailored recommendation.

Allowing the spray market to cannibalize baiting sales will lead to drawn out per-customer profit, and will increase profit-reliance on renewals.

Given entrant and startup costs, client should equip fleet for spray application, but should advertise benefits of baiting over spray (time tested, safer for kids & food, etc), along with ability to accommodate both applications such as: 'Your full service termite eradication expert since 1925.'

Case 19: Telecom Service Provider (I of II) The Boston Consulting Group, Round I

Problem statement narrative

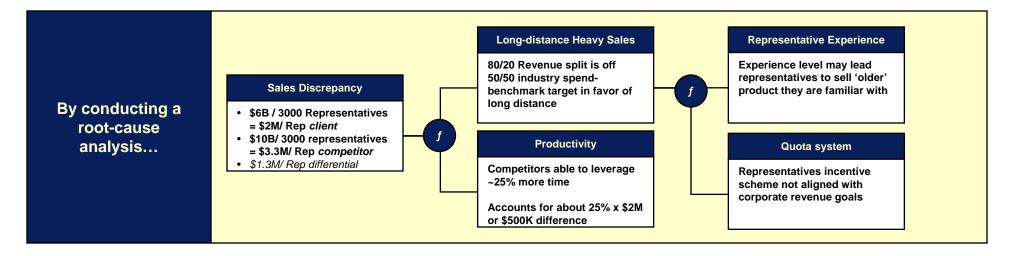
Your client is a telecom service provider. They have 2 products – long distance and wireless. Their customers are businesses, and they use a sales force to sell products.

The only competitors' sales force has higher \$ sales per sales person and the client has hired you to determine why...

Guidance for interviewer and information provided upon request

- Only provide information after being asked specifically by the candidate
- Client and competitor are only players in market
- Sales of \$6B for client; \$10B for competitor
- Client customers spend equally on both products
- Client revenues are 80% long distance, 20% wireless with a target of 50/50 split
- Sales force of 3000 representatives each company
 - Our representatives have 10yrs more experience
- 3-5 clients per representative for each company
- Client representatives spend 45% of time selling; competitor representatives spend 55%
 - Difference is spent on administrative tasks
- As opposed to competitor, client has quota system established on a per-product basis
 - Sales greater than quota generate higher commissions

Case 19: Telecom Service Provider (II of II) The Boston Consulting Group, Round I



The candidate will be able to answer the client's question...

- Example: 'The sales per representative discrepancy appears to have three primary drivers:
 - Our reps are tied up with administrative tasks while they could be out selling 25% more
 - Our quota system rewards our reps to 'sell what they know' not what we want them to sell
 - Our representatives are very experienced, but technology is changing and they need to be current with their product knowledge

...And provide a pragmatic set of solutions.

- •Retool processes to increase rep time selling, likely by increasing administrative staff
- •Implement training program for representatives so they understand both products equally
- Adjust quota system to align with corporate goals
 - Specifically, determine which product is more profitable, and steer quota toward this product
 - Determine a more 'balanced' quota system that does not reward reps for concentrating work in one area

Case 20: Smart Card Manufacturer (I of III) The Boston Consulting Group, Round II

Problem statement narrative

Circa-late 1990s:

Your client is a global high tech company that is a diversified manufacturer (chips and cell phones for example). The company has decided to enter the Smartcard market and wants to know where in the value chain they should enter.

On Smartcards, there is a computer chip that provides a broad array of functionality. It can process transactions locally, provides a higher level of security. The technology is currently used in Europe and a little in Asia, however it is not currently used in the U.S. It can be used for loyalty programs, transit, credit cards, ATM, etc.

Guidance for interviewer and information provided upon request⁽¹⁾

- Only provide information after being asked for the information by the candidate
- ADDITIONAL INFORMATION ON NEXT PAGE
- Client has already determined to enter- only want to know where and why
- Market is currently growing at 25%-30% annually
- Ask candidate to draw their thoughts about value chain before telling them what the value chain elements are
 - Do tell candidate elements of value chain
 - Let candidate ask about specifics within value chain

⁽¹⁾ If detailed exhibits exist, they will be referenced in this box, and included in full on the following slide(s)

Additional Information to Provide

Case 20: Smart Card Manufacturer (II of III) The Boston Consulting Group, Round II

	Card Development	Terminals/ Local Processing	System Implementation	Continuing Operations
Concentration	4 players with equal share	10 players with equal share	12 players with equal share	Highly fragmented
Competitive Tactic	Patented technologies	Products are mfg based w/ little intellectual property	Major IT consulting firms	Geographically based
Profit Margins	15%	10%	20%	10%
Other	All products are in performance	Natural extension of current products (ATMs & Disk drives)	Track records are highly important	Requires workers with electrician skills
Share of \$1 spent in industry	25%	25%	20%	30%

Case 20: Smart Card Manufacturer (III of III) The Boston Consulting Group, Round II

	Expected Profits/ \$ Industry Revenue	Corporate Alignment	Competition	Entry Strategy
Card Development	\$1 x 25% x 15% = 3.75¢	Medium/ High	Low	Acquisition
Terminals/ Local Processing	\$1 x 25% x 10% = 2.5¢	High	Medium	Internal Development
System Implementation	\$1 x 20% x 20% = 4.0¢	Low	Medium	Partnership/ Acquisition
Continuing Operations	\$1 x 30% x 10% = 3.0¢	Low	High	Acquisition

While system implementation is more profitable, card development is more aligned with client and has less competition- recommend acquiring one of four firms in market

Case 21: Insurance Provider (I of IV) The Boston Consulting Group, Round II

Problem statement narrative

Your client is a car insurance company. Their claims processing department is under pressure to reduce costs. How might you help them?

