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DARDEN CONSULTING CLUB INTERVIEW GUIDE 2003-2004

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Profit Improvement Cases

OFFICE SUPPLY CHAIN MANAGEMENT

Question:

An office supply company has asked you to determine why they are not as profitable as their primary competitor (i.e. OfficeMax vs. Office Depot).

Approach:

Think of an Income Statement. Begin with Revenues and work your way down item by item (revenues, volume, price, costs, fixed, variable, etc.). Identify any area that is not consistent with industry standards (as a % of sales). Once you have identified a problem area, then you can begin to determine the specific cause and then make recommendations for corrective action.

Solution:

In this particular case you would have discovered costs to be high. Further analysis would have identified variable costs and specifically the cost of the products they are purchasing from their supplies. With even further analysis, you would identify that shipping from the supplier is included in the price of these products. Furthermore, these shipping costs are extremely high, because the suppliers are billing you for the shipping and thus have no incentive for them to manage them.

Sample Conversation:

Interviewee – I would begin by analyzing the company's Income Statement to identify an area to further investigate. Therefore, are the company's revenues in line with the industry standards?

Interviewer – Yes.

Interviewee – How about their costs?

Interviewer – They seem to be a bit high.

Interviewee – Knowing that the company's costs are high, I would then analyze in detail their cost structure by first determining if it is fixed or variable costs that need attention.

Interviewer – In this case, their fixed costs seem to be fairly consistent; however, their variable costs seem to be high.

Interviewee – I would then analyze their individual variable costs beginning with the cost of their primary variable cost, their products.

Interviewer – It does seem that they are paying slightly more than their competitors for the products they purchase.

Interviewee – I would then analyze the components of that price. What does it include in addition to the actual price of he product? Taxes? Freight? And are these costs competitive?

Interviewer – The price includes both taxes and freight. The taxes are obviously the same for all buyers, but the shipping costs do seem to be a bit high.

Interviewee – I would then note this as a problem area to be addressed in my recommendations and then look for other problem areas.

Interviewer – It turns out that this is the only area in which we appear not to be competitive. What would you recommend we do about it?

Interviewee – I would recommend that we separate the freight charges from the price of the products and pay the freight ourselves (i.e. FOB). This would allow us to utilize the most competitive means of shipping the products. Currently, the suppliers have no incentive to lower the shipping costs.

LAUNDROMAT

Question:

You are the owner of a Laundromat in New York City. What are some ways you can increase profits?

Possible approach:

When this case was asked, the interviewee was told specifically that the interviewer simply wanted brainstorming: a number of good ideas. The point is to demonstrate creativity and ability to think on one's feet. However, it is important to demonstrate structured thinking as well.

Break profits down into revenues and costs. Work through each separately.

Revenues:

- Use of machines
    - Coins
        - Other? (scan cards, etc. could promote loyalty and repeat business)
- Sell ancillary supplies, such as detergent, softener, bleach.
- Other goods and services.

Costs:

- Machines (upkeep and replacement)
- Marketing?
- Rent and utilities

Some possible ideas for increasing revenues include innovative marketing, such as having free live music or an event, which attracts the media, and the sale of other good and services such as snacks.

Possible ideas for decreasing costs include allowing a charity to use some unused space in an attempt to convert the business to non-profit status. Creativity pays off in answering this question.

FOLDING CARTONS

Question:

A folding carton manufacturer has hired your consulting firm because it's facing declining profitability in its North American operations. What can you do to help?

Approach:

- Start with the components of profitability.

→ Consulting firm has two teams working for this client. One team is working on revenue sources, pricing, and customer relationships. Our team is focusing on operations. At issue are the client's 10 plants in North America, and what the client can do to cut costs.

- Where are client's costs coming from? Cost categories include:
- Fixed costs – overhead, plant space and related factory costs
- Variable costs – raw materials, labor
- What is biggest cost driver for the client?
- Plant capacity. Is client using plants as well as it could? Does it measure capacity usage now, and does it benchmark against other similar companies?
- Factory operations. Is this a labor-intensive or automated business? What kind of batch sizes and setup time are involved in the manufacturing process? How does this compare with what the competition is doing?
- Distribution and supply chain costs. What are these and how do they compare with the competition?
- Inventory levels. How much is company spending compared with competition?
- How might the business's structure make our costs higher than competitors'?
    - Are plants cost centers or profit centers? What are advantages and disadvantages?
    - Why 10 plants? Is client saving on costs by having plants close to its customers or suppliers, or do the costs of operating a plant outweigh these benefits?
- Is the competition doing anything differently than it has in the past?

Additional Data:

- Client is division of a bigger company. The division purchases its raw materials (paper) from another division and pays a transfer price that is greater than the market price.
- Raw materials are the biggest percentage of carton cost. Labor is a relatively small percentage of manufacturing cost.
- The client's manufacturing process is almost completely automated. It spends a lot of time on equipment setups now. The client isn't sure how its capacity utilization compares with competition.
- Competitors haven't made any recent significant changes in operations.

Possible Approach:

Interviewer has steered you toward operations and cost concerns, so focus on those instead of on revenue and product mix. (You may have time to come back to these at the end of the case.) As you ask questions and make recommendations, think about what the client does internally *and* in relation to competitors.

Identify biggest drivers of cost and tackle those first. Raw materials (paper) are the biggest cost driver for the client. The transfer pricing policy makes paper more expensive for our client than for the competition. Though transfer pricing probably allows another division in the company to make money, the policy should be reexamined.

Discuss costs that happen all along the chain – from raw materials coming into the plant, to factory operations, to distribution and sales costs. This division doesn't really know how well it is using its plant capacity, so you can recommend benchmarking against similar companies, so client can see whether its factory operations are more expensive than the competition's. Distribution and sales are not really an issue here, but you should raise the question of why the company runs 10 plants (instead of 5 or 20). Is this an optimal number? What are the tradeoffs of shutting plants or opening new ones?

Identify consequences of the way business is structured. Discuss advantages and disadvantages of operating each plant as a profit center. Consequences may be that all plants try to sell high-margin products and steer away from low-margin ones – which might not fit with the client's marketing and product mix strategy as a whole. It's better to optimize all plants operations instead of run each as a profit center.

SPECIALITY CHEMICALS PROFITABILITY

Background:

Client organization serves paper industry with specialty chemicals and seeks to increase profitability:

- Currently just above breakeven
- Serves 250 accounts with sales force of 150 "sales and service engineers" throughout Asia
- Industry growth is moderate; 3-6% depending on paper industry utilization rates
- Client company is weak #5 player; 6 players dominate market with some (limited fragmentation)
- Top 6 players compete on service, product technology, and tailored "solutions"

How would you approach this problem?

Approach:

- High switching barriers at account level, largely driven by "papermaking" chemistry
- Account profitability varies wildly by size, type, and penetration
- Product margins high and highly variable (i.e., 20-60)
- Industry leaders enjoy 15-18% ROS
- Very low fixed cost and capital required; barriers to entry are account-level share/relationships and product technology

Solution:

Minimum - You should be able to determine that account-level profitability drives overall profitability

1. Construct simple P&L that reveals high cost of held force (i.e., 60+ of total costs)
2. Grasp the <u>very</u> local nature of business (i.e., single mill site)
3. Identify that <u>accounts</u> are the scarce resource to be optimized (i.e., profit per account)

Better approaches probe account-level economics and assess what separates a 'good' account from a 'poor' one.

1. Account size matters, provided the revenue is of 'high quality' (i.e., mix toward top of margin scale) and cost-to-serve (i.e., number of on-site staff) is managed.
2. Account share is crucial – it takes at least one full-time person to serve most accounts, even if share is low; semi-fixed nature of business is key driver of profitability

Outstanding approaches will grapple with issues of how to improve, rather than simply shred, unprofitable accounts.

1. Identify that ownership of critical applications leads to trust and follow-on sales (high account share)
2. Recognize that individual skills and performance make a huge difference for relationships, service, solution tailoring and local marketing/selling
3. Realize that a low cost-to-serve, low margin/revenue model could be created to improve profitability of small accounts.

STEAM BOILER HOSES

Background:
The consultant was asked by a diversified manufacturing client to help turn around the steam boiler hose division. This boiler hose division provides boiler hoses for both external customers and the client's boiler division. Background information on the client and industry includes:

- Boiler hoses are sold both with original equipment and as replacements.
- There has been increasing price pressure in the industry.
- The client is third of eight industry participants.

The following information is also available in response to questions asked by the candidate:

- Last year P&L showed (as a percent of sales):

Raw material	70%
Labor	20%
Distributed overhead	10%
SG&A	15%
Profit	(15%)

- Raw material is a commodity petrochemical
- At least two of the other companies in the industry are making moderate profits

Question:
How would you structure an analysis aimed at restoring profitability? Where do you expect to save costs?

Approach:
Could start with the following:
1. Drop the product line (apparently not possible because hoses are necessary for boiler sales).
2. Raw material prices (they are the same as everyone else's).
3. Allocation of overhead (no savings and provides little potential).
4. Examine SG&A costs (standard industry fee paid for independent installers).

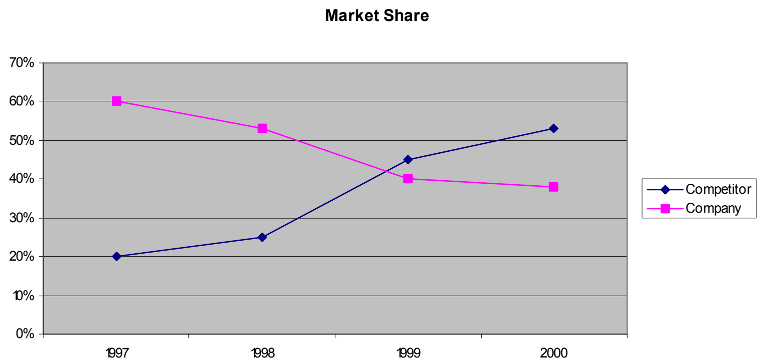
Solution:
Better answers will move beyond the previous answers to consider:
1. Scale economies (client is big enough to achieve scale production).
2. Production technology (client has modern plant).
3. Labor costs (wage rate and productivity are average for industry).
4. Raw material purchasing practices (materials are purchased through long term contracts based minus a discount).

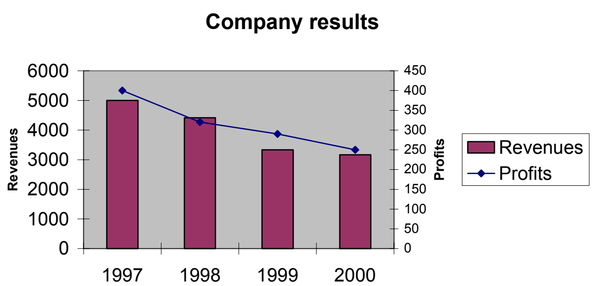
The best answers, following a logical progression, should stumble upon the actual answer: the product has been over-designed, requiring excess raw material. The answer should consider the following organizational implications:
1. How is our product engineering operation wired into the marketplace? (There is little contact between the engineering and marketing/sales organizations.)
2. What kind of feedback are we receiving from our sales force? (Customers are delighted with our hoses, but don't require all the product features.)
3. Are there other areas in the company where similar problems exist?

FRUIT JUICE PRODUCERS

Situation:

This company is an association of 900 producers of juice that supply the fruit to make juice. The profits of the total company get shared among the producers based on how much they supplied (sold) to the company.





Question:
What has gone wrong?

Additional information (only if asked): Price is the main differentiator in this "commodity" market. Currently our price is the same as our competitor's.

Answer: The main problem here is that demand for juice is going down, that puts pressure on the competitors to drop prices to maintain their production level, as a result, not only do they have a decline in sales, but also a bigger decline in profits.
On the inside, since individual producers want to take more profits, they produce more, and this leads to excess supply, which in turn, creates waste. Since the producers are not able to sell everything that they produce, they incurs losses, which make them "sell" at lower prices, which in turn creates even more pressure on their profits. This is a vicious cycle that started with the decrease in overall demand, and continues further and further.
Things to consider in order solving the problem:

- Look for alternative places to sell the excess supply
- Limit the production per producer
- Decrease the number of producers

FLORIDA JUICE COMPANY

Question:
Your client is a cooperative of fruit growers in Florida who jointly own a fruit juice operation. Recently, profitability has been down, sales revenue and profitability has decreased by 40%. As a consultant what are your recommendations?

Possible Approach:
This is a 3 stage case, the first stage being the problem identification, second is the recommendation of solutions and the third is investment decisions required to implement the solution.

Stage 1: Problem Identification
Possible frameworks to use are the profitability framework or the 3 Cs. Also you must need to understand the nature of the business.

- The company only produces orange juice, so the scope of the case is limited to orange juice. There have been on changes internal to the company, costs have remained stable, but sales have declined. There is no change in the overall market demand for orange juice, our selling prices have been stable relative to competitors. Our competitors are doing very well, in-fact our main competitor has been taking our market share.
- Our main competitor in the last 6 months has changed their orange juice formula from 10% juice and 90% water to 20% pure juice and 80% water. Our formula still remains as 10% juice and 90% water. This is the cause of our loss in sales.

Stage 2: Recommendation of Solutions (and calculations)
- There are 2 possible strategies to advise the client: Switch of 20% (or more) pure juice formula and compete as a premium product, or lower your selling price to compete on cost basis. To evaluate which strategy to use, we need to know price elasticity of orange juice, the market segmentation of orange juice drinkers etc.. – Assume that quality is a key order winning criteria, so you advise the client to switch to 20% pure juice formula.
- What are the implications on switching from 10% juice to 20% juice. Unit costs will increase. The price breakdown of in the production of orange juice is: 5% orange fruit, 20% process overheads, 15% SG&A, 40% Distribution costs and 20% profits. What is the impact on our bottom line?
- Assume selling price is the same, doubling the pure juice content increases the cost of the orange fruit to 10%, therefore profits margin drops from 20% to 15%. We lose ¼ of our profits per unit. However, we get to recoup our sales revenue back to original levels (up by 40%). Overall impact to profitability is profitability increases by 30% (40 * ¾).

Stage 3: Investment decision required to implement the solution
- Question: Some additional plant equipment is required to implement the change from 10% juice to 20% juice, we have 2 different options with 2 different cash flow returns (which one would you choose):

Investment Option	Initial CAPEX	Yr 1 Returns	Yr 2 Returns	Yr 3 Returns	Yr 4 Returns
A	200	11	25	75	80
B	50	5	15	30	40

No need to ask for discount rate. Just be eyeballing the figures, the returns from Investment A do not sum to the initial 200mil CAPEX. There is no way that Investment A can have a positive NPV. Choose investment B.

UNIFORM RENTAL COMPANY

Part I - Question

Your client owns a business that rents uniforms to other businesses (hotels, restaurants, mechanics, etc). They provide the uniforms to the client every morning, collect them at the end of the day, clean them and iron them and deliver them again the next morning. This business currently spends 400 million dollars a year in suppliers to make their uniforms, how would you recommend they cut these costs.

Part 1 : Possible Approach

Reduce the number of suppliers to get higher discounts
Use closer suppliers to reduce transportation cost
Focus on the fewer industries (hospitals) to reduce the variety of supplies and get volume discounts
Use different materials (better quality fabric to last longer or cheaper fabric)
Refurbish uniforms
Vertical integration, (buy the supplier, start up a factory, join venture)

Part 2- Question

Evaluate and choose one of the following options:

1. Reduce the number of suppliers by 1/3 (the suppliers have agreed to give an 8% discount for every 100% increase in the order size or its equivalent)
2. Establish a contract to buy a fixed number per year to only one supplier for a 16% discount.

Part 2: Possible Approach

A 1/3 reduction of suppliers would translate into a 50% increase in the order size per supplier or a 4% discount, this multiplied by 400 million would give us a reduction in costs of 16 million.

The second option would give a discount of 16% that would translate to a 20 million reduction in costs. Solely by the numbers this option is better.

It is important to mention that the second option would mean that the company has to order the same number every year, and if they need more they have to buy at market price and if they need less they still have to buy the same amount which produces losses. If you go by option one, and reduce the number of suppliers by 2/3 instead, then you would get the same 16% discount of the second option without the need to buy a fixed amount every year. So the first option is better if you can reduce the suppliers by 2/3 (assuming you can get all that you need from only one third of the suppliers).

