



# McGill Casebook 2013-2014

Your best resource for case interview preparation



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Faculty of Management  
Soutar Career Centre

Produced by the Management Consulting Association in collaboration with Roland Berger Strategy Consultants.



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# Introduction

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## *A word from the MCA*

The Management Consulting Association of the Desautels Faculty of Management is proud to present the first McGill casebook. Using this new reference, we hope McGill students will gain a thorough understanding of the consulting world and get the best advice possible on interview preparation.

Throughout the process of creating this book, the MCA has been fortunate enough to work alongside leaders in the consulting world in addition to McGill's experienced Career Services staff. As such, we've been adamant about tailoring the book to a McGill student's needs, highlighting key consulting trends in Canada as well as the rest of the world. Furthermore, a collection of sample cases and solving methods have been gathered from consulting firms across Canada to provide students with the best possible interview preparation.

We would like to say a special thank you to Roland Berger Strategy Consultants, our main sponsor and contributor. They have most generously provided us with access to their resources and case materials, and have also offered invaluable advice and support throughout the process.

Whether you are simply interested in learning about the consulting career, or if you have been preparing for the interview for the past couple of months, this book is for you. Through the combination of theory and practice, we hope to help you excel during this process. Ultimately, we hope this book helps you get into the mindset of a consultant, solving any problem with professionalism and passion.

Best regards,

The MCA



*A word from Desautels' Career Adviser – Julia Riscaldino*

The MCA and the Soutar Career Centre of the Desautels Faculty of Management have been working closely together to provide McGill students access to resources and professionals in the field of consulting in order to help them successfully prepare for consulting recruitment. Consulting weeks are now held in October and March to introduce 1<sup>st</sup> and 2<sup>nd</sup> year students to the world of consulting. In so doing, students are made aware of the importance of preparing for recruitment early on.

We cannot emphasize enough how important it is to practice many cases well before the recruitment period begins. The reality of consulting recruitment is that only a handful of positions are available for students in all faculties and across many universities. Students are encouraged to practice cases together and to join MCA and other groups that promote case work and offer students the possibility of practicing cases and getting feedback.

McGill students now have at their disposal a comprehensive casebook where they can not only learn about the consulting career path, but have resources to practice cases and prepare for interviews. In addition to the casebook, students are encouraged to visit their respective career centre in order to work with a career advisor and to obtain additional resources.



# **What is Consulting?**

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## *The Consulting Job*

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If you're reading this, we're assuming that you have more than a passing interest in the consulting industry, and probably have at least a working knowledge of what consultants do, so we won't go into the details. Essentially, consultants are hired to find problems and fix them. They are often referred to as "doctors for firms". They are hired to answer questions that companies either can't or don't have the time to answer. These questions typically involve problems with declining revenue, increasing costs or unfavorable cost structures, the product mix, the firm's strategic direction, and so on.

As an undergraduate or an MBA student, you will be hired at either the Analyst or Associate level. Titles may change from firm to firm; for example, McKinsey uses Business Analyst to describe an undergraduate hire, while BCG uses the term Business Associate. In general, however, the key roles and responsibilities remain the same. We have outlined the typical consulting career progression below, using McKinsey role titles for consistency. This is by no means applicable to all firms; however, it does a good job of describing the most common consulting career path.

### **Business Analyst**

Business Analysts are usually undergraduates who are hired right out of university. As a Business Analyst, expect to be responsible for most of the data crunching. Most Analysts have little to no client contact at the very beginning, but this can change a few months in, depending on your firm and manager. As most consulting firms have an up-or-out policy, BAs generally leave after 2-3 years to complete their MBAs or to work for other firms.

### **Associate**

Associates can be either new hires who have MBA designations, or Analysts returning from their MBAs. Associates generally take on a larger leadership role within an engagement. They tend to have a fair amount of client contact, and are usually responsible for putting together and delivering presentations. At the Associate level, the focus is less on data analysis (though it's still important), and more on synthesizing data into recommendations for the client.

### **Engagement Manager**

Engagement Managers are the drivers of the project. They work closely with both clients and the internal team to define the problem and deliver valuable insights. They also generally participate in the sale of new engagements to existing clients.

## **Associate Principal**

Associate Principals are those who are on-track to become Partners. Associate Principals often lead multiple projects at the same time, and are less involved in the day-to-day activities of each engagement. They spend lots of time counseling and advising clients, and of course selling new engagements.

## **Principal/Partner**

Principals or Partners are the top tier of consulting firms. They are responsible for driving the direction of the firm, and typically have great relationships with C-level executives in many industries. They serve as counselors and advisors to these executives, and tend to win most of the firm's engagements. If you join the firm as an Associate, it typically takes 6-8 years (at least) to make your way up to Partner.

### **A week in the life of an Analyst**

This section aims to describe typical activities in the life of an entry-level Analyst, based on McGill student experiences. If the Analyst is staffed on an engagement for an out-of-town client, he/she might be at the client site Monday-Thursday, and back in the office on Friday. However, this may vary from firm to firm, as some firms try to minimize travel for their consultants for the sake of work-life balance.

#### **Daily Activities**

- Daily touch points with other Analysts, Associates and Project Manager to update them on progress and plan for the day
- Data checking/analysis: become familiar with what each file from the client contains, determine if there are gaps or errors in the data that must be corrected. Communicate closely with client representative to determine if they have any additional data which could be useful, and to clarify points in the data that you are uncertain about
- Work on assigned deliverables; usually the creation of slide decks or quantitative analysis such as excel models, summary pivot tables etc.;
- If possible, take ownership of certain portions of the analysis and periodically update team on your progress
- Attend client meetings (if client is local). If client is not local, you might call in or travel there, depending on if your presence is necessary or not (and depending on the firm)

#### **Weekly/bi-weekly Activities**

- Participate in office teambuilding events
- Attend learning and development activities (excel training, industry updates etc. ;)
- Schedule lunches with colleagues to build your network

# *The Consulting Industry*

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According to an article in the Economist titled “*To the brainy, the spoils*”, the top 3 strategy consulting firms (McKinsey, BCG & Bain, or more commonly known as MBB), grew revenues by 12.4%, 14.5% and 17.4% respectively in 2011. All 3 have offices across the globe, and are continuing to open more. The author believes this growth is due to “big trends that befuddle clients”, such as Obama’s health care act and the Dodd-Frank financial reform, both of which have boosted consulting work in the health care and financial sector.

No matter what the reason, the consulting industry has experienced above average growth in the past several years. In this section, we aim to explore key trends in the industry, and the path in which it is headed.

## **1. Implementation & Operations**

In recent years of tight economic budgets, companies are reluctant to spend precious resources on intangible outputs. In order to get a larger slice of the pie, large consulting firms have increasingly moved into tasks outside of the traditional strategy realm, including implementations and operations, which was traditionally the domain of firms such as IBM and Accenture.

## **2. Re-rise of The Big 4**

In the early 2000s, the Big 4 Accounting firms (PwC, Deloitte, Ernst & Young and KPMG) began making moves into the consulting space. However, following several highly publicized scandals over accounting practices, most began divestiture of their consulting units to comply with tighter regulatory security. In recent years, this trend has somewhat reversed, and the Big 4 are rapidly rebuilding their management consulting businesses again. Most recently, Deloitte acquired Monitor in January of this year, KPMG bought SECOR in July 2012, and PwC bought PTRM, an operations consultancy, in 2011. It remains to be seen if the Big 4 will be able to challenge MBB and successfully enter into the elite strategy consulting space.

## **3. Internal corporate consulting groups**

Outside of the traditional management consulting space, many corporations have begun to set up their own internal consulting groups, hiring from either within their own corporations, or from external consulting firms. Internal consulting groups are often formed around a number of practice areas. Companies who have internal consulting groups include Dell, Amazon, Amex, Johnson & Johnson, Motorola and IBM.

#### **4. Specialization**

As clients are increasingly valuing specialized knowledge instead of pure brainpower, firms are trending towards specialization. In keeping with this trend, firms are seeking to employ more experienced hires, including industry experts and those with consulting backgrounds, rather than fresh grads (which may be bad news for us). However, on the bright side, recruitment activity has picked up significantly in the past several years, so the net effect might be positive after all.

## *Consulting Firms in North America*

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The following is by no means exhaustive, but it lists some of the larger consulting firms with a presence in North America, organized by specialty. Keep in mind that there are also firms with large internal consulting teams (such as Capital One), that we have not mentioned here.

### **Strategy**

- McKinsey & Company
- The Boston Consulting Group
- Bain & Company
- Oliver Wyman
- Booz & Company
- Roland Berger Strategy Consultants
- A.T Kearney
- Monitor Deloitte
- PricewaterhouseCoopers
- Ernst & Young
- KPMG-SECOR
- Towers Watson
- A.T. Kearney
- Arthur D. Little

### **Human Resources**

- Buck Consultants
- Hay Group
- Hewitt Associates
- Mercer
- Towers Watson

### **Information Technology**

- International Business Machines
- Accenture
- CapGemini
- CGI

### **Niche/Boutique Firms**

- Analysis Group
- IMS Health
- L.E.K Consulting
- Marakon
- ZS Associates

# Consulting at McGill

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## **Management Consulting Association (all faculties)**

If you are looking to learn more about consulting and gain access to resources for recruitment preparation, the MCA should naturally be your first stop. Members get access to regular email updates regarding our many programs, including a buddy system as well as the opportunity to apply to Accent on the Community (see below).

## **Soutar Career Centre for Desautels students**

Unsurprisingly, Career Services should be high up on your list as well. Advisers have a wealth of resources available to help you decide on the right career path, as well as the knowledge and experience to get you there. Consulting career advisors can help you with job search strategies and behavioral interview preps, among other topics. Career Services has drop-in hours on Monday to Friday from 3-4pm, or you can call 514-398-2996 to make an appointment. BCom students also have access to the [BCom Career Portal](#) ([www.mcgill.ca/desautels-career](http://www.mcgill.ca/desautels-career)) which includes resources such as the BCom Career Handbook (contains information on CV writing, interviewing, and more), Career Guides for different areas of business including consulting as well as external resources such as the Vault Guides, job boards, case interview materials, lists of consulting firms, and more.

It's important to start getting involved in extracurricular activities early on in your academic career, not just so you'll have something to put on your CV (though that helps), but because getting involved gives you the opportunity to figure out what you enjoy doing, and determine which career paths will bring you the most satisfaction.

If you're a U1 or U2 looking to get involved on campus, there are many organizations and competitions that you can partake in to gain experience. The list below is mostly catered to management students, but a couple of activities are open to non-management students as well. For students in faculties other than management see the SSMU clubs listing <http://ssmu.mcgill.ca/clubs-services/about-clubs/clubs/> and visit your career centre.

## **McGill Not-for-Profit Consulting (all faculties)**

The McGill Not-For-Profit Consulting program began in 2008 with the idea that students should have the opportunity to apply lessons from the classroom to the real world while giving back to the Montreal community. The program represents a partnership between Desautels, Oliver Wyman, and McKinsey and Company, providing committed students with an amazing opportunity to gain real world consulting experience in a supportive environment. Selected graduate and undergraduate students have the opportunity to work on a project with a local NGO of their choice, for which they can gain 3 credits in the Winter term for MGPO 434 (undergraduate) and BUSA 690 (Masters).

The program begins October 20 and ends in April. For more information on the application process, visit <http://www.mcgill.ca/desautels/beyond-business/students-difference/mnfpc/application-process>.

### **Accent on the Community (all faculties)**

Accent On the Community is a pro-bono consulting project that is run by Accenture and the MCA every year. It is a 6-week program in September where students work to solve problems that local Non-Profit Organizations are facing. The teams of students are mentored by Accenture consultants to give them direction and ensure their work is of the highest standard. This project provides an opportunity for dynamic and bright students to gain real-life consulting experience, network with Accenture and gives them an opportunity to give back to our local community. For more information on the application process, visit the MCA's website at <http://consultingmcgill.com>.

### **Case Competitions**

There are a variety of internal, external, and even international case competitions that Management students are able to participate in. To be eligible to compete in the Commerce Games (JDC), Queen's University's Inter-Collegiate Business Competition (ICBC), and international competitions such as McGill's MMICC, USC's MICC, Belgrade's BBICC, Georgetown's McDonough Hilltop Business Strategy Challenge and more, you must be enrolled in **BUSA 499 – Case Analysis and Presentation**, taught by Professor Richard Donovan every Fall semester. Professor Donovan usually holds an information session in lieu of the first class, and applications open right after. The process is fairly quick, so make sure to keep an eye out for announcements, and e-mail Professor Donovan at [richard.donovan@mcgill.ca](mailto:richard.donovan@mcgill.ca) for more information.

The **Desautels Management Competition Committee** is responsible for the selection of delegates for all other inter-university case competitions, including Happening Marketing (HM), Financial Open (FO) and JDC Central (JDCC). These competitions also include non-case components, such as Sports, Social, Quizzes, Stock Simulations and Debates, and applications are also accepted for volunteers and motivators. Participating in one of the non-case components is a great way to experience case competitions for the first time, as well as gain exposure to corporate sponsors who will likely be recruiting at these events. For more information on the application process, visit <http://dmcc.musonline.com>.

In addition to the above, McGill hosts numerous internal case competitions, many of which are open to students from all faculties. A few from the past year include the IBM Case Competition, the annual Graduating Case Competition (GCC) and U2CC, the Desautels Management Leadership Seminar (DMLS), the Entertainment Management Conference (EMC), SSMU Sustainability Case Competition, and DECA.

If that still does not satisfy you, the Management Undergraduate Society receives numerous invitations to other competitions every year. These invitations are sent out via their weekly mass e-mail, and some are also posted here: <http://musonline.com/competitions/all>.

To conclude this section, although many consultants will tell you that case competitions are not very representative of their day-to-day work, participating in such competitions shows an avid interest in consulting, and will more likely than not differentiate you from the numerous other applicants who all “enjoy fast-paced environments” and “love to be challenged”. You will also get the opportunity to meet intelligent, like-minded students from all across Canada and the rest of the world, as well as network with company representatives who are often present at these events. It’s not unheard of for an impressive student to be offered a job by one of the judges, so polish up your CV and start getting involved now!

### **Consulting Hiring Statistics for 2012/2013**

Thanks to the Soutar Career Center, we have been able to obtain an estimate of hiring statistics at Desautels for the 2012/2013 recruitment season. Keep in mind that not all students respond to surveys, so these might not be 100% accurate.

- 44+ BCom graduating students obtained an interview with a consulting firm (roughly 1/3 had interviews with more than one firm).
- 17+ BCom students received an offer in September during full-time recruitment.
- 35+ BCom U2 students obtained an interview with a consulting firm (approx. 5 had interviews with more than one firm).
- 9+ BCom U2 students received an offer in consulting for this summer.

# Getting the Interview

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## *Networking*

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Networking is a great way to get a head start on building your professional relationships. Even if you don't get the job, keep in touch and you might be notified of an opening later on. It has been said that networking results in an average of 60-80% of all job offers.

Take a second to think about the hundreds or thousands of applications that firms receive every day. Many of those applicants are probably just as outstanding as you are on paper. The only way to set yourself apart is to network, and do it well. Recruiters and interviewers will remember the applicants with whom they had interesting and stimulating conversations, not the ones who stood in a corner munching on the free snacks.

### Tips

The following are a number of tips to help you get started:

- ✓ Have a 30-second pitch ready about who you are and why you are at that particular event. Make sure it's not too long as no one will want to listen to you drone on and on.
- ✓ Don't be afraid to ask for business cards and ask if you can send them a follow-up email.
- ✓ With the follow-up email, make sure to start by mentioning a point or two you discussed with them during the event. You might find it helpful to write those down on their cards during the events for later reference.
- ✓ Go to information sessions to try to capture the unique element of each firm (you can use this knowledge when writing your cover letter).
- ✓ Don't skip out on information sessions because you've been to one for the same company before. Recurrent visits will help you get more familiar with the recruiters and will reflect positively on you.
- ✓ Arrive early during information sessions to talk to consultants before the official networking period at the end, when there will be a crowd of students around them.
- ✓ If you said you were going to attend an information session, BE THERE. Firms take note of who attends and who doesn't, and you will likely not be offered an interview if you fail to show up with no notice.
- ✓ Try to find a common interest (outside of consulting), to ensure that the conversation is interesting and pleasurable for both parties.
- ✓ Keep your phone firmly in your pocket; only take it out if you need to, and in an area away from the networking session.
- ✓ **Network in the off-season**, not just around recruitment, as it shows legitimate interest instead of just asking someone for something when you need it.

- ✓ You can ask people you're networked with to review your resume or even practice a case or two with you. Firms have certain recruitment targets that everyone is supposed to help meet, so it's actually part of their job. Don't be afraid to (politely) ask.
- ✓ If you make it to interviews, keep in touch with your interviewers and anyone else you might have met through the recruiting process, as it gives you an opportunity to get meaningful feedback.
- ✓ If you want to apply to an "alternate" office, connect with consultants there through people you have met locally or cold-calling/emailing.
- ✓ Don't be too pushy, but always follow up just in case someone was busy the first time.
  - If you email once and get no response, wait a while and email again. If they don't reply the second time, let it go. Not everyone is equally keen on helping, or free enough to do so.
  - If you do get a response, ask for less instead of more. For example, asking for a 15 minute call sounds a lot more reasonable and less demanding than asking for an hour long in-person chat.

### **Sample Questions**

Here is a list of sample questions you can use to start talking with the recruiters. This is by no means exhaustive, but it should give you a good start to the conversation. Be sure to add questions of your own to the list and know these questions in advance.

- Why did you choose consulting? (If the recruiter has shared his previous background information during the session then incorporate that into the question to show interest. E.g. You ran a local bookstore before working in consulting. Why did you choose to do that?)
- What do you like most about your job?
- What do you dislike about it?
- What kind of experience or training is required?
- How can I prepare to be an effective consultant?
- How do you stay current in your knowledge?
- When you think of big projects you worked on, does any specific project stand out? Can you talk about that?

In many cases, recruiters will specifically ask you to address them with questions on specific topics, such as travel, interview prep... Make sure to listen to this and write it down.

## FAQ

1. *How do I dress to a networking coffee?*
  - Business/smart casual, better overdressed than underdressed.
2. *How do I ask to have coffee with someone I've been emailing?*
  - See if they're receptive to emails first. You can ask for a 20-30 minute meeting where you would like to ask a few questions on the consulting career path, ask for advice on your strategy for recruitment, etc.
3. *How will my networking benefit me?*
  - Obtain advice that can help during recruitment.
  - Learn more about a particular consulting firm.
  - Opportunity to demonstrate keen interest in the field/organization; thereby making you more memorable to recruiters.
  - Build potentially long lasting and fruitful business relationships.
  - Opens the door to future opportunities.

## *CV Preparation*

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When consultants scan a resume, they are mainly looking for evidence of the following skills:

### **Leadership and impact**

Consultants are typically very interested in the personal impact you have had on your peers/colleagues/groups, as they want to know how you have made a difference in your environment. This usually encompasses your results and achievements, preferably quantifiable (amount raised, time contributed, % improvement). It can also include unusual or outstanding responsibilities and challenges, your prior track record in managing others, or your development curve and advancement path.

### **Quantitative skills**

Naturally, quantitative skills are essential too, as your main responsibility as an entry-level Analyst/Associate will be to crunch large amounts of data. You may choose to include past accomplishments (test scores, academic awards or competitions) and prior work experience involving numbers. If you are majoring in a quantitative field such as Statistics or Finance, it is probably not necessary to emphasize your quantitative ability. On the other hand, if you are majoring in a qualitative field such as Political Science, it would probably be helpful to stress this ability in both your work and extracurricular experience.

### **Analytics and problem solving**

Most consultants are able to boil their jobs down to one main function: problem-solving. As problem-solving is the core of consulting work, your CV should clearly impart your ability to do so, highlighting activities that required you to perform high-level analysis, or situations where you were responsible for resolving certain issues. These could also include specific problem-solving initiatives that you started and successfully concluded, such as implementing a more efficient recruitment process for your club.

### **Presentation and communication**

Communication is especially important as a consultant, as your analysis means little if you are unable to relay it to your clients successfully. Thus, you should strive to include examples of prior roles or achievements where you were required to communicate (both written and orally) effectively and efficiently.

## Teamwork

Consulting is very much a team job. Consultants always work in teams of varying size, depending on the scope of the engagement. You will likely be in constant contact with your team members, and thus teamwork is an essential skill. You should highlight your history of successfully working in teams, including the number of people you have worked with and how that has grown over time. You could also include your function in various teams (leader, driver, creative...), or examples of how you have successfully coordinated cross-functional efforts (for example, a collaboration between your club and another).

## Tips

- ✓ If you are an undergraduate or MBA student with less than 5 years of full-time work experience, your CV should ideally be 1 page long. Remember, recruiters often spend less than 1 minute on a CV, and you should strive to make yours as concise as possible.
- ✓ The resume is a snapshot of yourself, and the recruiter will not have a lot of time to look through it. You should therefore focus on the elements you are most proud of. *To do so, you may want to add extra bullets for the jobs or activities you want the recruiter to focus on more.*
- ✓ Keep two things in mind when creating the bullet points for your jobs and activities:
  - Firstly, QUANTIFY. Consultants want to be able to see tangible and concrete results that help them understand your true role. For example, instead of saying: "Worked as a tour guide in Spain"; say "Led a group of 300+ people from such and such firm for 3 weeks in Spain".
  - Second, focus on KEY TRANSFERABLE SKILLS. A trick to this is to ask yourself: So what? In many cases, something you thought was useless could be exactly what the company is looking for. For example, instead of saying: "Helped in the analysis of the client's financials"; say: "Worked in teams of 3 to analyze the financials of 20 different medium to large corporate firms". In this case, you are showing the interviewer that you are able to work on a team in more than one occasion and succeed.
- ✓ Use action words to brainstorm ways to start a bullet point – see the list included below for ideas.
- ✓ Add unique hobbies and interests. Consultants also want to know that you are an interesting person who they will enjoy working long hours with. Instead of saying you enjoy travelling, say that you are a globetrotter who's visited over 30 countries. If you list something as a hobby or interest, be ready to tell a story about it to interviewers.
- ✓ Make sure you can go through all the main points in your CV without looking at it. This could come in handy when asked to guide the interviewer through your CV.

### List of Action Verbs

Calculate	Compile	Complete
Conduct	Construct	Deliver
Coordinate	Manage	Consolidate
Detect	Determine	Develop
Discover	Eliminate	Establish
Examine	Expand	Generate
Identify	Implement	Improve
Increase	Initiate	Introduce
Initiate	Result	Make
Invent	Launch	Lead
Maintain	Monitor	Negotiate
Organize	Plan	Persuade
Process	Present	Produce
Produce	Create	Design
Provide	Reduce	Research
Schedule	Solve	Strengthen
Train	Update	Win

For a longer list of action verbs, visit the BCom Career Portal.

## **Cover Letter Preparation**

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There are two main points you should be trying to get across in a cover letter: why the firm should choose you and why you've chosen the firm in question.

As such, try to avoid generic terms as much as possible. Instead of saying that (*firm name*) is an international organization offering the opportunity for personal and professional development, mention the name of the program that caught your interest and talk about the specific office that attracts you and why.

Don't forget that you are also trying to sell yourself to the firm, so relate concrete examples of times that you've displayed the necessary skills (listed above). Do not merely replicate the information you have listed in your CV, but go into more detail when appropriate. If, after reading your cover letter, you can't help but utter "So what?" then you know you need to get back to the drawing board. What is your unique story? You want to be remembered. A great candidate has the ability to get and maintain the reader's attention with information that indicates he/she has a proven track record of successful experiences demonstrating drive, passion, a craving for challenges and incredible problem-solving ability. This is what consulting firms are looking for.

Always remember that you are writing to a consultant, and consultants love structure. As such, make sure to structure your cover letter well. Your points should flow from one to another, and be connected in a way that makes logical sense. You could start with why you are interested in consulting, followed by why this firm in particular, and then why you would be a great fit for the firm. However, this is only one potential structure; the important thing is to ensure that your cover letter is well organized and easy to read.

Have at least 2-3 other people read over your cover letter before you send it. Make sure to spell check and be careful if you ever replace a firm's name with another. If Oliver Wyman receives a cover letter addressed to McKinsey, your application will definitely be going into the no pile.

### **FAQ**

1. *Should I mention the names of people I've networked with?*
  - If you know they will remember you, yes. Mention what you talked about and why this conversation confirmed your interest in the firm.
2. *If my major GPA is significantly better than my CGPA, which should be on my resume?*
  - Many students get bogged down by the GPA and how to indicate it. While mentioning both the major and overall GPAs would highlight that your grades in your major are strong, be careful of getting too 'creative' in coming up with a 'good' number; never mislead the reader in any way, and be accurate. It takes a long time to earn credibility and no time to lose it.

3. *What from high school should be on my resume?*
  - Awards for academic or other achievements (community, sports, other). Try to include only the most prestigious awards (Duke of Edinburgh Gold) and known scholarships, rather than a laundry list of awards that no one has heard of.
  - If your GPA/average was good in high school, you can include that too.
4. *When is a work/extracurricular/volunteer experience considered to be too old?*
  - Most experiences pre-university, but not all. If a particular experience/activity you were involved in while in High School is really unique and has helped shape who you are, it could be included.
5. *Is it appropriate to put scholarship winnings on a resume? Should I add the amount?*
  - Scholarships awarded, yes, winnings amounts, no.
6. *Do I need to write “References available upon request”?*
  - No, it goes without saying that if you are asked for references you should be able to provide 2-3. Prepare them ahead of time.
7. *Do I need a profile/objective statement/skill summary etc.?*
  - No, summaries or profiles work well for individuals who have significant work experience and can highlight their expertise in this section. Students should begin their resume with Education.
8. *How good do I need to be at a language/tech skill to put it on my resume?*
  - You have to have at least a working knowledge of the skill. When it comes to languages, indicate whether you have: conversational French, intermediate Spanish or fluent English (if not your main language). There is no need to indicate whether a language is your native tongue.
9. *How animated/personal (exclamation marks, stories) can I be in a cover letter?*
  - While it is important to convey ‘your unique story’ in a cover letter, you want to remain professional, never personal. Avoid colloquialisms and exclamation marks.
10. *What if I don’t know to whom I should address my cover letter?*
  - Think ahead. Find out at the company information session; the recruitment team will be able to tell you.

# Acing the Interview

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## The Interview Process

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### Overview

The typical consulting interview usually consists of 2 rounds, both of which are a combination of fit and case interviews. Typically, you meet several consultants, managers or even partners in each round. Some firms, such as Roland Berger, Oliver Wyman and McKinsey, will require you to write a standardized test to assess your analytical and quantitative skills. This test is usually administered before the first round interview. Preparing for this type of test is difficult, as it is usually designed to test your ability to think under pressure, and some are not even meant to be completed. However, practicing math drills, and using online practice tests can be helpful.

We've compiled a list of interview processes at specific firms (as of 2012-2013) for your reference, but keep in mind that formats can change from year to year, so make sure to read up on each particular firm to prepare for different processes. This information has been kindly provided to us by students who have undergone the recruiting process at the firms in question.