If the candidate asks what is driving their cost reduction pressure, add....

Apparently the CEO believes her competitors' processing cost is less. Nor necessarily the competitors' overall payout, but the actual processing itself is cheaper.

Guidance for interviewer and information provided upon request⁽¹⁾

- SEE CLIENT AND COMPETITOR PROCESSES ON NEXT PAGE TO ADDRESS QUESTIONS IN THIS AREA
- Let the candidate draw assumptions whenever possible to develop time spent on each task
- Customers purchase insurance on price, not claims processing convenience

⁽¹⁾ If detailed exhibits exist, they will be referenced in this box, and included in full on the following slide(s)

Additional Information to Provide (NOT A HANDOUT)

Case 21: Insurance Provider (II of IV) The Boston Consulting Group, Round II

Process Differences

Phase A (Same across companies)

Call center receives a call from customer

Agent assigns an inspector and informs customer of process (different processes depending on client/competitor)

Our Phase B

Inspector receives appointment time from agent and visits the damaged car

Inspector prepares a report and estimates a reasonable payout

Competitor Phase B

Agent instructs customer to have car inspected by three mechanics and fax in quotes

Agents review quotes based on proprietary system and decide reward amount- not necessarily lowest amount

Guideline for interviewer

- Candidate should want to calculate how efficient each operation is:
 - i.e.: how many claims can an inspector process in a day?
- Things they should include:
- Travel time
- Inspection time
- Time spent to review quotes
- Report writing time
- Total time worked each day
- Candidate should find travel time is making our process more time-intensive, and changing process may save in short term...
 - However, is there any risk associated with this?

Candidate Handout ASSIGNMENT

Case 21: Insurance Provider (III of IV) The Boston Consulting Group, Round II

	Previous Costs	Proposed Costs
Revenues	100	
Phase A	10	
Phase B	20	
Payouts	60	
Profits	10	

Candidate: Please complete and explain the 2nd column

Case 21: Insurance Provider (IV of IV) The Boston Consulting Group, Round II

	Previous Costs	Proposed Costs	
Revenues	100	100	
Phase A	10	10 (same)	
Phase B	20	10 (something less)	
Payouts	60	70 (variable)	
Profits	10	10 (variable)	
	Phase A Phase B Payouts	Revenues 100 Phase A 10 Phase B 20 Payouts 60	Revenues 100 100 Phase A 10 10 (same) Phase B 20 10 (something less) Payouts 60 70 (variable)

...and voicing concerns about risk...

- Implementing the new structure already used by competitors may cause payouts to drift in unexpected directions (either up or down)
- Potential for fraud must be addressed prior to full system wide rollout
- Some customers may prefer the ease of a scheduled visit rather than having to undergo footwork on their own (especially if serious accident)

...Leads to a client-tailored recommendation.

Survey selection of client base (and potential client base) anonymously to determine acceptance of model

Institute pilot program in a select area to determine effect on payout and client morale- if positive in both regards, rollout system wide

Case 22: Appliance Insurance (I of II) The Boston Consulting Group, Round II

Problem statement narrative

Your client is an insurance company that sells home appliance insurance. They have hired you to help efficiently increase product sales, what would you do?

IF THE CANDIDATE ASKS FOR SPECIFICS, ADD...

The client covers all appliances in the home for \$400/year. Therefore any problems with the washer, dryer, air conditioning, refrigerator, range, etc, all get complete repair or replacement

Guidance for interviewer and information provided upon request

- Client sells to all households in US via two channels
 - Direct Mail Channel:
 - Target 60M non-moving households each year
 - 50M mailers sent
 - \$0.50 per mailer to send
 - 0.5% sales conversion ratio
 - Sales Team Channel
 - Target 40M moving households each year
 - 80% coverage
 - 5% conversion ratio
 - 1000 members of sales team
 - \$100K annual salary
 - Coverage is highly concentrated in specific regions- little coverage in northeast

Case 22: Appliance Insurance (II of II) The Boston Consulting Group, Round II

Candidate should want to calculate acquisition cost per customer for direct mail...

	Direct Mail
Target market	60M
Mailers sent	50M
Cost per mailer	\$0.50
Total mail cost	25M
Conversion ratio	0.5%
New customers	250K
Cost per customer	\$100

Candidate should drive to a set of conclusions & recommendations

- Sales team coverage is less costly, therefore firm should concentrate on building capability in this area
 - Specifically: build capability in northeast
- Appears mailers are sent indiscriminately, by sending targeted mailers to high-potential candidates
 - This would likely lead to higher conversion ratios

...And then for the sales team.