FREQUENT FLYER

Question:

A large commercial airline is in the process of evaluating the merits of its frequent flyer program. How would you determine the value of this program?

Approach:

- The value of this program is essentially the benefits less the costs. While the benefits can be determined by finding out a) how many customers switch to the client's flights due to the frequent flyer incentive and b) how much do these customers pay for a ticket when they do so.

- The rest of the case centers on determining the cost. To do this, you must identify the cost drivers from both, the demand side as well as the supply side.

  The demand (or customer) side drivers include:
  - Most traveled seasons
  - Most traveled destinations
  - Demographic characteristics of those that redeem miles
  - The split between business and leisure redeemers

  The supply (or airline) side drivers include:
  - The number of frequent flyer miles given away (these constitute a kind of liability)
  - The number of frequent flyer miles redeemed
  - Incremental administrative, logistical, in-flight, advertising, and promotion costs of the program

- A good way to express the cost of the program would be $ per frequent flyer passenger mile or $ per frequent flyer mile redeemer

- You may finally suggest ways to reduce or limit these costs, e.g. improve the operations for this program or limit windows during which passengers can redeem miles.

HEALTH REFORMS

Question:

You have just been appointed Chief of Health Reforms and have discovered that kidney dialysis is a major portion of public health care expenditures. What analytical techniques do you use to determine if this cost can be reduced?

Approach:

- Essentially, you want to see if costs are high due to incidence, cost of procedure, or both. You also want to see if any unscrupulous practices are being used.
- Analyze the proportion of public versus private health expenditures that are applied to kidney treatment to determine if unscrupulous practitioners are pushing this expensive treatment onto the public health budget.
- Compare the incidence of kidney disorder in this country with other countries. Is ours higher? If so, public policy or efforts to increase awareness help reduce it?
- If incidence is indeed higher for the US, build a model (regression perhaps) that will somehow determine the factors that are most related to kidney treatment. Perhaps those who are typically covered by public funds (the poor, the elderly) have a higher incidence of kidney problems. Is there room for any type of preventative program for these groups?
- If the cost of the procedure seems high in comparison with similar medical procedures, it could be due to professional fees, consumables, or capital equipment costs. Limiting the amount of government compensation could cut professional fees. Employing new technologies could cut consumables and equipment costs.

NEWSPAPER COMPANY

Question:

A newspaper publisher has been experiencing declining readership and as a result, declining profitability. What should it do?

Approach:

- It is important to recognize that advertisements are the major source of revenue for newspapers. But this revenue is totally dependent on readership.
- It turns out that all newspaper publishers share the same plight and TV is the main culprit. To fight this, the client can, at best, study other markets where TV is prevalent but newspaper readership is high (like Japan) and use any knowledge they gain to promote readership in the U.S. They could share costs via newspaper publisher associations.
- To compete with other newspapers and periodicals, the client can determine customer preferences and tailor contents to them. But any differentiation created will quickly neutralized by the competition.
- The best course of action is to build mechanisms to continually adapt to changing reader tastes. This could be accomplished by market studies, flexible and versatile staff, etc.
- Also, the client should focus on cost rationalization to increase profitability. This would mean consolidating operations and reengineering them. Consolidation would help in deriving economies of scale whereas re-entering would increase operational efficiencies.

CANDY COMPANY

Question:

Your company is a rather successful producer of candy. It originally started as a single product company and has diversified its product line over the last few years. The production process consists of two basic activities: manufacturing and packaging. The firm has also expanded its sales through product line extensions. Management is concerned that sales are growing, but profits are not increasing at the same rate. What can your company do?

Approach:

This is revenue vs. cost exercise. Margins are shrinking.

Find out about the critical components of cost: raw material, labor and fixed cost. Raw materials are commodities with cyclical prices, which have fallen in recent years but are expected to swing up again (this, as you have guessed, makes the problem worse.) Labor and fixed capital has increased per unit over-proportionally compared with ten years ago. Find out that the company's controlling system is still focusing on the manufacturing part of the production and the cost explosion occurs in packaging (candy is candy, the product line extension is primarily an issue of different packaging.) Controlling schedules manufacturing which is rather efficient already, but not packaging, thus causing slack in labor and fixed capital (small batch sizes, high setup times.)

Solution:

Possible solutions: reduce product line, introduce controlling/scheduling measures for packaging. Qualifier: are the company's customers (i.e. retailers) willing to accept the reduced product line?

Find out about revenue killers: concentration of retailers, trade brands, retailers demand large introductory discounts for new products, high failure rate of new products.

Other good solutions: streamline product line, reduce low margin trade brand production, emphasize pull marketing, and reduce introduction rate for new products.

COSMETIC COMPANY IN EUROPE

Question:

Eurocos, Inc. produces and sells various cosmetics products in several European countries. The company's different brands are well established in the markets. The various products are quite similar in terms of raw materials and production.

The company has been doing very well in the past, however profits have been shrinking in recent years. The CEO is thinking of changing his strategy in the industry. He asks you if this is a good idea and what he should do?

Additional Information:

- Market - many small to medium size companies, with many small to medium size brands.
- Few big companies owning several brands.
- Eurocos produces all products in all countries.
- Transportation costs are small (see operational part).

Possible approach:

What is the structure of the industry? *Fragmented industry.*

Why?

- low entry barriers (small setup costs, . . .)
- high product differentiation (many ways of differentiation)
- divers markets, customer needs (language, complexions)
- barriers: tariffs, customs

How can fragmentation be overcome?	*Feasible for Eurocos?*
Create EOS and learning curves	Yes
Standardize market needs	No
Separate the product's commodity aspect from fragmenting aspect	Yes
Changing environment: reduce tariffs	Possible (explore)

Possible solution:

Consolidate production while keeping the marketing and branding nationally decentralized.
Pros:

- EOS in production (better sourcing, longer runs, quality) optimize location (interest rates, wages, labor)
- Learning curve of running a more complex plant and logistics (see also Cons)
- Keep "fragmented" marketing required in the market
- Total inventory decreases (safety stock at original plant locations can be pooled centrally)

Cons:
- More complex central operation
- Increased logistic complexity
- Transportation costs increase

(*Operational aspect*: optimal plant location with respect to transporting goods to warehouses. Possible assumptions: Plant location at (x, y), national WHs at (xi, yi), demand per country, cost linear with distance, shortest travel distance.)

Solution:

Should the company seek dominance now?
Have the driving forces for fragmentation disappeared? No, the fragmenting factors from the market are still in place. The company has not changed is strategy in the fragmented industry (dominance makes no sense), but has gained an advantage by operational changes.

SKI RESORT

Question:
Net Income of $500,000 needs to be increased to $1,000,000. Assess our options.

Approach:

Current Slope Mix
Skiers mostly (no snowboard park, etc.)
60% - day skiers (single day)/ 40% - resort skiers (multiple days, 3-5)

Impacts on Revenue
Volume: # of skiers (have to back into)
Product Mix/Price: Day skiing only ($35/ticket)

Impacts on Costs
Fixed Costs: $1,000,000/yr
Variable Costs: $10/skier

Others
Outsource concessions (income negligible)
Small slope with little advertising
Many surrounding slopes that are far better known

Solution:

1. Determine the type of slope
   - Who are the "typical" visitors
   - What are the sources of revenue
   - What are the sources of costs
2. Determine how many visitors per year currently
3. Determine how many visitor per year needed to reach one million in profit → is it feasible
4. Suggest ways for reaching goal
   - Give a suggestion (i.e., night skiing, increased advertising, snowboard park, new lift, raising prices, etc.) → think about what affects mix, volume, or price
   - Does it fit with current customer?
   - What costs would be associated with the idea
   - Approximately what revenue would be gained by the idea (Is there any cannibalization or trade-offs)
   - Is it a good idea?
   - Repeat the process
5. Summarize with explicit recommendations

Note: Think of the hourglass. Address the issue. Get to the premise of the problem quickly. Is the problem fixable? If so, brainstorm ways to improve the issue. But be aware of trade-offs, increased costs, etc.

SCHOOL CAFETERIA

Question:

When the school cafeteria workers went on strike a few years ago, the school union experienced a significant increase in sales. However, when the financials for the quarter were reported, the union discovered the profits actually decreased. What happened?

Possible Approach:

- Did they lower prices? *No*
- Did their costs go up – paying staff overtime or extra to obtain raw materials at the last minute? *No*
- Did overhead costs increase significantly? *No*
- Did they introduce new items? *No*
- So prices did not change and costs did not change... did the overall mix of what they were selling change? *Yes, the union sold more sandwiches and drinks than before.*
- Upon further investigation, we discover that they were actually losing money on each sandwich they sold (selling them below cost).

Additional Information:

- The interviewer then asks me how - assuming no pre-generated data - I would have gone about discovering that they were losing money on sandwiches. On a practical basis, you'd have to look at the cost in aggregate. Perhaps how much they spend in a week on sandwich ingredients, the hours spent making sandwiches, and the number of sandwiches sold and scrapped. Then you'd calculate a cost per sandwich and compare it to the selling price. Ideally, you'd also want some overhead allocation, but this is a good start.

GOING UP

Question:

An elevator maker is experiencing profitability erosion. How would you begin to analyze the company's situation?

Possible Approach:

Initial Approach

- Sales trend? *Declining over recent years*
- Market share / positions? *Still second largest domestic player*
- Cost structures? *Product costing to date indicates that large portion of costs are fixed*

Narrowing

- Given that a large part of costs are fixed, economies of scale may be a factor.
- Demand revenue side - costs are truly fixed, and increased sales with low marginal costs will drive profitability.
- Cost supply-side - company's process is fundamentally uncompetitive and benchmarking / re-engineering work will be of more impact.

Note: It is often better to establish two paths and let the interviewer choose; however, if the interviewer is not obviously more excited about your pursuit of one or the other, pick the one you feel is more robust, justify your choice, and pursue it. Return to the other path if there is time or for unanswered questions at the end.

Demand side

- What drives demand? *New construction obviously*.
- Who are the customers? *Contractors.*
- Have the underlying economic trends changed? *No, commercial construction remains flat in the company's geographic areas.*

Micro level

- What are the decision factors for customers? [through customer interviews] Turns out that along with price/performance, *reputation* and *availability of service* are key factors.
- How is the product priced? How much does this influence the purchase decision [price quotes, surveys]? Product is *competitively priced*, and actually represents relatively *small share of average project cost* for contractor.
- How is the product perceived in the market? [market research] *Service reputation is low* in many markets relative to competitors.

Attack this point and present possible recommendations to address this problem.

YELLOW PAGES

Question:

The client is a printing company (books, magazines, etc.) It wants to make more money from an existing customer for whom they print yellow pages phone books. The client is in the 2nd year of a 10-year contract. How do we increase the profitability of the customer?

Possible Approach:

To increase profitability we can look at decreasing costs and increasing revenue.

Costs
After exploring a number of possible ways to reduce cost, it was clear that only a minor adjustment was possible on the cost side.

Revenue
Revenue is based on the number of pages printed. The client can't legally increase the price because of the contract. Therefore an increase in the volume of pages printed is needed.

Conclusion
To increase the volume of pages printed, the client can encourage the phone company to sell more phone books by including smaller geographical areas in each phone book.

Additional Information:

Other answers were also acceptable. For example, increasing the amount of advertising in the book could increase the volume of pages printed. Ideas include bundled ads for smaller retailers, discounts on purchases of multiple ads in multiple books, etc.

HOSPITAL PAYMENT SYSTEM

Question:

A non-profit hospital wants help to reduce the $10 million loss that the organization has been experiencing in the last 3 years. If the hospital continues this level of loss for more than 2 years, then the hospital endowment would be completely gone and the hospital would need to close its doors.

Problem: It is realized that the hospital's loss was due to a new law which basically fixed hospital prices because of the new DRG (diagnosis related groups) hospital payment system in New York State (i.e. price per unit could not be changed.) What profitability improvement levers should the team focus on first if the team wants to quickly reduce the hospital's loss? What would you expect to find?

Possible Approach:

A good approach to this issue might be to discuss the different costs associated with performing the hospital's services and the current capacity vs. demand for the hospital. The correct conclusion is that it is quicker and easier to change the cost structure and capacity of an organization than to change the demand for the hospital's service (remember the price per unit is fixed so the revenue lever remaining is increasing the units of service.) Reducing the capacity and shifting some costs from fixed to variable would help restore the hospital's profit.

Conclusion:

A more complete answer would discuss some of the revenue levers even though they may take longer to work. The team could explore some of the marketing issues such as:

- What draws physicians and patients to a hospital and where do the patients come from? (It turns out that most patients come from local communities surrounding the hospital and that focusing efforts on the local neighborhoods that are under represented by the hospital can increase patient volume.)

- How does the client hospital compare to the competitors along service dimensions that are important to patients and admitting physicians? (The hospital was outstanding at patient care but lacked convenience.)

What are the trends in patient care and how should the hospital change to exploit the opportunities? (Recent trends are towards outpatient services and away from admitting patients for long periods of time. For example, cataract surgery used to be an in-patient procedure requiring a hospital stay of three days or more. In the last few years, most of the cataract procedures performed require no hospital stay, there seems to an opportunity providing a very convenient outpatient facility to the community).

BICYCLES LTD

Question:

Your client designs, manufactures and markets a full line of bicycles. The company had been growing in sales and profits when its profitability flattened, and then began declining 3 years ago.

Approach:

- 1st analysis - Assess whether revenues, expenses, or both are the source of decreasing profits.

  - Revenues growing at roughly the same rate as before the down-turn
  - Expenses increasing disproportionately
  - (Would use financial statements to assess this data)

- 2nd level analysis - Analyze source of increasing expenses:

  - Operating/Administrative? Administrative costs growing, but operating costs appear to account for bulk of increased expenses.

  - Components of Operating Cost – Fixed/Variable: Fixed costs growing but variable costs appear to account for the bulk of increased expenses.

  - Components of variable cost – direct/indirect: Both have been growing. Bicycles have become more sophisticated, with better materials and components (However, the increasing cost/bike has been comparable to the growing price/revenue per bike). Indirect costs are increasing disproportionately.

  - Components of Indirect Variable Cost - Materials, Labor: allocations of indirect material about the same (Loss of bikes about the same). However, allocation of indirect labor appears to be the big problem.

  - Why is indirect labor increasing? Examine WIP: increasing. Look at the factory floor, many bikes waiting around. What are the bottlenecks? Not capacity related - plenty of throughput available. Much time appears to be spent nowadays in set-up - resetting paint booths, welding jigs, dies and presses, etc.

  - Why has set-up time increased - either by increasing the number of set-ups of bikes or increasing the set-up time.
    - ⇒ Increased set-up time? No. It has actually decreased as the workforce has improved set-up tools/jigs etc. Workforce turnover, labor relations, etc. are all fine.
    - ⇒ Increased set-ups? Yes.

Conclusion:

At the time of the profit decline, the industry had been trending towards increased specialization in bicycles: touring/mountain/racing/hybrid/etc. This company had responded with rapidly proliferating product lines, leading to increased number of set-ups and lower volumes per assembly run.

Solution: Rationalize product lines, and try to increase shared components across model lines.

Additional Information:

The key to this case is to methodically dissect the cost structure for the company, and knowing what the components of cost are (i.e. cost accounting).

PLUGS

Question:

We were doing work for a consumer electronics firm (e.g. Federated, Silo Circuit City) who had experienced losses for the previous several years and was in a difficult financial position. How would you have approached this case?

Possible Approach:

Economies of Scale

- The client had a number of stores that were simply not large enough to reap the economies of scale necessary for this business.
- This was not reflected in the cost information provided as this was in a format which gave averages per store.
- The economics of scale were important because of numerous large fixed costs, including advertising and rent.
- They needed to rationalize their retail outlets.
- NB the company as a whole, did achieve economies of scale in purchasing; their product margins were similar to competitors.

Competitive Scale

- The company wanted to be a high service company, but their payroll averages were below that of competing firms (some of which were competing on the same basis).
- Advertising expenses were well below industry average - not a good idea in this line of business (often impulse buys at seasonal sales).

Additional Information:

Providing with income statements for the average store for the client and some competitors (expressed as a percentage of sales).