### McKinsey

- 1<sup>st</sup> round interview: two 45 minute case and behavioral interviews with different people (25 min of case, 20 min detailed personal impact)
- Final round: three 45 minute interviews (25 min of case, 20 min personal impact)

### Boston Consulting Group

- Usually includes many graphs and tables.
- 1<sup>st</sup> round: two interviews (50 minutes – 30 min case, 20 min behavioral)
- Final round: three interviews (50 minutes – 30 min case, 20 min behavioral)
  - Non-evaluative coffee chat and cocktail with final round

### Accenture

- 1<sup>st</sup> round: one 30-45 minute case interview, one 30-45 minute behavioral interview with market sizing question
- Second round: one 30-45 minute case interview, one 30-45 minute behavioral interview

### Monitor Deloitte

- Since Deloitte's acquisition of Monitor, the interview formats may change depending on whether you get Monitor-style written cases or Deloitte-style verbal cases. The format below relates to Monitor-style cases
- 1<sup>st</sup> round: two 45 minute case interviews (20 minutes reading time independently, 25 minutes with interviewer)

- 2<sup>nd</sup> round: five 30-minute fit interviews, one 3-hour group case (20 minutes independent reading, alternating group discussion and presentation with follow-up questions)
  - Non-evaluative cocktail and dinner with final rounds

### **Bain**

- 1<sup>st</sup> round: two 30 minute case interviews
- 2<sup>nd</sup> round: two 45 minute case interviews and an experience interview (resume and behavioral, with a mini-case)

### **KPMG-SECOR**

- 1<sup>st</sup> round: one hour interview (30 min fit interview, 30 min case interview)
- 2<sup>nd</sup> round: two 1 hour case interviews
- 3<sup>rd</sup> round: two 1 hour fit interviews

### **Roland Berger**

- Standardized Test
- 1st round: two 45 minute interviews (20 min fit interview+ 25 min case interview)
- 2nd round: two 1 hour case interviews

### **Oliver Wyman**

- Standardized test
- 1st round: two 30 minute case interviews
- 2nd round: four 45 minute interviews (3 case interview + 1 fit interview)

### **PwC Consulting**

- 1st round: 30 minute fit interview on the phone
- 2nd round: 30 minute fit interview on the phone + 1h group assignment + 30 minute written assignment

## **Fit Interview**

The key to a fit interview is to come prepared. You must be able to readily reel off anecdotes about times when you demonstrated leadership, worked well in a team, or solved a difficult situation in a creative way. In order to do this, you have to know yourself pretty well. In order to prepare for fit interviews, we recommend using the activity table below to sketch out your stories. Your anecdotes should typically be presented using the STAR format – Situation, Task, Action, and Result. The interviewer will mostly likely probe you on your anecdotes if they feel that you have not developed them fully, so be prepared to justify your actions and answer questions on what you could have done better. You can finish by stating what you learned or took away from the experience and how it ties in with the role you are being interviewed for.

Skills	Activities			
	Situation	Task	Action	Result
Leadership				
Personal Impact				
Teamwork				
Problem-Solving				

### Questions you should prepare for:

- ✓ Tell me about yourself.
- ✓ Why do you want to work in consulting?
- ✓ Why do you want to work for X?
- ✓ Why do you think you are the best fit?
- ✓ What is your greatest strength/weakness?
- ✓ Tell me about a time you failed.
- ✓ Tell me about a time you showed initiative.
- ✓ Tell me about a time you demonstrated leadership skills.
- ✓ Tell me about a time you worked in a team and there was a conflict.
- ✓ Tell me about a time you convinced others to follow your lead.
- ✓ What are three words that friends would use to describe you?
- ✓ Who is your favorite leader? Why?
- ✓ What was your biggest challenge in life?
- ✓ What are you most proud of in your life?

## Case Interviews

The case interview may seem tough, but it's really just meant to test your analytical and presentation skills. The interviewers want to see that you are able to think clearly, logically, and that you are able to structure these thoughts and present them under pressure. This is very similar to what consultants are required to do on a day-to-day basis, and they want to know that you will be able to handle the job before they hire you.

Another point to keep in mind is that a case is essentially a simulation of what consultants do in real life. For that reason, think of the interviewer as a client who has hired you to **simplify and clarify**, and not to impress and bedazzle. While working on a case, always keep in mind that you have to be client-friendly, taking the clearer and more concise road to the solution. Ideally, the client should follow your thoughts and be able to reach the same hypotheses and conclusions at the same time as you do; or maybe just a bit later since you are the consultant.

This section will take you through the types of case interviews, how to solve each of them, and how to practice for them.

## A. Types of Case Interviews

- ✓ **Business Case:** The majority of consulting interviews are Business Cases because it is the only case type that really tests for the skills that a consultancy is looking for. Additionally, it is a good representation of what consultants do on day to day basis. In a business case, the interviewer presents a business situation and asks the interviewee to 'solve' it through discussion. This is where frameworks and, more importantly, your ability to think critically and analytically, come into play. An example of a business case situation is the following:
  - Your clients are an insurance company. They want to launch a new e-commerce campaign that is synergistic with their current products. How do you decide what this online business should sell and who it should sell to?
- ✓ **Estimation or Market-sizing Case:** Estimation questions can be stand-alone or can be incorporated into a Business Case. In many cases, the interviewer will come up with the question on the spot and ask you to estimate a specific market. With these types of questions, use a methodical approach, starting with a known population and narrowing it down through logical assumptions. The interviewer is testing your ability to make connections in order to get a good estimate of the answer. He or she is also observing your quantitative skills and ease with numbers. It could be helpful to memorize the populations of Canada and the U.S. to help you start the question. An example estimation case question is the following:
  - How many computer monitors are sold in Canada each year?
- ✓ **Brainteaser:** Brainteasers are rare in a case interview and are seldom stand-alone. An example brainteaser is the following:
  - What is the angle between the big and small hands on your watch if the time is a quarter past three?

## B. Solving a Case Interview

### Business Cases

When solving business cases, always remember to tackle them one step at a time. According to Victor Cheng, the best way to approach a case is in a methodical, almost mechanical way, at first. To do so, frameworks (described below) and systematic steps should be used. After structuring the problem and gathering basic information for the case, the rest of the analysis is intuitive and you will most definitely get better as you practice more cases.

The following four steps can help you approach a case in a more structured manner:



### **Step 1: Listen & Clarify**

Getting comfortable with this is vital to mastering cases.

The interviewer will start by introducing you to the case, he/she will typically give you a bit of background about the firm, describe the specific business situation and give you a bit of information about the goal of the engagement. Some of this information will be important; other bits will prove to be irrelevant. Regardless, you need to **listen very carefully** to all of the information and take notes on it. Practicing your note taking skills can prove to be handy.

After you've been introduced to the case, you may want to ask **clarifying questions**. The interviewer may have used terms that you are not familiar with (e.g. an investment banking firm is looking to acquire its competitor through a leveraged buyout). Additionally, you may want to get a better feel of what a company does or is facing, so feel free to ask short questions about what was stated before in order to get a better understanding. Finally, when you think you understand what the interviewer has just said, then go ahead and **state it out loud** (e.g. so our company, a local tire manufacturer, is looking to expand to a different market in order to *increase short-term profits and long-term brand recognition*). You want me to decide what we should be looking for in this expansion). Doing so will help you hear the problem out loud, in a concise manner, and will also demonstrate that you are on the right track. Should you have misunderstood any part of the case, it's better that the interviewer correct you now rather than 10 minutes into the interview.

### **Step 2: Structure**

Interviewers usually say that they knew that so and so was the right candidate from the first five minutes. This step is what they are referring to.

After clarifying what the business situation is, you should politely ask the interviewer if he/she would mind if you take a few minutes to think about how you should proceed (Would you mind if I take a few minute to collect my thoughts?). There is no right or wrong amount of time for this step, but try to aim for under 1 minute so that the silence doesn't become too apparent.

During this time, you should be **thinking about and writing the structure** you will be using to start the case. The structure can be:

- Created by you and a reflection of how you believe the problem can be solved. This method of structuring is a bit more advanced since you have to be logical and coherent (and MECE) on the spot.
- Using a framework that you have learned (look at frameworks below) which will help you start off a certain problem.

- A combination of both, where you tailor your framework to a certain situation (delete some of its elements or add some to it). This is probably the most recommended and effective approach to solving cases as it you are able to start out confidently and to use intuition when determining next steps.

Once you have thought of a good structure to follow, remember to:

- **Write** down the structure as clearly as time allows, to show it to the interviewer.
- **Communicate** the structure to the interviewer to make sure he/she understands your train of thought. This can also lead to unanticipated help from the interviewer who might guide you through your structure and point out where you should start.
- **Refer** to the structure throughout the case and make sure to go back to it whenever you are stuck.
- **Identify** key issues in the structure as you go along and **mark them down**.

The structure step of the case interview should take 5 – 10 minutes depending on the case.

### **Step 3: Analyze**

You now have a structure to follow. In this step, you should:

- **Ask** the interviewer questions to zoom in on the problem or solution. You should start out with more broad questions (e.g. How have our revenues been doing this year?) and gradually focus your questions as you go down the issue tree (e.g. interesting, so has there been a shift in our client demographic from teenage males to middle-aged females?)
- **Collect** the information and fill it in the structure appropriately. Write down as much of it as possible. And always circle numbers and figures that you think will be helpful for future calculations.
- **Develop hypotheses** based on the information received. You do this after a certain pattern starts to emerge from the data. Ideally, you would tell the interviewer where you think you should be going with the information given in the form of a hypothesis (e.g. we've been losing a lot of our high-end clients during the past few months while maintaining the same number of total clients. My hypothesis is that our low-end clients are finding more value from the service we are providing and I feel I should examine this idea further. Does this seem reasonable to you?) Doing this will allow the interviewer to follow your thoughts and, as an added bonus, give you marks for organized thinking.
- **Synthesize** the information when you feel it is necessary. The synthesis should **always** be based on data and not guess work. The synthesis could also be seen as a mini-conclusion; closing a certain path or establishing a new mini-situation that will be examined next (e.g. from the data I've collected so far in the form of client surveys, our service is no longer attractive to our high-end clientele because of the availability of better substitutes in the market. Our low-end clients, however, are still benefitting from the price we offer with our solution. Since upgrading our

service would involve developing new core competencies, which would take a significant amount of time, I would now like to explore ways to engage our low-end clientele instead).

In addition to the above stages, keep the following in mind:

- Remember that the interview should be a dialogue. In addition to your analytical skills, an interviewer is looking to see how you convey your message and how you interact with a client. Try to avoid staring a lot at your paper and writing down your thoughts. Rather, voice your thoughts and speak out loud as much as you can to engage the interviewer, or the client, in the situation. You can even do calculations out loud. Should you reach a dead end in a specific idea branch, think out loud and say that you want to follow-up on the issue with the next highest priority.
- Your questions should be justifiable and follow a sequence. A rule of thumb is to always ask the questions that further the data you already have.
- Systematically follow your structure. Should you reach a dead end, go up your issue tree and start to examine the issue of next highest priority. The interviewer will appreciate your clear thinking.
- When doing calculations, explain all the steps you are taking to the interviewer. Interviewers will appreciate that and will coach you through a miscalculation.
- It's always good, but sometimes a bit difficult, to number the situations you will be tackling next and go about doing that systematically (e.g. it seems we have three ways we can go about decreasing costs. The first is by outsourcing our manufacturing to a country with cheaper labor, the second is by introducing new technologies that will decrease manufacturing costs in the long run, and the third is by eliminating idle capacity in our factories. I will start by examining if we should outsource our labor...).

#### Step 4: Conclude

This step should be the simplest one if you've been following the previous steps. Regardless, make sure to always practice concluding, even when you are practicing alone. You can do so by repeating the conclusion many times out loud in order to get the structure right.

To conclude:

- **Start** with the solution/result first. Many people prefer to build up to it, but remember that the interviewer is a client who doesn't always have the time and patience to listen to a ten minutes primer before being told what the problem is.
- **Support** your conclusion with key data you have gathered throughout the case. Had you been writing down the data and walking through the issue tree systematically, the data would be right in front of you and you would be able to synthesize it easily (e.g. we should focus more on our low-end clients because of three reasons. First, surveys show that our low-end clients can fully benefit from our services and have even been changing our business model to better employ it. Second, high-end users are

flocking to new substitutes that provide new areas of customization that we do not offer. Finally, we've been dedicating most of our staff to our high-end clients without focusing on our lower clients despite the clear difference in interest). This phase is very similar to the whole case interview where you have to be systematic and clear in your approach.

- If you have the time, **add** some next steps that a firm can use to further improve a problem (e.g. in the long-term maybe our firm can develop new competencies to target high-end customers and enjoy more profits from that segment). Adding these considerations shows the interviewer that you understand that there is no one right answer to any problem, but that the time constraint led you to choose the best one.

### Estimation Cases

Estimation Questions are quite common in business situation questions. At many points in a case, the interviewer might ask you to estimate a specific market before continuing with your analyses. Getting familiar and comfortable with these cases is vital to impressing your interviewer.

If you are asked an estimation question, here are some tips to help you:

- Make sure to clarify any terms or values you don't understand or know (e.g. size of a gallon, traffic a typical airport observes...)
- Make sure to fully clarify the question so that you understand what exactly to estimate (e.g. don't estimate the number of above-ground trains in the U.S. when you are asked to estimate all trains including sub-terrain and above-ground trains)
- Get comfortable with making assumptions. In order to proceed with the case, you may have to do so in order to narrow down the population size. (e.g. in a typical Canadian metropolitan area, I'm assuming 3 above-ground trains and 10 sub-terrain trains operate)
- Sometimes the information is given. If the estimation question is part of a business case then maybe some numbers are already there. Use those numbers instead of making assumptions!
- Break the problem into logical steps starting from a large population (the population of the U.S. or Canada) to a smaller population (the number of metropolitan areas in the U.S.)
- Practice fast and accurate calculation (read our section on quantitative skills)
- Make life easier on yourself and round up or down a number to make it easier to work with (e.g. for simplicity, I will assume that rather than 10,230 people per town, we have an average of 10,000)
- Remember the *rounded* population sizes of the U.S. (300 million) and Canada (30 million)
- The only way to get good at these is to *practice*.

## Brainteasers

There is no specific technique to brainteasers since they can be virtually anything. The good news is that they are becoming increasingly rare in consulting interviews. Should you get one, stay calm and approach it systematically. Additionally, take your time to think and don't rush into it.

## C. Practicing for Case Interviews

The key to cracking the interview is, of course, practice. Practice often with different peers. Try not to stick with one person, as you want to obtain different people's perspectives. Take turns pretending to be the interviewer and interviewee. There are numerous cases provided in this casebook which will help you to practice. If you run out, there are more available on the MCA's website as well as the BCom Career Portal: <http://www.mcgill.ca/desautels-career/>. Beyond just practicing, make sure to give each other clear feedback after each session. If an assumption bothered you, say so. If you think their framework could have been structured better, explain how.

Merely memorizing frameworks does not tend to work well, as you will probably forget them under pressure. Memorizing frameworks also tends to narrow your focus, and might result in you trying to force fit a framework that just doesn't work. Instead, practice as often and as much as possible, and hopefully you will have exposure to enough cases that you will be able to use a combination of key concepts and frameworks to crack the case.

To start off though, here are a couple of **tips**:

- ✓ Use popular resources such as Case In Point and Victor Cheng as *basic* resources. These resources alone are not sufficient to nail a case interview.
- ✓ Use casebooks by yourself to practice your frameworks when you can't find partners. Read the case; take a few minutes to draw a structure, read the answer to get a sense of potential answers. However, do not depend on reading casebooks on your own to get adequate preparation.
- ✓ Make sure your mental math is adequate (read our section on quantitative skills).
- ✓ Practice graphing out concepts quickly, as well as drawing 2 by 2 matrices (consultants love these!).
- ✓ Always ask yourself "So what?" when you are doing your case analysis. Finding the insight and explaining its meaning is a key part of any case interview.
- ✓ When you give out your recommendation at the end of your case, try to find some potential risks and additional steps to show your "practical" sense.
- ✓ Practice engaging the interviewer; make frequent eye contact and let him or her know what you are thinking and how you will proceed, step by step.
- ✓ Make sure you practice having neat notes as you will need to refer back to them and the interviewer will see them, and in some cases keep them.
- ✓ Don't just state how, also mention why you have decided on a particular course of action. You may have thought of more than one viable option so it is important to share this with the interviewer.
- ✓ Remain poised and calm, this will demonstrate your ability to handle pressure and will help you think clearly. Realize that on the job you would have more than

- just 30 minutes to come up with a solution for your clients, so just do your best and enjoy the challenge!
- ✓ Practice, practice, practice!

To conclude this section, interviewers are looking for the following during a case interview: your ability to think on your feet and come up with a logical approach to solving a problem, your ability to handle stress, and your ability to interact with and engage the interviewer. What is important is how you come up with a solution, not so much how accurate your answer is

### **Q&A Period**

At the end of most interviews, interviewers will try to leave 5-10 minutes for questions. Make sure to have a couple of firm-specific questions ready. Try to avoid generic questions such as "How did you end up working at (firm name)?" Instead, try to come up with clever and original questions about the interviewer, the job or the firm. This shows that you have put some thought into your application, and are not interviewing merely because you were offered the opportunity (even if this is the case). It helps to think about what you value most in a job, and to ask about that. If you are concerned about the firm's environment and collegial relationships, ask about possible programs in place for socializing and interacting with colleagues. If you are interested in non-profit work, ask about the interviewer's experience with that. In general, your questions should not be about things that can be easily found on Google or the firm's website.

### **Non-Evaluative Components**

If you make it to the 2<sup>nd</sup> round of interviews, most firms usually have a non-evaluative component. BCG, for example, has a non-evaluative chat and cocktail, and other firms may even invite you to dinners.

However, don't be fooled by the term 'non-evaluative'. Even though these events are not technically scored, you are still being closely observed, and inappropriate or rude behavior at these events will definitely be noted, and will serve as a strike against you.

Even before interviews begin, most firms will conduct information sessions, or invite you to events such as BCG's 'Crack the Case'. These events are often optional, but you should make a point to attend, as it shows genuine interest in the firm, and recruiters will definitely be noting down the names of attendees (and more importantly, absenents).

## Main Frameworks

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Frameworks are the guiding principles of consulting work. Consultants think in terms of frameworks and hypotheses, so you should always **always** lay out a framework, as it shows that you are able to think like a consultant, and structure your thoughts appropriately. However, do not try to force fit a framework into a situation. Think of frameworks as a reference you can use to guide your thoughts, and to help you focus on the 3-5 most likely areas of analysis. Often, you will need to create or use a combination of frameworks to explore a case. Always be flexible with your framework. If the interviewer is obviously leading you in another direction, do not try to hold on to your inappropriate framework. Instead, follow his or her lead, and come up with a new framework that fits the situation.

Consultants also subscribe heavily to the MECE principle, so try and ensure that the factors in your framework are **mutually exclusive and collectively exhaustive**. Before introducing the main frameworks to use, it's good to get a full understanding of MECE.

### **MECE Approach to Case Interviews**

MECE, or mutually exclusive and collectively exhaustive, is a principle used in case interviews to group ideas into subsets. It stems from a need to be very precise and exhaustive in order to zoom in on a problem or solution. In order to achieve that goal, subsets have to be:

- Mutually exclusive: the elements of the list have to be distinct and should avoid overlap.
- Collectively exhaustive: the elements of the list should “exhaust” the relevant field and examine all possible options without leaving gaps.

In practice, it might be difficult to be perfectly exhaustive during a case interview, but try to tackle as many relevant issues while avoiding overlap. The best way to visualize how the MECE framework works is through the use of an issue tree.

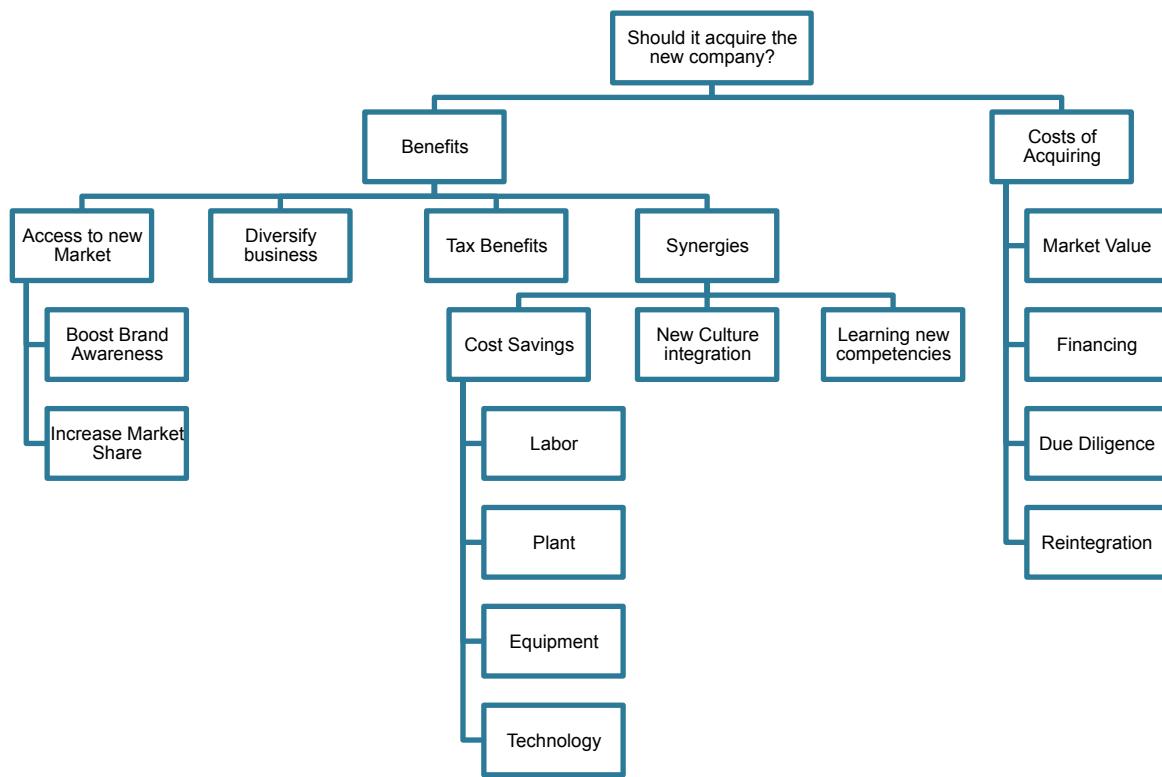
### The Issue Tree: An Application of the MECE framework

An issue tree is used to quickly and accurately summarize all the main points we want to analyze in a specific case or scenario. It consists of connecting issues and ideas in related branches that follow a given logical sequence.

The issue tree allows you to:

- (i) *Systematically and methodically* focus on a topic as you go down the tree and explore the ideas.
- (ii) More importantly, it allows you to backtrack if you find that you've reached a dead end in a specific thought process. You do so by going up the branches and exploring new ideas.

The best way to explain the MECE Approach and its application in an issue tree is through an example. Suppose a food retailer needs to enter a new market. What should the retailer be looking at?



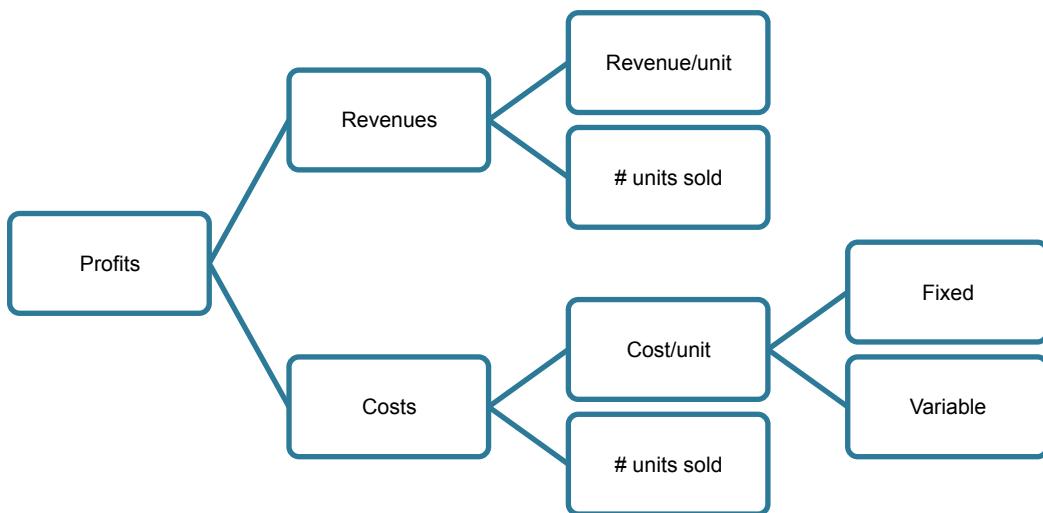
This is by no means an exhaustive issue tree, but it serves to summarize a certain situation. Firstly, it allows you to go deeper into a certain point (e.g. maybe increasing market share is a good objective for the acquisition). Secondly, should you realize you've reached a dead end, you can simply go back up the issue tree and analyze another point (e.g. the new company has captured a very small percentage of the market. Maybe it can help us diversify our holdings.)

In summary, using an issue tree will make your thought process clearer and can save you when you get stuck solving a case.

## Main Frameworks

The following are some of the frameworks that students have most often used. For a more comprehensive list, refer to the end of the section.

### 1. Profitability



The profitability framework examines both revenues and costs to determine the drivers behind a change in profitability (usually declining, but not always). Try to determine early on if the cause is internal or external, as this changes the analysis. If the problem is external, you will need to examine the industry and competition to determine how the market has changed and what is causing the lack of profitability.

#### Best uses for Profitability framework

When profits/sales/costs have changed in a case, in most cases you need to start your analysis with the profitability framework to understand the cause of that change.

Be careful though, since in some cases we need to understand *why* these changes have occurred which would lead us to the 3 C's and 1P framework to examine a business situation.

#### **Revenues**

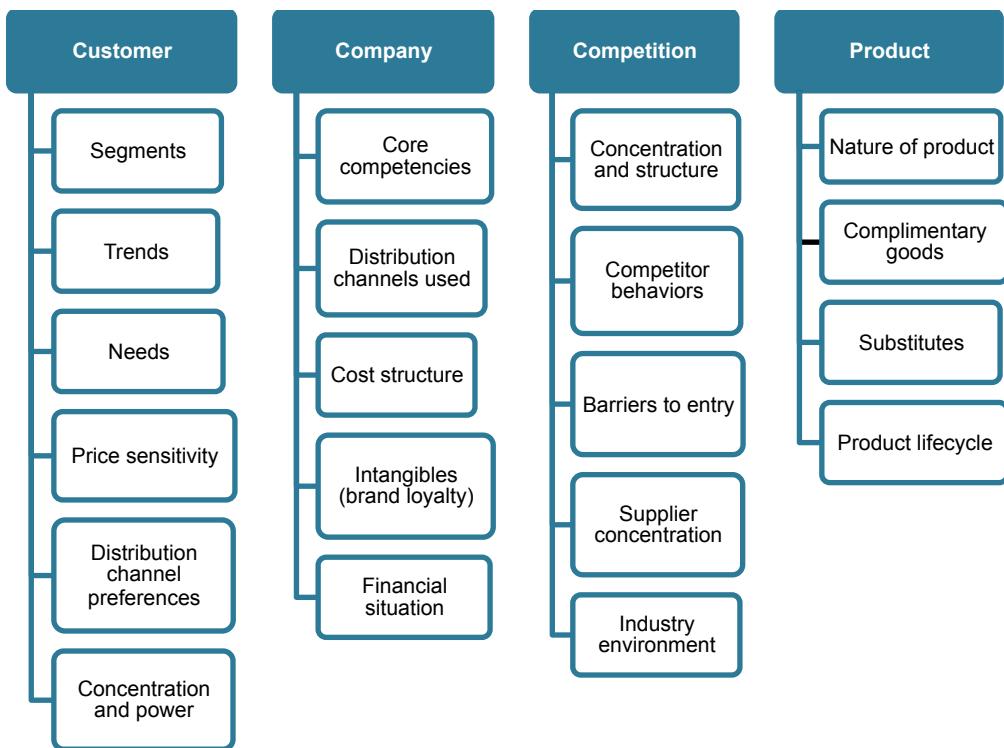
You should start by examining price, quantity and the product mix for changes. If none have changed significantly, move on to costs. If prices have decreased, determine the root cause – has competition been increasing? Is the company trying to prevent a new entrant? Likewise, if quantity has decreased, determine if the market is shrinking, if market share is being lost to competitors, or if prices have increased lately. Finally, inappropriate product mixes can often be the cause of declining profitability. Segments

that you might want to explore include product lines, regions, distribution channels and customer type.

### **Costs**

If you have determined that revenues aren't the problem, move on to costs. Think aloud about the possible cost structure of the company – do not expect the interviewer to just tell you. Examine fixed and variable costs to determine the cause of declining profitability. If the problem is high fixed costs, the company might consider using their equipment for other purposes to increase revenues. If the problem is high variable costs, you will want to examine the company's suppliers to determine if costs can be cut, as well as look for opportunities to increase efficiency within the company (higher productivity, less workers and so on).

## 2. 3Cs and 1P<sup>1</sup>



### Best uses for the 3C's and 1P framework

This framework is best used in business situations to gather information you need to further your analysis. It is a more qualitative approach to solving the case, but it can be quantitative too. Like all other frameworks, it is flexible and can be modified to the specific case you are facing. Try to prioritize the segments, for example, if you know that it is an internal issue, start with the company or the product. If the issue is increasing competition, start with competition instead. Some situations it could be useful in are:

- New Market Entry
- New Product Introduction
- New Business Establishment
- How to Grow existing business or capabilities
- Turnaround
- Company Position Assessment

<sup>1</sup> Victor Cheng's Case Interview Frameworks

### ***Customer***

Key questions to answer here include who the customer is, what they want, and what price they are willing to pay for it. To answer these questions, you will likely need to segment the customers and determine the size of each segment and their respective growth rates. Compare the metrics to past years and look for trends – for example, is Segment A growing 50% faster than Segment B? If Segment A customers are worth less than Segment B customers, this might be the cause of declining profitability.