	Sales Team
Target market	40M
Coverage (%)	80%
Coverage (homes)	32M
Conversion ratio	5%
New customers	1.6M
Team size	1000
Individual salary	\$100K
Total team cost	\$100M
Cost per customer	\$63

Additional conversations given time...

- How might our sales channels affect the insurance industry's problems with 'adverse selection' (how those who most need insurance tend to purchase more than those who do not)
 - Example: door-to-door sales may allow for specific selection of areas & homes rather than indiscriminate mailing

Case 23: Automobile Parts Manufacturer (I of II) A.T. Kearney, Round I

Problem statement narrative

Your client is an automobile interior plastic product manufacturing company. The client's market share is 20% and the industry's growth rate is nominal.

Over the past two quarters, their profits have stagnated and the CEO is concerned.

The company has only one customer and the customer continuously forces the client to price down. The company has one factory outside of Detroit and the factory is running at 70% utilization. The company manufactures 42% of the product on that factory and outsources the remaining 58%.

The CEO would like to improve factory utilization as well as improve profitability... could you help develop some recommendations?

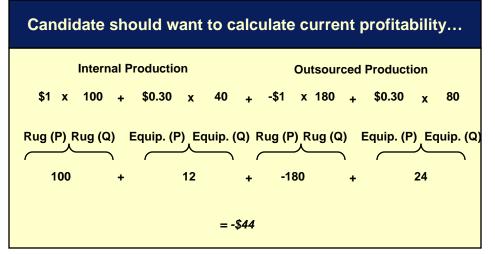
Guidance for interviewer and information provided upon request

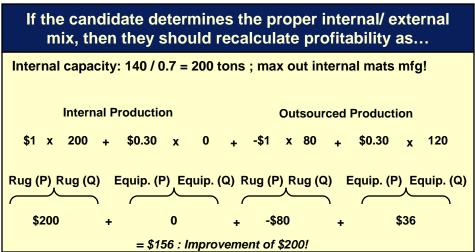
- The customer has no plans to increase order quantity
- Two products with particulars below

	Internal Production		Outsourced Production	
	Plastic Rugs	Small Parts	Plastic Rugs	Small Parts
Quantity (tons)	100	40	180	80
Full Cost	\$6	\$4.7	\$8	\$4.7
Price	\$7	\$5	\$7	\$5

- Small parts are more labor intensive to produce than mats
- Mats lend more 'brand recognition' to products than small parts
- Parts produced internally have a higher quality than outsourced parts
- Outsourced work has lower labor cost than internal

Case 23: Automobile Parts Manufacturer (II of II) A.T. Kearney, Round I





The standout candidate will address other concerns of the sourcing decision, such as...

- Future client demand
- Effect on brand name and positioning
- Labor relations
- Undiversified client base
- Quality control

Case 24: Electronics Retailer (I of III) The Boston Consulting Group, Round I

Problem statement narrative

Your client, Circuit Co., is a national consumer electronics retailer similar to Best Buy. For the past five years, Circuit Co. has grown its revenues and earnings primarily through new store openings. However, Circuit Co. knows that this type of growth can not be maintained forever. For the past year, the company has focused on several initiatives aimed at improving same-store sales and earnings. One of these initiatives has fallen by the wayside and you have been hired to analyze the situation.

Specifically, in the third quarter of 2003, Circuit Co. ran a pilot program in the digital camera departments of its Southwest Region stores. The CEO wants to know:

- 1. Was the program a success?
- 2. What improvements can be made to the program?
- 3. Should Circuit Co. roll the program out to the rest of the country?

Guidance for interviewer and information provided upon request⁽¹⁾

- ADDITIONAL INFORMATION ON FOLLOWING PAGE
- Details about the pilot program (Read verbatim)
- Traditionally, all of Circuit Co.'s ground-level employees were "generalists" in the sense that every one of them did all of the jobs that needed to be done: stocking the shelves, answering customer questions, running the cash register, etc. The pilot program involved setting up a group of "specialists" in the digital camera area who were solely responsible for answering customer questions and selling digital cameras. The remaining employees remained "generalists." Generalists maintained their previous wages. Specialists were paid a small draw plus commissions based on digital camera revenues.
- Trial success criteria:
 - Incremental revenues exceeded incremental costs
 - Program did not create significant problems for general store operations

If detailed exhibits exist, they will be referenced in this box, and included in full on the following slide(s)

Additional Information to Provide

Case 24: Electronics Retailer (II of III) The Boston Consulting Group, Round I

Pilot Program Financials

- Only provide each item when asked
- •Note: Company still growing by adding stores

	3Q 2002	3Q 2003
Digital Camera Rev. (\$M)	502	899
Total Store Rev (\$M)	7.75	12
# of stores	199	296
Digital Camera COGS (\$M)	251	674

Additional Points

- SKU portfolio did not change
- Pilot had no effect on other operations
- Q3 runs June- September
- Generalist wage changes insignificant

Case 24: Electronics Retailer (III of III) The Boston Consulting Group, Round I

Analysis of financial performance...