HUNT & FISHING MAGAZINE

Question:

Our client is a media conglomerate that owns a hunting and fishing magazine. Profitability has fallen. What can they do to improve profitability?

Possible Approach:

- Explore both the cost and revenue portions of the profitability equation.

- Find out what has changed to cause profitability to fall and then see what might be done to improve profitability.

  Costs
  - These have not risen dramatically.
  - There is no opportunity to reduce costs further.

  Revenues
  What components make up revenue?
  - Circulation (subscriber) revenue - circulation has increased and the goal is just to break even with subscription revenue.
  - Advertising revenue - this has fallen dramatically.
  - With the increase in number of subscribers, there has been a change in the composition of the subscriber base.
  - The audience is now more general, but the advertisers were targeting the hunting and fishing market specifically. They have stopped advertising as they no longer reach the same audience.

Solution:

- Cut back circulation and focus on a specialized group.
- Understand what's important to the advertisers.

SMALL BANK

Question:

Our client: A small national bank.
Its competitors: Regional banks and big national banks
Problem: Profits are smaller than those of their competitors. Why? What can the company do?

Possible Approach:

Why do their competitors earn higher profits?

- **Big Banks:**
  - Enjoy economies of scale (same centralized services, more offices to allocate their costs to).
  - Size allows them to profitably use processes and technologies that smaller banks cannot implement.
  - Large amounts of available capital allow them to accept/attract bigger clients.
- **Regional Banks:**
  - Size and geographic concentration: lower overheads (less hierarchy, less paper shuffling, smaller distances to be traveled).
  - Brand name: customers may feel represented by 'their' local bank, preferring it to the rest.
  - Better knowledge of the client base: ability to choose the best clients.

Conclusion:

What can the company do?

- Grow: mergers/acquisitions.
- Rationalize: sell some offices and acquire new ones in a profitable region (probably a bad idea).
- Specialize: offer some services that the big banks don't want to offer and that the regional banks cannot afford to offer (if there are any services like these).

EUROPHONE

Question:

Our client is a European pay telephone manufacturer. They are experiencing sharp decreases in profitability after a history of strong, consistent earnings. Their competitors are facing similar problems. What should they do?

Possible Approach:

Develop questions using an approach driven by Five Forces and the 3 C's. This elicits the following information:

- The buyers of the equipment are either large private telephone companies or state-owned agencies.
- Not all equipment is interchangeable, depending upon switching devices, etc. however, most companies can produce variant systems to comply with large market requirements (accepting different coins, ability to connect to different switching equipment, etc).
- The adoption cycle for underdeveloped countries is odd. The typical network economics operate - if you're the only one with a phone, who do you call? After the first movers buy, the installed base increases until the initial saturation level is achieved. At the same time, private phone purchases increase, somewhat offsetting the need for further purchases of pay phones. Once phones become ubiquitous, the final saturation point is achieved. From this point forward, a replacement cycle begins in periods of about five years.
- At the time of the case, credit card public phones were vastly increasing in demand. Most markets had experienced aggressive programs to replace the old coin phones with this new product.

Conclusion:

The recent wave of large credit card phone installations meant that the old phones were being replaced before physical obsolescence. The entire industry will experience a downturn until the newly installed base in the large markets needs replacement. They have no choice but to wait for this next wave of replacement purchases.

Industry Analysis Cases

VIDEO GAMES

Question:
The CEO of a large, diversified entertainment corporation has asked you to examine the operations of a subsidiary of his corporation that manufactures video games. Specifically, he needs to know if he should approve a $200 million capital request for tripling the division's capacity. What are the critical issues you should plan to examine to determine if the industry is an attractive one for the CEO to continue to invest and why?

Approach:
Market share
- Division is third largest manufacturer of hardware in the industry with 10 percent market share.
- Top two producers have 40 and 35 percent market share. Remainder is divided by small producers.
- Division sells to broad range of consumers.

Sales
- Division sales have increased rapidly over last year from a relatively small base. Current estimate is annual sales of 500,000 units.
- Current estimate of industry hardware sales is 5,000,000 units annually. Industry growth has been strong though over last few months, sales growth has slowed.
- Division's current sales price for the basic unit is $45 per unit.
- Division remains less than 20 percent of parent company sales.
- Top 2 competitors also develop, manf and sell software/games though division sells only licensed software.
- Industry growth of software continues to increase.

Costs
- Division estimates current cost is $30 fully loaded. Requested expansion should reduce the cost by 5 to 7 percent and triple production of the hardware units.
- Top two competitors are estimated to have a 10 to 15 percent cost advantage currently.
- Main costs are assembly components and labor.

Customers
- Division estimates much of initial target market (young families) has now purchased the video game hardware.
- No large new user segments have been identified.

Distribution
- Primarily outlets of distribution are toy and electronics stores.

Profitability
- Division currently exceeds corporate return requirements, however, margins have recently been falling.

Product
- Hardware standards have been established by the industry leaders.
- Product features are constantly developed (e.g., new type of joystick) to appeal to segments of the market.

<u>Note to the Interviewer</u>

The primary issue of the case is to determine if the industry is attractive and, especially, if our client's position in that industry is sustainable. The candidate should <u>identify</u> issues which are necessary for assessing both the industry and our client's position, but should not be expected to solve the problem.

If the candidate begins to discuss too deeply a specific issue, before having covered the key issues overall, bring them back to discuss the industry more broadly by asking "what other issues must be examined?"

If the candidate is discussing issues which seem irrelevant to the attractiveness of the industry, ask, "how will that analysis help to assess the attractiveness of the industry or our client's position?" Then, ask the candidate to identify other issues which must be examined.

Solution:

Acceptable approaches would determine:

1. What is future market potential? Ask about overall industry growth, the saturation of markets, competitive products (home computers), and declining "per capita" usage.
2. What is the competitive outlook? Should at least recognize the need to examine competitive dynamics, such as concentration of market shares; control of retail channels; and R&D capabilities (rate of new product introductions, etc.).
3. What will be the price/volume relationships in the future? Issues of prices need to be considered.

Better answers would address:

Market Potential

- Recognize that there is a relationship between market penetration and growth in new users which, when combined, yields an industry volume estimate.
- Address the shifting mix of product purchases, in this case from hardware (player unit) to software (video cassettes).
- Seek to look at buyer behavior in key segments, i.e., "fad" potential of product.

Software

- Recognize technology standards are set by industry leaders. In this situation, the division as a secondary player will have to follow these standards.
- Recognize that different distribution needs may exist for different products (in this case hardware versus software).

Price/Volume Relationships

- Discuss the effect capacity additions can have on overall industry price/volume relationships and on industry price levels.

Company Ability to Compete

- Should ask what the capacity expansion is designed to do.
- Explore the cost position of the client division relative to that of other competitors.
- Seek to understand reasons for poor profit performance of division.

FURNITURE MANUFACTURER

Question:

You are having lunch with the CEO of a major furniture manufacturer (couches, loveseats, and tables). He shows you this income statement for their furniture company and gives you some industry averages. He is trying to figure out what is going on and any recommendations that would you have?

Income Statement		
Gross Revenue	600	105% of Net Revenue
Net Revenue	570	
COGS	**496**	**87% of Net Revenue**
Gross Profit	74	
SGA	**57**	**10% of Net Revenue**
Operating Profit	17	
Interest	0	
Taxes	**6**	
Net Profit	11	2% of Net Revenue

Industry Average
Returns & Allowances = 2%
COGS = 80%
Net Profit = 10% of Net Sales

Starting Points:

- What are our client's goals? *Client is primarily interested in maximizing profit.*
- Why do furniture manufacturers have returns and allowances? *If the retail furniture seller sees visible marks or tears on the furniture.*
- Does our client have more expensive raw materials? *No, they have similar RM costs to the industry.*
- Does our client have more expensive labor costs? *No, they have similar labor costs to the industry.*
- Does the client's competitors have economies of scale advantage? *No, we actually have the largest sales in the industry.*
- Does our client have more expensive transportation costs? *No, they have similar transportation costs.*
- What is the market? Describe the customer segment(s) that they sell to? *Our market and so is our competitors is the medium priced furniture, as such this does not include the extremely expensive furniture so both groups are selling the similar type furniture.*

- Who does our client typically sell furniture to (segment) ?
  → End customer – Apartment dwellers and first-time home buyers
  → Immediate customer – 40% to furniture stores and 60% through department stores where client has exclusive arrangements to sell only their furniture – One dept. store accounts for 10% of all sales.

- Who does our client competitors typically sell furniture to (segment) ?
  → End customer – Apartment dwellers and first-time home buyers
  → Immediate customer – 90% to furniture stores and 10% through department stores where client has exclusive arrangements to sell only their furniture.

- Are there price differences in what we charge the two different customer segments?
  → Yes, our salespeople tell us that the department stores typically demand a price break for the exclusive arrangement or else they switch to a competitor. They have also been pushing for larger price breaks in recent years.

- How do we sell to these different segments? *We hire independent furniture salespeople to contract with each store.*

- How do we compensate the furniture salespeople? *We pay them a 5% commission based of Net Revenue.*

- Do the salespeople have the ability to adjust the price? *Yes they do.*

Possible Approach:

Consider the problem from both a cost and revenue perspectives. The Five Forces framework, if used properly, allows you to realize that the main problem is not a cost issue, but a revenue issue due to the major buyer market, department stores, that this furniture manufacture is using. They are using their buyer power to demand price discounts or else they will switch to a competitor. That is why the rest of the industry does not rely on department stores for much of their revenue. As such, this company is getting more revenue at the expense of poor profitability. Identifying that this is a revenue issue is a B answer.

Solution:

The A answer also includes insight into the poor incentive plan for the independent furniture salespeople since it is based on net revenue and not on gross margin. One suggestion may be to internalize the salespeople positions for the department stores, especially since your largest customer, 10% of sales 60MM, the sales rep earns $3MM per year for that account.

The A+ answer also recognizes that the 2% Net Profit includes no interest so that this company has no debt and is under-performing which means two things. First, with loan interest, this company could be losing money, and second, being all equity-based and under-performing may make this an attractive takeover target.

MERGER CANDIDATE IN THE CHEMICAL INDUSTRY

Question:

A major chemical producer has asked us to evaluate another major participant in the industry. Both companies are bulk commodity chemical producers. We have been asked to begin our work by analyzing the future prospects of the target company's main product line, a bulk chemical used in the production of plastics. Essential facts include:

- Production of this chemical has slowly declined over the last five years.
- Prices have declined rapidly.
- There are 7 to 8 major producers; the largest producer has a 30 percent share; number two has 20 percent our target company has 15 percent; the rest is divided among other competitors.
- The two largest competitors earn a small return; target company is probably at break-even; rest are operating at break-even or loss.
- The largest competitor has just announced construction plans for a major new plant.

How would you structure an analysis of the target company's future prospects in this product line?

Approach:

An **acceptable** approach should, at a minimum, address the following issues:

1. What markets use this chemical, and what has been the nature of growth in these markets? (End-use markets are largely automotive-related.)
2. How much overall capacity exists now? (Far too much.)
1. What has been relative capacity utilization of competitors in the industry? (60 to 70 percent for last 3 years.)
2. What are relative cost positions of competitors? (Related to size/efficiency/age of plant; target company has reasonably "good" position.)

Better answers will move beyond the previous answers to consider:

1. How rational is pricing? (Prone to self-destructive cuts to gain temporary share points.)
2. Are there niche or value-added uses for chemical? (Not really.)
3. Does the chemical have a major by-product or is it a by-product? (Not of significance.)
4. How often have companies entered/exited, and how expensive is entry/exit? (Entry expensive; exit cheap for most because older plants are fully depreciated.)
5. How important is this product line to each of the competitors? (Most producers are diversified.)

The **best** answers could address:

1. Reasons for announced capacity expansion. (It is a bluff to try and get smaller competitors to shut own.)
2. Is regulation important? (Yes: all competitors have installed pollution control equipment.)
3. What is nature of operational improvements that target company could make? (Lots.)
4. How is product sold and distributed? (Economies of scale in marketing and transport are critical.)
5. Is there synergy between our client and target? (Not really.)

AIRPLANE MANUFACTURER

Question:

You are consulting to a CEO of an airplane manufacturer. In the last couple of years you have gone from being number one in market share to number two. In addition, another company has announced that it will be entering the business and is presently tooling up its plant. As a consultant, what are the concerns your client might face, what additional information might you want to find out, and what recommendations would you have?

Approach:

The airplane industry's demand is a function of travel amongst two classes: business and leisure. Business travel increases as a result of globalization. Leisure travel increases with growth of middle and upper classes. Business travelers are primarily insensitive to price, leisure travelers are very price-sensitive.

The current competitor; a comparison:

Price, service, technology, heritage, safety. It turns out that the competitor's plane is cheaper to operate because it is more fuel-efficient. The consultant should ask strategically whether the firm is interested in the manufacture of more fuel-efficient planes. The answer would depend on the future of oil prices. Instead, it may be better to try to compete on the basis of price, safety and service.

Prevention of a new competitor gaining market share:

Solution:

Key: creation of barriers to entry.

- Long-term contracts are pre-emptive.
- High concern, on the part of purchases, for a proven safety track record.

AGRICULTURAL EQUIPMENT MANUFACTURER

Question:

Your client is a large agricultural equipment manufacturer. Their primary product line, farming tractors, is losing money. What questions would you ask of your client to help them solve their profitability problem?

Approach:

You might want to start off by asking how many competitors there are. Suppose there are two direct competitors.

- Your clients 40% of the market, competitor #1: 30%, competitor #2: 15% with the remaining 15% belonging to many small manufacturers.
- Five years ago, your client had 60% of the market, competitor #1: 15% and competitor #2: 10%. Obviously, your client has lost significant market share to its two competitors over the last few years.
- Do all three competitors sell to the same customers?
- Your client's product is priced higher than the others. Has this always been the case? (Yes)
- Are the products the same?
  - Essentially yes, they all have the same basic features. Of course, tractors are not commodity items and a few differences do exist.
- What are the differences that allow you to charge a premium for your product?
  - Your client has a strong reputation/image of quality in the market and the market has always been willing to pay a premium for that reputation because it meant they would last longer and need less maintenance. This can be critical for some farmers who can't afford to have equipment break down at a critical time.
- Are sales revenues down? Are sales quantities down? (Yes)
- Is the price down? All costs the same? (No. In fact both the price and costs are up.)
- Have fixed costs increased? (No. Material costs (variable costs) have gone up out of sight, and the client has no answer as to why material prices have gone up so much.)
- Do you manufacture your tractor or just assemble it? (Primarily an assembly operation.) Finished part prices have gone up? (Yes)
- Raw material prices for your suppliers? (I don't believe so)
- Have labor costs increased for your supplier? (No)
- Have you changed suppliers? (No)
- Why are your suppliers charging you higher prices for the same product? (Well, they're not, the prices have increased as a result of our product improvement efforts. We've tightened tolerances and improved the durability of our component parts.)
- Why do you make these improvements? (Because we strive to continue to sell the best tractors in the world.)
- Are your customers willing to pay for these products improvements? (What do you mean.)
- Are your customers willing to pay a marginal price which will cover your cost of implementing these improvements? (I don't know. I guess we assume that they will. . .)

Solution:

It turns out that the prices have been raised to cover the costs of these improvements, but the customers do not value these improvements unless they are essentially free, so sales are down. The client needs to incorporate a cost/benefit analysis procedure into its product improvement process. Don't forget though, that you must consider the long-term effects of these decisions.

AIRLINE V. BABY FOOD

Question:

Compare the airline industry vs. the baby food industry. In which would you invest your own money?

Additional Information:

- Industries should be compared by going through a simple Porter's five force analysis.
- It turns out that competition in the airline industry is intense. Fixed costs are high and competitors keep cutting prices till they shave margins to the very bone. Customers are price sensitive. Brand equity is virtually nonexistent.
- Using a microeconomics argument, you see that airlines will keep cutting prices as long as they are covering variable costs. Since fixed costs are high, and doubtlessly financed with debt, these companies can end up defaulting on interest payments.
- On the other hand, the baby food industry is less competitive. There are two or three large players who do not indulge in cutthroat pricing. Products are well differentiated. Customers we quality conscious: they will pay a premium for quality.
- To invest your own money, baby food is better than airlines due to higher profit potential.