You will also want to determine key needs of each customer segment to figure out if the company is fulfilling those needs adequately. If customers are looking for quality and the company is competing on price, it is probably a sign that they should consider a change of strategy. Accordingly, price sensitivity is also an important aspect of customer analysis. How high can the company raise its prices before it starts to lose a significant amount of customers?

Finally, it can be useful to look at customer concentration and power. If 80% of the company's sales are coming from one entity, the company might not have a lot of pricing power, and recommending an increase in price is not be very feasible.

### ***Company***

Analyzing the company involves looking at its capabilities and expertise to determine core competencies. As we learn in OP, never outsource a core competency. Instead, we want to leverage these competencies to create added value for the customer, and thereby additional profits for the company.

Looking at the company's cost structure can help you to understand its capabilities. If they have unusually low manufacturing costs, this might signal advanced technology or techniques that give them an edge over competitors. Examining the proportion of fixed versus variable costs also gives you insight into the industry that the company is competing in. High fixed costs represent a barrier to entry, which means the company is less likely to face competition from new entrants.

It is also important to examine the company's intangible assets, such as brand and reputation. This can often be a crucial factor, as some companies rely heavily on brand image and word of mouth rather than marketing. It also helps you to understand the company's position in the marketplace, which will lead to more insightful recommendations.

Finally, don't forget to look at the company's financial situation. Can they afford to make the \$500M investment in new equipment? Do they have sufficient cash to make an acquisition? Remembering details like this will impress your interviewer, as it shows that you do have business sense and are considering all aspects of the situation.

### ***Competition***

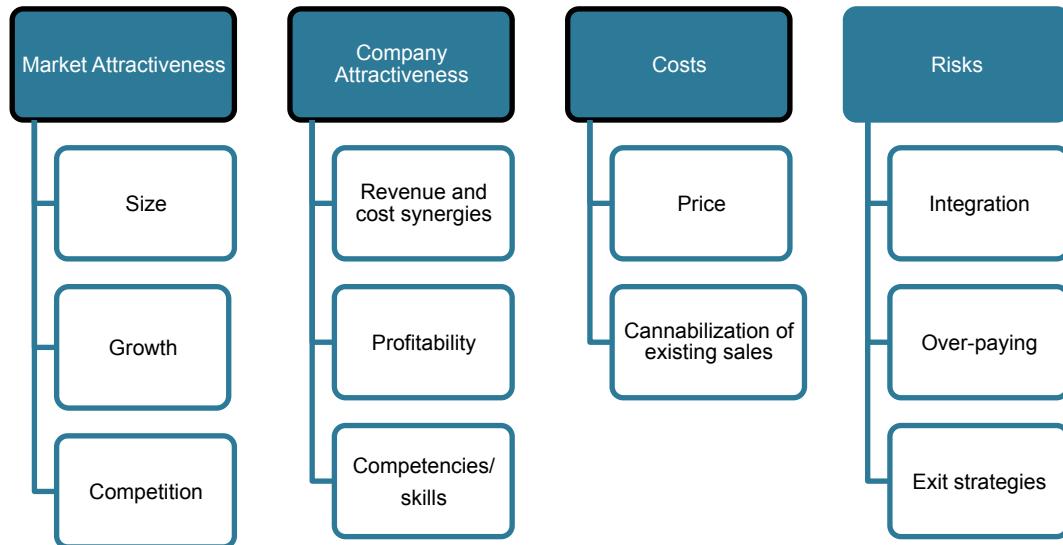
No analysis is complete without evaluating the competition. You will want to consider competitor concentration and structure – is the market a monopoly, an oligopoly, or very saturated? What are the market shares of the main competitors? It is also important to look at competitor behaviors and best practices. Has the competition changed strategies recently? Are they doing things that we aren't? How are they targeting their customers and pricing their products?

You could also choose to look at the broader industry, using factors such as the regulatory environment and supplier concentration.

### ***Product***

Finally, it's important to understand what kind of product the company is selling. If you aren't sure, make a point to clarify at the start. It's okay to admit that you don't know something (unless you're asked about something that's common knowledge). Once you know what the product is, think about the nature of the product and its benefits, and try to determine if it's a commodity good or if it's differentiated, as that makes a big difference in strategy. Identify complimentary and substitute goods, and determine the product's lifecycle to assess industry attractiveness.

### 3. M&A



Before starting an M&A case, always be sure to clarify your objective. Is the company looking for growth? Are they looking to merely acquire the assets of the other company? Or are they acquiring in order to vertically integrate? It's important to know the objective, as this can change your framework entirely. If the company is acquiring mainly for assets, you probably won't have to do a company analysis as profitability and competencies will not matter.

#### **Market Attractiveness**

If the company that is being acquired or merged with is in a different industry, it pays to analyze the industry to determine how attractive it is.

To do so, you may look at the size of the market and its growth in recent years, which will give you an idea of the industry's lifecycle. If the company is in a declining industry, it might not be a good idea to merge or acquire. You should also consider the competitive environment as part of your market analysis. If competition is fierce and the market is already saturated, the company might want to think twice before entering.

#### **Company Attractiveness**

It is also key to consider the attractiveness of the company in question. Are there currently profitable? Do they have specialized skills or people? What are their core competencies? Are there synergies to be gained by merging with or acquiring this company? This will help you determine what added value the company to be acquired can bring to the table, and will also help you assign a price to the company (if necessary).

### ***Costs***

Don't forget that there are also costs to any merger or acquisition. The main cost is usually the price paid for the company, but there are also other costs such as bank fees and potential cannibalization of sales, if the company acquired is selling a related product.

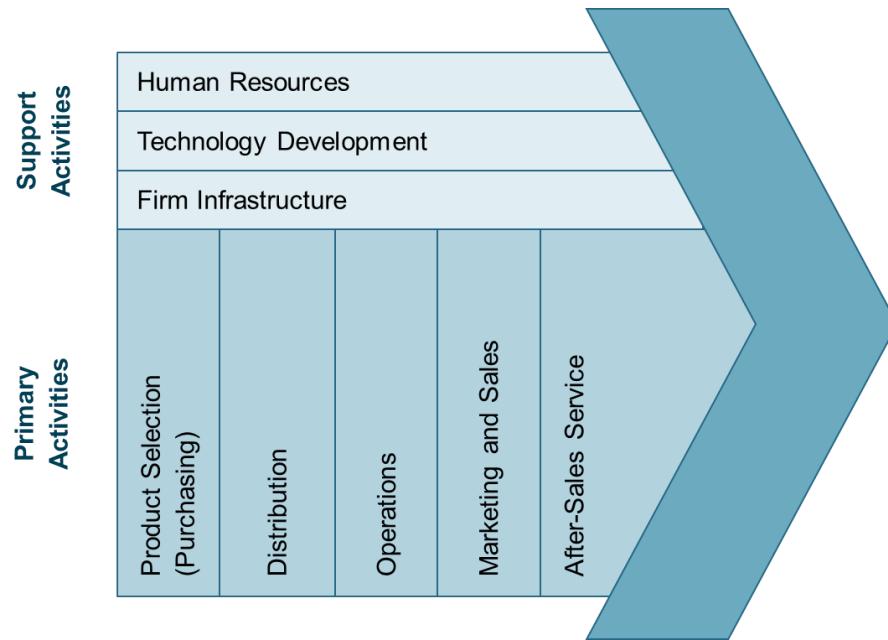
Valuation is not usually a part of undergraduate case interviews, but if you are recommending an acquisition, be sure to mention that it should only happen at the right price.

### ***Risks***

As with any endeavor, there are risks to merging with or acquiring another company. Some include the failure to integrate properly (if the companies have culture clashes, for example) and the risk of over-paying.

You could also mention potential exit strategies in this section. If the merger or acquisition goes badly, how can the company minimize damage and costs?

#### 4. Value Chain Analysis



The Value Chain framework analyzes each activity involved in making a product or a service. Activities could be primary activities or secondary activities.

- **Primary activities:** Have a direct effect on the creation of the product or service.
- **Secondary Activities:** Provide the input and infrastructure that allow the primary activities to take place.

The purpose is to analyze the internal operations of a certain company. You do this by discerning which activities add more value to the company overall and are, therefore, core competencies. This allows you to focus more efforts on specific tasks and outsource other tasks. Note that the exact activities can change depending on the firm so be sure to clarify with the interviewer what the activities are.

You approach this analysis by determining what activities provide the most value to the firm and can be considered core competencies. You invest more in these activities. Conversely, you may want to find what activities are costing you most and providing the least to the bottom line. You could outsource these activities.

You can see from the above diagram that support activities influence primary activities. For example, better human resources can improve employee morale and therefore improve in-store sales.

### Best uses for Value Chain Analysis

Value Chain analysis is best used to analyze the internal environment of the company. This allows you to find problems in the company and determine future prospects of the company. Some situations it could be useful in are:

- Finding the cause of decreasing revenues (e.g. decreasing quality of product would lead us to invest more in technology development)
- Finding the cause of increasing costs (e.g. outsource of our primary activities)
- Finding synergies with potential acquisition targets to gain new core competencies that we lack

### Useful building blocks:

The following are usually not used as a framework by themselves, but rather are incorporated into parts of your framework. For example, if one of the factors you are examining involves competition, you might want to use Porter's Five Forces to determine industry dynamics and intensity of competition. They can be very helpful in allowing you to structure your thoughts appropriately, and we recommend for you to know all the following concepts well.

- ✓ **BCG Matrix**
- ✓ **5Ps**
- ✓ **Macro factors**
- ✓ **Product Life Cycle**
- ✓ **Porter's Five Forces**
- ✓ **Differentiation vs. Cost Leadership Strategy**
- ✓ **Product/Market expansion matrix**
- ✓ **SWOT Analysis**

# **Quantitative Analysis**

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You can be certain that most of your case interviews will comprise of a quantitative section. This is especially true if you are perceived to have a weak quantitative background (if you majored in Art History, for example). The quantitative portion of the case interview is perhaps the easiest one to prepare for, as all it takes is practice. Below, we outline a number of tips and tricks that will help you to master quick mental math. While you go through them, keep in mind that **fast is only impressive if you get it right**. Take more time if you need to, within reason. If it's a complex equation, try to walk your interviewer through the steps you are taking, and double check your answer before you say it out loud. If there are many options in front of you, try and see what you can eliminate without doing any calculations, as this saves you a lot of time.

The following are a number of common quantitative analyses that you might be asked to perform:

## **Contribution Analysis**

### **1. Unit contribution**

The unit contribution is defined as the marginal profit per sale, and can be calculated as Price – Variable Cost. Accordingly, the unit contribution margin is (Price – VC)/Price.

Unit contribution margins can provide you with insight into the type of industry you are analyzing. Typically, low contribution margins are indicative of a labor-intensive sector such as a service industry (which tends to have high variable costs), and high contribution margins are indicative of a capital-intensive sector, such as manufacturing and industrials, which tend to have higher fixed costs.

### **2. Break-even analysis**

Break-even analysis involves finding the breakeven price or number of units at which the company will need to sell its product or service, in order to have zero profit. In other words, revenues must equal costs to find the breakeven points.

This means that  $\text{Price} * \text{Quantity} - \text{Fixed Costs} - \text{Variable Costs} * \text{Quantity} = 0$ .

To simplify,  $(P-VC)*Q = FC$ . Depending on which variables you are given, you may have to solve for different parts of the equation. Breakeven analysis is especially useful if you are unsure if a recommendation is feasible or not. Finding the breakeven point will give you an idea of whether a certain price or quantity is achievable or not.

### **3. Gross/Net profit**

Gross profit is defined as revenue less cost of goods sold, while net profit is defined as operating profit less taxes and interest.

It can be useful to calculate gross and net profit margins, and look for trends in the number, as well as compare it to competition and industry benchmarks. This will give you a clearer idea of the company's performance relative to its competitors.

## **Financial Analysis**

### **1. Financial Statements**

You will be expected to know at least the basics of all 3 financial statements: the Net Income Statement, the Balance Sheet and the Statement of Cash Flows.

While you will not be expected to construct a statement of cash flows or asked to balance a balance sheet, you will definitely be expected to be able to analyze the statements and speak intelligently about them, so brush up on your accounting knowledge while you can.

### **2. NPV analysis**

NPV analysis is less common in interviews, as you are not expected to be able to discount a series of cash flows by 13% over 10 years in your head. However, be sure that you understand the concept of NPV. You might be asked to use a certain discount factor to calculate an NPV, so be ready to do so.

### **3. Financial ratios**

In some cases, you may be given exhibits of financial statements or information, and asked to calculate key ratios. These might include the profit margins mentioned above, costs as a % of sales, ROE/ROI/ROA, growth rates, turnover and so on. Make sure to have a working knowledge of the most common ratios, just in case.

## **Fraction Tables**

Memorizing common fractions can be really helpful in case interviews. When you have to divide a number by 7 and have no idea what it could be, just remember that  $1/7$  is 0.14, and multiply it by that instead.

Resolving the One	Synthesizing the One
$1/2 = 0.5$	$0.5 \times 2 = 1$
$1/3 = 0.33$	$0.33 \times 3 = 1$
$1/4 = 0.25$	$0.25 \times 4 = 1$
$1/5 = 0.2$	$0.2 \times 5 = 1$
$1/6 = 0.16$	$0.16 \times 6 = 1$
$1/7 = 0.14$	$0.14 \times 7 = 1$
$1/8 = 0.125$	$0.125 \times 8 = 1$
$1/9 = 0.11$	$0.11 \times 9 = 1$
$1/10 = 0.1$	$0.1 \times 10 = 1$
$1/11 = 0.09$	$0.09 \times 11 = 1$
$1/12 = 0.08$	$0.08 \times 12 = 1$
$1/13 = 0.077$	$0.077 \times 13 = 1$
$1/14 = 0.07$	$0.07 \times 14 = 1$

## **Solve for X**

When you are given an unknown to solve for in a case, it can sometimes be helpful to label that unknown ‘x’. This takes you back to algebra classes in high school, and could help to structure your problem solving, as well as remind you of the variable you are trying to find. It’s also useful to lay out an equation rather than having a bunch of random numbers all over your page, as it keeps you focused on the end goal rather than getting lost in the calculations.

## **Use 100 as a base**

When you are not given a base number, and are asked to find the % change, it simplifies your work to assume 100 as a base.

For example, if you are told that Distributor A sells its product to Retailer B at a 50% markup and Retailer B sells to the Consumer at a 40% markup, you can assume the starting point to be \$100. This means that Distributor A sells to Retailer B at \$150, and Retailer B sells to the consumer at \$210. Therefore, the consumer pays a total markup of 110%.

## **Round Numbers**

Often, consultants are not looking for an answer accurate to 5 decimal places, unless the problem you were given is exceedingly easy. Instead, they are looking for a ballpark answer, backed by sound logic and reasoning. Thus, it is more than acceptable to round numbers when appropriate. If you are dealing with a number like 398,789, your

interviewer will not mind if you round to 400,000, as it will likely save them some time staring at you while you puzzle out the numbers.

### **Always convert to percentages**

It's great if profits are going to increase by \$500M. But is revenue \$1B or \$100B? If the former, your recommendation has increased revenue by 50%, a highly significant amount. If the latter, you have only managed to increase revenues by 0.5%, which is less than inflation. Percentages help to put things in perspective, and are indispensable for making decisions.

### **Calculate out loud**

If you're prone to miscalculations while someone is staring at you, try to calculate out loud. This helps your interviewer to follow your logic even if you make a mistake. It will also give you more time to think through your calculations, and hopefully avoid silly mistakes.

### **Interpret your findings**

Always explain your findings to your interviewer. What does a net profit margin of 15% mean? Is it good or bad compared to the industry? How about compared to historical performance? Numbers are meaningless if you don't add some insight. Refer your findings back to the main question you were trying to answer, and relate it to the case.

### **Be careful of units**

Sometimes, graphs or charts might have several different units in them, or interviewers might be asking for an answer in a different unit than the information they gave to you. Watch out for this, as consultants value attention to detail.

### **Practice!**

The key to getting better at mental math is, of course, practice. Practice calculating tips in your head instead of using your phone, practice splitting the bill among your friends, make use of websites such as those listed in our resources, and download apps or games that you can play in your spare time.

Other than regular math, also practice analyzing graphs and charts. Make sure you understand the axes and the scales, and are able to draw sound conclusions in a minute or two.

# **Case Library**

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The following cases have been compiled from various sources to help you practice. We have strived to include different kinds of case types to give you an idea of what to expect. Common case types include profitability, market entry, market sizing, sales strategy and M&A cases.

For ease of use, the cases are organized by difficulty level, with 1 indicating the easiest cases, and 5 being the most difficult. These levels are solely our opinion (and not the opinion of interviewers), and thus may not be fully accurate, so use your own judgment and discretion when practicing. We recommend for you to start from the beginning, and work your way up to the harder cases. Good luck!

## 1. Exxon – Market sizing (Source: Roland Berger)

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*Difficulty level:* 2

### **Problem Statement**

Suppose you are flying on a plane with the CEO from Exxon and you want to sell a consulting engagement. He has just left to use the lavatory and you have about five minutes to estimate his yearly revenues from personal automobile gasoline sales in the U.S. (excluding commercial trucks, boats, etc.) How would you go about coming up with this estimate?

### **Suggested Solution**

1. Assume the population of the U.S. is 300M
2. Estimated number of people per household is 2.5, making 100M households.
3. Estimated number of cars per household is 1, which gives 100M cars in the U.S.
4. Assume each car gets filled up once per week (or 50 times per year to use simple numbers)
5. Assume the average fill-up is 10 gallons.  $50 \times 10$  is 500 gallons per car.
6. Total gallons sold is  $500 \times 100M = 50B$
7. If average price is US \$3.50, total revenue from U.S. automobiles is US \$175B
8. Estimated market share of Exxon is 20% (*Unless you know the market share, a guesstimate is fine as long as you are able to justify it logically. In this case, the justification is that the market is essentially an oligopoly with a few players dominating the market. Dominant competitors in this type of market typically have market shares of approximately 20%.*)
9. Total revenue for Exxon from the U.S. household automobile market is therefore US \$35B.

### **Tips**

This case is intended to test comfort with numbers and quantitative ability, and thus has no suggested framework. This case also requires that plausible numerical assumptions be made. The key to this case is to be organized and methodical, and to always segment. If broad assumptions are made, your answer is not likely to be very accurate. Try to break down each segment as far as it can go.

## 2. Aqualine – Revenue (Source: Oliver Wyman)

*Difficulty level: 2*

### **Problem Statement**

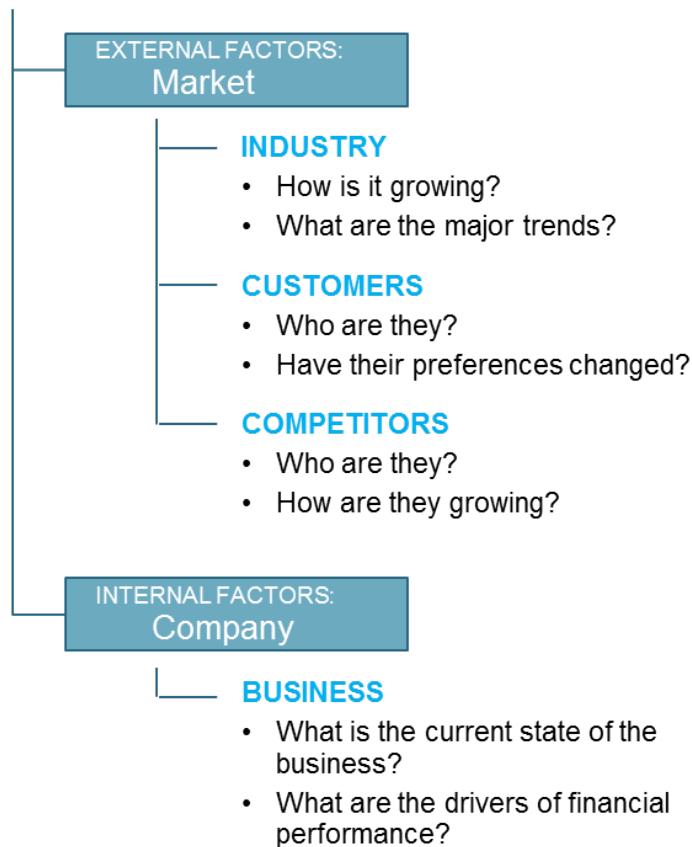
Our client is Aqualine, a manufacturer of small powerboats—high-speed, engine-driven boats under 25 feet in length. It designs, manufactures and sells its premium-quality boats, which are priced at \$30,000 per unit, through a dealership network on the East Coast of the United States. Aqualine has historically boasted double-digit growth, but despite a good profit margin and stable cost structure, its sales have slowed and begun to flatten at \$120MM. Its CEO has hired Oliver Wyman to determine the factors behind this slowdown and identify sales growth opportunities.

### **Question 1**

Your case manager has asked your team to begin thinking about Aqualine's situation. What background information would you like to gather to begin structuring your assessment of growth strategies for Aqualine?

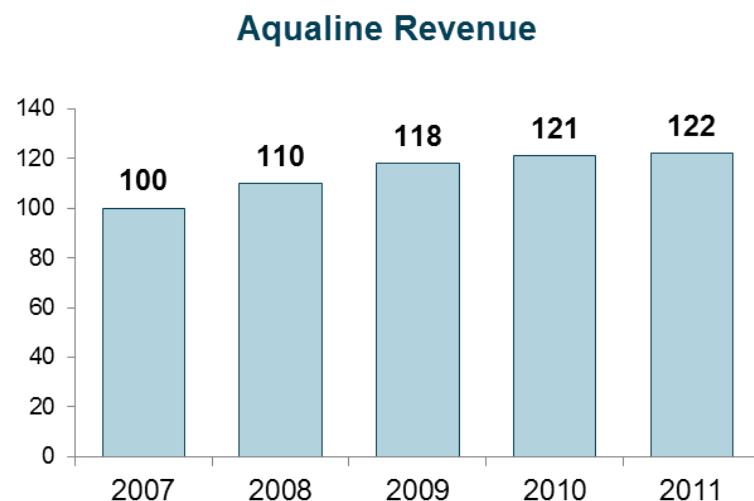
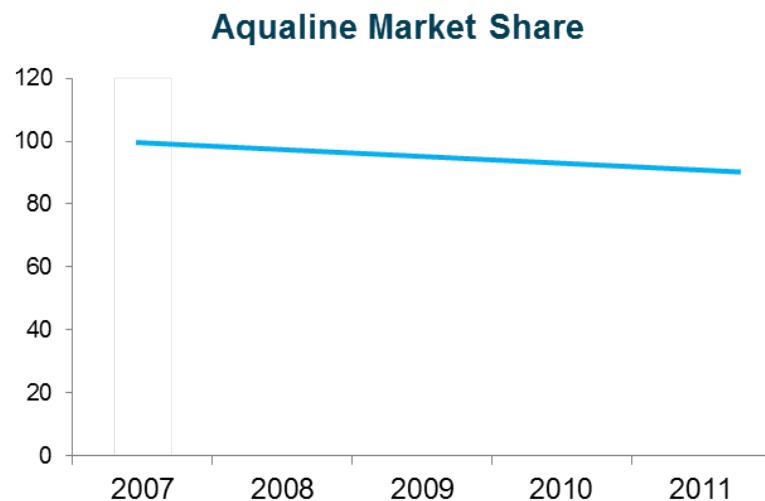
*The ideal answer would include:*

## **Growth**



## Question 2

Your team has chosen to first explore industry trends and has collected some data on the U.S. powerboat industry. For ease of comparison, all data has been converted to a percentage of its 2007 value. What implication can you draw from this data?



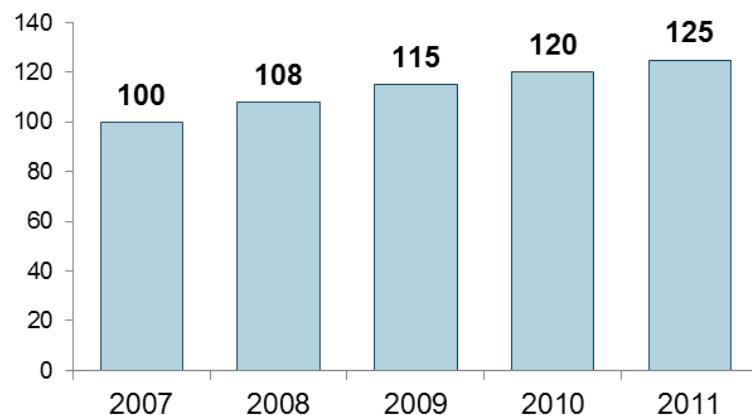
*The ideal answer would include:*

Although Aqualine's market share is declining, its overall revenues are increasing. For this result to hold, the powerboat industry must be continuing to grow. Thus, Aqualine's growth problem is apparently not reflective of a larger issue facing the industry.

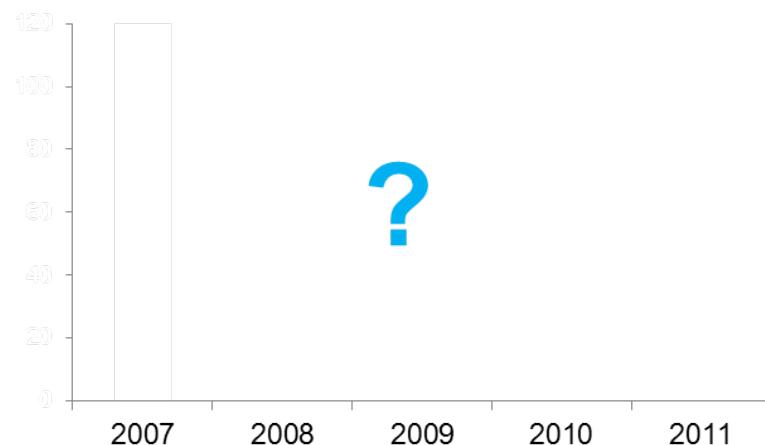
### Question 3

Your team receives some new data from a market research provider. For ease of comparison, all data has been converted to a percentage of its 2007 value. Based on this new information, your manager asks you to draw a chart of the average price per powerboat. What would you predict for the overall trend in prices?

**Total Powerboat Registrations**



**Average Price per Boat**



*The ideal answer would include:*

The average purchase price per boat is likely increasing over time. Because the growth in customers and powerboats is equal, each customer is purchasing one boat. This means that the extra growth in revenue is not occurring from an increase in the number of boats owned by a customer. We also know that the growth in the number of registered powerboats is lower than the growth in total revenues. This implies a higher amount of revenue associated with each boat sold.

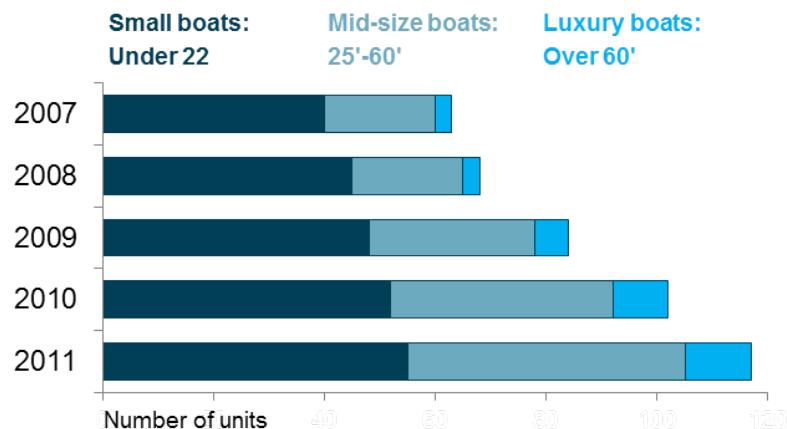
#### Question 4

Your team holds a brainstorming session to discuss what factors could be driving this increase in average purchase prices in the industry. What ideas would you offer to the team?

*The ideal answer would include:*

A number of possible factors could be driving up average purchase prices in the industry, including an increase in technological content, higher manufacturing costs, or a change in the product mix.