- Digital camera revenues increased by about 80%
- Stores increased by ~50%, therefore camera revenue per store increased about 30%
- However, COGS increased about 170% or 120% after normalizing for store openings
- This means digital camera profits actually declined during the pilot program, even though revenues increased dramatically

...Leads to clients' answers.

- It appears specialists were focusing on selling low margin cameras in order to earn revenuedriven commissions
- In terms of revenues, the program was a success, however the client suffered in terms of profits.
- Recommendation: re-run the program after determining a profit-driven commission plan, based on results, determine rollout possibility for system

Case 25: Trucking (I of III) DiamondCluster, Round I

Problem statement narrative

Your client is a trucking company. The company has grown through acquiring regional trucking companies, which are currently each managed as separate businesses.

The CEO, who is new and is an outsider to the company, has asked you to help prioritize some short term investments, as well as advise on where the company should go in the long term.

In terms of the short term investments, the CEO is particularly interested in a Route Optimization software that has been developed by one of the regional divisions and has significantly improved profitability within that division. So, first the CEO wants to know what the impact to the firms profitability will be...

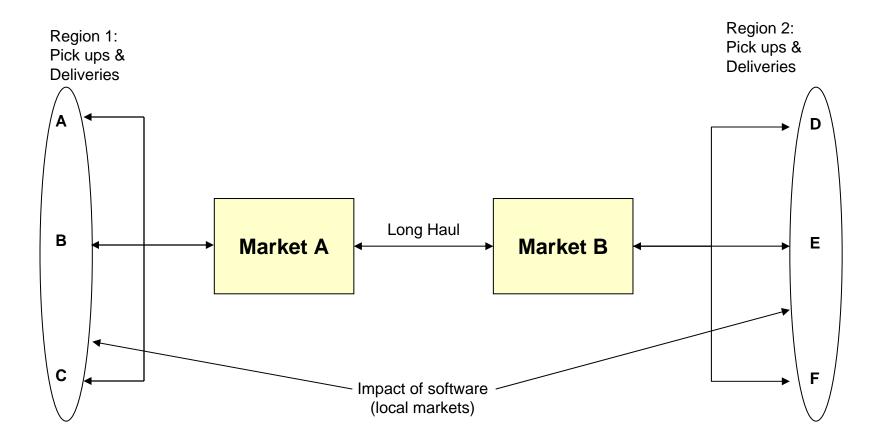
Guidance for interviewer and information provided upon request⁽¹⁾

- CANDIDATE HANDOUT EXPLAINING SOFTWARE IMPACT ON FOLLOWING PAGE
- If prompted, have the candidate focus on costs state demand is very stable, and expensive to increase
- Current pickups or drop-offs/ hr: 2
- Pickups or drop-offs/ hr w/ software: 2.5
- Hourly rate \$100
- Annual system wide pickups: 4M
- Drop-offs: 4M
- Tax rate: 40%
- No depreciation
- Labor is 1/3 of total costs
- Labor is 50% pickups & 50% deliveries
- Ask candidate to outline their idea of the cost buckets
 - Fuel
 - Drivers
 - Warehousing
 - Trucks, other equipment

If detailed exhibits exist, they will be referenced in this box, and included in full on the following slide(s)

Candidate
Handout
(upon request
about
software
function)

Case 25: Trucking (II of III) DiamondCluster, Round I



Candidate
Handout
(upon request
about
software
function)

Case 25: Trucking (III of III) DiamondCluster, Round I

Candidate should calculate cost reduction:

2 pickups/ hr * 8M pickups & drop-offs/ yr * \$100/hr = \$400M

2.5 pickups/ hr * 8M pickups & drop-offs/ yr * \$100/hr = \$320M

Pretax Benefit \$80M

- Taxes @ 40% \$32M

Final Benefit \$48M

This is the cost savings excluding a system wide rollout and system maintenance costs. Since the system already exists in one market, these costs can easily be modeled for whole system

Question: What should the CEO think about if he is looking to integrate the different businesses?

Watch the candidate frame out what the CEO should think about... the structure and thought process is more important than the results

What are the benefits?
Overhead consolidation
Access to markets
Centralized/ non-duplicative warehousing
Efficiencies in long-haul transfers

What are the costs?
Startup integration costs
Severance/ shut-down costs for duplicates
Advertising for increased capability

Establishing the Case - BACKGROUND

Case 26: Hong Kong Port (I of VII) McKinsey & Company, Round I

Problem statement narrative

Your client is Hong Kong port. The management is concerned about revenues going down and asks for your advice.

When asked to further elaborate on the business, add...

Let's assume that the only source of revenue for the client is container processing services related to shipment of containers. A manufacturer that wants to ship a container hires a shipping company. The shipping company tells him what ship the container should be loaded on. The manufacturer brings a container to the port and pays the port for taking care of everything (paper work, possible storing, loading on ship) to be done to load the container on the ship named by the manufacturer.