TAIWAN

Question:

You are a consultant advising the government of Taiwan. Government officials want to move from low value-added products, like textiles, to high value-added products, like aerospace.

Possible Approach:

- What are Taiwan's resources?
  - Labor? Skilled workforce.
  - Capital? Inflows from Europe and America?
  - Infrastructure?
  - Components? Supplier industries?

- What does the industry look like on a global basis?
  - Is it profitable? Is it growing?
  - Who are the players / competitors? What are their competencies?
  - Can we find a niche?

- Who would the buyers be?
  - Can we serve them?

- Also, what will the country lose by moving away from low value-added products, like textiles?
  - Dislocation of workers

Additional Information:

What not to do –

- Forget about profitability and competitors.
- Ask about Taiwan's history and culture without addressing the issues in the case.

BOOK PUBLISHER

Question:

Develop a strategy to help a major book publisher explore new strategic opportunities and risks.

Possible Approach

Key factors

- Buyer power has been increasing due to the movement away from the corner bookstore towards the large chains that give discounts to readers off the publisher's price.
- Internet book sales give more power to the buyer.
- Increasing substitutes caused by video games, books on tape and video on demand.
- Increasing competition between publishers causing reduced margins (buyer power) and saturated market (increasing substitutes) and proliferation of titles. Also no real branding among publishers that published the last book that you read?)
- Increasing competition leading to higher advances to well known authors (millions of dollars in many cases).

Conclusion:

- Become a market leader by announcing new terms and conditions for the large book retailers. If the other major players in the industry follow the lead, the industry may become more profitable as a whole. If not, the client may need to move back to the old terms in the industry.
- Focus on the books or types of books that have an expected positive NPV. The proliferation of books probably has caused unprofitable titles.
- Forward integrate into bookstores.
- Develop online strategy that capitalizes on existing distribution relationships and pricing strengths.

INTRA-OCULAR LENSES

Question:

The client produces intra-ocular lenses. It is known for premium quality and used to be the market leader, but the overall market and the client's share have declined. What should be the strategy to become the market leader again?

Possible Approach:

What has changed since the time of market leadership?:

Company

- Product, prices, sales/marketing changes? Nothing significant.

Customer

- Have customer wants / needs changed?
- Have buying / usage behavior changed?
- Are there new buyers?
- Customers have become more price sensitive and the type of buyer has changed. The new buyers are institutional buyers rather than doctors.

Competitors

- New entrants, new products, different positioning, new substitutes? The product has become more standardized, more of a commodity product.

Solution:

- A new distribution system to target institutional buyers rather than doctors and a low cost product are key to selling to new buyers in this commodity market.

- Cost leadership is important because of the commodity nature of the product.

Note: You can change the frameworks to be more useful to you and to be less obvious to the interviewer. Here the 3 C's framework was used, but many of the Porter concepts were also adopted in the questioning.

SPARK PLUGS

Question:

We have a client who is interested in opening a manufacturing plant for spark plugs in Spain. How would you advise them?

Approach:

The interviewer begins by pushing for your snapshot of the size of the Spanish spark plug market. Think through all the uses for spark plugs in an economy (cars, trucks, diesel engines, lawn- mowers, etc). How many sparkplugs per cylinder in an engine? What is the market segmentation of the car market (4-cylinder vs. 8-cylinder cars for instance)? How many cars per year are manufactured in Spain (new market each year)? Ignore corporate fleet demand and truck market - only look at consumer market. What is the economic life of spark plugs?

One possible figure.
Assume:
Mention other uses of spark plugs but focus on passenger car market for simplicity.
Population of 36 million.
Assume number of new cars bought each yr. per family
Assume economic life of new cars
Number of spark plug changes over economic life, etc.

After achieving an annual demand number for spark plugs, analyze the market conditions. Use Five Forces. *Suppliers/ Buyers strength, barriers to entry, threat of substitutes, firm rivalry conditions.* Probe interviewer for raw materials needed for spark plugs. Is Spain well situated because of market isolation? Low wages? Proximity to supporting industries, manufacturing consumers, etc. What are the different cost components to spark plugs (raw materials, labor content, transportation, margin, etc)? What are technology needs in the manufacturing process? Understand order-winning criteria for auto manufacturing contracts. The firm wants to capture how the candidate will attack, frame and dissect a very complicated process in both a country and with a product that they are unfamiliar.

Note: This case incorporates a tour de force of Porter's Five Forces analysis, a country Diamond overview, your ability to conduct "guesstimations "in foreign markets and a basic understanding of supply chain interaction.

PETROL STATIONS

Question:

A large oil company with nation-wide retail petrol stations wishes to evaluate the competitiveness of its outlets. What would you want to look at, how would you look, what would you hope to find out?

Approach:

- What drives customer preferences? (subjectively and empirically)
- If the client has enough stations, consider the different stations in similar customer situations (traffic flows, population, competition) and understand how differences in format, pricing and services affect volumes. - This is a convenient point at which to apply the 4 Ps framework.
- Where good peer groups are not available, it is possible to, pilot changes in certain aspects of the store's situation to understand what effect these changes have. This may then generate follow up questions about how to design and ensure the reliability of such tests.
- Market research to understand subjective customer preferences. A survey combined with demographic profiles. (This is a good point to cover things you think might be important about gas stations such as price, convenience store, service, paying at the pump, easy entrance and exit, well lit, design aspects, ease of credit card payment, etc.) It would also be appropriate to compare with industry averages.
- Brand loyalty - if the good locations in a market are foreclosed to me, does it matter how competitive my stores are? Will customers switch stations - what switching costs are involved and what type of benefits do I have to impart to win volume?
- Consider both content issues (such as using the 4 P's framework) and the process issues (i.e. how to get the required information - as covered in the points above).

RETAIL CHAIN

Question:

Our client: A big Canadian Retail chain
Problem: Wal-Mart has just brought a retail chain in Canada. Should we be worried? Why? What can we do?

Approach:

- Data: We own 20 stores, Wal-Mart just bought 50. We sell more or less the same as them, and their stores are close to ours. Therefore, they can be a threat to our operations.

- Are they a threat? Check the financial data:

	Us	Wal-Mart
Revenue	100%	100%
COGS	50%	53%
Store Operations	20%	22%
Corp. Overheads	20%	20%
Operating Profit	10%	5%

- This data doesn't tell us much: our higher profits could come from higher prices, which we wouldn't be able to maintain once we had to compete face-to-face with Wal-Mart. Therefore, the next thing to do is to compare their prices to ours. How? Easiest way (what they actually did): go through a Wal-Mart store, and take notes. Compare a set of their products with ours.

- Once they did this, they found that Wal-Mart was 10% cheaper. What does this means?

- It means that if we are forced to match their prices, we will have an operating profit of around 0%.

Solution:

What can the company do?

- Lower costs. Problem Wal-Mart is exceptionally good in this area, and we will probably be unable to match their costs.

- Sell them our chain, give in. Not a viable solution, so move on…

- Try to differentiate us: appeal to the Canadian's sensor of patriotism (buy Canadian). Will probably not work in the long run, because eventually people will get tired of this and just buy where it is cheaper.

- Use our better knowledge of the Canadian customer to optimize our product line, targeting Canadian tastes and preferences.

- Change our product line: Sell some products that Wal-Mart does not offer, products that can be sold at high margins.

CAR MANUFACTURER

Question:
Your client is dominant auto manufacturer in the US, you are hired to implement a cost reduction program. Where would you start, what are your recommendations?

Possible Approach:
This is a 3-stage case, the first stage being the problem identification, second is the recommendation of solutions and the implementation of the solution.

Stage 1: Problem Identification

Focus on the main cost components in the car manufacturer.

- Fixed Costs: Overheads, Plants, Capital Equipment and Variable Costs: Labor, Direct Material Costs. Benchmark your client's costs relative to that of a competitor. It turns out that the Direct Material Costs (i.e. car components and sub-assemblies) are much higher than that of our competitors.
- Why? Each car model requires too many variants of components. For instance one model of family sedan has 24 variants of steering wheels. The result is that our steer wheel supplier is not able to have economies of scale in its production of steer wheels and passes the increased costs to us. Our client has over 30 chassis platforms for all the models in its range, while our key competitor only has 12 different platforms.

Stage 2: Recommend Solution

The solution is to lower component costs by lowering the number types of components and have different models share the same base components or platforms. E.g. Instead of having 24 kinds of steering wheels, attempts to reduce the number of variants.

- What is our basis for reducing the number of variants? Similarity in design, parameters and requirements. Overlapping parts. After using this criteria, we now have reduced the number of steering wheel variants from 24 to 10, how do we go about further reducing this?
- Each steering wheel can be separated into several components, the ring, the frame, the covering and the electronics. We can arrange the components in terms of value, of which the ring and the frame are the most expensive parts. We can further save costs by treating the ring and the frame as the base product, and the covering and the electronics as customizations onto the base product. The supplier simply provides one variant of the frame and ring, and we independently customize each steering wheel by adding different coverings and electronics.
- This allows to vendor to have economies of scale by having only to produce one type of frame and ring.

Stage 3: Implementing the Solution

Explore how you would convince the various stakeholders about the merits of this new method of component sourcing. For example: the manufacturing engineers, the designers, the sales & marketing dept, the finance department. What is the impact to each of these groups?

Market Expansion Cases

CO-BRANDED CREDIT CARDS

Question:

An oil company has its own credit card that many of its customers use when they fill up their car with gas. Recently, other companies have begun entering into agreements for co-branded cards (i.e. Amoco + Visa). This company wants to know if it should do the same. Either way, should it continue to offer its own credit card?

Possible Approach:

CUSTOMER

- Do current customers value the card - do they use it? About 20% use it and like it.
- Would a co-branded card draw new customers or increase loyalty? Yes, people indicated they'd be more likely to visit our stations if we had the co-branded cards. However convenience is the main consideration when selecting a location.

COMPANY

- Is the company currently performing the processing in-house - is it profitable? Yes, they're doing it in-house but are not making much money on it.
- Would the co-branded card processing be out-sourced - does it offer attractive margins? That's an option; the margins appear to be better if processing is out-sourced.

COMPETITORS

- How many competitors have co-branded cards? Only two, but others are looking.
- If they don't move now, would their choice of partners be limited? Probably.

RECOMMENDATION

- Offer the co-branded card, but out-source it. Given that existing customers use and like the company card, they should continue offering it, but attempt to shift customers to use the co-branded card.
- The data processing operations for it should also be out-sourced. They should research marketing (co-marketing) tactics that could improve the attractiveness of the card to the company's customers - with the intent of increasing the number of customers.

Additional Information:
- Considered the marketing research that had been conducted.
- Explored the focus of the company (they had no business trying to run credit card processing).

TIRE MANUFACTURER.COM

Question:

You are having lunch with a former client, the CEO of a major automotive tire producer. She explains that they have been toying with the concept of the company making a foray into e-commerce. She hasn't devoted much thought to the strategy involved and would like you're input regarding the attractiveness of such a move.

Additional Information:

- Client is currently largest player in the industry but facing traditional domestic competition in addition to increased foreign competition
- Client's competitive advantages have traditionally been brand, customer relationships and technological innovation.
- Client's main business is supply to original equipment manufacturers (OEMs)
- Secondary existing channel includes franchised service and retail outlets
- Third channel is direct sales to industrial clients (fleet services)

Approach:

Key Issues:
- What are the capabilities of e-commerce?
- Direct sales
- Service complement via customer service, product information, etc.
- Sourcing data/order management system
- Channel data/order management system
- Other intranet capabilities

→ Client is primarily interested in direct sales opportunities (other uses of electronic data interfaces are in use or under development)

- What is the market?
  - Segment description and size
    - Who would buy tires over the internet (installation?)
      - Break the market down
      - Draw a pie chart! How big of a slice can you get?
    - What are the advantages to the consumer for buying tires online?
  - Does that overlap with segments served by existing channels?

- What are competitors doing? How will they respond? How quickly?

- What are the alternatives to e-commerce? (Phone orders, direct mail, etc.)

- What are the advantages of this channel? Disadvantages?
  - Cost reductions? Margin comparison to other channels?
  - Underserved segments?

    - What investment is required? What is the relative ROE compared to other channels?
    - What will be the impact of an e-commerce strategy on existing channels? What will that do to channel relationships?
    - How is the product delivered? Installed?

- Is there an advantage to forming a strategic alliance with an e-commerce merchant prior to developing our own capability?

Notes:

Consider the problem from both marketing and operational perspectives. Framework starts from "where's the market going?" and goes to operating tactics to enable necessary innovation, "how do we get to there?"

Identify what segments might want to buy online ("bargain hunters", "web surfers", etc.). Why do they want to buy online? (Price, convenience) How big are these segments? (pie chart to get percent of total market then size total market). Which segments are most profitable to serve? Why? Which are growing the fastest? Why?

How do you deliver the "order winning criteria" (OWC) that the segments demand? (do not use the term OWC, they've heard it 20 times so far that day). One concept is to use the existing service and retail outlet channel in combination with just in time (JIT). Customers would purchase tires and schedule an appointment for installation online. Installation would occur at a local service and retail outlet of the client's. If convenience is the OWC then perhaps the vehicle is picked up at the consumer's home or business and returned later that day.

The online order might initiate the delivery of the merchandise to the outlet via company shipping or expedited shipping (UPS?) and be connected to the company's inventory and manufacturing management systems (manufacturing resource planning -- MRP, enterprise resource planning -- ERP). This saves money for the company while allowing channels to maintain a margin. It also reduces costs for the service and retail outlets through lower inventory levels and smaller stores while increasing customer satisfaction through guaranteed stocking and improved service (appointments).

Same concept could be used with alternative channels (Sam's Club, Kmart) in areas without service and retail outlets to allow expansion without incurring the administrative costs related to outlets (which may no longer be the most efficient/profitable means of selling tires to consumers).

Does the company have the capabilities required to enable this strategy? If not, how do they develop or acquire them? How will competitors react? Is the company better off regardless of what competitors do? How does the company sustain an advantage in the electronic marketplace? Does it make sense? Should the company do this itself or seek a partner?

MEDICAL PRODUCTS MANUFACTURER

Questions:

The client is a producer of medical products selling primarily to hospitals and doctors. The client wants to expand/enter the home health-care market. The initial investment will be $70 million. How would you evaluate whether or not the expansion/investment is a good idea? What are the key issues and key success factors you would evaluate? What information would you need to make the decision?

Approach:

New Market Analysis:

A 5 forces type framework would be useful in analyzing the new market.
Need to gather as much information as possible about the new market.
Questions you'd want to consider:

- What is the size of the home health care market?
- What does the competition currently look like?
- Who are the players?
- What is their relative market share?
- How long have they been in the market?
- What do they compete on?
- Is the market growing?
- Are there any barriers to entry that I would need to consider?

Operational/Current Capacity Analysis:

Does the client have excess capacity?
Will there be any additional equipment needed?
Are the manufacturing processes similar? Is the new market a complementary market?
Will we need a new supply chain?

Financial Analysis:

Quick NPV analysis – discuss how you would determine if the expansion will add value to the company (i.e. will the annual cash flows discounted back at the WACC provide a positive NPV?)

Strategic Analysis:

Does the expansion fit with the companies' vision?
Does it fit with the company's image?
Is the new market complementary to their current lines of business? Is it a logical fit?
Is their current market mature (i.e. do they need to diversify in order to maintain sales/earnings growth?)?

FEEDING THE ARMY

A foodservices company wishes to explore new markets in order to help meet its goal of increasing revenue by 15% over the next few years. A market that they are interested in is feeding the hungry men and women in the US military. Is this a worthwhile opportunity?

Interviewer Information:
Company has $1BB in revenues for the past few years with minimal growth.
Company average net profit margin is 5% on revenues.
Company is engaged in foodservice and facilities management, with 80% of revenues attributable to foodservices.
The company does not currently have any contracts with the military or the federal government.
The company is Canadian.
The company is primarily looking to serve food in military dining halls for military personnel who live on base.
A mess hall can be viewed as similar to a college dining hall.