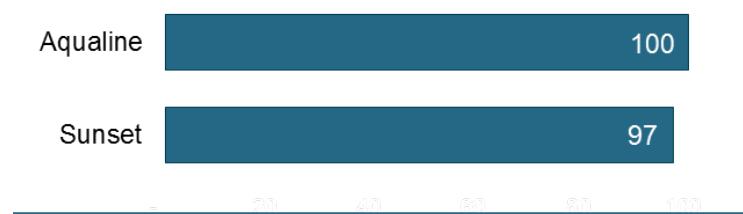
#### Powerboats Sold



#### Question 5

As part of your competitive research, you come across a small boat company called Sunset. Sunset has managed to generate superior profit growth over the past few years. A benchmarking study reveals parity with Aqualine's costs, and customer research reveals that Sunset captures a higher amount of total customer spending on boating. Your manager asks you for your ideas on how Sunset has been able to accomplish this feat. What would you suggest?

#### Average Boat price Comparison (Benchmarked to Aqualine)



#### Share of Customer's Total Spend on Boating



*The ideal answer would include:*

It seems like Sunset's boat prices are pretty much in line with Aqualine's, though slightly lower. However, Sunset manages to capture a whole 10% more of their customer's share of total spend on boating. I would hypothesize that this is because Sunset has a broader range of product offerings beyond the boats themselves. This could include accessories and related services that would allow it to generate more revenue.

### **Question 6**

Based on your findings, your manager asks the team to list possible growth strategies for Aqualine. Think about the assets and capabilities Aqualine has to leverage. What growth ideas can you identify?

*The ideal answer would include:*



### **Question 7**

Aqualine management is considering a plan to unveil a mid-sized Cruiser boat next year priced at \$50,000, a \$20,000 price increase from their current small boats. Market research indicates that current Aqualine customers, who are extremely brand loyal, are the most likely set of customers to purchase from this line by upgrading their current boats. As a result, your manager asks your team to estimate the net sales from existing Aqualine customers only.

How might you estimate the number of potential Cruiser customers from Aqualine's existing customer base? What information would you need? (Hint: Think about how you would segment the customers.)

*The ideal answer would include:*

I would need the following information:

- (i) How many customers are in the market for a new boat?

To determine how many customers will upgrade their boats next year, I would need to factor in the length of boat ownership and boat lifetime. Boat owners become progressively

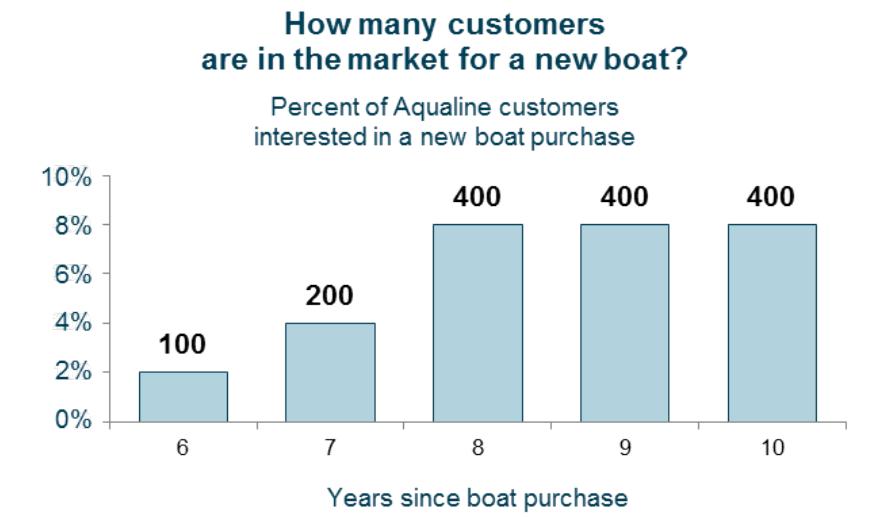
more likely to consider replacing and upgrading their boat as it approaches the end of its useful life. I would segment the existing customers in the following way:

- Owners who want to upgrade to mid-sized or larger boats
- Owners who are undecided about size
- Owners who want to purchase another small boat

(ii) What type of boat are they planning to buy?

### Question 8

Customer survey results reveal the following trend of current owners planning to purchase a new boat, which has a lifetime of 10 years. What is the net sales gain for the Cruiser next year? Should Aqualine pursue this initiative?



**How many will buy Aqualine's Cruiser?**

Customers in market for a new boat

	Will purchase mid-sized	Undecided	Will purchase small
% of new-boat customers	20%	20%	60%
If offer Cruiser	100% purchase Cruiser	50% purchase Cruiser	100% purchase small
		50% purchase small	
If do not offer Cruiser	100% purchase mid-size from competitor	40% purchase mid-size from competitor	100% purchase small
		60% purchase small	

*Aqualine customers are extremely brand loyal. You can assume that if Aqualine offers the boat they want to buy, they will purchase from Aqualine.*

*The ideal answer would include:*

### Calculate the number of customers in the market for a new boat:

$$\begin{aligned} & (2.5\% \times 4000 \times 1) \\ & + (5\% \times 4000 \times 1) \\ & + (10\% \times 4000 \times 3) \\ \hline & = 1500 \text{ Existing Customers} \end{aligned}$$

### Calculate sales if Aqualine offers the Cruiser:

	"Will purchase mid-sized" segment 20% x 1500 customers x \$50K	=	+\$15M
+	50% of "Undecided" segment who purchase a mid-sized boat if Aqualine offers the Cruiser 50% x 300 "Undecided" x \$50K	=	+\$7.5M
-	10% of "Undecided" segment who would have purchased a small boat instead if the Cruiser were not available 10% x 300 "Undecided" x \$30K	=	-\$0.9M
Total net sales gain from CRUISER sales:			\$21.6M

### Question 9

Should Aqualine pursue the mid-sized boat initiative?

*The ideal answer would include:*

Based purely on net sales, Aqualine should pursue the mid-sized boat line initiative. However, before implementation, Aqualine should consider a few other issues, including:

- **Profitability**  
How profitable are the new boats versus the existing product line?
- **Investment timeline**  
How much investment is needed and how long is the payback period?
- **Distribution network**  
How willing are Aqualine's distributors to carry a new product line?

### 3. Revolutionary transporter machine – Pricing strategy (Source: Columbia Graduate Consulting Club)

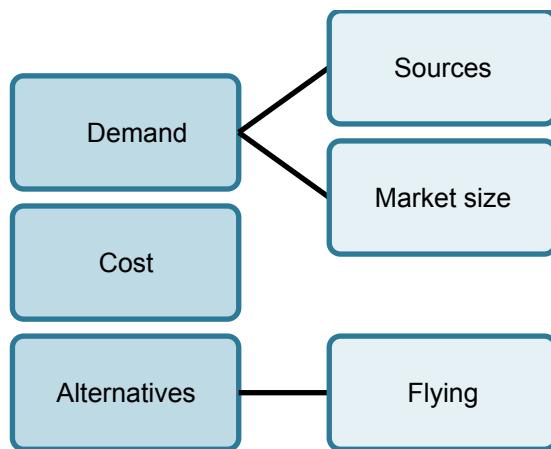
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*Difficulty level:* 2

#### **Problem Statement**

Your client has developed a revolutionary product. It is a transporter machine that can take anyone (or anything) placed in it from NYC to London in 10 minutes. How would you price one trip?

#### **Potential Framework**



#### **Suggested Solution**

**Candidate:** I would consider 3 main factors when determining the pricing strategy: demand for the product, the client's cost and any alternatives available for transportation. Can you tell me about the size of this machine? I mean, can you only transport humans or can you also transport, say, an automobile?

**Interviewer:** It's rather large, but there are seats that are very sparsely laid out. Let's stick to humans and perhaps small packages.

**Candidate:** Ok, well, I would think that most of the demand for this product would come from human usage and not from the packages. Because of technology, documents can be faxed, e-mailed, etc. which are also quick methods of transfer. Only larger packages or original documents needed in 10 minutes would comprise the demand on the package size. I'm going to focus on the human side.

**Interviewer:** That sounds reasonable. How would you assess demand from people?

**Candidate:** Well, 10-minute travel time to London is very appealing; the only other alternative is to take a regular air flight (7 hours). Since the client's transportation machine is much quicker, I would imagine that we could charge at least some premium over the alternative. Therefore, we are probably looking strictly at the business traveler or very wealthy individuals. I would further narrow the business traveler market by assuming that only top executives would use this machine. To estimate this number, I would determine the

number of top executives at all publicly traded companies and add to that executives at larger, privately held companies. For the wealthy, we can probably take the U.S. population and estimate the number of people in the top income brackets. Would you like me to go through these estimations?

**Interviewer:** No, let's say we've done that and now you have a total market size estimate. What do you want to do next?

**Candidate:** Well, to develop a pricing strategy, we could use a number of methods. We could estimate the costs and then include a markup. Otherwise, we could take the price of an alternative product and determine the value of the extra benefits our client's machine offers. Of course with either method we need to recognize the trade-off between price and the number of trips demanded, as well from an economics perspective the marginal cost and revenues.

**Interviewer:** Ok, I don't want to get into a quantitative discussion. Can you expand upon what the extra benefits of using the machine might be and how you assign a value to them?

**Candidate:** Sure. I guess the main benefit is the timesaving the traveler obtains by the using the machine. Additionally, perhaps the actual ride, seating, etc. are more comfortable.

**Interviewer:** Let's focus on the time. Can you tell me all the different ways you would value an executive's time?

**Candidate:** Well, you could look at the total compensation vs. total hours worked to determine an "hourly" wage. Or, you could try to link the revenues of the business to the executive to determine how much revenue is generated by one hour of his/her time.

**Interviewer:** Can you think of any other ways?

**Candidate:** Hmm...you can probably argue that the additional time can bring in new revenues as well, so use an estimate of how much more money can be generated with the extra time (new deals/contracts, etc.).

**Interviewer:** That sounds great – thanks.

### Tips

Occasionally, as in this case, interviewers are looking more for creativity and 'out of the box' thinking than for quantitative answers. If you are pushed for more ideas, don't panic, just take a couple seconds and try to be as original as possible.

#### 4. Wumbleword (Source: Oliver Wyman)

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*Difficulty level: 2*

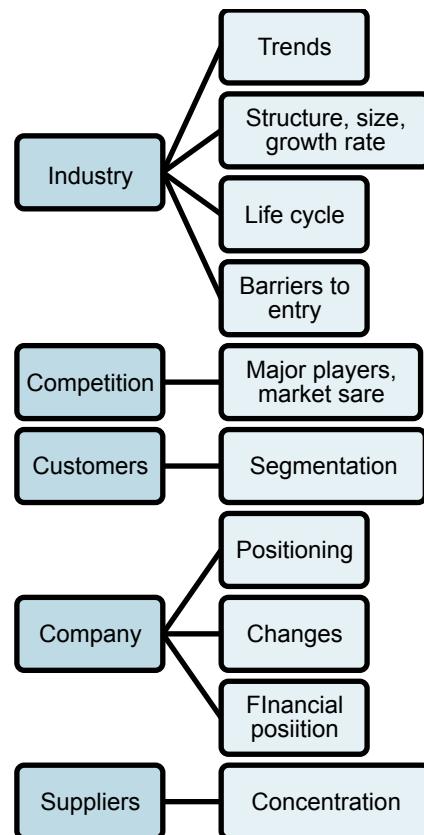
##### **Problem Statement**

Our client is WumbleWorld, a theme park operator located in a wealthy coastal city in China. WumbleWorld is a 50/50 joint venture between a foreign firm and a China state-owned enterprise. The company manages a single park year-round and principally generates revenues from park admissions, food and beverage, and merchandise. WumbleWorld's CEO has asked Oliver Wyman to identify the reasons for her company's declining profits and develop suggestions for how to reverse this trend.

##### **Question 1a**

Your team leader suggests that you conduct a high-level brainstorming session. What general information would you like to gather to help you with this case?

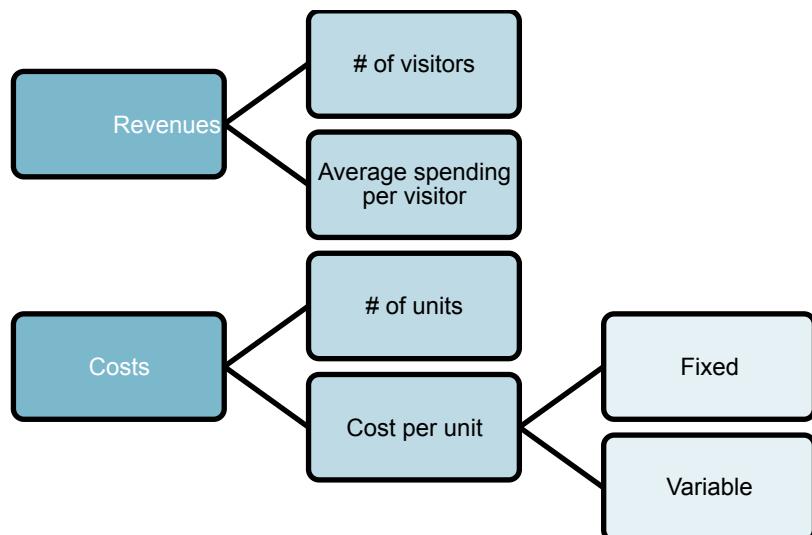
*The ideal answer would include:*



### Question 1b

Your team has been asked to address profitability. How would you structure your investigation into WumbleWorld's weakening profitability?

*The ideal answer would include:*



### Question 2

Your team has chosen first to explore fixed costs. Please identify some of WumbleWorld's fixed costs and explain why they may or may not be changing.

*The ideal answer would include:*

Since fixed costs are those that would not change as a function of the number of park visitors, I imagine there would be costs related to equipment, land, overhead, interest expense and depreciation. If the company has been making significant investments, the equipment and depreciation costs could be rising at the value of their assets increases. Additionally, if the company has been borrowing to sustain these investments, their interest costs could also be rising.

### Question 3

You have found that fixed costs have been fairly constant and, as such, are unlikely to be contributing to weakening profits. The team has decided to investigate variable costs. Please list a few of WumbleWorld's major variable costs.

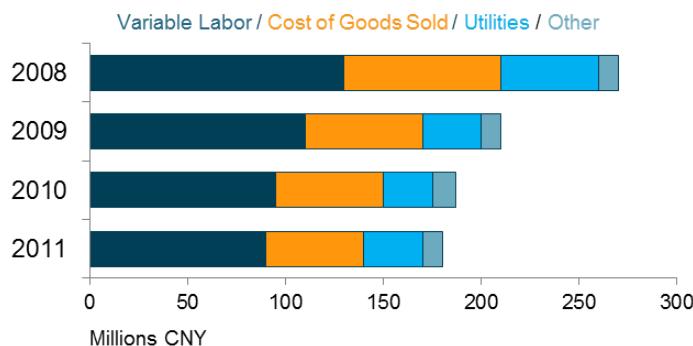
*The ideal answer would include:*

Variable costs are those that change with the number of units that are sold. These would include costs such as labour (ride facilitators, cleaning crews, ticket counters, other service staff), cost of goods (food, beverage, merchandise), utilities and other maintenance fees or taxes.

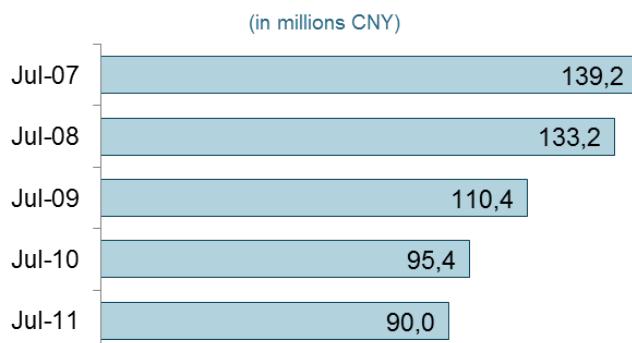
#### Question 4

Your team has determined that labor is the key cost driver. WumbleWorld's variable labor costs over the past 5 years are presented below. What conclusions can you draw about WumbleWorld's variable labor cost trends?

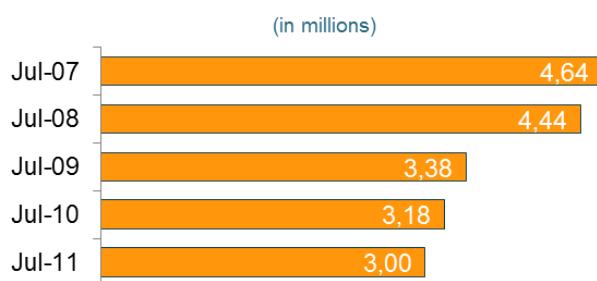
**Total Variable Cost Breakdown**



**Total Annual Variable Labor Costs**



**Annual Attendance**

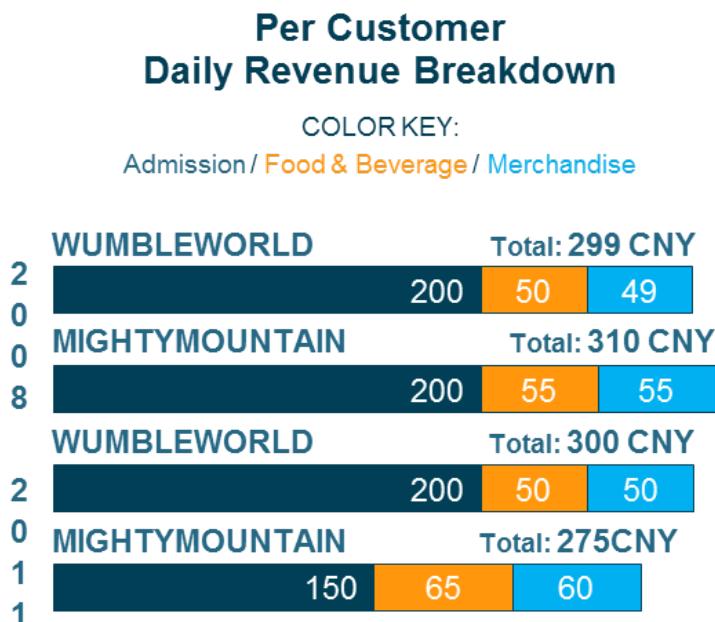


*The ideal answer would include:*

Variable labor costs on a per-visitor basis have remained constant and thus are not likely the cause of the downward trend in profitability. (Note: The per-visitor labor costs in 2009 did not equal 30 CNY due to a lag in labor reduction. WumbleWorld was not able to adjust its labor force quickly enough to match the sharp decline in the number of visitors.)

### Question 5

Given that costs are likely not the cause of the decline in profitability, your team has decided to examine WumbleWorld's revenues. Displayed below is the per-customer breakdown and value of revenue for WumbleWorld and its competitor, MightyMountain. Neither company has any additional revenue streams. What insights can you draw from these graphs?



*The ideal answer would include:*

**WumbleWorld's average daily spend per visitor has been relatively constant:** It appears that WumbleWorld has not been as successful as MightyMountain at converting admissions into merchandise and food & beverage sales.

**MightyMountain reduced its admission price between 2008 and 2011:** This led to a decrease in total average daily spend per visitor, but increased food & beverage and merchandise spend per visitor. MightyMountain's price decrease likely contributed to an increase in the number of visitors, which might explain the significant decline in the number of WumbleWorld visitors between 2008 and 2009 (as displayed in a previous chart).

**Volume (number of park visitors) seems to be a key driver of revenue:** Though the relative profitability is unknown, MightyMountain's decision to reduce prices hints that its strategy hinges upon increasing the number of visitors to its parks and increasing average visitor spend on food & beverage and merchandise.

### Question 6

Your team has decided to first focus on the number of visitors and then hone in on average spend per visitor to drive profitability forward. To better understand the drivers of park attendance, the team has chosen to analyze WumbleWorld's consumer market. Specifically, the objective is to divide visitors into groups of people with similar characteristics. How might you group customers in this market? What metrics would you use?

*The ideal answer would include:*

The market may be segmented using a number of different metrics, including (but not limited to) demographics, income level, geography, spending behavior within the park, activities within the park, and cost of customer acquisition.

### Question 7

Oliver Wyman has conducted a thorough analysis of the various consumer segments in this market. Most of WumbleWorld's visitors align with one of the three segments listed below. Which of WumbleWorld's customer groups is the largest (i.e. total number of visits annually)?

	Total people in segment	Wumbleworld's share	Visits per person annually
Segment 1 Family Members	20mm	5%	1.25
Segment 2 Young Adults	5mm	10%	1.5
Segment 3 Adults w/o Kids	10mm	10%	1

*The ideal answer would include:*

To determine the largest segment (in terms of total number of visits annually), I would multiply the total people in segment by WumbleWorld's penetration rate by # of visits/person annually. The results show that segment 1 visits 1.25M times a year, segment 2 visits 0.75M times a year, and segment 3 visits 1M times a year. Thus, segment 1 – family members – is the largest segment.

### Question 8

If you were asked to determine which segment is most attractive for WumbleWorld to pursue, what additional information would you need?

*The ideal answer would include:*

WumbleWorld would want to target the greatest profit contributors that align with its business. To determine this segment, I would need to investigate the following:

- **Relative profitability of each customer:** What is the average spend per customer and the relative cost of customer acquisition in each segment?
- **Growth rate of each segment**
- **Who WumbleWorld's offering caters to most:** Does WumbleWorld have a compelling and differentiated value proposition for that segment? Looking forward, what are the changing needs of WumbleWorld's customers and can it meet those needs?

### Question 9

WumbleWorld's CEO, who is very pleased with your team's analysis, has decided to focus on the family segment, where she believes she can capture the most value. She proposes creating a 20% family discount such that the admissions price for the family segment decreases from 200 CNY per person to 160 CNY per person. If the new pricing scheme were implemented, variable costs per person would remain the same at 75CNY. Average total daily spend per person would fall to 260CNY as a result of the price change. Based on primary research your team has conducted, WumbleWorld's share of families would increase from 5% to 7%. All other data would remain the same. Would offering a family discount increase over-all profitability? Assume that market penetration would remain the same if she does not implement the discount (i.e., there would be no further decrease in the number of visitors under any circumstance).

	Total people in segment	Wumble-world's share	Visits per person annually	Wumble-world # of visits
<b>Segment 1</b> Family Members	20 mm	5%	1.25	1.25 mm
<b>Segment 2</b> Young Adults	5 mm	10%	1.5	.75 mm
<b>Segment 3</b> Adults w/o Kids	10 mm	10%	1	1 mm

*The ideal answer would include:*

To determine if the discount should be implemented, I would like to compare the projected profit loss from the price change to the projected profit gain from volume enhancement (increase in the number of visitors). Since market share would increase by 2%, this translates to an additional 0.5M visits per year. The profit from these visits sums to 92.5M CNY  $[(260-75)*0.5M]$ . The loss resulting from the decrease in price is 50M CNY  $[(300-260)*1.25]$ . Thus, based on pure profitability, WumbleWorld should offer the discount.

### Question 10

What qualitative factors should WumbleWorld consider before offering the discount?

*The ideal answer would include:*

Before implementing the plan, WumbleWorld would likely want to consider a few additional areas, including:

- Effects that increased traffic would have on the customer experience (e.g., negative effects such that customers do not return to the park in future years)
- Effects that the increased traffic would have on customer spend in the parks

- Park capacity
- Customer reaction (e.g., from target segments that are not offered the same discount)
- Other stakeholder response (e.g. opposition from Chinese government)

### Question 11

To further increase revenues and capture value in each of its customer segments, the CEO asks that your team re-address daily spend per visitor. Please list some ideas to increase average daily spend per visitor.

*The ideal answer would include:*

- **Product/Service:** Speed passes for rides, more food/beverage vendors (e.g. premium restaurants) and merchandise differentiation, games and prizes, hotel (to encourage longer stays), parking fees, childcare, stroller, locker fees, park tours, concerts and events
- **Promotion:** Coupons and seasonal promotions, special features and rides
- **Price:** Season passes price variation by day of week and season, special child and senior citizen rates

## 5. Chemical Company – Profitability (Source: MIT Sloan Management Consulting Club)

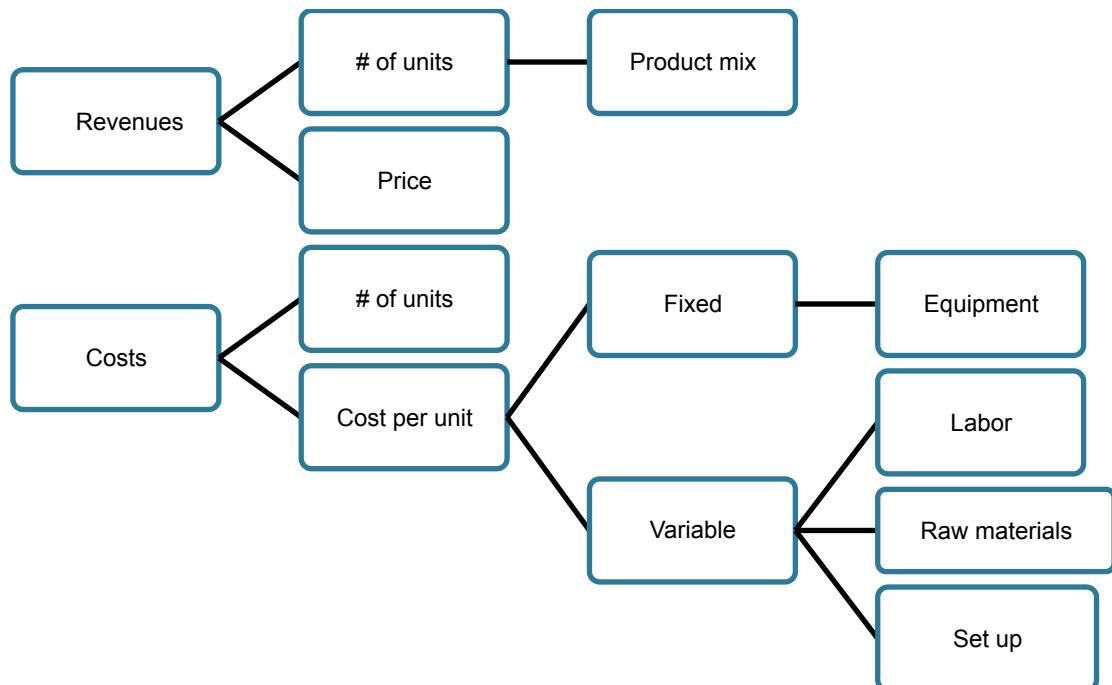
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*Difficulty level:* 2

### **Problem Statement**

A chemical company's profits have been falling recently. How would you advise the company to improve profits?

### **Potential Framework**



### **Suggested Solution**

**Candidate:** Since the client is concerned about profitability, I would first like to determine the cause of declining profitability. To do so, I would like to examine the drivers of both revenues and costs, starting with the latter. Have our costs increased lately?

**Interviewer:** No. Our costs have been constant.

**Candidate:** Okay, how about our revenues?

**Interviewer:** If there have been no changes in our costs lately, then the decline in profits must be due to a decline in revenues.

**Candidate:** Does our company sell just one product or do we sell multiple products?

**Interviewer:** Multiple products. We sell both generics and specialty drugs.

**Candidate:** Have we noticed a decline in revenues on both lines of products, or just one?

**Interviewer:** Our competitors have cut prices on similar generics. We've had to cut prices to match or risk losing customers.

**Candidate:** Are we still profitable on the generics?

**Interviewer:** No. Our prices are below our costs on the generics. We don't have (and cannot gain) the economies of scale to match our competitors. As a result, our costs are prohibitively high.

**Candidate:** Are we profitable on the specialty drugs?

**Interviewer:** Yes. Specialty drugs are highly profitable. Economies of scale are less important in driving down the costs of specialty drugs.

**Candidate:** Okay, from the information I've gathered, I would recommend that the client:

1. End production of the generic drugs
2. Reorient or close the unprofitable generic drug factories.
3. Concentrate efforts on profitable specialty markets, where economies of scale are not a factor. Reorient sales force; enhance distribution efforts for specialty drugs. Modify sales incentives to encourage sales of specialty drugs.

## 6. Kami Corporation – Revenue (Source: Oliver Wyman)

*Difficulty level: 2*

### **Problem Statement**

Our client is Kami Corporation, a leading printer manufacturer based in Japan. Kami sells printers to both the home and office market around the world, and generates revenue from the sale of printer hardware as well as ink and toner, which are called consumables. Revenue has started to decline lately. Kami's CEO has asked Oliver Wyman to identify the reasons for this fall, and to make recommendations on how to restore growth

### **Question 1**

Your team holds a brainstorming session to talk about how to approach the case. What kind of information would you want to have?