Guidance for interviewer and information provided upon request⁽¹⁾

- CANDIDATE HANDOUTS ON FOLLOWING PAGES
- Revenues have been decreasing at 3% / yr for 4 yrs
- Current sales of \$200M/ yr
- Client has 50% market share
- Industry is growing at 7%/ yr
- Competitors (both modernized in last 5 yrs): two mainland China ports, Zhanjiang and Shenzhen.
- Customers: Guangdong (mainland China-based) manufacturers (typical route is China – USA)
- Customers are VERY cost sensitive
- No difference in shipping cost from HK or competitors
- Handouts:
 - Container Processing Costs
 - Port Cost Structure
 - Profit Margins (question what they want and why)
 - Customer transportation costs
 - Map of relevant area

If detailed exhibits exist, they will be referenced in this box, and included in full on the following slide(s)

Case 26: Hong Kong Port (II of VII) McKinsey & Company, Round I

Processing Cost

Port	Container Processing Cost	
Hong Kong	\$320	
Zhanjiang	\$300	
Shenzhen	\$310	

Cost differences are accepted due to differing quality

Case 26: Hong Kong Port (III of VII) McKinsey & Company, Round I

Port Margins

	Hong Kong	Zhanjiang	Shenzhen
Gross margin	20%	17%	22%
Operating margin	10%	10%	10%

Case 26: Hong Kong Port (IV of VII) McKinsey & Company, Round I

Port Cost Structures

	Hong Kong	Zhanjiang	Shenzhen
Fixed cost	60%	70%	65%
Direct labor cost	20%	15%	15%
Materials / fuel / variable	10%	8%	8%
SG&A	10%	7%	12%

Case 26: Hong Kong Port (V of VII) McKinsey & Company, Round I

Map of Area



Additional Information

Case 26: Hong Kong Port (VI of VII) McKinsey & Company, Round I

If the candidate does not drive to manufacturer transportation costs in 15 min., provide hints...

- What drives the customer decision in choosing which port to ship from?
- What costs does a manufacturer incur while shipping a container from his plant to end customers?
- How does the manufacturer get the container to port?
- How about manufacturer transportation costs?

Guidance for interviewer and information provided upon request

Manufacturer transportation costs by port:

	Hong Kong	Zhanjiang	Shenzhen
Total Cost	\$300	\$210	\$180

- Hourly labor cost is the same for all trips
- There is an administrative border between HK and mainland China- trucks have to undergo customs clearances (and endure long waits)
 - 50% time waiting, 50% in customs
- Long lines in evenings, but no lines during day & night
- Customs communications are highly underdeveloped
- Need two drivers for HK, mainland drivers not allowed; also salaries much higher in HK
- HK government has a stake in the company and receives significant tax benefits

Case 26: Hong Kong Port (VII of VII) McKinsey & Company, Round I

Expected Recommendations

- Convince HK government to invest in building out the customs station at the border to increase throughput
- Invest in updating customs information and communication systems
- Lobby HK government to abolish regulation that prohibits Chinese commercial drivers to drive in Hong Kong
- These will all reduce manufacturer transportation costs

Creative Recommendations

- Orchestrate a single customs clearance (at HK border or at port) rather than a customs border at each
- Establish a separate trucking company to absorb border cost
 - This is a short-term solution
- Incentivize manufacturers to ship during the day or late at night to avoid evening rush

Establishing the Case (I)

Case 27: Argentinean Bank (I of III) McKinsey & Company, Round I

Problem statement narrative (I)

Your client is a bank in Argentina who has historically served individuals or large corporations. There are only three other large banks in the market, with each having equal market share and cost structures. Last year, your client was the first bank to enter the small to medium business market and made some money. They did this primarily by offering the businesses the same services that they offered the small and large companies through their retail outlets. They would like to understand how they could become more profitable...

Information provided upon request

- Small to medium business market is growing
- Users are very price sensitive
- Client's cost structure is rather small
- Client's retail outlets can

Initial question solution elements

If the candidate has asked the appropriate questions about the profit equation, it is apparent that...

- · Price can not be easily changed
- The cost structure is currently very good
- Quantity is the only thing to change
 - Choice 1: Increase sales to current clients
 - Choice 2: Increase sales to new clients

Initial question follow-up

- ASK CANDIDATE: Please give me four examples of products that you would offer to the small and medium sized businesses...
 - Possible answers
 - Payroll management
 - Funds management services
 - Tax services
 - Business insurance

Establishing the Case (II)

Case 27: Argentinean Bank (II of III) McKinsey & Company, Round I

Problem statement narrative (II)

Lets do some calculations.

Right now, we make \$1000 Revenue/Product, Have \$160 Million in profit, and service 2 products per customer.

The current cost structure is 20% profit, 20% fixed, and 60% variable.

Given the services you have talked about we predict that customers will increase to 600,000 expected customers, 3 products per customer, the revenue per product stays the same, the variable cost per product stays the same, what is the expected profit?