Possible Approach

Interviewee should first define "worthwhile." In the context of the problem statement, an expected interpretation should be whether or not entering this market will make a significant contribution to realizing the 15% revenue growth over the next few years. Additionally, the interviewee should be expected to perform a simple industry analysis to determine barriers to entry, etc.
To answer the first question, a rough market sizing should be done. It is not so important that the numbers come out to be anything particular; however, the interviewee should be able to brainstorm and identify the likely key drivers of revenue for this market:

Size the market

The purpose of sizing the market is to determine if the opportunity is large enough to significantly increase revenues.

Market Size (annual revenue) = [number of people in the military] x [average meals per day] x [average price per meal] x [days per year]

Some reasonable numbers might be:

Market size = [500,000 people in the military] x [3 meals per day] x [$3 per meal] x [365 days] = $1.5 BB >> $$150MM

Interviewee should conclude that the potential market size warrants further investigation into the opportunity.

Industry Analysis

The purpose of this is to determine how this market works, how profitable the industry is and what the key success factors are to enter the market and gain market share in the industry.

The interviewee should try to gain clarity around exactly what services the company can perform and how they will make money. This might be done in the context of a 5 forces type analysis.

Power of suppliers: Food suppliers are specially certified by the government as Prime Vendors. The company will have no freedom to choose suppliers. The company will not need to buy the food from the suppliers; food will be delivered each day by the supplier and paid for by the government.

Potential implications to recognize: Company will not be able to leverage existing relationships with its own, possibly higher quality suppliers. Company will not be reimbursed for the cost of food, therefore can be expected to be reimbursed for labor involved in value-added activities such as cooking, serving and cleaning. It should be recognized that the last implication will reduce the potential revenues if the interviewee assumed that the price per meal included the cost of food.

Power of buyers: The end users are military personnel. The buyer of the foodservice is the military dining facility. The mechanism of purchase involves competitive bid processes to win a 10 year contract, at which point it is re-bid. The winning bid is the typically the low cost bid. Government regulations define who is qualified to bid. All of the current contracts that have been awarded to private businesses have been award to small or disadvantaged businesses due to government regulation. Our company is not small or disadvantaged. Government contracts reimburse cost plus a "reasonable" margin for profit.

Potential implications to recognize: The company is unable to compete due to regulations and is required to partner with or subcontract to small businesses. This will have effects on the potential revenues (a minority interest in a small business, or a subcontracting situation will reduce the revenues). The market will have to be captured in chunks as each 10-year contract comes up for bid – thus for every $100 in market revenue, only $100/10 will be available for bid each year.

Industry competitors: Military dining halls are served by military personnel or local small disadvantaged businesses. There is only a small tendency for dining halls to shift from using military personnel to private business, thus the market is reduced to that currently served by the small businesses. Currently small businesses serve about 20% of the military bases.

Potential implications to recognize: This immediately reduced total market size by 20%.

Threat of new entrants: Government contract regulations are the primary barrier to entry. It is not clear that the government will change its rules with respect to awarding contracts to small businesses.

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A final market sizing may adjust for the above factors:

- $1.5BB = base market size
- Adjustment for not being able to charge for food = ½ (assumes food drives half the cost of a meal)
- Adjustment for contract staggering = 1/10 (can only bid on the 10% of contracts that come up for re-bid every year)
- Adjustment for the bid process = 50% (assumes company wins 50% of the contracts it bids for)
- Adjustment for military-served dining halls = 20% are served by small businesses
- Adjustment for partnering with small business = 50% company approximately splits the revenue with the small business.

$1.5BB x [1/2] x [1/10] x [50%] x [20%] x [50%] = $4MM possible in first year…worthwhile?

The interviewee should have a plan for how to enter this market, and be able to articulate the implications of the plan and the state of the industry on the likely revenues to be captured from this market. A recommendation on whether or not to proceed should be provided.

ACQUIRING NEW AIRLINE ROUTE

Question:

A major American airline is considering establishing new routes from Tokyo to several sites in the United States. Would you recommend that they take this action?

Approach:

- We are dealing with establishing new routes and not acquiring existing ones.
- This case requires a complete examination of the customers and competition.
- Customers consist of both business and leisure travelers. While business travel from Japan to the U.S. has been declining at about 25% over the last year, leisure travel has increased at a faster rate. It is expected that leisure travelers will continue to grow at a faster rate than business travelers. Currently, about 50% of all Japanese travelers to the U.S. are leisure travelers.
- It is extremely expensive to buy gates at Tokyo's crowded airport.
- As it turns out, competition will come not only from other airlines at Tokyo, but also from a new airport that's being built in Osaka.
- Furthermore, Osaka is expected to attract a very high percentage of the leisure travelers. It is very inconvenient for leisure travelers to fly out of Tokyo, where there's heavy congestion and where prices tend to be higher due to high gate prices. It is estimated that the leisure travelers at Tokyo airport could decrease by 25-30%.
- If our client continues with their plans for buying gates in Tokyo, they will find it difficult to attract the growing percentage of leisure travelers needed for their new routes to the U.S. It probably makes much more economic sense to buy gates in Osaka instead.
- Another insight is the recognition that Osaka will increase the total number of airport gates in Japan. The intense demand for gates at Tokyo will decrease considerably with the greater supply of gates at Osaka. This fact most likely doesn't change the benefits of buying gates in Osaka. However, there may also be a new opportunity for our client to buy gates cheaply in Tokyo to establish new business traveler routes to the U.S.

BABY BELL DIVERSIFYING

Question:

A Baby Bell company is interested in diversifying into other areas besides telecommunications. They are considering entering the market for electronic home security systems. Would you recommend that they do so?

Additional Information:

- The company is a holding company. They have previously made unsuccessful forays into software and into real estate.
- The home security industry is highly fragmented. The top five players in the industry generate less than 4% of the total industry revenues. This implies that the industry largely consists of small, regional companies.
- 10% of all residences currently own an electronic security system.

Approach:

- This is in some sense a razor and razor blade sort of business. The economics are:

Item	Retail price	Cost/Margin
Equipment & Installation	$500-$1500	0-10% margin
Monthly service	$20/month	$5/inonth

- What strengths/competencies of the Baby Bell company are useful in this market?

  Installation expertise
  Operator services
  Transmission system (phone lines)

- It turns out that the "expensive home" segment of this market is saturated. Growth has been slow in recent years.
- Price sensitivity is unknown in "moderate-priced home" segment.

Conclusion:

The conclusion is that this business is a reasonably good fit for the company, and that more market research needs to be done to assess the growth and profit potential of each segment of the market.

PAYROLL PROCESSING

Question:

A company is very successful in the payroll processing business, allowing employers to out-source their payroll function. The client is considering an expansion into the processing of pension checks for financial institutions. Does this product extension make sense for a low-cost producer, and how can they best penetrate this market?

Possible Approach:

- The crucial question is how the checks are currently being processed (in-house by fund managers and banks or out-sourced to other providers) and why?

- It turns out that virtually all financial institutions which disburse checks on a regular basis process them in-house and are relatively cost inefficient in doing so. This however, does not necessarily present a market opportunity on the basis of cost reduction. The check processing fees are an attractive profit center for all but the smallest financial institutions because they can pass the costs (plus a huge margin) on to their clients. Since the check processing fees are a relatively small part of the total fund management expense, the margins can be very large without customer complaints. This makes the sub-business of in-house check processing very attractive to many of the potential customers of the outsourcing business.

- Another factor which makes this product extension unattractive is the importance of accuracy and timelines in check disbursement. The financial institutions would lose a great deal of goodwill if their "out-sourced check" processor screwed up, and they had to explain to thousands of upset pensioners that it was another company's fault. Spending a little more to have it done in-house was considered prudent by many fund management institutions.

- Note - the check processing business is not always cost driven (i.e., low cost might be critical to small employers but quality may be more important to fiduciary service providers) and that a cost center for some potential clients (businesses) might be a profit center for others (financial institutions).

LONG LIFE BULBS

Question:

A light bulb manufacturer currently sells light bulbs for $1 that last one year and cost $.50 to produce. There are three other competitors, and each of the four (4) producers has 25% market share. They develop a new light bulb what lasts 10 years and costs $1 to produce. You can produce either the old or the new bulb. Which one do you decide to sell?

Possible Approach:

- Company must have low variable costs and high fixed costs, so you want volume.
- While the bulb could be sold at a price where consumers are indifferent between two types, a lower price could lead to increased market share.
- Just because it lasts for 10 years, it will not run the industry. The higher price should compensate producers for reduced overall volumes.
- A potential problem with increased production is that if your competitors develop the new bulb and regain their market share, you will be left with excess capacity.

Produce the new light bulb.

Notes: Price and volume is the key here. You can price it ten times the current bulbs. But, the important issue here is, whether or not the customer is willing to pay ten times for an unproven product. Then the next question to ask will be can we provide them a guarantee? Note that it becomes a durable product now, it is not a commodity. Some can still identify it as commodity but it is more like TV, PCs or Cars, more of a home appliance now. So you should think of pricing and marketing it like a home appliance.
You should also consider, how long will it take your competitors to enter the market, how fast can you convert the customers to new habit. Is it possible to acquire customers in such fashion that the revenues / conversion of customers are relatively flat over 10 years, rather than acquiring a huge customer base right now and then there is no replacement market in year 7-10.

UTILITIES

Question:

With the deregulation of the electric utilities industry, there is increasing competition in the U.S. A client competing in this industry in the U.S. (American company) is considering expanding overseas. They have been slowly investing throughout the world and have the opportunity to potentially enter into a joint venture with a Malaysian electric utility company. They deal will encompass two U.S. power plants and 2 Malaysian power plants and the two companies will split the profits 50/50.

Should the client enter the joint venture?

Approach:

Clarify the alternatives:

- Why would the client do this?
- What do they get out of it?
- Think about doing a COUNTRY ANALYSIS – is the country a stable place to do business? What is the economic outlook? Are there growth opportunities? What does the electric utilities industry look like in Malaysia? Competition, size, growth, etc.?
- Are there barriers to entry for a foreign firm? If so…the JV would be an easy way for the American company to enter the market without all of the difficulties/restrictions that they would face if they attempted to enter on their own.

Broad strategic analysis

- Try to think of the benefits for the U.S. Firm:
  Lower barriers to entry if they go with the JV
  Diversifying their interests – beneficial since the U.S. market is highly competitive
  Adopting a presence in the foreign market
  Diversifying their risks – don't put all eggs in one basket
- What is the downside?
  Country risks – economic & political stability
  Currency risks

Financial Analysis

NPV analysis – will the cash flows provide value?

50-YEAR LIGHT BULB

Question:

You are an inventor. You have invented a light bulb that lasts 50 years. You want to market it and, in order to secure the finance, you need to prepare a 10-year plan for the bank.

Possible Approach:

Start out by:

- Gauging, market size, comparative costs (cost of light bulb x no. of times you have to replace it), and distribution channels.
- Assess at what level you can sell it for - and thus estimate revenues.
- Use of 3 Cs - Customers (who are they), Competition (what do they have), Capacity (what is it and could you be undercut or undercut them?).
- Explore opportunities for light bulbs of differing lengths less than 50 years as you may end-up cannibalizing your own market.

Conclusion:

- If your light bulb lasts for 50 years you pose a real threat to the current manufacturers. Assess their level of profitability and, assuming they are not likely to quickly discover this technology, offer to sell them the patent for the light bulb as you could otherwise destroy their market (replacements would only then be needed every 50 years - good business for a few years only, for 10 years - unlikely you'll have a market for that length of time!). If they refuse to buy it, or offer too low a price then start production and earn your money that way.

NOTE to establish a business plan, you need to cover:

- initial capital investment required
- fixed and variable cost elements of running costs
- capacity and expected level of utilization
- level of working capital required for day to day operation
- expected sales - initially, and the expected growth over the 10 years
- Given the issue of cannibalization you should address the question of whether the machinery can be used for other purposes, once sales reduce.

NYC BANKING DEMAND

Question:

How would you determine whether a location in NYC holds enough banking demand to warrant opening a branch?

Approach:

- The demographics of the area surrounding the prospective branch should be examined. Population, business concentration, income levels, etc. should be compared with those of historically successful branches.
- Competitor reactions could easily make this venture unprofitable, so it is essential to anticipate them.
- These will depend on the importance of the area to competitors (in terms of profits, share, etc.).
- The client will have to match competitors' incentives to customers – we should estimate the cost of these.
- The client must examine if the new branch would complement their existing competence and strategy (retail or commercial; high growth or profitability, etc.) and what purpose it would serve. If the need focuses on deposits and withdrawals only, maybe a cash machine would suffice!

WIRELESS SERVICE IN MEXICO

Question:

Your client is a large diversified manufacturing company with global operations and is considering whether they should participate in the closed envelope auction process for a license to give wireless service in Mexico.

Your client wants to know the issues to consider when deciding whether to bid or not and how much should they bid?

Possible Approach:

The first things to ask here is how many subscribers could you service with this license, which regions are included, and for how much time. It is also important to consider how many licenses are being auctioned now and in the future. How many bidders are going to participate would be helpful to know too.

The other things to consider in this problem could be divided into 4 big sections:

1. Market attractiveness
    a. Size of market (can they afford this product, substitute products)
    b. Number of established competitors and their power (locations they serve)
    c. New entrants (consider price wars, and differentiation)
2. Company operation
    a. Synergies with established divisions operating in Mexico
    b. Suppliers
    c. Distribution
3. Risk/Reward
    a. NPV
    b. Political and economic risk
    c. Exchange rates, inflation and other financial risks
    d. Other projects (cost of opportunity)
4. Bidding process
    a. Competitive analysis of other bidders (game theory)
    b. Access to information compared to other bidders (to make a better bid)

To practice numbers: estimate the size of the wireless market in Mexico.

New Product Cases

NEW CAN

Question:

Drink cans were traditionally made from three separate pieces of metal (top, bottom, and side). A new technology known as the two-piece tin is now in use at many canning facilities in the U.S. Imagine that you are in the executive conference room of a large U.S. canning facility that is considering transferring to the two-piece technology. Take on the role of each of the vice-presidents of the facility and present to me what you think each of them would have to say about the decision to stay with the three piece or move to the two piece.

Possible Approach:

An impressive way to start this answer would be to ask if the factory was organized by function or process. Since factories are typically functionally organized. I would start by saying something like:

"Why don't we go along the value-chain and explore the benefits and advantages for a manager responsible for each segment of the chain?

This is not an exhaustive list, but it serves to give you some ideas.

PROCUREMENT

- Lower metal content reduces raw materials inventory, freeing up space and cash.
- Identify new suppliers for high tech materials or work with existing to change material specs.

HUMAN RESOURCES

- Downsizing from increased automation.
- Retraining lead-times.

INFORMATION TECHNOLOGY

- Probably plug and play with legacy systems.

INFRASTRUCTURE (Finance, accounting, quality. . .)

- Where is the money coming from?
- We should be able to sell the three piece line to a subsidiary or company operating in a developing country.

OPERATIONS

- Change-over options (pilot or parallel run unnecessary unless we are an early adopter, more likely a shut down start-up implementation utilizing around the clock vendor technicians and our engineers.

- Large positives with new machinery: lower maintenance, better control interfaces, high volumes and tolerances, less staff but more highly trained.

DISTRIBUTION

- Infrastructure compatibility (pallet sizes, stacking height, handling- ease. . .)

SALES AND MARKETING

- Customer reaction - are we an early adopter - if not - no issues, if yes, some education required e.g. cost and environment - less waste, ring pull stays with the can, so less litter.

SERVICE

- Non-issue? Explore.

One problem with this case and many in general is that it parallels a HBS case - Crown Cork & Seal. If the interview knows that it is taught in your core strategy class he / she may expect:

1. A much richer answer.

2. You to reveal that you are familiar with the case - I wouldn't tell them before starting since this will raise expectations.

However, it may be that the interviewer can tell that you have done the case before, because you answer too quickly and in too much detail for it to be spontaneous. If this is the case, it is better to be open about your familiarity with the case.

REPLACING ALUMINIUM

Question:

The client is in aluminum production. The market for aluminum is declining slightly. The client has a new technology to use plastic in place of aluminum in some products. The completion is six (6) months behind in developing plastics. Should the client pursue plastics or stay with aluminum?

Approach:

ENVIRONMENT

- Explore the reason for the decline in aluminum market: is plastic replacing aluminum?
- What about cannibalization of existing products?