*The ideal answer would include:*

I would like to know more about both the internal and external environment. Internally, I'd like to know if the company has been losing market share, or if prices have changed for any reason. Externally, I'd like to know if the marketing is shrinking or growing, and examine Kami's major competitors to determine if they have been doing anything differently.

### **Question 2**

You have been given the revenue for Kami and its two competitors for the past 3 years. Together, the 3 companies make up the whole market. What observations can you draw from this information?

**Table 1: Client and Competitor Revenue, 2010-2012**

Company	2010	2011	2012
Kami	\$25.2B	\$25.0B	\$24.5B
Treadstone	\$17.2B	\$17.0B	\$15.3B
Syracuse	\$8.1B	\$8.0B	\$7.7B

**Table 2: World GDP Growth, 2010-2012**

	2010	2011	2012
World GDP growth	+5.2%	+4.7%	+4.3%

*The ideal answer would include:*

It seems like all 3 firms have been experiencing declining revenues. This suggests that the problem is likely to be external and that the market is shrinking. However, since world GDP growth has been positive in the same period, it seems like the problem is limited to the market we are operating in, and is not a case of overall weak economic demand.

The data also shows that the decline in sales seems to be accelerating for Kami's competitors. In comparison, Kami's sales are falling more slowly than competitor's, and its market share seems to be increasing.

### Question 3

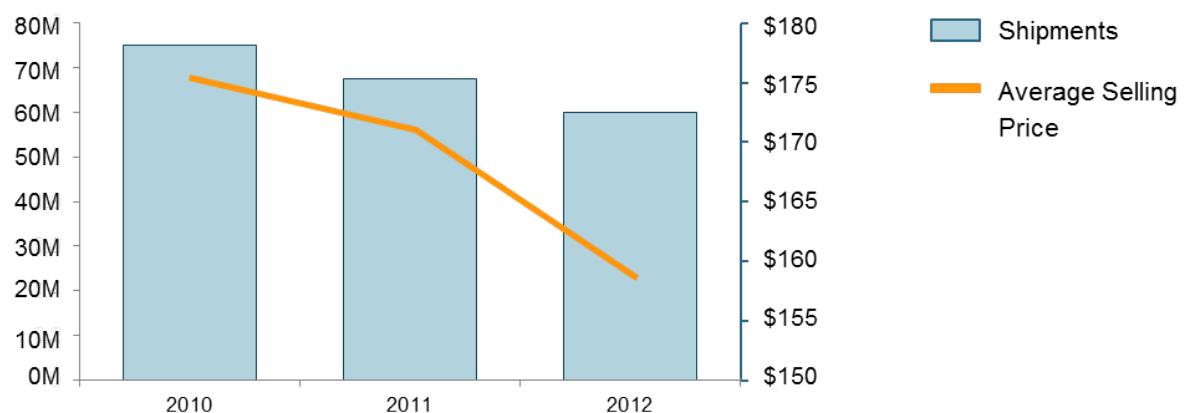
Your team has established that the overall market is shrinking, but you have yet to identify the cause. The Oliver Wyman research group has provided you with the following data about the printer market. What insights can you draw? What hypotheses might you want to test, and how would you test them?

**Table 3: Market Size by Segment, 2010-2013**

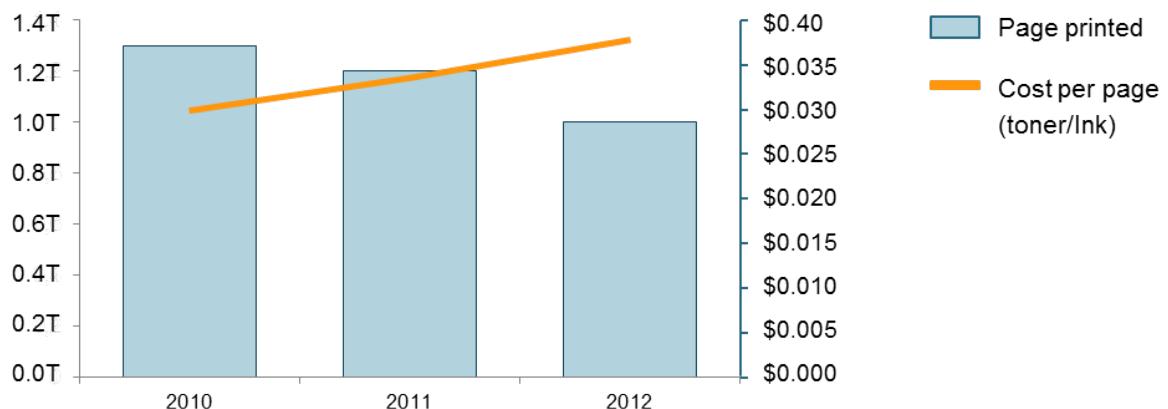
	2010	2011	2012	CAGR
Hardware	\$13.1B	\$11.4B	\$9.6B	-14.5%
Consumables	\$37.5B	\$38.6B	\$38.0B	0.7%
<b>Total Market</b>	<b>\$50.5B</b>	<b>\$50.0B</b>	<b>\$47.5B</b>	<b>-3.0%</b>

*Note: Totals may not add due to rounding errors*

**Chart 1: Hardware Shipment and Average Selling Price, 2010-2012**



**Chart 2: Consumables Pages Printed and Cost per Page, 2010-2012**



*The ideal answer would include:*

According to table 3, the consumables market is about 3 times the size of the hardware market. In addition, the consumables market appears to be growing slightly, whereas the hardware market seems to be shrinking rapidly. Referring to chart 1 and 2, this seems to be because consumers are buying fewer printers, and the price of printers is also falling. In contrast, despite the fact that consumers are printing less, the consumables market has grown slightly due to the rising cost of toner and ink.

To determine the reason behind the falling printer shipments and prices, I would like to hypothesize that the overall demand for printers is falling, and that manufacturers are cutting prices in response. This could be because people don't use as much paper as they used to, and thus need fewer printers, or because people already have as many printers as they need, and there aren't any reasons to buy a new one unless one breaks. It could also be because offices and homes are cutting down on printing to reduce costs, or to be more environmentally friendly.

With regards to consumables, since print volume is falling as prices are rising, it seems to indicate that an appropriate hypothesis would be that people are printing less because it is becoming more expensive. Other hypotheses I would like to test include the following: new devices (such as smartphones and tablets) have reduced the need for paper as information is always accessible online, the younger generation is playing an increasing important role and likes to use less paper, government regulations are changing and paperwork is increasingly being done digitally and finally, cheap online storage solutions and increasingly powerful search functions are making storing documents digitally an attractive alternative to physical storage.

In sum, since it seems likely that customer behaviour is a driving factor of the decline in both printer shipments and print volume, an in-depth customer survey would probably give us a good deal of insight and allow us to test our hypotheses.

#### **Question 4**

The Oliver Wyman team has determined that the printer market is shrinking because of structural factors that are decreasing society's reliance on paper. Kami's CEO has asked you to suggest new products that her company could launch. What could you suggest? How would you evaluate whether the products are a good fit for Kami? What would a business design for these products look like?

*The ideal answer would include:*

To determine what new products Kami should launch, we should examine its current assets. Examples of assets we could leverage include Kami's expertise helping consumers and business be creative and productive, its global sales relationship with large companies and consumer-facing retailers, strong brand name, hardware design and manufacturing capabilities, unique R&D capabilities and intellectual property.

An example of a new product that comes to mind would be tablets. Kami likely has the design and manufacturing capabilities to produce its own tablet, and this would prepare it well for the post-paper world.

Below is a potential business design for the tablet:

1. *Who are the target customers, and why would they need this product:* This product would be targeted at both consumers and office workers, and would enable them to carry out the activities they currently do on paper in a fully digital manner.

2. *How would Kami make money from this product:* Kami would make money by selling the tablet itself; it could also make some more money by taking a cut of the apps that users would install on their tablets.

3. *How would Kami protect its revenue for the long-term:* Here, you could show that you think critically about the business world around you and bring in real-world insights. Apple popularized the tablet, and has a very strong position in the market. Gaining market share and protecting revenue is therefore likely to be a significant challenge. Kami could however differentiate itself by having an exclusive operating system. It is unlikely to be able to develop it on its own since it is a hardware rather than a software company, but could strike a deal with one of Apple's competitors who is looking to break into the market.

## 7. Snow Tires – Market sizing (Source: Roland Berger)

*Difficulty level:* 3

### **Problem Statement**

Your client is Wilson Tire, located between Montreal and Toronto on the 407 highway. Mr. Wilson is attempting to size the market for snow tires in Montreal. Help Mr. Wilson estimate the total market size and how many purchases might be made each year.

### **Potential Framework**

1. This question might begin with an estimation of the total population of Montreal. This total might include a student vs. full-time resident population.
2. Next, a person might consider number of cars per household or number of cars per student. It might also be a good idea to consider the types of cars that will require snow tires (i.e., 4-wheel drive might not require tires)
3. Special consideration might be given to students. For example, some students may buy their tires out-of-state.
4. Finally, consider how often people install tires on their car and how many snow tires people buy (2 or 4).

### **Suggested Solution**

**Candidate:** I'd like to start by estimating the total population of Montreal, and segmenting this into students and full-time residents.

I would say the population of Montreal is approximately 2 million. Since Montreal is known to be a university town, I would say 30% of these are students. This makes 0.6M students, and 1.4M full-time residents.

**Interviewer:** That sounds about right. What next?

**Candidate:** I would like to divide the full-time resident population by households. Assuming that each household consists of 3 members on average, this means there are approximately 0.5 million households. Further assuming there are 2 cars on average in each household, that makes 1 million cars for the full-time resident population.

As Montreal is a city, and fairly easy to get around, I would estimate the % of students with cars to be very low, say 20%. This makes 120,000 cars in total for the student population.

**Interviewer:** Okay. What does that imply about the market for snow tires?

**Candidate:** Well, since some cars are 4 wheel drives, not all of the cars above will require snow tires. Since Montreal is known to have harsh, snowy winters, I think the % of 4 wheel drives would be higher, approximately 20%. This leaves 96,000 student cars and 800,000 household cars that would require snow tires

However, not all of the population might purchase their snow tires in-state. For example, most of the students with cars are likely to be from another province or state. Thus, I would estimate 50% of students to purchase their tires outside of Montreal. This narrows the size of the market to 840,000 ( $800,000 + 96,000 \times 0.5$ ).

**Interviewer:** Great. Is there anything else you would want to consider?

**Candidate:** Yes, I would look at how often people replace their snow tires. I know from personal experience that the average is usually 3 years, depending on mileage. I would also want to look at the number of snow tires consumers usually buy. However, I know that in Montreal, cars are required to have 4 snow tires.

**Interviewer:** What do you think the final market size is?

**Candidate:** Since I've determined the number of cars needing snow tires in Montreal to be 840,000, and the number of tires to be 4, it would be approximately 3.40 million. Dividing this number by 3 (as tires are only replaced every 3 years) would give a market size of 1.13 million tires per year.

**Interviewer:** Good job. I will pass on your conclusions to Mr. Wilson.

## 8. Medilogiks – Market entry (Source: MIT Sloan Management Consulting Club)

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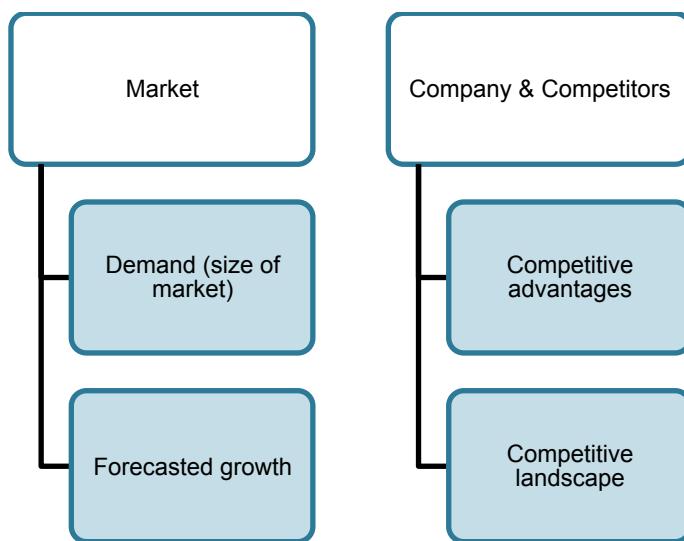
*Difficulty level:* 3

### **Problem Statement**

Our client, Medilogiks, is a medical devices company and they have just invented a product for non-invasive surgical procedures. They have hired us to determine if they should enter the market with this product.

### **Question 1**

Should they introduce this product into the market?



*The ideal answer would include:*

Our discussion should revolve around two threads – firstly, what is the market for this product and secondly, what is our client's capability to succeed in this marketplace. The discussion would extend not only to a "yes or no" decision for entering the market, but evaluating options for entering the marketplace against valuing the technology for sale to potential buyers.

We require some background details on the technology, our client, and the market. For the technology, we need to understand the impact of this technology in the medical world and if it is here to stay. For the client, we would need to look at our client's core competencies and its competitive advantage in the marketplace. Finally, we would need to understand the marketplace's potential and growth.

### **Question 2**

How would you go about establishing if this technology is here to stay?

*The ideal answer would include:*

We would establish this by speaking with market analysts, surgeons, medical providers, and insurance companies (payers) to understand if this technology would provide a sustainable business model for our client. This would include understanding the size of the market, its growth potential and the factors that drive competitive advantage in this marketplace.

### **Question 3**

If I tell you the market size for this technology is \$500 million in the United States, and the market is expected to grow at 35% for the next 10-15 years, would you advise our client to enter the market? For our discussion, let us focus only on the US market.

*The ideal answer would include:*

This certainly sounds like an attractive market. However, we would need more information on market forces, including competitors and the factors that drive competitive advantage in this marketplace, to determine if our client should enter the market. Despite its large size, it may not be an attractive market to enter if competition is high.

### **Question 4**

At this point in time, Medilogiks faces only one major competitor in this market, GSC, with sales of about \$250 million annually, and very strong R&D and marketing capabilities. Do you believe new competitors will be attracted to this marketplace in the future?

*The ideal answer would include:*

New competitors would be attracted to this marketplace if the technology is widely adopted in the marketplace, entry barriers are low and the market opportunity presents high margins.

### **Question 5**

The technology looks promising: it cuts surgery costs and post-surgery recovery times, and is expected to be widely accepted in the marketplace. The technology is not patented, the development timeframe for this technology is about 6 months, and we are expecting gross margins of about 60% to 70% for the major players. In light of this information, do you think that new competitors are likely to enter the market? Why or why not?

*The ideal answer would include:*

Given the low entry barriers, high margins and available market space, we can expect new competitors to enter the market.

## **Question 6**

How much market share do you think Medilogiks can acquire?

*The ideal answer would include:*

We are looking at GSC, the market leader, with 50% of this market and a potential threat of new competitors in the short term. Given our time-to-market lead of 6 months over potential newer entrants, we can conservatively estimate to acquire about half of the remaining market – about 25% market share in 4 to 6 months – by our early presence in this marketplace. This leads us to revenues of about \$125 million annually. From a revenue standpoint, this marketplace looks attractive. Now, we would need to examine what our costs would be if we were to enter the marketplace.

## **Question 7**

There is one constraint, however. This rapidly evolving technology would require an annual recurring R&D investment of about \$100 million for Medilogiks. Do you still think this technology is a viable business?

*The ideal answer would include:*

From the cost standpoint, this does not look viable since we estimated earlier that our annual revenues would be in the range of \$125 million. This leaves a gross profit of \$25 million before accounting for all other costs, including operating costs, selling, general and administrative costs. Hence, this does not look like a viable business for Medilogiks, especially as competitors are expected to earn margins of 60-70%. We would thus recommend that they do not enter this business.

An alternate option would be to sell this technology to a third-party by performing a valuation on this technology and examining the market for potential buyers.

## 9. U.S Retail Bank – Market sizing / entry (Source: MIT Sloan Management Consulting Club)

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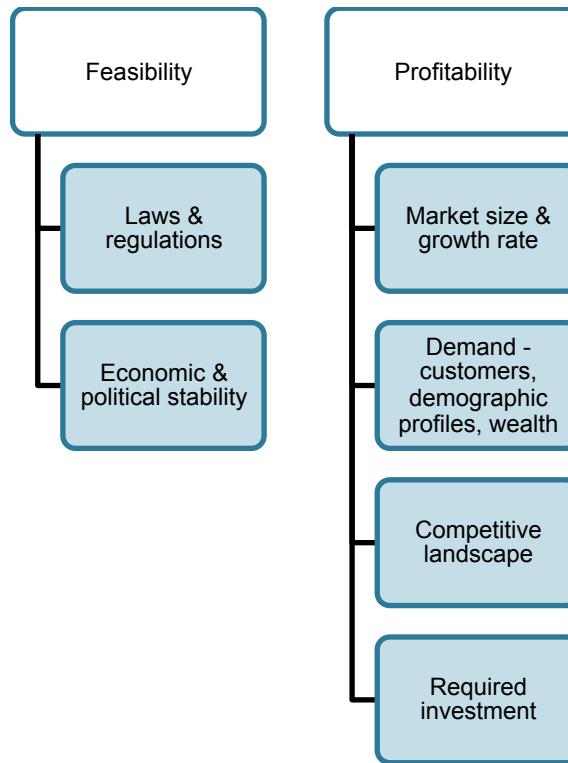
*Difficulty level:* 3

### **Problem Statement**

Your client is a retail bank in the U.S. There has been no growth over the last couple of years in the domestic market so they are considering pursuing growth overseas in emerging markets.

The client would like you to present a structure for evaluating whether or not they should enter a given country.

### **Potential Framework**



### **Suggested Solution**

#### **Structure**

1. I would suggest for the client to first look at the feasibility of entering the country. To do so, I would suggest researching the laws and regulations in that specific country, to determine if there are any restrictions against foreign entities.
2. Next, I would like at the country's economic and political stability to further determine if it would be ideal to enter the market. A bank requires economic and political stability to thrive, and so I would advise against entering an unstable market.

3. I would also advise the client to examine the profitability of the market before entering. To do so, I would look at the size of the market, and the historical and expected growth rate.
4. I would also assess demand for banking services in the market, by looking at the customers and demographic profiles, the % of the population who entrusts their wealth to banks, as well as overall wealth of the country.
5. It is also important to examine the competitive landscape in the country. Are there lots of existing competitors? Are they fragmented or are there a number of large players? What are the barriers to entry, if any?
6. Lastly, I would advise the client to determine the costs that will have to be incurred in entering the market, both fixed costs and variable costs such as labor (are there strong unions in the country, will labor costs be significantly higher or lower etc.)

**Using your above structure, the client has identified Mexico as a particularly attractive market. They would like you to estimate the annual size of the auto loan market in Mexico, to give them a better idea of whether it is worth entering.**

### **Suggested Solution**

1. I would start by estimating the number of car dealerships in Mexico. I assume there would about 50 in each major metropolitan region. Assuming approximately 10 regions, that would be 500 dealerships nationwide.
2. I'm going to assume that each dealership sells 5 cars a day, on average. This translates to 2,500 cars sold per day. Assuming 300 operating days in a year, that is 750,000 cars.
3. Assuming that each car costs \$10,000 on average, and the down payment is 10%. This means that loans are worth \$9,000 per car. However, some car buyers do not take out loans, let's say 10%. Thus, the number of buyers who take out loans is 675,000.
4. Assuming an interest rate of 20% on average (higher than it would be in North America), the size of the market is \$1.215 B.

## 10. CanadianTimes.com – Market sizing/entry (Source: Harvard Business School Consulting Club)

*Difficulty level:* 3

### **Problem Statement**

You're a new senior strategy associate and have just finished your orientation training. You are immediately assigned to our Canadian Times team.

The Canadian Times is an upscale, highly respected newspaper. It is the most widely read newspaper in Canada, especially its very strong business and financial section. The paper is a cross between the Wall Street Journal and the New York Times, both in content as well as in reputation.

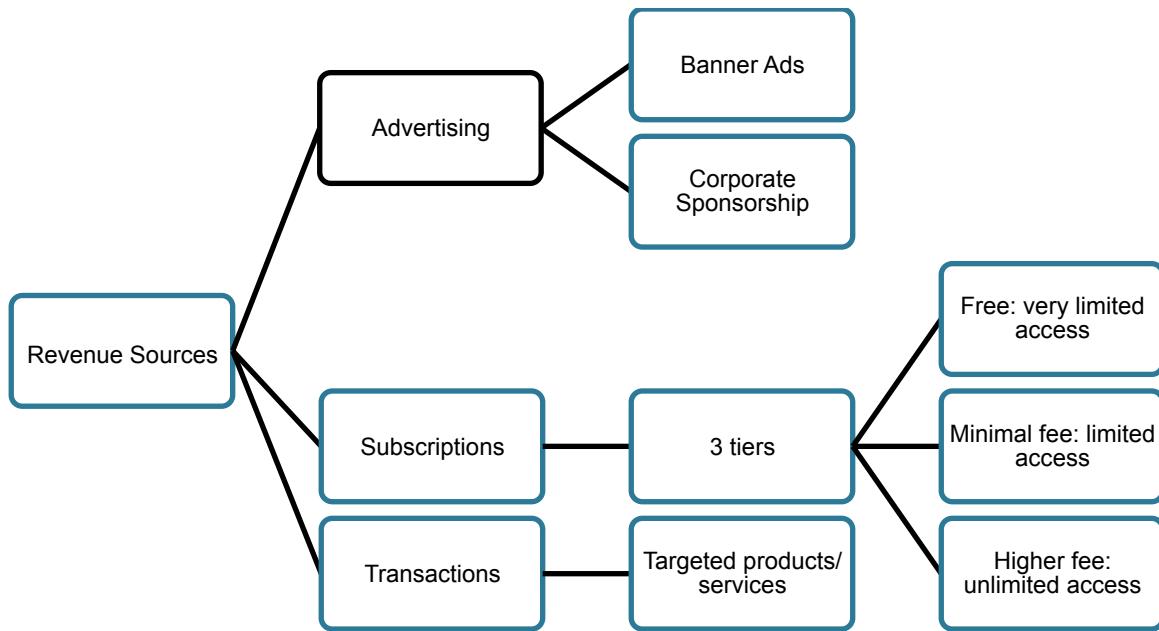
The team has already had one meeting with the newspaper's online spin-off: CanadianTimes.com. You are going to join the team for the second meeting, which will be held with only the CEO of the CanadianTimes.com. Currently, their web site is nothing more than an online version of the newspaper, otherwise called brochureware.

The newspaper's and the web spin-off's single biggest asset is the highly respected brand name: Canadian Times. The purpose of this second meeting is for the consulting team to present its response to the CEO's current predicament: how to realize greater revenues from their current online spin-off (CanadianTimes.com). **The CEO has asked you to prepare 3 or more ideas for the CanadianTimes.com Company to increase their revenue through their Internet strategy.**

Your team has provided you with the following information as background about CanadianTimes.com:

- CanadianTimes.com conducted a viewer survey, receiving a high enough number of responses to be statistically significant, allowing them to feel comfortable using the following information for planning purposes.
  - Their website has a large number of hits, only 30% fewer unique visitors than the number 1 site in Canada.
  - Their hits are from viewers in the 75th percentile of customer income.
  - Their viewers are also highly educated: 60% have a university education and 30% have graduate degrees.
- CanadianTimes.com is a spin-off from the newspaper.
  - However, the same parent corporation owns both.
  - The CEO of the dot-com does not report to the CEO of the newspaper.
  - The dot-com CEO has worked for the newspaper for a long time and knows its operations well.
- The brand name is very strong in Canada, but not outside.
  - The newspaper's content is primarily focused on Canada, but it does have an international section.
  - The CEO wants the dot-com to use the newspaper's content and brand, but otherwise has no need to connect to the newspaper.

## Potential Framework



## Suggested Solution

**Candidate:** In general, it's fair to say that the bulk of Internet revenue comes from three sources: advertising, subscriptions, and transactions. I think that the key to helping the CEO is to tailor these initiatives to CanadianTimes.com core assets.

**Interviewer:** Good points. Can you give me more details on each of these sources of revenues?

**Candidate:** Well let's look at advertising first. We could suggest two avenues: banner ads and corporate sponsorship. Upscale or corporate banner ads such as insurance companies, banks, or brokerage firms would make a lot of sense with our audience. They are highly educated and more importantly, have the highest level of disposable income. In addition to banner ads, we should look into corporate sponsorship. We should take full advantage of the fact that the strong business section can obtain corporate sponsorships; for example, banks or e-trade companies pay for their section of the site.

**Interviewer:** Good. They do some of that already but probably not as much as they could. You also mentioned other sources of revenues. Could you explain your subscription model?

**Candidate:** We could imagine a three-tier approach. For example, in tier 1, readers could have access to today's news for free. For a small fee, Tier 2 subscribers could research up to one-week-old articles in the archive. Finally, in the last tier, subscribers could have access to the entire archive.

**Interviewer:** Coming from a traditional publishing company, they are fairly familiar with these two models. I would be interested in hearing more about your third option.

**Candidate:** One way to "monetize" their attractive audience would be by offering targeted products and services. Some examples could be a tollbooth model similar to Amazon Z shop concept or selling tabs on their site. This would clearly require a deep analysis of the competitive landscape and of the company's capability (technical, people...) to start a completely new line of business.

These products or services would have to be:

- High margin,
- Upscale,
- Highly profitable vertical businesses; for instance: golf store, tax advice, investment advice, upscale travel (cruises, etc.)

**Interviewer:** Golf equipment? This is interesting. How would you go about sizing the market for golf equipment in Canada?

**Candidate:** To determine the golf store's (equipment only) first year total revenue, we would have to figure out the following:

- The population of Canada
  - The percentage connected to the Internet in Canada
  - The number who browse this site
  - The number who browse the golf store
  - The number who buy from this site: the buy to browse ratio
  - The average amount spent per transaction
  - The number of times they buy per year
  - The commission received by CanadianTimes.com
1. There are approximately 30 million people living in Canada. If we assume that two thirds of them are connected to the Internet, we have:  $30M \times 2/3 = 20M$
  2. If we assume that 20% of the people connected will visit the Canadian Times site, we now have:  $20M \times 20\% = 4$  million visitors
  3. Not all of them will click on the golf site. Probably about 20% will do. We can now estimate the number of people browsing the golf site:  $4M \times 20\% = 800,000$  visitors
  4. If we assume that only 10% of them will actually purchase on the site, we now have:  $800,000 \times 10\% = 80,000$  buyers.
  5. Each buyer may spend on average \$100 each time they visit and they may visit the site 2 times each year.
  6. If we assume a 5% margin, we now have a rough idea of the golf equipment first year revenues:  $80,000 \times \$100 \times 2 \times 5\% = \$800,000$

### **Tips**

- It's always a good idea to use numbers that are easy to manipulate. Do not hesitate to round up the number to help your calculations. The interviewer is not looking for an accurate answer.
- In this case, the interviewer decided to test the candidate's ability to do some real time analysis, to articulate a methodology and to make reasonable and explicit assumptions in order to arrive at a ballpark estimate of the size of the golf equipment market. However, the interviewer could also have chosen to discuss in more detail how the candidate would have thought about launching a completely new line of service. Thus, you should always be prepared to do both qualitative and quantitative analysis.

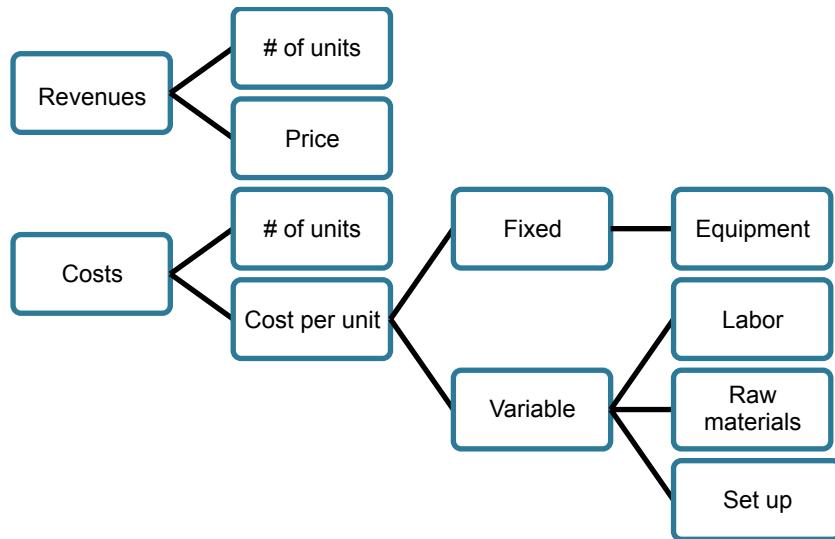
## 11. Yearbook publishing company – Profitability (Source: INSEAD Consulting Club)

*Difficulty level:* 3

### **Problem Statement**

Our client is a yearbook publishing company that is experiencing declining profitability. They have hired us to figure out why this is so, and what they should do about it.