Requisite math & solution

Current Structure

\$160 M Profit

\$160 M Fixed

\$480 M Variable

\$800 M total Revenue

\$800 M Revenue/ \$1000 Revenue/Product = 800.000 Products

Variable Cost Per Product = \$600 per product

New Structure

Rev.→ 600,000 customers*3 products/cust *1000 →\$1,800 M

Fixed Costs→ \$160 M

Variable→ 600,000 cust * 3 products/cust *600→ \$1,080 M

Profit→ \$560 M

Case 27: Argentinean Bank (III of III) McKinsey & Company, Round I

Ask candidate:
can you provide
me a couple of
ways to segment
our small and
medium sized
business
customers?

- •Answers (which should be backed up by some rationale) could include:
 - Risk susceptibility
 - Size (revenues)
 - Size (employees)
 - Industry (service/ production)
 - Lender services
 - Borrower services

So, should we move forward with this?

• Given the potential return and connection to our current offerings, the benefits far outweigh the risks- looks like a go! (candidate should structure out thoughts)

Establishing the Case

Case 28: Sandwich Bags (I of VII) The Boston Consulting Group, Sample Case

Problem statement narrative

Your client is a very small consumer packaging company. One of their product lines, for which they have one dedicated machine, is plastic bags for food storage. They have 3 sizes of bags – 4" (sandwich bag) 8" quart bag and 12" (gallon bag). The bags are all the same width – the sizes refer to the length of the bag.

The client is facing more demand than they think that they have capacity to produce. They have called us in to figure out a 2 key questions:

How can they best utilize their current bag capacity? Should they invest in a new bag machine?

Let's start with the capacity question. How would you want to start to think about this problem? What information would you want to have?

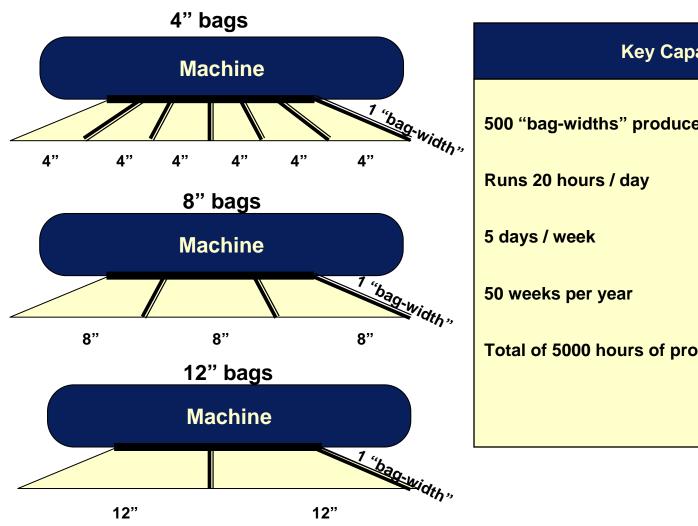
Interviewer guidance & key guestions(1)

- Candidate should be interested in issues such as:
 - Capacity of the machine
 - Demand for each product
 - Revenue / costs for each product
 - Production time for each product
- Provide candidate with capacity and demand/ blankprofitability slides if they ask for that type of data
- Prompt with "So, based on this information, what would you recommend the company produces on its rollers and why?"
 - Answer should be: 4" and 8" bags w/ 12" bags as overload
- PART II: "So, the client has some extra demand they have not met, should they invest in another roller? What information would you like to know?"
 - If asked:
 - Cost: \$750K
 - Payback: 5 years
 - · Demand growing at population growth
 - Mature market, no dramatic changes
 - Throughput growing at 2% due to efficiency

⁽¹⁾ If detailed exhibits exist, they will be referenced in this box, and included in full on the following slide(s)

Candidate Handout Capacity (Upon Request)

Case 28: Sandwich Bags (II of VII) **The Boston Consulting Group, Sample Case**



Key Capacity Data

500 "bag-widths" produced per hour

Total of 5000 hours of production per year

Candidate
Handout
Profits &
Demand
(Upon
Request)

Case 28: Sandwich Bags (III of VII) The Boston Consulting Group, Sample Case

Profitability and Demand by Product Type

	# bags / bag-width	Profit / bag (\$)	Annual Demand (# of bags)
4"	6	.02	9M
8"	3	.03	3M
12"	2	.04	3M

Candidate
Handout
(After
completing
previous
math)

Case 28: Sandwich Bags (IV of VII) The Boston Consulting Group, Sample Case

Completed Profits & Capacity

	# bags / bag-width	produced per hour	Profit / bag (\$)	Demand (# bags)	Total Profit (\$)	Hours of capacity
4"	6	3000	.02	9М	180k	3k
8"	3	1500	.03	3M	90k	2k
12"	2	1000	.04	3M	120k	3k

Additional Information

Case 28: Sandwich Bags (V of VII) The Boston Consulting Group, Sample Case

Should we invest in a new machine?