COMPETITION

- Expected actions of competitors - not a co-operative oligopoly - high rivalry in declining aluminum industry will lead to price wars and declining profits.

PLASTICS MARKET

- Profitability in relation to aluminum.
- **Customer needs** / desires satisfied by plastic - does plastic offer significant benefits? Is it inevitable that the aluminum producer will shift towards plastics?
- New **competitors** in the plastic market?
- **Costs of entry** - minimum efficient scale for plastic is 10% of the volume of the aluminum market.
- Fit with current production (use excess capacity or must build new plants?) and **distribution**
- Are there other **substitutes** for aluminum and plastic?

KEY ISSUES

- Potential cannibalization.
- High rivalry in a declining industry (aluminum) will lead to price wars and declining profits.

ISRAELI TRAVEL AGENCY

Question:

An Israeli travel agent has been extremely successful. His primary source of revenue is customers who fly to and from the US. He manages to fill up over two plane loads on a daily basis. Given his success, he is considering buying an aircraft and flying the US-Tel Aviv route himself. What advice would you give him?

Additional Information:

- The client is attracting customers due to his own promotion and reputation. He will probably continue to do so if he were to buy his own aircraft. Also, access to hubs, etc. would not be a problem.
- If the route is extremely busy, it is probably very lucrative for other airlines too. The dominant operator on this route is El Al (a large airline with deep pockets) that finds this route extremely attractive.
- If our client were to enter the industry, he would doubtlessly trigger a price war initiated by El Al since, if he were to do so, other small operators would want to follow our client's lead and soon El Al would pretty much lose this important source of profits.

Approach:

- The only way our client could fight this price war is by differentiating itself from El Al and other airlines and charging a price higher than El Al's. But any such move towards differentiation will be matched by El Al, and our client will be forced to go out of business. It is therefore best to maintain status quo.

GROCERY STORE BANKING

Question:

One of our clients, a supermarket chain, is considering opening an in-store bank. No other competitors in their area are currently doing this. How should we help them think about this?

Additional Information:

- Floor space required is equivalent to a florist department, etc. There are currently no other better uses for this floor space.
- There are three options for the project:
  - Start own bank.
  - Joint venture with an existing bank.
  - Lease the space to an existing bank.

Approach:

- There is little opportunity cost in launching this project.
- Revenues will come both from bank transactions and effect on consumer habits.
- Bank revenues depend on nature of agreement.
- If JV or own bank it will be driven by types of transaction (savings, checking, other low margin transactions) and number of transactions per day. Estimates can be gotten from:
  - JV partner
  - Industry information
- If leasing, flat fee (can explore what it's worth to a bank).
- Consumer habits may be changed by increased traffic and increased sales per person.
- Traffic may increase due to bank "draw"- need to estimate.
- Access to cash may allow for larger purchases (ATM and credit card sales do the same thing).
- Discuss the risk/reward tradeoff of strategic choice of how to approach project.

CONSULTING FIRM

Question:

You are the managing director in a large international consulting firm. Traditional strengths of your firm have been solving strategy and organizational issues. Recently, you have noticed an increasing number of your firm's proposals are being rejected because of a lack of information technology expertise in your firm. So far, your firm's growth has been strong enough that proposals lost have not hurt annual earnings. Nonetheless, you are becoming increasingly concerned about the need to develop the firm's capabilities in information technology.

1: Assuming your concern is valid, what reasons will you provide to other partners about the need to acquire information technology skills?

2: Assuming you are able to convince other partners of the importance of IT expertise, what steps would you take to rapidly build IT capacity in this area?

3: What are the major risks in executing an IT capacity-expansion?

Approach:

1: Good answers focus on the value of IT to clients: discussion topics include the increasing importance of information in business, strategic value of information and information flows, importance of information systems for implementing new organizational structures and management control systems.

Better answers focus on the costs of losing clients to competitors: discussions included the encroachment costs of having clients talking with competitors about IT problems, risk of losing credibility with clients by not being able to solve a problem.

2: Good answers will focus on various methods to build expertise: buying expertise by acquiring another firm, by raiding IT practices of other firms for a few key consultants, building capacity through recruitment of IT experts and training them to be consultants, building capacity by training current consultants in IT practice skills, establishing a strategic alliance with a IT boutique firm.

Candidates should discuss the pros and cons of each method proposed: impact on firm's current culture, cost to the firm, time needed to build expertise, etc.

Better answers will realize the importance of stimulating client demand as capacity builds through seminars, articles strategic studies in IT areas…

3: Good answers depend on the expansion methods discussed, but an important issue is the loss of the firm's focus away from just strategy and organization.

Better answers will focus on the difficulty of implementation in IT, rapid technology changes in the IT industry require significant ongoing training and development costs; new practice cultures may be significantly different from current culture, especially if "external experts" are brought into the organization.

SELECTIVE BINDING

Question:

Your client is a major fashion magazine that has been offered by its printer a proprietary new process called selective binding, which enables publishers to customize the pages included in magazines based on demographic data known about the reader. For example, an ad in Better Homes & Gardens for lawn chemical services could be placed only in those issues going to subscribers who live in houses and not to those living in condominiums or apartments. In this way, advertisers can focus their communications on the demographic segment they are targeting. Would you advise your client to take advantage of this new process and offer selective binding to its advertisers?

Approach:

This is a pretty straightforward cost/benefit analysis. The magazine would want to consider offering the service to its advertisers if it would be able to enhance its earnings by being able to charge its advertisers a premium for being able to more exactly and efficiently target the demographic segment they want to reach. Of course the increased revenue from the any premium must be able to offset any revenue lost as advertisers stopped having to pay for advertising for the segment they are not targeting. The interviewee could start the analysis by obtaining the following information from the interviewer:

The only breakdown possible on your database is between subscribers who make under \$50,000 and those who make over \$50,000.

There are 1 million readers, 80% of who are subscribers. Twenty-five percent of subscribers make under \$50,000. The same mix applies to the newsstand buyers according to readership audits.

Most advertisers are selling high-end fashion products, so 75% of them are targeting the high-income group.

The service is being offered to your client free for 3 years since the printer wants to promote the client's use by getting a major magazine to start using it. The client charges \$50 per thousand per full-page and (selective binding can be offered on full-page ads). Therefore revenue associated with a single inserted page (front and back) in an issue is \$100 per thousand.

The client's closest direct competitor has 500,000 readers, 100% of who are subscribers. Effectively, all of their readers make over \$50,000. They charge \$70,000 for their full one-page ads.

Since the printing cost to the client of selective binding is zero, the client simply needs to evaluate cost on the basis of revenue per thousand gained or lost as their advertiser base uses the service to better target their ads to their desired segment. Presumably, instead of 100% of advertisers paying the full \$50/thousand per page, the 25% of advertisers targeting the lower income segment will choose to advertise only to the 25% of subscribers falling into that segment and the 75% of the advertisers targeting the high-income segment will advertise only to the high-income subscribers (75% of subscribers). Assume that all advertisers continue to advertise in 100% of the newsstand copies. The revenue effect of this change can be calculated by looking at the impact the change would have on average ad rate per thousand on subscription readership:

New ad revenue per page = Old ad revenue per page X [(% low income subscribers X % low income target advertisers) + (% high income subscribers X % high income advertisers)]

Thus,

New ad revenue per page at old rate	=	$50 X [(25% X 25%) + (75% X 75%)]
	=	$31.25 < $50

Now the question is, can ad rates per thousand on the selective binding portion of ads sold be increased sufficiently to increase average revenue per thousand over what it is today? To answer this question, your client's ad rates must be looked at from the perspective of their advertisers. If you consider the advertisers targeting the high-income group, their alternative to advertising in your client's magazine is to put their ad dollars toward the 100% high-income readership competitor. The cost per thousand high-income readers with the competitor magazine is:

(Page rate X total readership) / (portion of readers who are high income) = ($70 X 500,000) / 500,000 = $70

Thus $70 is the maximum price per thousand the client can charge its advertisers for selectively bound ads before the advertisers would switch to their competitor. Note that currently, the client is cheaper buy for these high-income advertisers even though they are paying to reach readers they do not want:

($50 X 1 million) / 750,000 = $66.67

If the client charged $70/thousand for selectively bound ads, average revenue per thousand to the client would be:

$70 X [($25 X $25) + ($75 X $75)] = $43.75

Since $43.75 is less than the $50 that advertisers are currently paying, the magazine should not be offering advertisers the selective binding service.

Of course, there are other issues which interviewees might want to mention such as the possibility of price discriminating between high- and low-income advertisers, the potential for and cost of expanding the advertising base using selective binding as a selling tool, etc. However, it is important by the end of the interview to have reached a recommendation regarding the initial regarding the initial question posed by the interviewer. To mention these other possibilities and areas for further investigation is certainly worthwhile, but it is also important not to get too far off track or to complicate the issue so much that a final recommendation is never reached.

Pricing Cases

PHARMACY OUTLETS

Question:

Major discount retailer with over 1300 pharmacies. Pharmacy operations have had flat sales in a growing industry. Profitability is very poor relative to industry. Chain has history of decentralized pricing and promotion for pharmaceuticals, leading to strong autonomy in field operations, as well as widely inconsistent pricing. Customer pricing complaints and customer attrition is chronic. New head of pharmacy operations has engaged us to "solve" the pricing issue. How should we proceed?

Possible Approach:

CUSTOMERS

- Customers are generally older, repeat, discount-sensitive shoppers (as opposed to convenience-oriented shoppers).
- Customers may initially select a pharmacy on referral location or price.
- Tend to build strong loyalty to pharmacy due to personal relation with pharmacist and high switching costs (transfer of records etc).
- Price tends to be a major factor, particularly given nature of customer (usually pay in cash from fixed income) and trust relationship (i.e. price fluctuations are very damaging).
- Inconsistent pricing on a given item may lead to price shopping, exposing all purchases to scrutiny, and losing the customer.

PRICE

- The client recommends a standard mark up from cost, with price matching to be determined by the pharmacist at the store. As mentioned before, this leads to wildly different pricing from store to store, as different pharmacists are vigilant to different degrees, regarding optimal pricing strategies.

COMPETITORS

- Three main groups - chain drug stores, independent pharmacies, and discount chains with pharmacy operations (Wal-Mart, Kmart). Client is in the "discount" group but competition is fierce between groups. No pricing studies have been done.

NARROWING

- Do a pricing study – How?
- Select a market basket of items in commonly dispensed quantities, and call for prices from a selection of competitors and our stores from across the country. Fine – it turns out that prices on high-volume items are very erratic: from our prices at higher end to well below cost at some discounters. Less common items display more consistent pricing across chains, with our pricing more or less in line.
- Which items displayed the most aggressive pricing? Heart, diabetes, cholesterol and the like - basically

higher cost, "maintenance" medications - those that someone has to take for the rest of their lives. Turns out, customers are very sensitive to pricing on these items, as they represent a significant, unavoidable expense. These are the items industry experts say are price shopped most commonly by customers.

- Note - here the interviewer might suggest you design a pilot program to improve pricing, or you might be prompted to give your insight on the information gathered to this point

Solution:

- Test a pricing program where prices are set centrally for a number of stores in different markets. In this test, set prices very aggressively for items identified as key items, and try to make up margins on non-key items. Monitor results and adapt, and roll out if volume, profit warrant.
- This is how most (good) retailer's price. The hot items serve as loss leader, drawing traffic into the store for general purchases, where money is made. In pharmacy in particular, it is important to be priced aggressively in situations when many of your customers use case (vs. insurance) and where the customer with other health care uses the item needs. Hence, heart and diabetes medications tend to be sold at or below cost in many cases.

Additional Information:

Case made up by someone who gave consulting interviews. Given the amount of information missing from the initial set-up and discussion, there is a premium place on logical leaps and some intuition about customer behavior.

EYESIGHT DRUG

Question:
A marketing vice-president of a major pharmaceutical firm is working on a business plan for a new revolutionary product. The researchers have developed eye drops which completely eliminate near sightedness in 60% of the cases (the cases caused by eye strain rather than irregularly shaped eye lenses) if the drops are used twice a day.

Part I

Problem: The client has been working on a business plan but is having a difficult time with one piece of information. The client needs a directional estimate of the retail price they should set for the drops so that he can complete the business plan. How would you help the client structure his thinking on the price and what is your back-of-the-envelope estimate on the price that he should use in the business plan?

Part II

Problem: After talking through the pricing issue, the price of drops of $200 per year approx. is agreed with the client. The client now wants to discuss another issue. The client needs to complete his baseline business plan within an hour and share it with the management committee later in the afternoon. He wants to produce a ballpark estimate of the market of the product. Specifically, what dollar level of sales might he be able to expect per year in the long run in the U.S. market?

Possible Approach:

Part I

- One rough cut pricing analysis would determine the market price for the product that is being replaced. . . in this case eyeglasses or contact lenses. For example, if eyeglasses cost $120 and last on average 2 years, then a two-year supply of drops could be sold for $120.
- A more advanced analysis might determine that eye drops are simple to use and completely trouble-free so that they should replace the most expensive option including all the costs associated with that option. For example, this may include $100 per year in optometrists' fees, $180 in contact lenses ($120 per pair, plus on average, each user loses one lens in a year) and $25 in contact lens cleaning solution and other supplies, for a grand total of $305. Using this example, the retail price of the one-year supply of drops should sell for $305.
- The most advanced issue will include the fact that this new product is actually much better than the alternatives, issues such as dynamics of pricing strategies (e.g. start high and reduce over time to best understand elasticity), and pricing so that marginal revenue equals marginal cost.

Part II

Because you have already estimated a reasonable price, you must now estimate the number of yearly supplies that the client can reasonably expect to sell in the U.S. One possible organizing structure (with estimates) is:

1.	Estimate the number of people in the U.S.	250 million
2	Estimate the percentage of (1) using corrective eyewear	20%
3.	Estimate the percentage of (2) that are nearsighted	70%
4.	Use the client's figures for the percentage of (3) that will be helped	60%
5.	Estimate the percentage of people that will adopt the new product	40-60%
6.	Put it all together (250*(.7)(.2)(.6)(.5) =	10.5 million
	Multiply by price per (10.5) ($200 per unit) =	2.1 billion

ELECTRICITY POOL

Question:

Our client is a major British electricity utility. Currently, rates and returns are regulated, but a new proposal would change the system to a more market-based pool system. The mechanics (simplified for case use) are as follows:

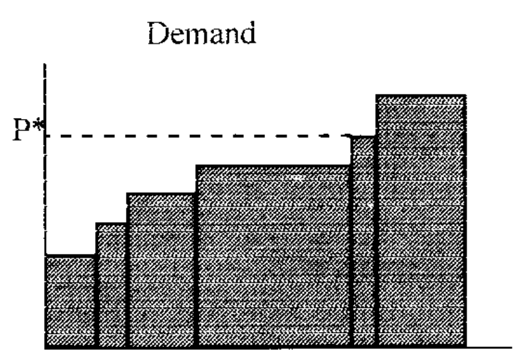
- Rather than each utility producing electricity for the use of its customers only (with excess or shortage made up for in short-term contracts with other utilities or independent power producers), all utilities and power producers will bid into a pool for power supply.
- Bidding for the purpose of this case can be assumed to (somehow) occur continuously - that is, if a supplier decides to produce an amount of electricity (kilowatt-hours) at a certain, time, he bids that amount into the pool.
- Bids will be arranged according to price, that is, the producer who bids in a the lowest price will have his power used first, then the next highest price power will be used, etc.
- Demand will determine how much power gets taken from the pool at any time.
- The last unit of power purchased will be bought at the price it was bid into the pool at. All power sold at that time will be sold at the price by the last unit. This can be thought of as a market-clearing price.

How would you evaluate this situation? At what price will /should people bid into the pool? What non-competitive aspects might you expect from this system?

Possible Approach:

As with all economics questions, draw a graph first!

A supply / demand graph works quite nicely.



The demand side reflects the instant nature of demand - remember, the case said so. Keep in mind, power can be thought of as pretty inelastic at any given point in time. The supply curve should be thought of as chunks of power being bid into the pool at different quantities and prices.

The market clears at P*, as you might think, but keeping the mechanism of the pool in mind, the last guy only sells part of what he bid in, and the next guy sells nothing. Note the large producer surplus for the guys who bid in low.