### **Potential Framework**



### **Suggested Solution**

**Candidate:** I would like to explore a breakdown of revenues and costs to determine the cause of declining profitability. In terms of revenue, could you tell me if prices have changed?

**Interviewer:** Prices have stayed constant in real terms.

**Candidate:** How about quantity sold?

**Interviewer:** Pretty much flat.

**Candidate:** Then there must be something going on with the cost structure. This is publishing so I presume there are pretty high fixed costs. Did we make any investments or do anything else that could have increased the fixed costs?

**Interviewer:** No. The client has old machines that are pretty much depreciated.

**Candidate:** Because they are old machines could the maintenance costs have increased or is there more downtime?

**Interviewer:** No.

**Candidate:** Okay, I'll move on to variable costs. Did the unit labor or raw material costs change significantly?

**Interviewer:** No.

**Candidate:** Hmm. Could you explain how the production process works so I can understand the cost structure better?

**Interviewer:** Set-up costs are very high. It is optimal to do longer runs to lower costs.

**Candidate:** Is it therefore some kind of mix issue? Could you tell more about the changes in demand?

**Interviewer:** Yes. We have small schools and large schools that use us. The smaller schools are ordering fewer yearbooks while larger schools are ordering larger quantities.

**Candidate:** Why are small schools ordering less?

**Interviewer:** The number of students has not changed, but the proportion that order yearbooks have gone down. As a result, we have started to do more uneconomic batches of printing. Can you think of some solutions to increase the order quantity from smaller schools?

**Candidate:** What drives sales?

**Interviewer:** One key driver: having your picture in the yearbook.

**Candidate:** Do the schools order all of their yearbooks at one time?

**Interviewer:** Good question. Actually they tend to order them one at a time, but often call us up after and ask if they can order just a few more. We have always obliged them as a customer satisfaction compromise.

**Candidate:** Have we considered charging a premium for these 'extra' orders?

**Interviewer:** Well, we haven't in the past, but we could certainly consider doing so. Any other ideas?

**Candidate:** I guess that we should help schools with advertising to increase yearbook participation/ awareness. Well, this may be a radical proposal, but we could also consider trying to shift our customer base more towards large schools. We should look at the trade-offs involved in the new customer acquisition costs versus the improved operating margins.

### **Tips**

- Prioritize issues and filter out unneeded information.
- Visual representation often helps to make things clearer; you could try drawing out the manufacturing process and sketching out the cost structure.

## 12. Hospital Proposal – Profitability (Source: MIT Sloan Management Consulting Club)

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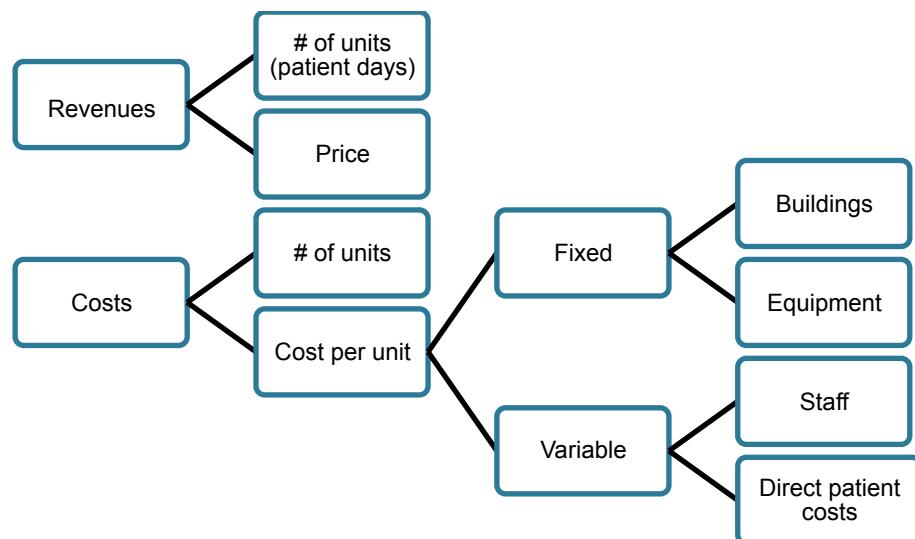
*Difficulty level:* 3

### **Problem Statement**

You are a new consultant and your managing partner has just given you the following task: the CEO of a hospital is concerned about declining profits, falling revenues and rising costs at her hospital.

The partner of your firm wants YOU to prepare the proposal that will convince the hospital to retain your firm's consulting services. Your managing partner is the resident expert on healthcare issues and you have ten minutes to query him for information before he departs to London for another client engagement. How would you structure this problem and what questions you would ask of him?

### **Potential Framework**



### **Suggested Solution**

**Candidate:** What defines volume or "quantity" for the hospital?

**Interviewer:** Patient days.

**Candidate:** What has been happening to patient days?

**Interviewer:** They have been constant for the past five years.

**Candidate:** How long has the hospital been experiencing profitability problems?

**Interviewer:** Five years.

**Candidate:** In regards to costs, what is the proportion of fixed and variable costs for the hospital?

**Interviewer:** 30% Fixed Costs (FC) and 70% Variable Costs (VC).

**Candidate:** What are the key components of FC and how have FC changed over the past five years?

**Interviewer:** Buildings and Equipment are the main components of FC; FC have been constant over the past five years.

**Candidate:** What are key components of VC and how have they been changing over the past five years?

**Interviewer:** Staff and Direct Patient VC's are the key components; staff salaries represent 50% of total costs (TC) while direct patient VC's represent 20% of TC. Patient costs have been constant with inflation for the past five years while staff costs have increased 10% during the same period.

**Candidate:** What do you mean by "Direct Patient VCs"?

**Interviewer:** Medications and supplies needed to provide patient care.

**Candidate:** Do you know what factors have been causing staff costs to rise?

**Interviewer:** Hiring has been increasing and new hires are more expensive. Due to the increased use of technology in patient care, which requires more skill and specialized training, we have to pay new hires higher salaries.

**Candidate:** What happens to the old (less skilled) hires? Has the hospital laid them off?

**Interviewer:** No.

**Candidate:** Do salaries of the old hires increase with tenure, despite their lack of specialized training?

**Interviewer:** Yes.

**Candidate:** So essentially old hires are staying on doing less productive work, and also being paid more for it. This seems like a large part of the reason behind rising staffing costs.

**Interviewer:** That sounds about right.

**Candidate:** What is happening to hospital prices?

**Interviewer:** They have been steady for the past five years.

**Candidate:** How can revenues be declining if patient days (volume) and price have been steady? Are there other revenue components I have not considered?

**Interviewer:** No. The price billed has remained steady, but the actual price we receive has been declining every year.

**Candidate:** Why has price received been declining? Who is not paying, or specifically, what is the customer mix?

**Interviewer:** Customer mix and the amount of price paid for each segment is as follows:

Customer Type	Private Individuals	Indigent Poor	HMO's	Government (Medicare)
% of price paid	100%	0%	70%	60%

**Candidate:** What is the proportion of each customer type and how has that proportion shifted over the past five years?

**Interviewer:** Here are the changes.

Customer Type	Private Individuals	Indigent Poor	HMO's	Government (Medicare)
% of price paid	100%	0%	70%	60%
Proportion of customer base 5 years ago	20%	10%	35%	35%
Proportion of customer base today	10%	10%	40%	40%

**Candidate:** The first thing I notice from the table is that the proportion of private individuals as customers has dropped by half. This seems concerning as private individuals are the only ones who pay 100% of the billed price. Has the hospital tried to market directly to private individuals to attract more of this segment, or tried to modify the customer mix in its favor?

**Interviewer:** Yes, it has, but it does not seem to be working. The hospital also denies care to patients under HMOs with the lowest reimbursement rates; we send those patients to other hospitals. We also ask some patients to subsidize their own care, or we double bill, to both their Medicare and HMO providers, for example. But HMOs are catching on and finding ways around this strategy.

**Candidate:** Okay, I think I have enough material to begin developing a proposal now.

- I am assuming that the trend toward more HMO patients and fewer full-paying patients is a given, and beyond our control for now.
- One goal for the hospital should be to make more rational revenue estimates based on actual price received rather than price billed. This will let the hospital budget against expected rather than desired revenues. These changes will help the hospital project more realistic profit margins.

- Another key issue is to adjust cost structure by 1) laying off unproductive employees (using separation and/or early retirement incentives) and 2) getting greater productivity out of our higher skilled, more costly staff. This will help boost profit margins.

### **Tips**

Remember what developing a proposal entails; it is not cracking the case, but finding the major issues and developing some preliminary hypotheses.

## 13. Publishing company – Profitability (Source: Columbia Graduate Consulting Club)

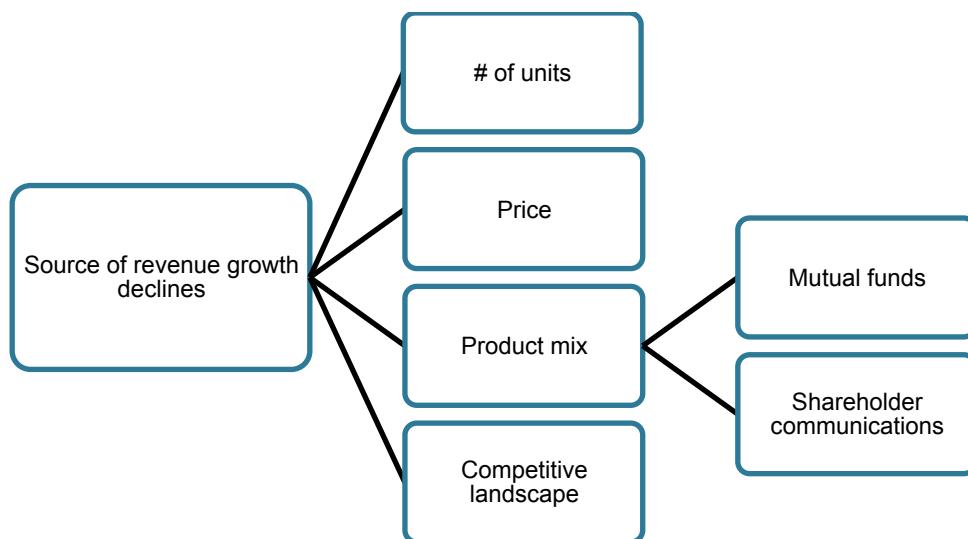
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*Difficulty level:* 3

### **Problem Statement**

A publishing company has 2 divisions, one that prints SEC disclosures and the other that prints mutual funds' prospectus. In the first division, the shareholder communications are printed and sent to all the shareholders. It entered the mutual fund prospectus business 10 years back, and this has helped with revenue growth. It had revenue growth of 25% over 5 years and then 15% over the next 5 years. The CEO wants to know why the rate of growth has slowed and what he can do about it.

### **Potential Framework**



### **Suggested Solution**

**Candidate:** Could you give me some more information about the client's business? Does it produce content, maintain a distribution list, solicit firms directly, etc.?

**Interviewer:** The client's services are retained by Investment Banks. When a company needs to access the capital markets or make SEC disclosures, it is required by law to send the information to all its shareholders. The company uses an Investment Bank in order to access the markets, and the bank gives the information to the client, who prints it and hands it to the company, which in turn mails it to the shareholders. So the client does not produce content or maintain its own distribution lists.

**Candidate:** Ok, let me start by looking at the revenues. Could you tell me a bit about the pricing in this market?

**Interviewer:** Prices have been constant.

**Candidate:** This indicates that the quantity of prospectus printed has declined. However, given the bull market, the overall number of investors has grown, which should have resulted in an increase in the number of prospectus printed. Could you tell me about the client's market share?

**Interviewer:** The market share has been constant.

**Candidate:** Then the other option is that companies are communicating to their shareholders in different ways. Have more firms started using the Internet to communicate with the shareholders, some service like ProxyVote.com?

**Interviewer:** Actually, the case is set in 1998, before online shareholder communication was possible. So ignore the effect of the Internet in this case.

**Candidate:** Ok, so no Internet effects... but the prices have gone down, which means that the quantity of shareholder communications must have gone down. However, this doesn't seem reasonable since the number of investors has increased, and the number of stock, bond offerings etc. has also increased. Can you tell me about the quantity of shareholder prospectus booklets printed?

**Interviewer:** Your reasoning is correct; the number of booklets printed has gone up.

**Candidate:** The quantity has increased, the price has remained the same, but revenue growth has decreased this doesn't make sense. Could you show me the revenues for the 2 divisions?

**Interviewer:** Mutual Funds prospectus: \$100 million in 1988, \$300 million in 1993, \$600 million in 1998. Shareholder communications: \$500 million in 1988, \$1 billion in 1993, \$1.7 billion in 1998.

**Candidate:** Ok, so the decline in revenue growth is due to the shareholder communication division. Hmm...Quantities have increased and prices have stayed constant... How does the client charge customers?

**Interviewer:** The client charges them on a per page basis.

**Candidate:** A per page basis! This means that the number of pages in shareholder communications have gone down.

**Interviewer:** That's correct.

**Candidate:** What could be the reasons behind it? You've mentioned that the client doesn't have any control over the content. Could the customers be reducing the amount to be printed to control costs?

**Interviewer:** Shareholder communication standards are mandated by the SEC, so the customers have to print what is required by the SEC.

**Candidate:** Then it looks like the SEC is the cause of the reduction in number of pages per communication.

**Interviewer:** Yes. In 1993 the SEC mandated the easy English usage rule, which forced companies to reduce all the legal jargon that was difficult to understand. So what options does the client have to raise revenue growth rates?

**Candidate:** The options before the client are to raise prices or to raise the quantity printed. It could achieve the latter by gaining market share, increasing the number of pages, or by expanding into other lines of business.

**Interviewer:** Ok, examine the options for me.

**Candidate:** Before I do that I would like to find out a bit more about the competitive landscape. Does the client have any differentiator? What is their competition like?

**Interviewer:** There are 3-4 firms that offer printing services. There is not much of a difference between them. Investment banks use one or the other's services for a while and then switch to another one if there is some personality clash. Prices are the same and so is the service.

**Candidate:** Ok, based on that information, let's take a look at the option of raising prices. The client's services are required when firms access capital markets, requiring shareholder communication. When firms access the capital markets, they hire Investment Banks, and I would guess that our client's costs are much less than those of Investment Banks. Is this true?

**Interviewer:** Yes, it is.

**Candidate:** Ok, then raising prices is a viable option. But I would like to check for competitive reaction. The Investment banks could choose a competing firm. However, you did mention that price usually doesn't come into the picture, so I feel that raising prices a bit is a viable option. The next one is to gain market share. Is there any way that our client can differentiate itself? Can it build a relationship with some Investment Banks and provide better service?

**Interviewer:** Not really, there are few options for doing so.

**Candidate:** Ok, so that rules out the market share option. What about printing more pages? While the content isn't under the client's control, it could play around with the font size, formatting to increase the number of pages.

**Interviewer:** No. Everything is mandated by the SEC, including the format.

**Candidate:** So that option is ruled out as well. So other than raising prices, the client can increase revenue growth rates by entering other markets, say the market for printing annual reports. It is similar to the mutual funds' prospectus market and can leverage its existing connections with forms, Investment Banks.

**Interviewer:** Ok. What about entering the publishing of something entirely different, like textbooks?

**Candidate:** That's also viable, though I feel that the annual report market might be closer to its competency, given its mutual funds prospectus printing division.

**Interviewer:** Great, thank you.

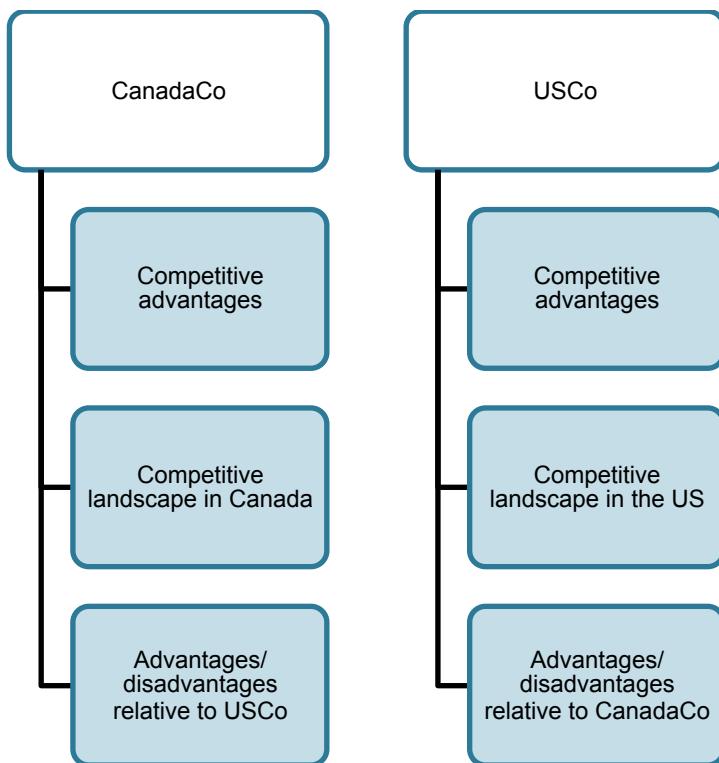
## 14. Canadian Retailer – General strategy (Source: INSEAD Consulting Club)

*Difficulty level: 3*

### **Problem Statement**

Your client is the largest discount retailer in Canada, with 500 stores spread throughout the country. Let's call it CanadaCo. For several years running, CanadaCo has surpassed the second-largest Canadian retailer (300 stores) in both relative market share and profitability. However, the largest discount retailer in the United States, USCo, has just bought out CanadaCo's competition and is planning to convert all 300 stores to USCo stores. The CEO of CanadaCo is quite perturbed by this turn of events, and asks you the following questions: Should I be worried? How should I react? How would you advise the CEO?

### **Potential Framework**



### **Suggested Solution**

**Candidate:** So, the client, CanadaCo, is facing competition in Canada from a U.S. competitor. Our task is to evaluate the extent of the threat and advise the client on a strategy. Before I can advise the CEO I need some more information about the situation. First of all, I'm not sure I understand what a discount retailer is.

**Interviewer:** A discount retailer sells a large variety of consumer goods at discounted prices, generally carrying everything from houseware and appliances to clothing. Kmart, Woolworth, and Wal-Mart are prime examples in the U.S.

**Candidate:** Oh, I see. Then I think it makes sense to structure the problem this way: First, let's understand the competition in the Canadian market and how CanadaCo has become the market leader. Then let's look at the U.S. to understand how USCo has achieved its position. At the end, we can merge the two discussions to understand whether USCo's strength in the U.S. is transferable to the Canadian market.

**Interviewer:** That sounds fine. Let's start, then, with the Canadian discount retail market. What would you like to know?

**Candidate:** Are CanadaCo's 500 stores close to the competition's 300 stores, or do they serve different geographic areas?

**Interviewer:** The stores are located in similar geographic regions. In fact, you might even see a CanadaCo store on one corner, and the competition on the very next corner.

**Candidate:** Do CanadaCo and the competition sell a similar product mix?

**Interviewer:** Yes. CanadaCo's stores tend to have a wider variety of brand names, but by and large, the product mix is similar.

**Candidate:** Are CanadaCo's prices significantly lower than the competition's?

**Interviewer:** No. For certain items CanadaCo is less expensive, and for others the competition is less expensive, but the average price level is similar.

**Candidate:** Is CanadaCo more profitable just because it has more stores, or does it have higher profits per store?

**Interviewer:** It actually has higher profits than the competition on a per-store basis.

**Candidate:** Well, higher profits could be the result of lower costs or higher revenues. Are the higher per-store profits due to lower costs than the competition's or the result of higher per-store sales?

**Interviewer:** CanadaCo's cost structure isn't any lower than the competition's. Its higher per-store profits are due to higher per-store sales.

**Candidate:** Is that because it has bigger stores?

**Interviewer:** No. CanadaCo's average store size is approximately the same as that of the competition.

**Candidate:** If they're selling similar products at similar prices in similarly-sized stores in similar locations, why are CanadaCo's per-store sales higher than the competition's?

**Interviewer:** It's your job to figure that out!

**Candidate:** Is CanadaCo better managed than the competition?

**Interviewer:** I don't know that CanadaCo as a company is necessarily better managed, but I can tell you that its management model for individual stores is significantly different.

**Candidate:** How so?

**Interviewer:** The competitor's stores are centrally owned by the company, while CanadaCo uses a franchise model in which each individual store is owned and managed by a franchisee that has invested in the store and retains part of the profit.

**Candidate:** In that case, I would guess that the CanadaCo stores are probably better managed, since the individual storeowners have a greater incentive to maximize profit.

**Interviewer:** You are exactly right. It turns out that CanadaCo's higher sales are due primarily to a significantly higher level of customer service. The stores are cleaner, more attractive, better stocked, and so on. The company discovered this through a series of customer surveys last year. I think you've sufficiently covered the Canadian market - let's move now to a discussion of the U.S. market.

**Candidate:** How many stores does USCo own in the U.S., and how many does the second-largest discount retailer own?

**Interviewer:** USCo owns 4,000 stores and the second-largest competitor owns approximately 1,000 stores.

**Candidate:** Are USCo stores bigger than those of the typical discount retailer in the U.S.?

**Interviewer:** Yes. USCo stores average 200,000 square feet, whereas the typical discount retail store is approximately 100,000 square feet.

**Candidate:** Those numbers suggest that USCo should be selling roughly eight times the volume of the nearest U.S. competitor!

**Interviewer:** Close. USCo's sales are approximately \$5 billion, whereas the nearest competitor sells about \$1 billion worth of merchandise.

**Candidate:** I would think that sales of that size give USCo significant clout with suppliers. Does it have a lower cost of goods than the competition?

**Interviewer:** In fact, its cost of goods is approximately 15 percent less than that of the competition.

**Candidate:** So it probably has lower prices.

**Interviewer:** Right again. Its prices are on average about ten percent lower than those of the competition.

**Candidate:** So it seems that USCo has been so successful primarily because it has lower prices than its competitors.

**Interviewer:** That's partly right. Its success probably also has something to do with a larger selection of products, given the larger average store size.

**Candidate:** How did USCo get so much bigger than the competition?

**Interviewer:** It started by building superstores in rural markets served mainly by mom-and-pop stores and small discount retailers. USCo bet that people would be willing to buy from it, and it was right. As it grew and developed more clout with suppliers, it began to buy out other discount retailers and convert their stores to the USCo format.

**Candidate:** So whenever USCo buys out a competing store, it also physically expands it?

**Interviewer:** Not necessarily. Sometimes it does, but when I said it converts it to the USCo format, I meant that it carries the same brands at prices that are on average ten percent lower than the competition's.

**Candidate:** What criteria does USCo use in deciding whether it should physically expand a store it's just bought out?

**Interviewer:** It depends on a lot of factors, such as the size of the existing store, local market competition, local real estate costs, and so on, but I don't think we need to go into that here.

**Candidate:** Well, I thought it might be relevant in terms of predicting what it will do with the 300 stores that it bought in Canada.

**Interviewer:** Let's just assume that it doesn't plan to expand the Canadian stores beyond their current size.

**Candidate:** OK. I think I've learned enough about USCo. I'd like to ask a few questions about USCo's ability to succeed in the Canadian market. Does USCo have a strong brand name in Canada?

**Interviewer:** No. Although members of the Canadian business community are certainly familiar with the company because of its U.S. success, the Canadian consumer is basically unaware of USCo's existence.

**Candidate:** Does CanadaCo carry products similar to USCo's, or does the Canadian consumer expect different products and brands than the U.S. discount retail consumer?

**Interviewer:** The two companies carry similar products, although the CanadaCo stores lean more heavily toward Canadian suppliers.

**Candidate:** How much volume does CanadaCo actually sell?

**Interviewer:** About \$750 million worth of goods annually.

**Candidate:** Is there any reason to think that the costs of doing business for USCo will be higher in the Canadian market?

**Interviewer:** Can you be more specific?

**Candidate:** I mean, for example, are labor or leasing costs higher in Canada than in the U.S.?

**Interviewer:** Canada does have significantly higher labor costs, and I'm not sure about the costs of leasing space. What are you driving at?

**Candidate:** I was thinking that if there were a higher cost of doing business in Canada, perhaps USCo would have to charge higher prices than it does in the U.S. to cover its costs.

**Interviewer:** That's probably true, but remember, CanadaCo must also cope with the same high labor costs. Can you think of additional costs incurred by USCo's Canadian operations that would not be incurred by CanadaCo?

**Candidate:** USCo might incur higher distribution costs than CanadaCo because it will have to ship product from its U.S. warehouses up to Canada.

**Interviewer:** You are partially right. CanadaCo has the advantage in distribution costs, since its network spans less geographic area and it gets more products from Canadian suppliers. However, since CanadaCo continues to get a good deal of products from the U.S., the actual advantage to CanadaCo is not great - only about two percent of overall costs.

**Candidate:** All this suggests that USCo will be able to retain a significant price advantage over CanadaCo's stores: if not ten percent, then at least seven to eight percent.

**Interviewer:** I would agree with that conclusion.

**Candidate:** I would tell the CEO the following: In the near term, you might be safe. Your stores have a much stronger brand name in Canada than USCo's, and they seem to be well managed. However, as consumers get used to seeing prices that are consistently seven to eight percent less at USCo, they will realize that shopping at USCo means significant savings over the course of the year. Although some consumers will remain loyal out of habit or because of your high level of service, it is reasonable to expect the discount shopper to shop where prices are lowest. Moreover, over time your brand-name advantage will erode as USCo becomes more familiar to Canadian consumers. You certainly have to worry about losing significant share to USCo stores in the long term. You should probably do something about it now, before it's too late.

**Interviewer:** Can you suggest possible strategies for CanadaCo?

**Candidate:** Maybe it can find ways to cut costs and make the organization more efficient, so it can keep prices low even if its cost of goods is higher.

**Interviewer:** Anything else?

**Candidate:** It might consider instituting something like a frequent shopper program, where consumers accumulate points that entitle them to future discounts on merchandise.

**Interviewer:** What might be a potential problem with that?

**Candidate:** Well, it might not be that cost-effective, since it would be rewarding a significant number of shoppers who would have continued to shop there anyway.

**Interviewer:** Any other suggestions?

**Candidate:** CanadaCo might want to prepare a marketing or advertising campaign that highlights its high level of service. It might even institute a CanadaCo Service Guarantee that surpasses any guarantees offered by USCo.

**Interviewer:** Assuming the only way to keep customers is through competitive pricing, is there anything CanadaCo can do to appear competitive to the consumer?

**Candidate:** It might want to consider offering fewer product lines, so that it can consolidate its buying power and negotiate prices with suppliers that are competitive with USCo's. It might lose some customers who want the variety of products that USCo has, but it may be able to retain the customer who is buying a limited array of items and is just looking for the best price.

**Interviewer:** All of your suggestions are interesting, and you would want to analyze the advantages and disadvantages of each in more detail before making any recommendations to the CEO.

## 15. Social life – Market sizing (Source: Roland Berger)

*Difficulty level:* 4

### **Problem Statement**

How many people have you interacted with over the last year?

### **Suggested Solution**

Break into manageable subcategories and estimate them separately.

1. McGill – almost 10,000 students, faculty and admin, assume I interact with 5%, so say 500.
2. Social Settings – Events occur once or twice per week, more around the holidays, so say 100 events per year. The average number of people is on the order of 10 per event. Same people at different events, assume I see the average person 4 times.  $100 \text{ events} * 10 \text{ people} / 4 \text{ times} = 250 \text{ people}$ . Maybe 50 of these people are also at McGill, so round down to 200 people.
3. Everyday activities – dry cleaner, supermarket, favourite pizza place, post office, etc. I typically interact with a cashier and server, so assume 2 interactions per visit. Assume 3 errands or visits per day = 20 locations per week, average visit interval is once every two weeks, so there are  $40 \text{ unique locations} * 2 \text{ interactions} = 80 \text{ people}$ . Round up to 100 to account for my neighbours, doorman, my doctor, dentist, and other people I see over and over.
4. Random meetings – people who stop you to ask for directions, people you talk to on the subway and people who attempt to steal your laptop or wallet - assume 2 people per week or 100 annually.
5. Other meetings – people you meet on vacation, at sporting events, shows, etc. Assume 50 people.
6. Total number of people in a year =  $500 + 200 + 100 + 100 + 50 = \text{approximately } 1,000$

### **Tips**

Only count each unique person once (students who neglect this detail might come up with ridiculous answers like 13,000).