- Ask: What would you have to believe to say a new machine is a good idea? (suggestions)
 - Demand would increase faster than 2%
 - A new product could be introduced
 - Capacity could be rented out
 - · Prices will increase
- A NEW PRODUCT...
- Tell candidate: "let's say the client's R&D team has just come out with a new bag. It is a 2-in-1 bag, one side holds your sandwich and the other side holds your chips or lettuce to keep things from getting soggy. This bag is a 6" bag. Assume that if we stated to produce this bag tomorrow it would be accepted, there would be no lag time for people to catch on to using it.

What annual profit per bag would we need to generate in order to make the new roller a good purchase...

Extra points for mentioning cannibalization Don't worry about discounting

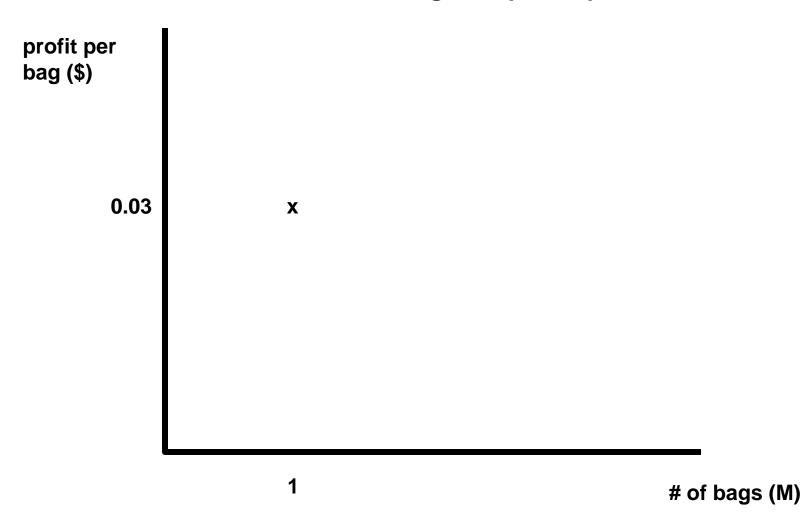
Getting the answer⁽¹⁾

- \$120K per year from 12" bags
 - \$600K profits over 5 years
- Need \$150K over 5 years for payback
 - \$30K per year
 - \$0.03 per bag at 1M bags
 - \$0.015 per bag at 2M bags
 - \$0.01 per bag at 3M bags
 - To candidate: "So, if we could get \$0.03 per bag and produce 1M bags we would be happy. Using this graph (next page), please draw me the curve that represents all of the price/quantity combinations where we would be willing to make the investment in the roller."
 - Does this curve have any endpoints for our client?

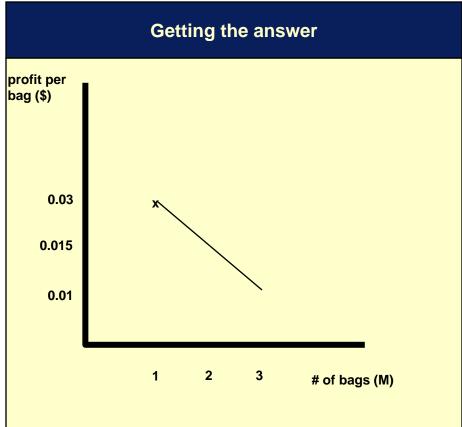
If detailed exhibits exist, they will be referenced in this box, and included in full on the following slide(s)

Candidate Assignment Demand Curve

Case 28: Sandwich Bags (VI of VII) The Boston Consulting Group, Sample Case



Case 28: Sandwich Bags (VII of VII) The Boston Consulting Group, Sample Case



Endpoints? Lower limit depends on demand sensitivity. Getting \$1 profit per bag is probably out as product as production quantities wouldn't be worth it. Upper production limit depends on capacity: 4M bags / yr

Bonus

Let's assume that we take the \$0.03 / 1 M bag combination. We can produce 4 bags per bag width, or 2000 bags per hour. Total production will take 500 hours so we still have 1500 hours of capacity on our new roller.

The client would like to come up with yet another innovation. They would like to find a use for more 12" bags, or perhaps a bigger bag. In the time that we have remaining, just brainstorm what applications you might investigate for a large storage bag. ...

This is an open-ended question, follow how the candidate constructs thoughts and comes up with solutions.

Establishing the Case

Case 29: Gift Wrapping Paper (I of III) The Boston Consulting Group, Round I

Problem statement narrative

Your client is a gift wrapping paper manufacturer in the United States. They are considering a proposal to outsource their manufacturing to mainland China. You have been called in to assist in the go / no-go decision making process. They would like to know your thoughts and your recommendation...

ASK CANDIDATE TO BEGIN BY ESTABLISHING COST BUCKETS

AFTER COST BUCKETS ESTABLISHED, ASK HOW THEY MAY DIFFER IN CHINA (A: LOWER LABOR COSTS?)

LET CANDIDATE STEER INTERVIEW FROM HERE...