This is basically the only model you need to get all of the following points:

- First, as in theory, the high-cost producer sets the market price. This would obviously raise concerns of price fixing and collusion among few competitors. Lets put that aside for now and think about some other key points.
- People will bid in at their marginal cost of production. If you end up being the last guy in the pool who sells power, you at least break even on a short run basis. If you turn out lower than anyone else, then you make some money. I would propose that this equilibrium isn't sustainable over the long haul, unless demand shifts up and down enough to bring high-cost producers into the pool so I can get more than LRMC on average (else I will shut down in the long run).
- Also, this system places a huge premium on owning both high- and low-cost resources. Likewise, you must understand patterns of demand. If you know a demand is coming up, bid both your high cost resource (to set the price) and your low-cost resources (to make profit) into the pool. This brings in obvious collusion issues.
- The extent to which the market disciplines gamesmanship and collusion depends to a large extent on those strategic management issues we all forgot or didn't have as first years - number and size of competitors, trade associations, degree of communications, signaling mechanisms, and the like.
- One might propose that the airline industry provides a good, similar model of deregulated industry (with consumers getting all the benefits of an industry that bids SRMC for prices and loses money of the long haul on huge fixed costs). On the other hand, telecommunications deregulation has produced high profits.
- Overall, tire pool favors those with low cost resources. The wrinkle in electricity production is that the lowest cost resources do not tend to be dispatch able, that is you have to run them all day long, if you run them at all. (Hydroelectric and Nuclear plants are like this.) Implications? Many, including the fact that all bidders know that you have to run your resource, and will assume you bid into the pool at zero. Also, if everyone has these resources, during periods of slack demand, there will be no one to sell to at any price, and the pool will clear at or near. That is why understanding (and modifying, if possible) demand is so critical…

Investment Decision Cases

NEW GLASS PLANT

Question:

A company has an existing glass plant and the scrap rate is 70% (yield is 30%). They are planning to build a new plant. Should they use the existing technology from the old plant or should they implement non-implemented technology in the new plant?

Additional Information:

- If you work on the process in the old plant, you can get the yield in that plant up to 50%. This modification will still not meet anticipated demand (i.e., you will still have to build a new plant)
- If you build a new plant based on the old technology (now up to 50% yield), the two plants will meet current demand. If demand increases, you will have to build a third plant.
- Cost of the new facility is the same - regardless of the technology - but the plant cannot be retooled from one technology to another without a significant investment.
- No significant difference in the fixed or overhead costs associated with the two technologies.
- The new technology was being run on a small-scale basis. Although the company is running this process successfully on a small scale, they are worried about the fact that it has been untested in a full-scale production environment.
- Customers prefer the product manufactured with the new technology and will pay a price premium for this product. Since no other companies have this technology, our company would be able to increase market share if the new technology is chosen.

Possible Solution:

- Establish that a new plant is really necessary: demand vs. capacity, improvements to current facilities, possible alternatives such as outsourcing, etc. (in this case, they had determined that it was necessary to build a new plant.)
- Frame the decision by considering the two alternatives' cash flows and NPV. (Ask interviewer for specific information needed.)
- Benefits to the new technology include: increased market share, increased capacity, no need for 3rd plant, ability to charge a price premium for new product.
- Risks of new technology include: untested in a full production environment.

ENVIRONMENTAL SOLUTIONS FOR PAPER

Question:

JPC Chemicals has been approached to buy a start-up company with a new environmental technology (Enviroclean).

- Technology is machinery-based, but uses some chemistry (similarly to JPC's); installations cost from $2.5 million depending on paper machine size.
- System "closes the mill," removing ~100% of effluents:
  - Some is reclaimed and made into paper.
  - Remainder can be disposed as solid waste or burned.

Additional Information:

- System requires either an on-site engineer or extensive customer training.
- Price for Enviroclean is $100 million (firm).
- Marketing concept is monthly fee based on size of installation and utilization.

Solution:

An **acceptable** answer should determine that revenue potential (i.e. demand, price structure) is critical to making an acquisition case.

1. Recognize the need to size the market potential (how many mills, how big) and estimate likely demand (customer benefits – regulatory needs, value of reclaimed material, etc., and alternatives)
2. Set up basic NPV analysis to underpin business case
3. Identify risk of buying new-to-the-world technology

A **better** response will recognize the synergies available from the paper chemical provider and potential advantages of ownership:

1. Access to accounts already served reduces marketing costs and, possibly, cost-to-serve.
2. Potential chemical sales "lock-ins" creating razor-and-blade marketing of environmental chemistry
3. Competitive advantages of winning way into new mills where JPC does not sell chemicals currently (and vice-versa for a competitor acquisition of Enviroclean)

An **outstanding** response recognizes the potential to overcome the high acquisition price and to create value creatively:

1. Create a price structure which offsets capital outlay for new installations (e.g., up-front payment of ½ capital plus annual management fee).
2. Option to sell equipment or technology to other companies outside JPC competitive arena (e.g., Europe, North American) or buy jointly with non-complete agreements.
3. Opportunity to form marketing alliance with Enviroclean (e.g., account introduction/marketing for JPC chemical specification).

CHINA CO.

Question:

The CEO of a large diversified building products company has asked us to help him examine the operations of his china products division. China products include tubs, toilets, and urinals. Specifically, he wants to know if he should approve a $200 million capital expenditure for new manufacturing facilities. The company is:

- One of seven producers in the United States: largest producer has 20%, our client is number three with 15%.
- Prices for the client's products have been flat.
- The two largest competitors appear to earn a small return, our client is to break even.
- The largest competitor has just announced plans for a major modern plan.

What issues must be considered?

Possible Approach:

MARKETING

- How rational has pricing been in the industry?
- Have competitors ever announced capacity expansions before and then not implemented them?
- Are there opportunities to rationalize the product line?
- Does the new finish that will result from the investment "pay for itself" with higher prices?

COMPETITIVE POSITION

- How important is the product line to each competitor?
- Are the products sold in combination (with each other or with other products such as fittings)?
- Would exiting this business affect the sales, profits or cost of the other business units?
- Are there advantages to plants being located in specific places due to high transportation cost?
- If the competitor's new plant is built, will other competitors exit?

EXTERNAL ENVIRONMENT

- Is regulation important?
- Are there changing demographics that will affect demands?

CUSTOMER

- Do customers demand a full line supplier? (for example if other building products are required)?
- Is any significant portion of sales to single customers (e.g. Sears)?

BARRIERS TO ENTRY OR EXIT

- What is the minimum efficient size for the new plant?
- How expensive is entry or exit? Has there been a history of change in the industry players?

MANUFACTURING

- Do the plants produce other products or contribute to overhead?
- Are there ways in which costs can be substantially lowered?

CLARIFY

- Is the planned investment expected to lower costs? (Yes, but not substantially, because the new process will result in a better finish.)
- Does the company rely on a limited source of raw materials? (No, as the materials are easy to get.)
- Has the market been growing? (Market is linked to new housing.)
- Is there overcapacity in this market?
- What are the competitors' relative cost positions?
- Market segmentation - residential vs. industrial vs. commercial.
- Price points - cheap vs. expensive / quality.

LUMBER COMPANY

Question:

A turnaround specialist has retained your services to help him evaluate a medium-sized lumber company as a potential acquisition. How would you determine whether the acquisition is worthwhile?

Additional Information:

- Because most of the company's products are sold to the construction industry, it faces cyclical demand.
- Most of the company's production facilities are fully depreciated and somewhat antiquated.
- Some reduction in workforce will be necessary to achieve levels of efficiency on par with the best in the industry.
- The company has extensive holdings of forests. The historical ROI for these assets has been 16%. This is actually less than the company's cost of capital of 18%. If the company were acquired, some of the acreage of forests could be sold. This would 1) provide cash to fund capital improvements, and 2) improve ROA.
- The potential exists to placate environmentalists and improve operating efficiency by 1) increasing selectivity in tree cutting, and 2) upgrading process machinery to peel trees more efficiently.

Possible Approach:

Ultimately, the decision of whether to acquire the company should be based on a conservative assessment of

1) Market potential – can the company expand into other industries to remove cyclicality and increase sales?

2) The potential to improve the company's operations – will investments in new machinery improve efficiencies while providing tax shields for higher cash flows? Will infusion of fresh equity reduce the cost of capital? What's the debt level – can we renegotiate the interest rates? , and

3) Predicted competitive reaction.

Because of the cyclicality of the industry, it is particularly important to look at downside and upside scenarios. Sales below projections will be a problem, but sales growth higher than expected may also be a problem if the company ends up starved for working capital.

GLASS CONTAINERS

Question:

A producer of glass containers is considering making a $1 million investment to upgrade some process equipment. Would you recommend that they do so?

Approach

1. Why are we thinking of making the $1 million investment?

Step 1: Hypothesis:

- To gain revenues or
- to reduce costs or
- both and hence increase profitability

Step 2: Explore the hypothesis.

A. To gain revenue:

- Increase volume or increase price of both.
- Ask questions centered around the product, market, competition, substitutability, market share etc.
- Make sure to concentrate on the past and the present. E.g. what has our market share been in the past 3 years.
- Also remember to concentrate on what is happening in the industry per se. Is the total pie growing/shrinking/the same? Any new products which can substitute ours?

B. To reduce costs:

- Ask questions about existing operations, cost of making a sq. foot of glass
- Competitor/industry costs,
- Industry margins, our margins etc and how this new technology might help us. Try to find how this technology will help us save operational costs.

Step 3: Zero in on the core issue.

- E.g. our quality is suffering, hence our volumes are decreasing, if we don’t act now, we will keep losing market share, hence we need to invest.
- At the same time, test whether we really need to remain in the business. E.g. if the industry is shrinking, new products are coming in, there might not be any point in investing. In this case, would it be better off to invest in another project?

- Explore various viewpoints, but keep on narrowing down and then offer a recommendation with a backup plan. (A 30 second synthesis at the end, leave out the case facts, just how you came up with the recommendation). Start by saying, “I recommend that we …..because….and…and…”.

Additional Information:

- This company has only one, albeit large, facility. There are quite a few other glass producers.
- Margins and profits of the entire industry have been eroding for several years.
- There has been and continues to be some cannibalization by plastic and metals. However, glass remains the material of choice for many applications, especially food products.
- The main input material, sand, is inexpensive and plentiful.
- Some of this company’s competitors have already made a similar upgrade to their own process equipment.
- The key insight in this case is to recognize the high competitive intensity in this industry. The profit potential, at least in the short term, appears poor.
- Given the fact that there are too many players and too little profit, some consolidation and/or exit of some companies from the industry appears inevitable. This company must decide whether it is worth it to try to ride out this shakeout.
- At least in the short term, the return on the $1 million investment will likely not be adequate to justify. However, one interesting possible justification for making the investment might be to “dress up” the company in order to sell it.

MANUFACTURING PLANT

Question:

A corn feed company has eight manufacturing plants located in the Midwest. These plants service the entire United States. Their plant in Ohio is in need of refurbishing. The company has four possible options:

1. Refurbish the existing plant
2. Build a larger plant at the current location
3. Build a similar size plant at a new location
4. Build a larger plant at a new location

Which is the best option for this plant?

Approach:

There are two issues to this decision. The plant size and the plant location should be considered separately.

Size of Plant:

- The first consideration is the demand for the product.
- Corn feed is a commodity product. Pricing on the product is dependent on current corn prices as opposed to the manufacturing process.
- There are four main competitors – our company is the second largest. All four competitors have similar manufacturing processes and similar cost structure.
- The purposed larger plant will not give economies of scales not currently present at the existing plant.
- The capacity utilization is 65% which is industry standard.
- The current customers buy from all four manufacturers in order to guarantee supply.
- Currently demand is being met and there are no alternative uses for corn feed.

Conclusion: The only way to increase demand for corn feed and support a larger plant is through the reduction of the price per ton. This price reduction will be matched by all competitors and reduce the profitability of the industry. Best option is to maintain the current size of the manufacturing plant.

Location of Plant:

Transportation cost and perishability are the main issues with location. The transportation cost for the corn stock (raw material) is much higher than the cost of transporting the actual feed. The corn is gown in the Ohio area and the feed is sold to the East Coast. The raw material is perishable where as the corn feed can be stored for any length of time and easier to transport. Cost analysis of the transportation cost of feed versus raw materials should be completed. Included in this analysis would be the % of spoilage for longer transportation of corn stock.

Conclusion: The current plant is located close to the cornfields and this is the best location for the plant from the cost/benefit analysis.

COMPANY ACQUISITION

Question:

A client approaches you with a very open-ended question. He owns a large branched bank in Texas and wants to reduce his exposure to the banking business. With $100 million in losses, he hopes to find a new business to acquire, against which he can offset these losses. If the transaction is executed properly, you can carry forward losses from the banking business, over the next 15 years, reducing/eliminating the taxes you'd pay on the profitable business that you have acquired.

Possible Approach:

- Does he have any particular area of interest or expertise? No, except in banking which he specifically wants to avoid.
- Given the substantial size of the losses, he needs to find a company that will generate almost immediate profits on a rather grand scale. This pretty much rules out any start-ups.
- From the IRS perspective, can the new business be a foreign one? Good question, I haven't explored that route yet.
- It would he great if he could use the bank as an advantage - leverage it. What about hooking up with some multi-media company - the whole banking at home concept? Interesting. . .

Microsoft would be great - I doubt Bill Gates would sell. But that company offers him what he needs: profits on a big scale, future growth, something new and different. He could also look at mortgage-backed securities - a firm like Freddie Mac with profits in the tens of millions.

Wild Card and Miscellaneous Cases

AUSTRALIAN SKI SALES

Question:

A ski manufacturer (snow-skis) has developed a revolutionary new ski technology. You, knowing very little about skis, have stumbled across them, and have seen a chance to become the Australian distributor for the product. You are meeting them in 30 minutes and have to come up then with an estimate of the number of skis sold in Australia annually.

<u>Possible Approach</u>

- Since there are roughly five (5) major Australian ski resort areas, estimated capacity at about 5000 skiers each, season is about 12 weeks, most ski for one week, total is about 250,000 skiers.
- Estimated ski life is 5 years, therefore 50,000 skis/year sold in Australia.
- Hiring vs. owning makes little difference.

FRIDGE LIGHT

Question:

Tell me all the ways, practical or not, which you could use to determine whether the light goes off in a refrigerator, when you close the door.

Possible Approach

A random list of answers that ended working:

- With the door open, press the button that makes the light go on and off.
- Drill a hole in the door so that you can see inside when the door is closed.
- Find out the mean time to failure for these bulbs, close the door and open it after the expiration time to see if the light is burned out.
- Go to the production line, and perform a statistically valid test (appropriate number of samples) to determine whether the light always goes off (by pressing the button, etc.)
- Hook wires to the socket and perform a similar test when the door is closed.
- Place a sensitive thermometer (chilled to the refrigerator's temperature before testing) near the light bulb and close the door.
- Place some light sensitive material in the refrigerator to see if it is activated.

Additional Information:

- After I came up with about 5 responses, the interviewer actually said that my performance was adequate (of course implying that he'd recommend me for the next round) however, he wanted to continue searching for answers "just for fun."
- When we were done, I asked him if anyone else came up with interesting answers that I didn't mention he gave two.
  - Pick up the phone, dial the manufacturer and ask if the light goes off when you close the door.
  - If no one is in there to see the light go off, does it matter? (for those of you unfamiliar with this philosophical angle, it was originally stated as "if a tree falls in the forest and no one hears it, does it make any noise?) I acknowledged that I wouldn't have thought of that one in a million years, but it definitely shows some tremendous creativity. He agreed.
- This is also a great test of how well one responds under pressure. There were definitely a number of silent pauses while I racked my brain.

MOUNT FUJI

Question:

The government of Japan has employed us to find out how to move Mt. Fuji 100Km North. How would you approach this?

Approach:

The key here is to not dive right into answering the question. Stop and think before progressing - Why does the government want to move Mt. Fuji?

It turns out that that tourism to the mountain is down. The government wants to increase tourism and thought that if the mountain were closer to Tokyo, more people would come.