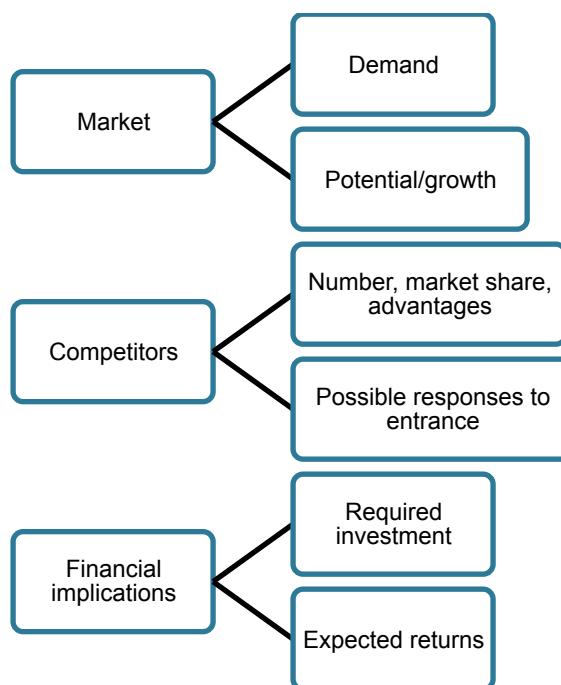
## 16. Airbus – Market entry (Source: MIT Sloan Management Consulting Club)

*Difficulty level: 4*

### **Problem Statement**

In 2002, Airbus is deciding whether to produce the Super Jumbo A380 or not. How much can they sell them for and should they enter the market or not?

### **Potential Framework**



**Interviewer:** Airbus is deciding whether or not to produce the A380 jet. How much can they sell them for and should they enter or not?

**Candidate:** I would first like to look at the overall market conditions, including demand, then look at competitors and their possible responses. Finally, I would like to look into the profitability of this venture for Airbus. Do we know how many super jumbos are bought each year?

**Interviewer:** Approximately 50.

**Candidate:** Is this demand constant or does it fluctuate?

**Interviewer:** For simplicity, assume it is constant.

**Candidate:** Who are the major players?

**Interviewer:** Boeing & Airbus.

**Candidate:** What are their market shares?

**Interviewer:** 30% for Boeing, 20% for Airbus. The remainder is split among many smaller players.

**Candidate:** How close are they running to capacity to understand the competitive response?

**Interviewer:** They are both at 75% capacity.

**Candidate:** Are these planes only used on long haul flights?

**Interviewer:** Yes.

**Candidate:** Is the demand expected to grow?

**Interviewer:** You may assume it will stay constant.

**Candidate:** I'd like to move on to competitors now. Does Boeing have a similar cost structure?

**Interviewer:** Yes.

**Candidate:** Are there long term contracts in place?

**Interviewer:** Generally yes, but these are somewhat like options.

**Candidate:** Does Boeing have anything similar lined up?

**Interviewer:** No, but they are thinking about stretching the current 747.

**Candidate:** Can current production assets be used for something else? Are they fixed or sunk?

**Interviewer:** Not relevant, so assume no. Costs are sunk.

**Candidate:** I think I have a pretty good picture of the market and competitors now. I'd like to know more about the financial feasibility. What are the variable costs of producing a plane?

**Interviewer:** Variable costs are USD 150 million, fixed costs are \$100 billion.

**Candidate:** Are there also sunk costs related to the production of the planes?

**Interviewer:** Yes, \$100 billion.

**Candidate:** What is the average lifetime of the plane?

**Interviewer:** 20 years.

**Candidate:** How much bigger is an A380 compared to a 747 in terms of seats?

**Interviewer:** 747s have on average 400-500 seats. A380s have 500-600 seats.

**Candidate:** Ok, now I want to estimate the incremental revenue for the airlines from the A380, from which I will be able to figure out how much Airbus can sell them for. I'm going to make a number of assumptions. I'm assuming that the super jumbo will have 150 seats more than the existing 747s. I'm also assuming that on average, flights will be booked to only 80% capacity. This means that airlines will be able to serve an extra 120 people per flight.

If we assume that there are 2 flights per day, and an average international long haul ticket costs \$1,000, this means that the airlines will earn an incremental \$240,000 per day, per plane.

If we further assume that the planes fly 300 days per year, that is \$72 M of incremental revenue.

**Interviewer:** Sounds reasonable so far. How about costs?

**Candidate:** I'm going to take a guess and say \$10M in incremental costs from additional fuel, wages and any other operating or administrative costs. Thus, assuming a 20 year lifetime of the A380, an airline will be able to earn an additional \$1.24 B in profits. However, these profits are not certain and must be discounted over 20 years.

Thus, let's assume we can charge less than half of that - \$500M per plane.

This means that Airbus will make \$250M per plane after fixed and variable costs. This means that we would need to sell 400 planes to recover our fixed cost of \$100 B. Thus, for the next 20 years, we would need to capture 40% of the market.

**Interviewer:** OK, so what should they do?

**Candidate:** Airbus should enter the market if they believe that they will be able to capture 40% of the market over the next 20 years. As they currently have 20% of the market, I believe it would be pretty challenging to double their market share.

In addition, Airbus should also consider the payback period involved in this venture and if they have sufficient capital to support it. \$100 B is a very large investment, and they will only be able to recoup it all in 20 years. The company should evaluate its current financial position to decide if they will be able to produce or borrow the required capital.

As the situation stands, I believe Airbus should not enter the market, as it requires a very large investment that will take a long period of time to recoup. However, this situation could change if Airbus is able to obtain governmental subsidies. I would also recommend for Airbus to keep a close eye on the new A380s. In a couple years, if the planes get more economically feasible, they should definitely start producing them.

## 17. Canadian Timber company – Cost-Revenue and Profitability (Source: MIT Sloan Management Consulting Club)

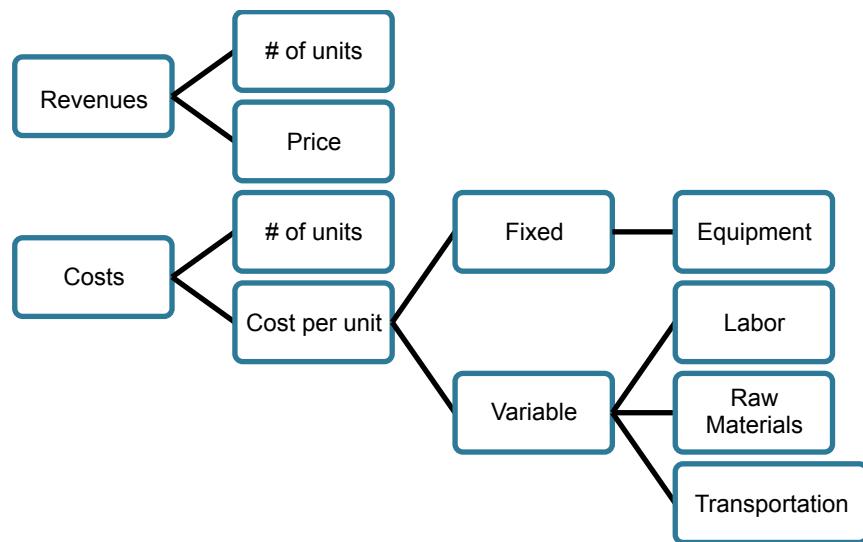
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*Difficulty level:* 4

### **Problem Statement**

A Canadian timber company has hired you. The company processes trees from the forest to make timber products (e.g., plywood, paper). They have recently been more profitable than their direct competitors for no apparent reason. You have been hired to find out why.

### **Potential Framework**



### **Suggested Solution**

**Candidate:** "You say our client has been making more profits. Are we also making higher margins?"

**Interviewer:** Yes.

**Candidate:** "In that case, let's focus on prices. How high are our prices, relative to those of our competitors?"

**Interviewer:** What do you think?

**Candidate:** "Timber products are commodity goods. I assume, then, that our prices are comparable to those of our competitors?"

**Interviewer:** That's a fair assumption.

**Candidate:** "Moving over to the cost side, how do our costs compare to those of our competitors?"

**Interviewer:** Our costs are lower.

**Candidate:** "Let's explore variable costs. Are our labour costs the same?"

**Interviewer:** The hourly rate that workers are paid is comparable throughout the industry. Assume that labour skills are comparable, as well.

**Candidate:** "And raw material costs?"

**Interviewer:** In Canada, the timber companies own their own natural resources (forests). Let's assume that the costs of growing and cutting down any given tree are comparable throughout the industry.

**Candidate:** "How do our transportation costs compare?"

**Interviewer:** There is not much of a transportation difference between the forests, the mills, and the point of sales.

**Candidate:** "Let's look at fixed costs..."

**Interviewer:** "Assume that we use the same equipment as our competitors."

**Candidate:** "From what you've said, it seems like the cost of processing any given tree would be the same for us as they would be for our competitors. Is that correct?"

**Interviewer:** That's a fair assessment.

**Candidate:** "If our prices on finished goods are the same, and our processing costs per tree are comparable, then the only way we could be making superior profits would be if our output per tree were higher than that of our competitors. Is that the case?"

**Interviewer:** Yes. On average, our timber company has thicker trees in their forests than their competitors. They can get a higher yield for the same amount of processing time, meaning a lower processing cost per unit.

**Candidate:** "Based on what you've said, then, our client seems to be experiencing above average profits because they enjoy a lower processing cost per unit. The next question we might explore is whether that is a sustainable competitive advantage."

### Tips

- The timber industry produces commodity goods. You may want to think about the steps in the value chain and analyze differences between competitors at each step.
- Obviously, the difference in yield per tree is the "blinding insight" for this case. This case is harder than most, not because it is particularly difficult, but rather, because you figuring out that the "blinding insight" is really a hit-or-miss proposition.

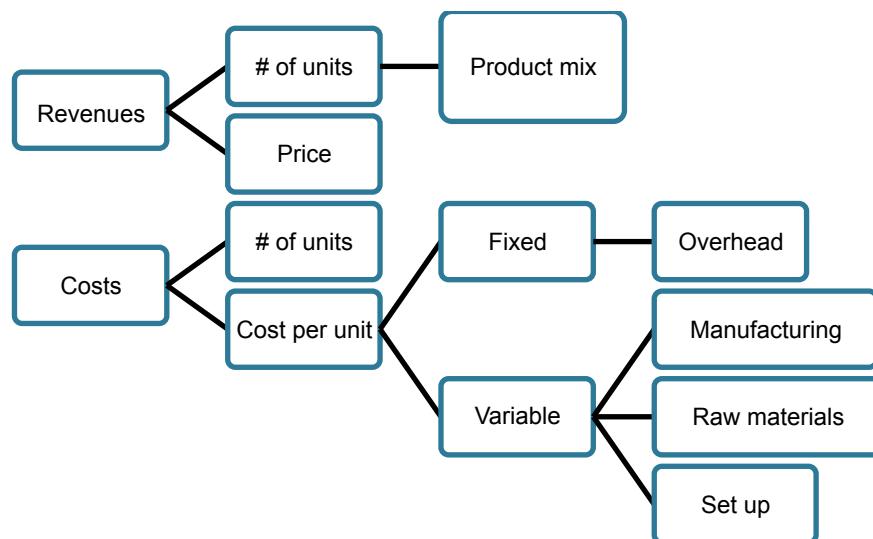
## 18. Meat processing plant – Profitability (Source: Michigan Consulting Club)

*Difficulty level:* 4

### **Problem Statement**

Our client is a meat processing plant that produces raw meat, with annual revenues of \$10B. Five years ago, our client acquired a branded pre-packaged prepared meat company (e.g. – producing packed pre-cooked sausage, hot dogs, etc...). The parent company noticed that the branded, pre-packaged division was losing money. What recommendations would you provide them with?

### **Potential Framework**



### **Suggested Solution**

**Candidate:** From a macro level, there are several issues we can examine here. Let's start by looking into profitability of this division. Let's look into the revenue drivers and the cost drivers. Can you tell me anything regarding the trend in sales and prices for this division?

**Interviewer:** The sales have dropped from \$250 million to \$200 million due to a product rationalization. The prices have remained constant.

**Candidate:** Well, has the client rationalized the proper products? How did the client come to these decisions? Were they based on a % of sales or on true profitability such as a measure like EVA? Perhaps we can examine which instrument/metrics the client used to rationalize its product base. Another possibility is examining the product mix and comparing it to customer preferences and market positioning. How has overall profitability of the division improved from the product rationalization?

**Interviewer:** This is a good question. It turns out that the client was very successful with the product rationalization. Our brand is a lower end brand and customers are satisfied with the product. The rationalization was very successful – the client was able to cut out the correct products. Profitability for the products went from (\$10M) to \$40 M. But, overall, the division is still losing money.

**Candidate:** So, the cost side of the equation is our next step. How has the cost structure changed for the division?

**Interviewer:** The costs have remained constant as a percentage of sales since the acquisition.

**Candidate:** Costs have remained constant? Well, this could mean that the company is not taking into account the synergies from the merger. Let's examine a series of costs that could be optimized. Let's start with overhead. Have the overhead costs and central functions been merged where necessary? What is the overall divisional structure of the firm?

**Interviewer:** The management is very lean in this division. There is one marketing executive, one finance executive, one operations, etc... They share legal assistance and some other general functions with the parent company. This is not an area of large costs and not really an area of concern – in fact, costs in this area have slightly decreased.

**Candidate:** Alright, let's now look at manufacturing costs. How have manufacturing costs changed? Has the firm taken advantage of economies of scale, capacity utilization, and other synergies in manufacturing?

**Interviewer:** Manufacturing costs have remained constant.

**Candidate:** Well, this could be one of the potential problems. Manufacturing costs should decrease as a percent of sales from synergies. Post-merger synergies should be realized and manufacturing costs should somewhat decline. Other post-merger synergies such as overhead and management costs could also be realized. Economies of scale and capacity utilization should improve from mergers and therefore costs should decrease as a percent of sales. Other issues could be culture fit between the two firms. We'll start with the manufacturing costs remaining constant. Let's take a look at how many plants are in this division and what the capacity utilizations are for these plants.

**Interviewer:** There is one manufacturing facility with high capacity utilization. Do you think that there are any opportunities to reduce costs within manufacturing?

**Candidate:** There is still a possibility of moving the production of the processed meats to each raw meat plant and increasing the vertical integration at each facility. Perhaps we can compare the investment required at each plant and the exiting costs for the existing plant to the benefits of integrating, such as decreased transportation and inventory costs.

**Interviewer:** Suppose this is true and after implementing these changes, we discover that there is a \$5 million improvement to the EBITA for a \$20 million investment. What would you recommend now? Would you implement these changes?

**Candidate:** I would now compare the improvement in earnings to the loss from operations. What is the loss in operations annually?

**Interviewer:** The operations loss is \$10 million per year.

**Candidate:** So, this means that the division is still losing \$5 million annually plus a \$20 million dollar investment. Now, let's look at selling the business. Who are our potential buyers and how much are they willing to pay?

**Interviewer:** There are no potential buyers. You cannot sell this business.

**Candidate:** Then we must look at exit costs. Perhaps we should not be in this business. How much would it cost to close down the plant? We would want to know the total cost of severance and the value of the assets we currently have.

**Interviewer:** The cost of exiting is \$50M.

**Candidate:** It seems as if we would be losing approximately the same amount by staying in the unprofitable business as well. Thus, I would recommend for the firm to exit the pre-packaged business, and focus on leveraging its core competencies to excel in its current raw meat division.

### **Tips**

- Whenever you hear about M&A, try to think about revenue and cost synergies.
- Don't forget that selling the company or division should always be an option if you are unable to find a path to profitability. If you do so, don't forget to mention exit costs as these can sometimes be quite high.

## 19. Bicycle Manufacturer – Profitability (Source: Columbia Graduate Consulting Club)

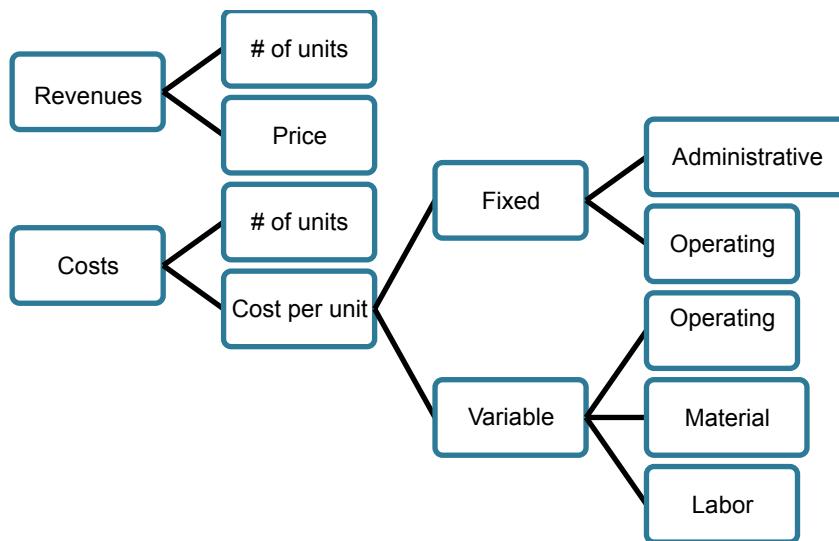
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*Difficulty level:* 4

### **Problem Statement**

Your client designs, manufactures, and markets a full line of bicycles. The company's sales and profits had been growing until three years ago when its profitability flattened and began declining. Why did this happen and how can the client fix the problem?

### **Potential Framework**



### **Suggested Solution**

**Candidate:** We'll start by examining elements of the profit equation:

$$\text{Profit} = (\text{Price} \times \text{Volume}) - \text{Costs}$$

I'd like to assess whether revenues (price x volume), expenses, or both are the source of decreasing profits. Can you tell me how much revenues and expenses have been increasing or decreasing?

**Interviewer:** Revenues are growing roughly at the same rate as before the downturn. Expenses are increasing disproportionately, however.

**Candidate:** So we need to determine the source of increasing expenses. Are cost increases due to operating or administrative activities?

**Interviewer:** Administrative costs are growing, but operating costs appear to account for the bulk of increased expenses.

**Candidate:** Which components of operating costs – fixed or variable – are increasing?

**Interviewer:** Fixed costs are growing but variable costs appear to account for the bulk of increased expenses.

**Candidate:** Which components of variable cost – direct or indirect – have been increasing?

**Interviewer:** Both have been growing, bicycles have become more sophisticated, with better materials and components. However, the increasing cost per bike has been comparable to the growing price/revenue per bike. Indirect costs are increasing disproportionately.

**Candidate:** Which components of indirect variable costs are responsible – materials or labor?

**Interviewer:** Allocations of indirect materials are about the same (usage per bike has remained about the same). However, allocation of indirect labor appears to be the big problem.

**Candidate:** Why are indirect labor costs increasing? It must be that laborers are spending more time on activities not directly related to the manufacture of a bicycle (or maybe sitting idle more). Are there bottlenecks in the system? In other words, has work-in-progress inventory been increasing?

**Interviewer:** Yes it has. When you look at the factory floor, you see many bikes waiting around. What do you think the bottlenecks result from?

**Candidate:** It could be from capacity constraints.

**Interviewer:** No, it's not capacity related – there's plenty of throughput available. However, much time appears to be spent nowadays in setup-resetting paint booths, welding jigs, dies and presses, etc. Why do you think this has occurred?

**Candidate:** Increased setup time can result from either an increasing number of setups per bike or increasing time per setup. Has time per setup increased?

**Interviewer:** No, it has actually decreased as workforce has improved setup tools, jigs, etc. In addition, workforce turnover and labor relations are all fine.

**Candidate:** Then the problem must be the result of increased setups. That would make sense since you said earlier that bikes have been getting more sophisticated with better materials. There are probably more material options for bike buyers to choose from, forcing manufacturers to produce a greater variety of bike varieties. This would cause an increase in the number of manufacturing setups that are required.

**Interviewer:** That's correct. In addition, at the time of profit decline the industry was 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 setups and lower volume per assembly run. What are some things the company can do to try to alleviate this problem?

**Candidate:** They could try to rationalize product lines, and try to increase shared components across model lines. Also, greater volume on each production run may yield better results.

**Interviewer:** Great, I'll pass on your recommendations to the client.

### **Tips**

The key to this case is methodically dissecting the cost structure for the company, and knowing what the components of cost are (i.e. cost accounting). Try to familiarize yourself with typical costs – operating costs, SG&A, materials and manufacturing and so on.

## 20. Liquor Manufacturer – Sales strategy (Source: Columbia Graduate Consulting Club)

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*Difficulty level:* 4

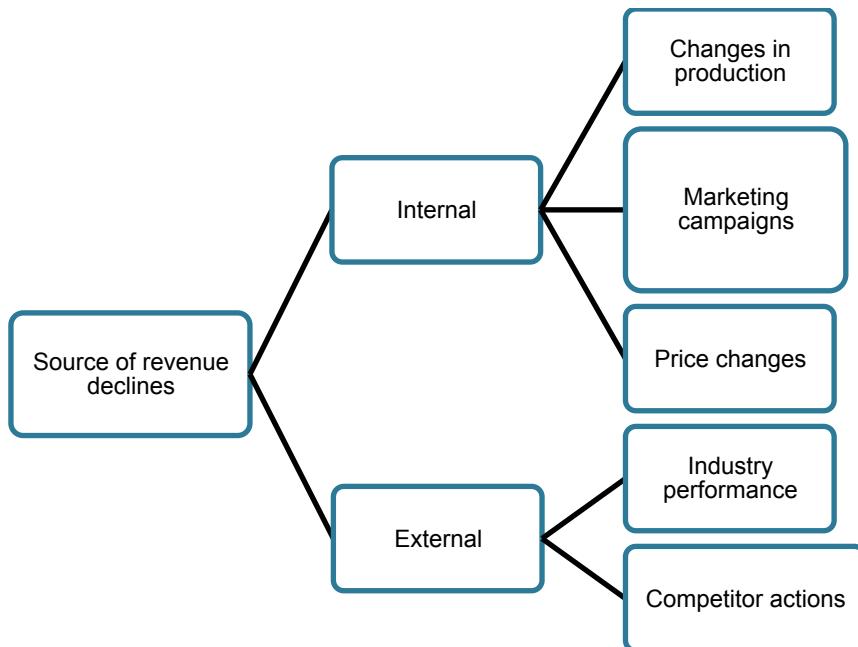
### **Problem Statement**

Our client is a liquor manufacturer that is 100 years old. They started out only producing whisky, but now whisky accounts for less than 5% of its multi-billion dollars in sales.

Industry-wide, sales of whisky have been increasing 1% per year over the last 20 years. Our client's sales have followed the industry trend. Last year, however, overall industry sales were up 2%, while our client's whisky sales were down 15%.

We have been hired to determine the cause of this, and present a solution to the problem.

### **Potential Framework**



### **Suggested Solution**

**Candidate:** To determine the root cause, I would like to examine the company's actions over the past year, in terms of price increases, changes in production, marketing campaigns and so on. Did the company do anything differently last year than it did in the previous 20 years?

**Interviewer:** Price has not changed. However, 5 master blenders implemented a new formula that reduces cost per bottle by \$0.25. There were no changes to packaging and no testing of the new formula, but they assured management that there was no noticeable impact on taste. However, 20% of one customer segment, the "loyals," that constitutes 5% of all customers but 45% of sales, have noticed the change and are "extremely angry."

**Candidate:** So, if angry loyalists have stopped purchasing our whisky, sales will have decreased by 9% ( $0.2 * 0.45$ ), since price has remained constant. But, before we can say that this was a harmful move for the company, we must look at the bottom line, profits.

**Interviewer:** Okay, the current profit margin per bottle is \$4.

**Candidate:** So, since costs were reduced by \$0.25, the margin before must have been \$3.75, all other things equal.

Before:  $100 * \$3.75 = \$375$

After:  $91 * \$4 = \$364$

Therefore, the change in the formula has not only hurt sales, but also hurt profits.

But, the remaining 6% drop remains unaccounted for. Do we know if the market for whisky has changed in the last year? For example, I know that with the rise of cigar bars whisky has become more hip recently. Is our client's whisky targeted to this customer segment?

**Interviewer:** Actually, it is not. The whisky market is divided into high end, middle segment, and low end whiskies. Our client competes in the middle segment. It turns out that at these whisky bars, people will buy high end whisky to drink straight, but are satisfied with low end whisky for mixed drinks. Last year, sales in the high end and low end whisky segments grew, but sales in the middle segment declined by 4%.

**Candidate:** That means that 2% of the decrease remains unaccounted for, assuming our market share has not declined. In terms of the competition, have they done anything that might have resulted in our loss of market share?

**Interviewer:** Maybe, what could they have done?

**Candidate:** They could have launched a new advertising campaign? No. They could have increased their penetration in retail distribution? No. Hmm.... they could have lowered their price?

**Interviewer:** Bingo. In fact, our client's competitor lowered their price from \$12 a bottle to \$11 a bottle. If I told you that our client only had one competitor in the middle segment, taking a look at the table again, can you tell me how much their market share increased in percentage terms? Assume that our client had 50% and their competitor had 50% of the middle segment before last year.

**Candidate:** Okay. Well, let's assume that the total market 2 years ago was 100. We had 50 and they had 50. Last year, our sales decreased by 15% and the overall market decreased by 4% in size:

$.15 * 50 = 7.5$  decrease in our sales to 42.5

$.04 * 100 = 4$  decrease in market sales to 96

$96 - 42.5 = 53.5$  current sales for our competitor

So, they increased their sales by 7% in absolute terms. Their market share increased by 5.7% to 55.7%. Our client's market share dropped by 5.7% to 44.3%.

**Interviewer:** So what should the client do?

**Candidate:** The first thing they should do is change the formula back to appease the angry loyals.

**Interviewer:** How do let these people know that they have returned to the old formula? Remember, there was never any change in packaging, so this is not like Old Coke vs. New Coke.

**Candidate:** Well, you should do targeted marketing to these loyals to let them know. This might be difficult, but will be necessary in order to move the whisky upmarket, which is my next recommendation.

Also, if the company wants to make their whisky a more premium product, they should not answer the price cut of its competitor with one of their own. Moreover, cutting price to regain market share would reduce profits even further:

Now:  $42.5 * 4 = 170$

After:  $(42.5 + (.02 * 50)) * 3 = 130.5$

This is intuitive: we would be cutting our margin by 25% to achieve an approximately 2% increase in sales! The key for our client going forward, then, is better marketing, which makes the brand relevant in a changing market.

### **Tips**

- This case highlights that multiple things can happen at once to create problems for a company. This is when structuring your thoughts becomes particularly important. Try to write down information as given, so you don't lose track of things.
- When doing calculations, you can assume 100 to aid you when looking at the effect of percentage changes in market share or quantity sold.

## **21. Canada Airlines – Market sizing (Source: Roland Berger)**

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*Difficulty level: 5*

### **Problem Statement**

Following the crash of their systems and wipe out of their data, the CEO of "Canada Airlines", an airline that provides local flights within Canada, calls you in for a meeting. He proceeds to ask you to estimate the total number of outstanding frequent flyer program points that the airline currently owes to all its program cardholders.

### **Guidance – information provided upon request**

- The Frequent Flyer Program (FFP) is a voluntary membership (client has to request the card and membership)
- FFP provides members with 1 point for every 1KM flown (for paid tickets only, not reward tickets)
- FFP members can redeem points for free tickets, based on distance of flight: 10 points redeemed = 1 free KM of flight
- Assume that the FFP was launched 2 years ago, all current members joined on the first day and none have left since
- Cabin class price differences will be ignored for this case
- 1 hour of flight ≈ a distance of 700KM

### **Potential Framework**

1. Estimate the number of key regions served.
  - 4 large hubs – Montreal, Toronto, Calgary and Vancouver
  - 4 smaller hubs – Halifax, Ottawa, Edmonton, Winnipeg
2. Categorize destinations by length of flight
  - Short haul (<2h)
  - Medium haul (2-6h)
3. Identify typical aircraft capacity by category
  - Short haul: 50
  - Medium haul: 150
4. Determine number of FFP points earned over past 2 years
  - Estimate average daily frequency of flights
  - Estimate average capacity utilization (no. of passengers on each plane)
  - Estimate average % of passenger who are FFP members
  - Multiply (# of FFP members) x (# of destinations) x (average length of category in kms) to determine average points earned per typical passenger
5. Determine number of redeemed FFP points
  - By length category:
    - Estimate the annual point redemption by average passenger
    - Estimate remaining year-end balance x 2 years
6. Determine net outstanding FFP points
  - a. Deduct number of redeemed FFP points from the number of FFP points earned

## **Suggested Solution**

**Candidate:** I would like to start by getting more information on the Frequent Flyer Program. Could you tell me more about how points are earned, and how redemption works?