Interviewer guidance & key questions(1)

 Cost comparison provided on candidate handout slidedo not provide until candidate outlines potential differences and asks for specifics between options

Fixed costs include:

Plant & machinery
 Employees
 See diagram for costs

• Variable costs include:

• Raw paper material \$20 per ream (same for both)

• Ink \$100 per ream US \$50 in China

Ink is special wrapping paper ink and an unavoidable cost

Shipping cost from China to US is \$150 per ream

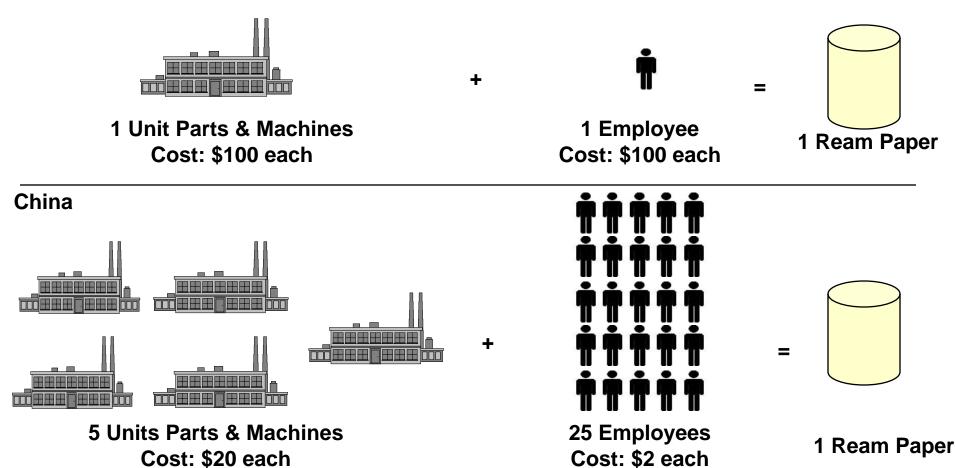
⁽¹⁾ If detailed exhibits exist, they will be referenced in this box, and included in full on the following slide(s)

Candidate
Handout
Profits &
Demand
(Upon
Request)

Case 29: Gift Wrapping Paper (II of III) The Boston Consulting Group, Round I

Gift Wrapping Paper Production Comparability Between Markets

United States



Case 29: Gift Wrapping Paper (III of III) The Boston Consulting Group, Round I

Establish base US costs	\$100 Parts & Machines \$100 Labor \$20 Paper \$100 Ink	Expensive US based labor Commodity- difficult to lower Specialized product \$320 TOTAL COST	
Generate comparable China costs	\$100 Parts & Machines \$50 Labor \$20 Paper \$50 Ink \$150 Shipping	More equipment may increase repair cost Lower per employee, but hiring/firing costs may increase Closer to supplier, still expensive \$370 TOTAL COST	
Compare two fully loaded costs for options	 Shipping is the deal-breaker for China Lower shipping costs would increase attractiveness What might some alternatives be? Bulk, sheets rather than rolls? More variables to manage in China, not very labor intensive product in US 		
Generate Recommendation	 Does not look viable at this time Track ink, paper, employee costs in China to address long-term potential for move Non-examined issues: US shutdown costs 		

Establishing the Case

Case 30: Automobile Manufacturer (I of II) Booz Allen Hamilton, Round II

Problem statement narrative

Your client is a leading auto manufacturer in the United States. There are three primary players in this market. Historically, the market leader had 30% share, our client and the other player both had 20% market share.

Over the past 2 years, your client's share has been falling, and it wants to know why.

Interviewer guidance & key questions

- This is an 'understanding the market' case, not a profitability case. If prompted, refer to 'getting an understanding for the industry.' The candidate should not want to drive to the profit equation.
- Elasticity of demand: 5
- Consumer preferences are the same and have not shifted
- There are no warranty, capacity, or supply chain issues
- Competitors price with a huge summer sale- we do not
 No major product portfolio changes
- Client market share has fallen from 20% to 18% to 15%

Case 30: Automobile Manufacturer (II of II) Booz Allen Hamilton, Round II

Competitors

- · Similarly elastic demand
- · Have a summer sale
- No extraordinary innovation
- Unknown production
- Unknown customer satisfaction

Client

- Very elastic demand
- No summer sale
- No extraordinary innovation
- Solid production
- Solid existing customer satisfaction

Customers

- Price sensitive
- Not complaining about service or quality
- Still purchasing cars
- Preferences have not changed

Math to determine price change

- •Need to regain 20% market share
 - This is a gain of about 35% (15% share increasing to 20%)
- •With a elasticity of demand of 5, increasing share 35% will require a price drop of 7%
- •Is a straight price drop the best way to regain customers?

Recommended solutions

- In order to prevent competitors following a price reduction to regain share, there are several 'locked' methods the client can pursue:
 - Discounting higher-margin after-market products or add-on features
 - Increase loyalty or trade-in program incentives
 - Increase financing incentives ie: '90 days same as cash'

Candidate should discuss benefits and risks of each- a final recommendation is not required