Think about alternatives:

- Offer cheap package tours to Mt. Fuji from Tokyo and Osaka.
- Lower road tolls if people are going to Mt. Fuji via car.
- Increase local and international advertising about the national treasure.
- Increase the frequency of trains to the mountain.
- Offer new attractions (more hotels, amusement parks, games, rides, super traditional restaurants, etc.)

Additional Information:

The interviewer then says, "OK, that's great information; but let's just suppose that moving the mountain is the best thing to do in this scenario. What would you do then?"

Approach:

The question now becomes a straight operations / optimization, guestimation case.

Estimate the volume of a cone and then start estimating the labor and machines needed to move the mountain. Additionally, bring in labor (the more labor employed will help the national unemployment statistics).

RECYCLED ALUMINIUM

Question:

You are in a meeting with a client who mentions that she is considering building a new plant. The new plant will require 100 million tons per year of recycled aluminum as an input. Your client turns to you and asks you if there is 100 million tons of recycled aluminum available in the U.S. on a yearly basis. You do not have that information at the top of your head. How can you answer the question on the spot?

Possible Approach

- I know that soda cans are made of aluminum. Let's assume that soda cans are the major source of recycled aluminum. Also, let's assume that people drink 5 cans of soda per day.
- 350 days / year x 5 cans / day / person = 1,750 cans per year per person.
- Let's assume there are 17.5 cans in a pound of aluminum.
- That means there are 100 pounds of aluminum per year per person.
- There are 250 million people in the United States.
- That means that there are 25,000 million pounds per year.
- Since 2,000 pounds = 1 ton, there are only 12.5 million tons of recycled aluminum available per year.

Thus there is not enough recycled aluminum available per year in the United States.

Additional Information:

- Don't make the math too difficult for yourself. It is acceptable and very wise to round off. For example, I used 17.5 cans in a pound and 350 days in a year as they are close enough and they make the calculations easier.
- Don't forget to state your assumptions - there are several assumptions you'll have to make to come to an answer. Make sure you state what they are. It is better to make an assumption that you are not sure of than to stop and not to get an answer. Once you have an answer, it is perfectly acceptable, and advisable to say "I've made several assumptions to come to this answer. One I am not sure of is my assumption about how many cans make up a pound. I said 17.4 cans are in a pound. If there were really twice that many, I would have to adjust my numbers accordingly. Of course that would not change my bottom line answer. There would still not be enough recycled aluminum.

U.S. GAS STATIONS

Question:

How many gas stations are there in the U.S.?

Possible Approach

There are two ways I thought of to approach this question:

- Population theory - In say, Menlo Park / Atherton, there are about 15 gas stations for about 40,000 people. In urban areas, there are many more people per gas station (say 150 in San Francisco for 700,000 people), while in rural areas, there are fewer people per station (in my hometown, there were three (3) gas stations for about 5,000 people). Add in a Fudge factor for truck stops in the middle of nowhere, and let's guesstimate that the average nation-wide (I know one isn't supposed to average averages, but this is consulting) is about as populated with stations as Menlo Park This is a ratio of one station per 2,667 people. There are 250 million people in the U.S. so that's around 90,000 stations.

- Note - one could just have used Menlo Park from the start, but the idea is not to get the answer but to think transparently. I threw in things like urban areas, people without cars, commercial transport etc to show that I was casting a net to test the reasonableness of my assumptions, regardless of the fact that I finished where I started.

- Two (2) - Patterns of demand and a little knowledge - My idea of the average gas station has 8 pumps. I have observed that, on average, four (4) pumps are in use during the 14 hours a day the station (average station) is open. Let's guess that the average station sells (14 hours x 6 fills / hr x 4 pumps x 10 gallons of gas) i.e., 3,360 gallons of gas / day. That's around 1.2 million gallons per year. Now, I know that all of the U.S. could fit into the front seats of all of the cars in the U.S., so lets assume there are 125 million cars on the road. If each car is driven for 12,000 miles at 20 miles per gallon, that implies (125 million x 12,000 miles/20mpg) i.e. 75 billion gallons of gas are consumed each year. Therefore 75 billion gallons / 1.2 million gallons / station / year - 62,500 stations.

- Note - I know that this is convoluted but more elegant solutions are available.

- Last I heard 80,000 or so. Remember the idea is not to get the right answer but to think logically, in a linear fashion, and net to a reasonable answer. That is 1 million stations is obviously too many where 1,000 is probably the number you personally have been to in your life.

Additional Information:

Given the interview conditions, it is worthwhile picking relatively easy numbers to work with rather than getting caught up in some highly complex mental arithmetic.

HEATHROW PASSENGERS

Question:

How many passengers go through Heathrow each year?

Possible Approach:

Interviewer not looking for the real number, but the process through which you arrive at it! Therefore you make assumptions.

I assumed:

- People going through Heathrow = Arrivals and Departures.
- Assume one plane lands and one plane leaves every 30 seconds.
- Assume airport is operational 365 days a year, and for 21 hours a day.
- Ask the interviewer what is the average passenger capacity of the planes (both arrivals and departures), e.g. 200.
- Ask if for example, 75% load rate is a fair assumption.
- You can then calculate the number.

Check that we ignored the double-counting issue of transient passengers (i.e. the same passengers both arrive and leave the airport - the interviewer hadn't considered this).

Keep the numbers simple when doing this - the actual number does not matter as much as the process.

MILLIONAIRE

Question:

Our client is a programming director for network television. She has been approached with the concept for a new prime-time game show where contestants have the opportunity to win one million dollars through answering a series of trivia questions. How would you help the programmer evaluate the opportunity?

Possible Approach:
Clearly the game show models ABC's popular *Who Wants to Become a Millionaire?* franchise. In general, starting with a profitability framework will help structure the analysis, but creative-thinking and an understanding of industry drivers will lead to differentiated answers.

- Many of the critical decisions which impact revenue have yet to be determined, and the consultant's recommendation should recognize and support choices that maximize the probability of success. The two immediate revenue streams are commercial advertising and in-show product promotion. Clearly the producer also has incentives to foster successful shows, as this will enhance the fees garnered from syndication. Finally, a great answer will address network effects across the programming schedule (i.e., a blockbuster program in one time slot will have spill-over effects into adjacent programming).
- A good answer will examine the chain of factors that lead to strong revenue. Popularity (as measured in weekly television ratings like Nielson) often directly correspond to the number of advertising spots and the dollars per 30 second spot that the show can command. However, ratings are a complex instrument. Certainly having a good product is essential to good ratings. But there are choices in the product definition – go after the mass market with generic questions, or a more targeted approach with sports trivia, yuppie trivia, etc. Mass market obviously has the larger potential, but a case could be made for significant capture of a targeted, demographically-attractive (18-34 year old male) audience. Another important decision point is time slot within the programming schedule, which dictates size of audience, competition, and network lineup.
- The second half of the success equation are costs. A good answer will identify the various components of cost in game show such as this – fixed production costs, promotion and marketing, opportunity cost of other programming to be developed, etc. The two most interesting cost components are the choice of host (talent) and the payout equation. For talent, the tradeoff lies among absolute cost and fit with target demographic (which translates into revenue potential). ABC obviously chose Regis Philbin, who likely commands a significant salary but also appeals to a wide audience and has established credibility / marketability. A more targeted, niche show would seek different characteristics. Alternatively, the producer could choose a no-name host, save salary costs, and hope the product itself sells. Secondly, the math behind the contestant payoff should be explored. An obvious realization is that the mean payout is significantly less than $1 million, as most contestants will answer incorrectly well before that. However, the producer will need to weigh saving money on the payout with a decline in audience interest (if the questions are so difficult that no one ever wins the million, it's likely enthusiasm would wane).

Conclusion:
At minimum, the consultant should break down the revenue and cost factors that will influence the program's success. Better answers will present an integrated recommendation, recognizing the connection points between choice of host / payout / timeslot / adjacent programming and success through targeted demographic, high ratings, and profitable advertising. Additional creative responses will acknowledge the positive impact of a successful, headline game show on the network's entire schedule (audience retention, promotion of complementary programming, etc.).

CRUISE SHIP LOGISTICS

Question:

A major pleasure cruise line has hired you to help them improve the loading and unloading of their ships while in port (i.e. Carnival). As the amount of supplies required has increased with the size of the ships and the number of passengers, they have found that there is no longer enough time to load and unload all of the necessary supplies without delaying the departure of the ship. What should they do?

Approach:

This problem requires a detailed analysis of the cruise ships logistics. Specifically, an analysis of the loading and unloading of the ship is required. Begin by gaining an understanding of the problem.

- How long are they in port? What is the layout of the port? Of the ship? What problems are they currently having?

Then analyze the specifics of the loading and unloading process (i.e. the supply chain).

- What are they loading and unloading from the ship? Where are they getting the supplies? Exactly how do the supplies get on the ship? Who is doing the loading and unloading?
- You should be trying to determine any bottlenecks in the system!!!

Once you've identified the bottlenecks, make recommendations for addressing them. Look for creative solutions or alternative processes!

Solution:

In this particular case you would have discovered a number of bottlenecks. Specifically, you would have determined that the loading and unloading of the ship is limited by time (8 hours); port layout (only room for one truck at a time); number of suppliers (purchase directly from individual producers vs. from one wholesaler); and ship layout (most used supplies are not easily accessible).

Recommendations might have included using a wholesaler to minimize the number of trucks entering the port; redesigning the storage of supplies on the ship to put the most used supplies near the loading door; increasing the number of fork trucks; and using other ports of call of the ship for loading and unloading of some of the materials.

CONSTRUCTION COMPANY

Question:

You are a consultant advising a construction company. The major line of business for your client is road construction. They have recently entered into the building construction. In past they have grown through Acquisitions. The COO has hired you to help them increase ROA.

Possible Approach:

While you are gathering your thoughts about the questions you are going to ask the interviewer, think of the components in ROA. The numerator is Income and denominator is Assets. So there are two ways you can increase the ROA. You either increase the income or decrease the Asset. You can do both if you want. Now that you have identified the drivers, you can start asking questions to narrow your options.

- You can start with asking the questions about ROA
  - How does ROA compared to your competitors?
  - Has it been so low for ever? Has it been going down? Any trends?

Ans : Competitors have better ROA than us. When we started it was good but then it has been going continuously down.

This gives you an idea that the problem is with the company and not with the Industry

- Now you can ask questions about the components of their income statement, one of the drivers of ROA
  - What is your profit margin?
  - How does it compare to the competitors?
  - Has the revenues gone up or down recently?
  - How does your COGS as % of revenue.

Ans : Our profit margins have been almost equivalent to those of competitors. We have not seen any drop in revenues it has been growing with the market. On the cost side we are not much off but there may be some opportunities.

This gives you an opening in the cost structure. Ask more questions

- If you don't know about the Industry ask about the cost structure in the Industry
- What is the labor cost?
- What are the other major costs from Raw Material perspective?

Ans : Labor costs are competitive . Major raw materials for us are concrete, crushed stone, steel etc. Is their any other cost you can think of.

This gives you an idea about the raw materials, can you do something to reduce that cost. Think of the other costs involved. Once you have analyzed these you are done with the Cost and revenue part of it.

- Next focus on the Assets.
  - Is there a way to reduce that?

What they are looking for:

If you just focused on the income statement, you did 25% job. The real issue was with the Assets. And the key to answering the questions is to listen to the question carefully. Company has been growing through acquisitions. As a result of that they had too many buildings, offices, equipments that were not utilized. They have just acquired it and it has been sitting on their balance sheet. You should have been able to at least ask questions about that and then the interviewer will lead you to the solution. The solution was to sell some of these unutilized assets. On the revenue side you also needed to touch on fact that they have started getting into a building construction. Is this a good business, how are they doing there. It turns out that they had a high profit margin for this set of business. To increase revenue they can increase the business in this area. On the cost side, the way to reduce the raw material cost was to vertically integrate with the stone crushers , as that was the major part of their raw material and owning that will help reduce cost.

REDEFINING A BUSINESS UNIT DIVISION

Question
A Multinational Pharmaceutical and Chemicals manufacturer has a 168 person ERP development center. Having completed over 50% of their business unit's (in total 5 excluding the ERP center) implementations the parent company is now trying to decide what to do with the organization. How would you evaluate their situation and what would you tell them to do?

Information to be given if asked:

Economy:
- 1995-2003 has been a period of rise and fall with many tribulations for multinationals
- German based this organization is facing lagging pick-up in the economy than in the US. Additionally, the major manufacturing businesses of these types of products have seen less turnaround.

Competitors:
The company:
- Interviewer asks: Does this matter?
- Interviewer asks: Where and how is this pertinent?
- Interviewer response: None of this matters

The Development Center:
- Interviewer asks: Who are they? What do you think?
- Interviewer response: Accenture, SAP, Deloitte, IBM, a large number of regional and local players
- Interviewer asks: What is the problem with these competitors and the important characteristics?
- Interviewer response: They are all lean, strong, smart, and now they were working on building their power back by acquiring every client possible
- Interviewer response: Some companies are actually willing to purchase their clients relationships
- Interviewee asks about prices: What Ask about prices? What does the ERP development center charge on per hour basis?
- Interviewer response: Our rates are 100 and 140 per hour.
- Interviewee asks about competitor prices? Interviewer gives you the following datasheet.

Developer – SAP

Supplier	Intermediate	Advanced	Manager	Senior
Company 1	48	58	68	75
Company 2	50	60	70	80
Company 3	50	60	70	80
Company 4	50	55	60	65
Company 5	55	65	80	90
Company 6	75	80	85	90
Company 7	50	60	70	85
Company 8	65	75	85	95

Functional Analyst – SAP

Supplier	Intermediate	Advanced	Manager	Senior
Company 1	65	80	95	110
Company 2	60	70	80	90

Company 3	65	70	80	90
Company 4	55	60	65	75
Company 5	65	80	100	110
Company 6	100	105	120	125
Company 7	60	70	80	90
Company 8	85	100	115	130

Technical Analyst – SAP

Supplier	Intermediate	Advanced	Manager	Senior
Company 1	48	54	60	Senior
Company 2	55	6	70	80
Company 3	55	60	65	65
Company 4	55	60	65	70
Company 5	60	75	90	105
Company 6	90	95	100	105
Company 7	49	54	64	64
Company 8	56	61	71	76
Company 6	90	95	100	105

- You should ask what type of firms these are?
    - Are these are regional players?
    - Are they the right competitor?
        - These are regional and they don't sell on brand so there may be other higher rates, It turns out for most purposes these are the companies our ERP division will be competing with.

Customers:
- Five corporate divisions
- 3 of the 5 have implemented ERP solutions; each time the solution is implemented the Division sets up their own management and services groups that will perform necessary upgrades, installs and any break-fix level work
- Significant system changes will require going back to the Development Centers
- The other 2 divisions will be implemented in the next 12-18 months

Company:
- The people in the company were originally put together from all of the different divisions, 5 years ago
- They are considered a $30 M revenue business in a 5B revenue company. What are the implications of this?
- They serve only an internal customer base and have no external customer base experience

Revenue Data: so what does this mean?

Headcount	
Total	168.0
Technical Analysts	34.0
Functional Analysts	109.0
Non-Billable	25.0

Rates (includes T&E)

Technical Analysts	$100.0
Functional Analysts	$140.0
Hours Per Year	**1,850.0**
Technical Analysts	1,850.0
Functional Analysts	1,850.0

This is what they should calculate:

Max Revenue Streams	
Technical Analysts	$6,290,000.0
Functional Analysts	$28,231,000.0
	$34,521,000.0

- They should also calculate if, there are 2000 work hours in a year, what the utilization is: 92.5%

Expense Data:

Average Cost per employee is: 220,000 (this is only the 143 people that are analysts)
SG&A is considered to be: 500,000 per month (this includes the 25 persons for overhead they should have realized from above)
If there are no other expenses/costs they are then the result is? $2.9 M of loss each year.

Is it reasonable to assume that people will work for clients, either internal or external for 92.5% of their time? No, that's tough…more like 80% at best. What does that mean? $7.6 M of loss each year.

Solution:

1. Finish the implementations and begin to rotate staff into the different divisions. EOD close down the Development Center in its current format. This may be redesigned for corporate needs or for potential other activities
   a. Next steps:
      i. Look at what local customer needs could be
      ii. Evaluate the services needs of the local market
      iii. Consider expansion of product lines to serve the company divisions

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