**Interviewer:** Sure. The Frequent Flyer Program is a voluntary membership that was launched 2 years ago. You may assume that all current members joined on the first day, and none have left since.

The FFP provides members with 1 point for every 1KM flown (for paid tickets only). FFP members can redeem points for free tickets, based on distance of flight. They are able to redeem 1 free KM of flight for every 10 points earned.

You may ignore cabin class differences in this situation.

**Candidate:** Do we have information on the average distance flown per flight?

**Interviewer:** We do not. But the CEO has told us that 1 hour of flight is approximately a distance of 700KM.

**Candidate:** Great, thank you. Since Canada Airlines only flies locally, I'm going to start by estimating the number of key regions served in Canada.

It seems to me like there are 4 main hubs in Canada – Montreal, Toronto, Calgary and Vancouver.

However, there are also smaller hubs such as Halifax, Ottawa, Edmonton and Winnipeg.

**Interviewer:** That sounds about right.

**Candidate:** Now, I would like to categorize the different destinations by length of flights. I will define short haul as flights under 2 hours, and medium haul as flights between 2-6 hours.

Short haul flights include Montreal to Toronto, Montreal to Halifax, Toronto to Ottawa, Montreal to Ottawa, Calgary to Vancouver, Calgary to Edmonton, Calgary to Winnipeg, Vancouver to Edmonton, Halifax to Ottawa and Edmonton to Winnipeg.

Long haul flights encompass all the remainder – Montreal to Calgary, Montreal to Vancouver, Toronto to Calgary, Toronto to Vancouver, Montreal to Edmonton, Montreal to Winnipeg, Toronto to Halifax, Toronto to Edmonton, Toronto to Winnipeg, Calgary to Halifax, Calgary to Ottawa, Vancouver to Halifax, Vancouver to Ottawa, Vancouver to Winnipeg, Halifax to Edmonton, Halifax to Winnipeg, Ottawa to Edmonton, Ottawa to Winnipeg.

**Interviewer:** That's good.

**Candidate:** It seems to me like short haul flights would be more frequent than long haul flights. I'm going to assume that there are 8 daily flights (4 going one way and 4 going the other way) between all short haul destinations, and 6 flights between all long haul destinations. This means that there are 80 short haul flights and 108 medium haul flights per day.

**Interviewer:** Okay, keep going.

**Candidate:** From personal experience, I know aircraft capacity tends to vary by length of flight. For short haul flights, I'm going to assume that it averages around 50, and for medium haul flights, around 150.

I also know that planes aren't always fully booked. If we assume 80% capacity utilization, there are 40 passengers on each short haul flight, on average, and 120 passengers on each medium haul flight.

This is a total of 16,160 passengers served per day.

**Interviewer:** What next?

**Candidate:** Well, now I would like to determine the number of FFP points earned per year by looking at the flight distance.

Earlier, you gave me the information that 1 hour of flight was approximately equal to 700KM. If the average short haul flight is 1 hour, and the average medium haul flight is 4 hours, a short haul flight would cover 700KM, and a medium haul flight would cover 2,800KM.

I determined earlier that there are 40 passengers on each short haul flight, and 80 flights per day. If we assume that only 30% of all passengers are Frequent Flyer members, that implies a total of 672,000 points earned a day. Similarly, for medium haul flights, that is a total of 10,886,400 points earned a day.

**Interviewer:** Sounds great. How about the number of points redeemed?

**Candidate:** For simplicity's sake, I'm going to determine the number of points redeemed as a % of the number of points earned. Does 60% sound reasonable to you? In my experience, frequent flyers are pretty eager to redeem their points, and since Canada Airlines only flies domestically, a smaller number of points are required to redeem flights due to the lesser distance.

**Interviewer:** It sounds fine.

**Candidate:** Great. From my earlier calculations, assuming Canada Airlines operates 7 days a week and 50 weeks a year, the total number of points earned is 4045.44 million. Since the program has been in place for 2 years, that is a total of 8090.88 million points earned. As I estimated 60% of those to have been redeemed, the number of points outstanding is therefore 3236.352 million.

**Interviewer:** That's great, thank you for your help.

## 22. Australian Airlines – Cost-Revenue and Profitability (Source: Booth Consulting Club)

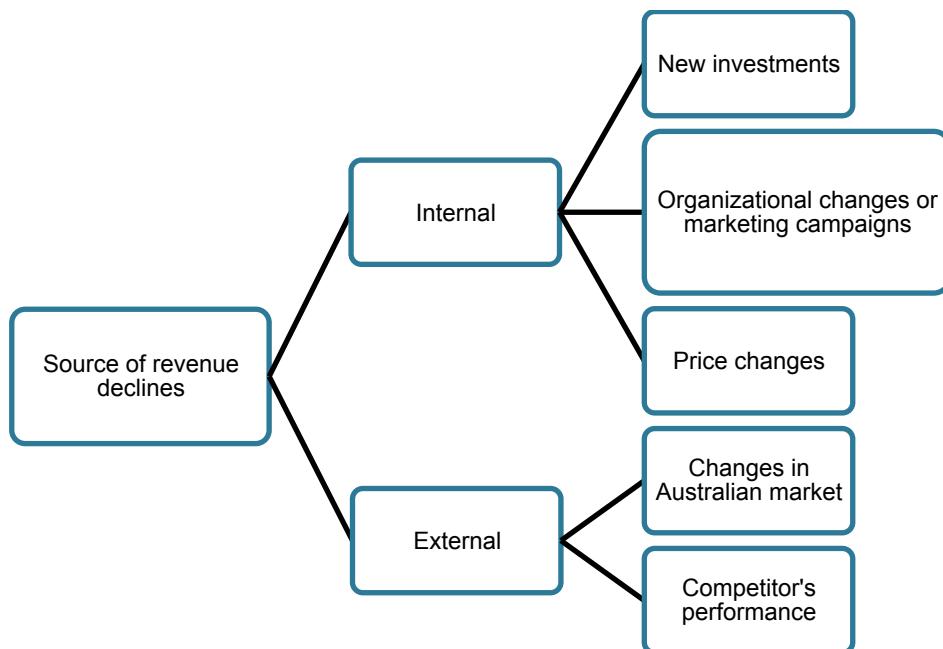
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*Difficulty level:* 5

### **Problem Statement**

Our client, Airline A, is one of two airline companies (duopoly) in Australia. Both companies are identical in every aspect (brand, price, etc.) and each has exactly half of the market share. For year X, Airline A projected revenue of 200M. An audit of their projected revenue for the year (in November) reveals that their revenue for the year has actually dropped to 180M, a 20M reduction! The client has hired us to find out what happened and how they can rectify the situation.

### **Potential Framework**



### **Suggested Solution**

**Candidate:** To take a closer look at why revenue is declining, I would like to examine both internal and external factors.

Externally, I would like to understand changes in the customer or the Australian market that happened during the year, including possible externalities. Then I'd like to also understand how our competition (Airline B) fared and any strategic changes that they had during the year.

Internally, I'd like to look at the company, specifically any new investments, organizational changes, price drops, or marketing campaigns that the company undertook.

**Interviewer:** Sounds good.

**Candidate:** Let me start with the external factors. Were there any changes in the Australian Airline Market – new competition, regulation, or big consumer trends that I should be aware of?

**Interviewer:** No, everything was just like last year.

**Candidate:** How about substitute products – cars, trains, buses and so on. Did the price of gasoline fall?

**Interviewer:** No.

**Candidate:** What about our competition - have they experienced any significant changes?

**Interviewer:** Our sources indicate they have gained approximately \$20M of the market.

**Candidate:** So our loss has gone to Airline B. You mentioned that we were identical in the number of flights, brand, price, delays, etc. Has anything changed over the last year?

**Interviewer:** Everything is the same as last year.

**Candidate:** So there were no strategic changes made by Airline B.

**Interviewer:** None.

**Candidate:** Now, how about the in-flight service that we provide to our customers?

**Interviewer:** No change.

**Candidate:** Is it possible that we are attracting a new segment of customers that alienated our past customers?

**Interviewer:** Our average customer segment has not changed.

**Candidate:** Ok, let me shift to internal factors. Were there any organizational changes, operational changes in our company?

**Interviewer:** No.

**Candidate:** How about new investments?

**Interviewer:** Nothing that we don't normally do in other years.

**Candidate:** No changes. Revenue has dropped. Number of tickets we sell is less – Well what outlets does the client sell tickets through?

**Interviewer:** Through a call center and through travel agents.

**Candidate:** Did we have any marketing campaigns/promotions to increase sales through any of these outlets?

**Interviewer:** No changes with the travel agents. For the call centers, our client did include a new feature. Our client felt that air travel should be sold as a package deal – car, hotel, air travel. So they aligned with some partners to provide the package to customers.

**Candidate:** Is it possible that customers are dissatisfied with say the car rental or the hotel and reflect the dissatisfaction on us?

**Interviewer:** Our client was extremely careful in selecting their partners. In fact, customers are extremely satisfied with our deal and our customer satisfaction rating has increased.

**Candidate:** Hmm. How about the average call-time? I'd suspect that it has increased.

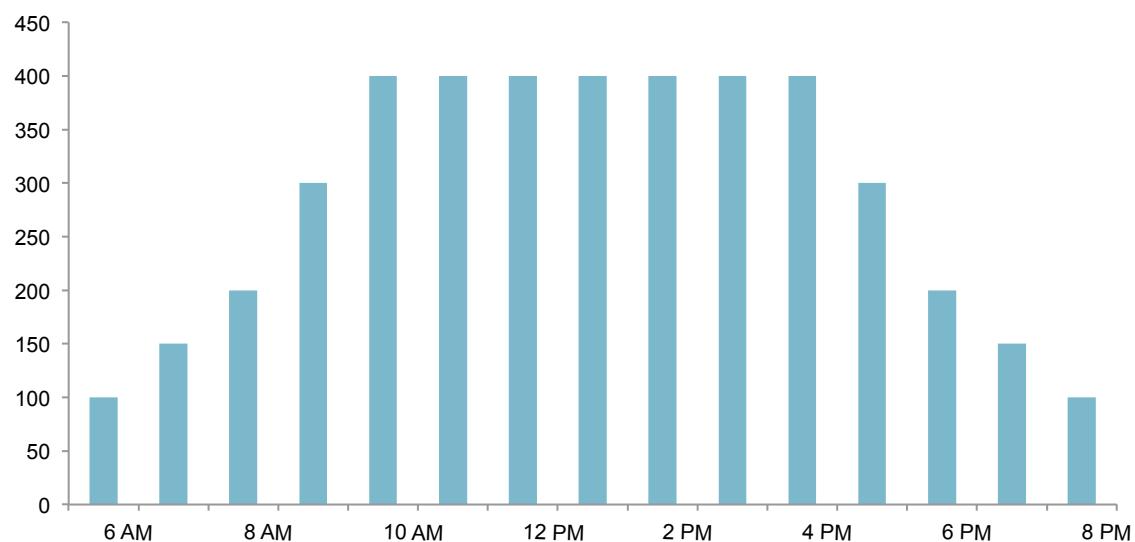
**Interviewer:** Call time has increased to 3 minutes.

**Candidate:** Did we increase the number of operators?

**Interviewer:** No

**Candidate:** So it's possible that our clients are trying to reach us, but waiting time has increased and we are not able to serve all of them?

**Interviewer:** That is possible. Unfortunately, the call center managers are not very sophisticated and all that they could provide is the following graph showing the calls per hour for each hour of the day.



**Candidate:** One thing I note is that the calls flatten around 10:00am at 400 calls. It's unlikely that consumers come in at the same rate from 10:00am – 5:00pm. So perhaps we have long waiting times during those hours due to capacity constraints and some customers leave.

**Interviewer:** Good hypothesis – how will you verify that this is true?

**Candidate:** Is the call center reaching capacity, or alternatively how many operators do they have?

**Interviewer:** Each center has 20 operators.

**Candidate:** Each call takes 3 minutes, so in an hour each operator can take 20 calls. 20 operators mean 400 calls per hour – so they are indeed at capacity.

**Interviewer:** Very good, but are you sure that this is the cause of a 20M drop in revenue? If it is indeed a capacity problem it can be easily solved. But I don't want to look like a fool before the board if I suggest this solution and it does not work.

**Candidate:** Well 20MM is a huge number, but it is 10% of the revenue. Consider a possible scenario where we had infinite capacity and let us assume that the calls increase till 2:00pm and follow a normal distribution.

**Interviewer:** Fair enough, what are you getting at?

**Candidate:** If I complete the bar graph to peak at 2:00 we can fit another 1800 calls (Area of triangle =  $\frac{1}{2} * 6$  (base = 6 hours) \* 600 (height of triangle at peak is 600 calls, assuming linear rise and fall)). This is around 40% of the existing total calls. So I'm fairly confident that this capacity constraint, if it exists in all centers, could account for 10% reduction.

But I'm assuming that customers who leave the phone go to our competition – they may go to our travel agents instead, so we may not be losing all of our customers

**Interviewer:** Great point. The consultancy found that the yield with travel agents was far less – so we actually lost customers in total. Great job!

## 23. British Royal Air Force – Cost Reduction program (Source: INSEAD Consulting Club)

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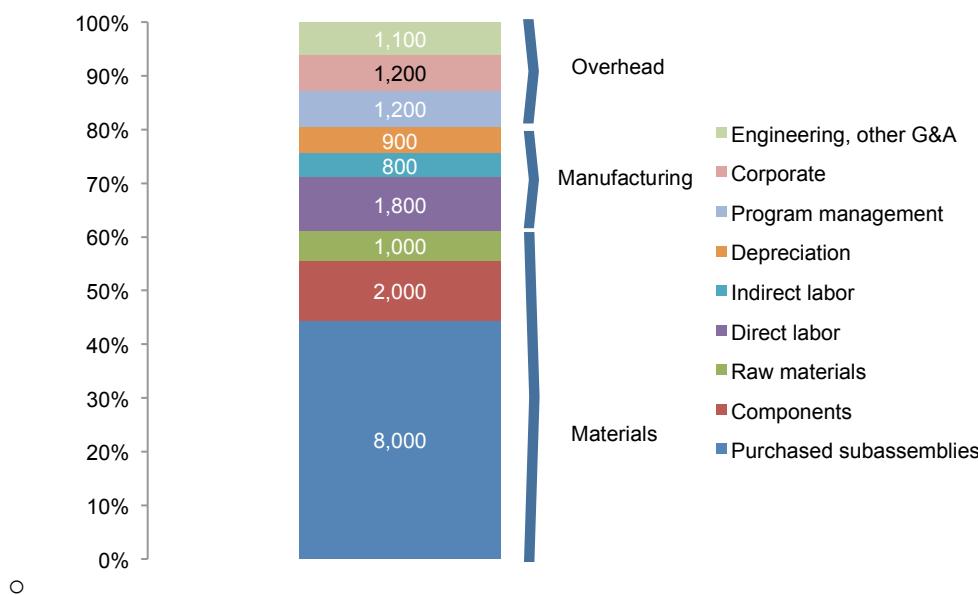
*Difficulty Level: 5*

### **Problem Statement**

Your client is a U.S. defense contractor that manufactures the Mohawk Light Fighter Jet for the British Royal Air Force. The company has produced the \$20 million fighter jet for the past 12 years. The British government has decided to put the contract out to bid, however, and to win the program, the client's purchasing agents have estimated, the company will need to cut its costs by 5 percent. It has asked you to help it reduce costs.

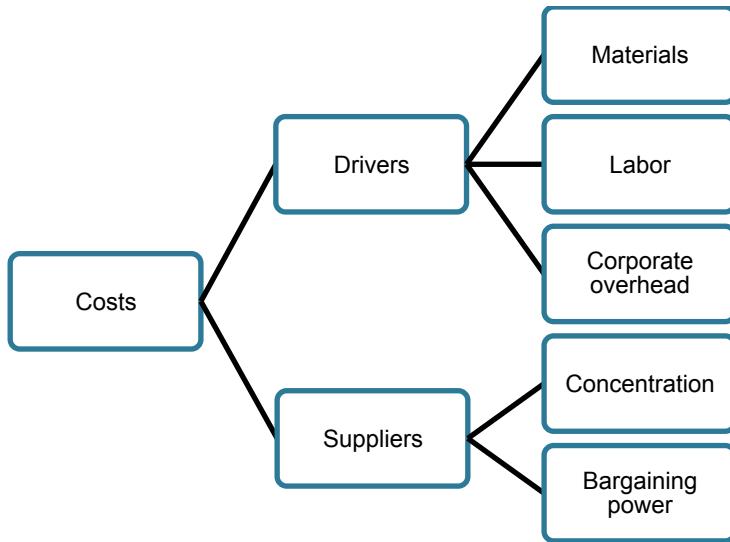
### **Guidance (information to be provided upon request)**

- Cost structure



- Our client is free to purchase from whomever it wants, as long as the parts meet the Ministry of Defense (Mod) quality guidelines.
- There are 7 suppliers of major subassemblies that go into the jet. A subassembly is defined as a unit that is assembled separately but designed to be incorporated with other units into a larger manufactured product. A component is a smaller part that cannot function on its own (for example, part of an engine).
- The manufacture of subassemblies requires a substantial investment in R&D, engineering, and infrastructure, which explains the relatively few number of suppliers.
- Purchased materials comprise approximately 70% of the price paid for subassemblies.
- There are approximately 125 suppliers of raw materials and components among the manufacturers of the subassemblies and the client itself. About 80 percent of these products are commodities, such as sheet metal and wire harnesses. Even some of the electronics, such as printed wire boards and circuitry, are fairly generic.
- In addition, approximately 30 percent of the cost of raw materials is from similar materials used across the subassembly manufacturers.

## Potential Framework



## Suggested Solution

**Candidate:** Let me first clarify the question. The client manufactures a \$20 million jet and, because of competitive forces, has to reduce its cost by 5 percent. Is our role also to verify the purchasing department's estimate?

**Interviewer:** No, you can assume that the purchasing estimate is correct. Our role is to find the cost savings to meet that estimate.

**Candidate:** Could I take a few minutes to think about the case?

**Interviewer:** Sure, please do.

**Candidate:** First, I would like to understand the cost structure of the jet to see what we should look at first. Next, I would like to look at major factors driving the costs we are targeting. Finally, I would like to explore potential ideas to reduce cost.

**Interviewer:** That sounds like a very logical approach. Let's proceed.

**Candidate:** Because the time for the interview is limited, I think we should try to identify those areas most responsible for the cost of the jet.

**Interviewer:** Time is limited on real projects as well, so I think that would be a good idea! You have the following cost information for the jet (above graph). How would you interpret it?

**Candidate:** The major cost driver for the jet appears to be purchased materials. Within manufacturing, direct labour is a fairly large component of cost, as are program management and corporate overhead within overhead. I think we would want to concentrate most on materials, however, since that's where most of the costs can be found.

**Interviewer:** That sounds like a good place to start. Where would you look within materials?

**Candidate:** I see that materials are broken down into purchased subassemblies, components, and raw materials. I understand what raw materials would be, but what would be the difference between components and subassemblies?

**Interviewer:** A subassembly functions on its own. An example is the pilot night vision system. A component is a smaller part, such as a part of the engine.

**Candidate:** I know that governmental agencies often have very strict guidelines about purchasing that could affect the cost of materials.

**Interviewer:** For the sake of this case, you can assume that the British Ministry of Defense, MOD, allows "commercial off-the-shelf" purchases, which means that the client is free to purchase from whomever it wants, as long as it can ensure that the parts meet MOD quality guidelines.

**Candidate:** I see that purchased subassemblies comprise more than 70 percent of materials. How many suppliers are there for these subassemblies?

**Interviewer:** There are seven suppliers of major subassemblies that go into the fighter jet.

**Candidate:** That seems like a relatively small number. Are there more suppliers that are qualified to do this type of work?

**Interviewer:** The manufacture of these parts requires a substantial investment in R&D, engineering, and infrastructure. It would be very costly for new suppliers to make the required investment, particularly if the client is trying to reduce the price it pays to the subassembly manufacturers.

**Candidate:** Since there are only a few subassembly suppliers, and the investment hurdle would preclude bringing in competing manufacturers, it would be difficult to reduce the price paid. Perhaps we should look elsewhere for savings.

**Interviewer:** But remember, if your client loses the contract, the suppliers will lose its customer unless it is teamed with the competing bidder. Even then, if the competitor is underbidding your client, there will be even less room for the suppliers to profit.

**Candidate:** Perhaps it would have an incentive to reduce its costs in order to maintain the contract. Are the majority of its costs in materials as well?

**Interviewer:** How could you find that out?

**Candidate:** I would want to interview the purchasing and engineering personnel of the different subcontractors in order to understand their cost structures. If we had a better understanding of their economics, our client might be able to reduce cost across the board, allowing it to compete more effectively for the contract without killing everyone's margins.

**Interviewer:** Let's say that purchased materials average approximately 70 percent of the price paid to most of the manufacturers.

**Candidate:** If the cost of subassemblies represents 40 percent of the jet cost and 70 percent of that is purchased materials, total purchased materials would be approximately 28 percent of the cost of the jet. Purchases of raw materials and components represent another 15 percent, for a total of around 43 percent of the cost of the jet. If our client could reduce the cost of raw materials by 20 percent, it could reduce the cost of the jet by more than 8 percent, more than enough to offset the 5 percent reduction it would need to win the contract.

**Interviewer:** That sounds reasonable, but 20 percent is a very lofty goal. How would you go about doing that?

**Candidate:** First, I would look at the number of suppliers. Are there a large number of suppliers to the subassembly manufacturers?

**Interviewer:** The client estimates that there are approximately 125 suppliers of raw materials and components among the manufacturers of the subassemblies and itself.

**Candidate:** Well, that sounds like a large number of suppliers. Of course, they could be providing very specialized materials to the subassembly manufacturers. Are these suppliers providing customized or more commodity products?

**Interviewer:** About 80 percent of these products are commodities, such as sheet metal and wire harnesses. Even some of the electronics, such as printed wire boards and circuitry, are fairly generic.

**Candidate:** That sounds promising, but I would need to know whether these commodities are interchangeable, so that our client could concentrate spending with fewer suppliers. Are there many commonalities among the parts used by the different subassembly manufacturers? We could talk to their engineers and look at the designs and bills of material to determine how much overlap there is.

**Interviewer:** Let's say that you did this and discovered that approximately 30 percent of the cost of raw materials is from similar materials used across the subassembly manufacturers.

**Candidate:** It seems safe to assume that the client would need more commonality to be successful in concentrating its purchasing and reducing costs. Do the engineers believe that the percentage of overlap could be increased if the designs were modified?

**Interviewer:** They believe they could increase that percentage substantially, particularly with basic materials such as screws and sheet metal, but also in other more customized areas.

**Candidate:** That's great news, but we would still need to know whether the subcontractors are using the same suppliers. We could analyze the number of suppliers for each of the areas of overlap.

**Interviewer:** Good suggestion. Although there are some common suppliers, the analysis indicates that the subassembly manufacturers tend to use different suppliers.

**Candidate:** Our client needs to reduce costs by 5 percent. The largest area of opportunity appears to be in purchased materials, the majority of which comprise subassemblies manufactured by seven subcontractors. By looking at its purchases in total, the client can target approximately 40 percent of costs. To achieve the 5 percent cost reduction, it would need to reduce costs by 15 to 20 percent. It could try to do that by increasing commonality in the design of the subassemblies and components and by shifting volume to a smaller number of suppliers.

**Interviewer:** Considering that the majority of the raw materials and components are purchased commodities, do you think the 15-20 percent cost reduction is achievable?

**Candidate:** Well, I know that commodities typically have lower margins than more customized products. I suspect it may be challenging to hit the client's savings target by focusing only on these purchases. But since raw materials and components represent about 40 percent of costs and there is an opportunity to concentrate purchasing, I think we should start here.

**Interviewer:** Where else could you look for savings?

**Candidate:** If I look back at the cost data on the jet, direct labour is another large cost component. As a contingency, we could look into that area as well. I've read that other companies use outsourcing to lower their manufacturing costs – perhaps our client could do the same. For example, it might want to increase its use of purchased subassemblies and reduce the amount of direct manufacturing it does. Of course this would work only if it could drive direct labour costs below the offsetting cost of these subassemblies. The client will be working closely with the subassembly suppliers to implement its purchasing initiative. This may give it an opportunity to explore the suppliers' capabilities at the same time.

**Interviewer:** That's an interesting suggestion. How would you recommend the company pursue both of the initiatives you have discussed?

**Candidate:** I would look first to combine purchases across the subassembly suppliers with our client's purchases. I suspect that the client and the subassembly suppliers will need to share a great deal of information, including engineering drawings and specifications, with potential suppliers of the raw materials and components. The Internet could prove to be a very effective medium for forming a single "virtual" purchasing department to consolidate both the flow of information and purchase orders across the companies. Our client might also want to use a bidding system for those materials that are true commodities.

Next, I would turn to the engineering departments and form cross-company teams to look for areas in which to increase commonality of design. At the same time, those teams could explore opportunities to use more purchased subassemblies and decrease the client's direct labour costs.

**Interviewer:** That sounds great, and is very similar to a project we did. I would caution you, however, to examine the upfront costs involved in your recommendations, both for the redesign and for the implementation of the purchasing system, before going ahead.

# **Resources**

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The following is a list of resources that students have found useful in the past:

## **Case Interview and Consulting Guides**

### **Vault Guide to Consulting Industry**

*A high level overview of the consulting industry, firms and interview preparation information*

### **Case in Point by Marc Consentino**

*Case in Point is typically a student's first step when beginning consulting interview preparation. Though the book can be a useful resource, some have expressed the opinion that it constrains you to a set of rigid case frameworks, which may impede your ability to be flexible and creative.*

### **Caselinterview.com**

*A free site created by a former McKinsey consultant, Victor Cheng. It contains many blog posts on helpful topics, and you can also download Victor's free frameworks.*

### **ManagementConsulted.com**

*Founded by another former McKinsey consultant, Kevin Gao, managementconsulted.com provides many free articles which can help students gain a better insight into what it's like to be a consultant. There are also numerous interviews with real life consultants which can be very insightful.*

### **The Management Consultants Network ([www.themcn.ca](http://www.themcn.ca))**

*Founded by a current Oliver Wyman consultant and McGill alumnus, the MCN provides valuable resources and tips on how best to prepare for your consulting interview, as well as insight into the consulting job and industry.*

### **Soutar Career Center**

*The Desautels Career Services Portal offers many resources including case interview preparation guides, CV and Cover Letter templates and so on. The Career Center also offers access to Peer Advisors and Career Advisors, who are able to review your CVs and Cover Letters, and offer advice on the recruiting process.*

### **Casebooks**

*If you join the MCA as a member, you will also have access to casebooks written by the consulting associations of various other universities, including Harvard and Wharton. These provide invaluable case resources, should you run out of cases to practice.*

## **Mental Math Practice**

### **Consulting Case 101**

*Provides a series of practice math questions*

<http://www.consultingcase101.com/case-interview-questions/math-problem/>

### **Secrets of Mental Math by Arthur Benjamin and Michael Shermer**

*This book teaches you mental math tricks that will enable you to mentally square a 5 digit number (with practice)!*

### **CaselInterview.com/math**

*Victor Cheng's site also provides a handy math tool for practicing quick calculations*

# **References**

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Thanks to the following sources for providing invaluable information in the compilation of this casebook:

**Roland Berger Strategy Consultants**

**Oliver Wyman**

**INSEAD Consulting Club Handbook 2011**

**Julia Riscaldino of the Soutar Career Center**

**Victor Cheng of CaseInterview.com**

**Naomi Desai, MCA Co-President 2013-2014**

**Christian Anastasiades, MCA Co-President 2013-2014**

**To the brainy, the spoils, an article from the Economist:**

<http://www.economist.com/news/business/21577376-world-grows-more-confusing-demand-clever-consultants-booming-brainy>

