The Consulting Society
EPFL

Cracking Your Case Interview

A casebook by The Consulting Society at EPFL

1st Edition
October 2020

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Acknowledgment

In the name of the whole Consulting Society team at EPFL, we would like to thank the active and past members of the association who offered their time, support and knowledge in order to bring this casebook to light. First and foremost, we would like to thank the project coordinator and ex-TCS president Jose Luis Bila along with the designer Nour Ghribi for their assiduous work in combining and editing the whole casebook. We would also like to thank the various members who contributed in writing the casebook and specially the current President Rayan Abi Fadel who provided the frameworks part and explanation, Mattia Gallese and Giacomo Martiriggiano for describing the interview process for the consulting industry and Jose Luis Bila, Benjamin Bollade and Sergey Arzoyan for writing the cases in this booklet.

Last but not least, we would like to thank all the remaining TCS members and sponsors for their continuous assistance all along the project.

The Consulting Society Members

September 2020

Introduction

1 Introduction

1.1 Word from The Consulting Society

The Consulting Society (TCS) was founded in 2012 by a team of consulting enthusiasts with the goal of building a bridge between the consulting industry and the EPFL community. Moreover, TCS's mission is to promote the consulting industry on the EPFL campus, encourage its 12’000 members composed of students and researchers to pursue a career in consulting while informing them about the different possibilities in the industry. TCS presents a range of services and facilities that enable the consulting companies to introduce and promote themselves among the EPFL community through a diverse set of events on and off campus. Such events include: business case competitions, networking events, seminars, interview preparation programs, workshops, etc.

Currently, TCS is the only EPFL-based and the most active association in the French speaking region of Switzerland that directly promotes consulting-oriented careers to students. In order to achieve this, TCS relies on the help of motivated student volunteers and a wide range of TCS alumni network who are working hard to improve the quality of its services while introducing brand new services. However, none of the activities mentioned above would have been possible without the help of a wide array of sponsors. Hence, TCS is forever grateful for the motivation of the students and support from its sponsors.

1.2 Goal of the book

Throughout the years The Consulting Society has been engaging with EPFL students through a wide range of events with the goal of introducing the consulting world to them. For instance, our networking events offer the students the opportunity to learn about different projects undertaken by the consultants in a daily basis as well as the process required for a smooth transition from scientific disciplines to consulting. Additionally, TCS has successfully designed and implemented the Interview Preparation Program (IPP) where students are taken through the steps necessary for a successful application as well as how to thrive in a consulting interview. In this program, several resources including books about consulting are carefully screened and delivered to the students. Although there are several well designed consulting case books already available, we would like to offer a comprehensive and up to date version that any student can use as a guide to prepare for case interviews for any consulting firm.

This book will take you through the different aspects you need to consider while preparing for an interview in consulting. First, an introduction about the consulting industry and the different requirements from various firms is provided which will help you become more target oriented during your preparation. Additionally, you will find information about the personal fit interview (which is often taken for granted) and some questions you need to prepare for. In addition, you will have a step by step guide on how to solve cases designed for case interviews while implementing case frameworks. Finally, you will be provided with up to date cases adapted from different sources which you can practice with other people.

As TCS, we hope you will enjoy your journey with us towards becoming a consultant and we wish you the best of luck with your interviews.

1.3 An Overview of The Consulting Industry

A consultant is often described as an expert or professional in a specific area given their vast knowledge of a subject. Although there are several types of consultants, management consultants work on the development and improvement of an organizational strategy. The work of consultants starts with data collection from the client's businesses which encompasses employee interviews among others. Then they are responsible for digesting the data and turning it into presentations or reports which are presented to the clients. A big part of the work is travelling to client sites which depending on the client portfolio of your firm it may be domestic or abroad. Hence, one must take this into account before considering to apply.

According to an article by Forbes magazine **[1]**, in consulting there is lack of defined competencies within the profession which makes it difficult for people to understand what it takes to become successful in the field. However, one can drill the skills required down to the following **[2]**:

1. **Communication**: while conducting interviews for data gathering, writing business proposals or delivering presentations, one needs to be a good communicator.

2. **Team player**: In addition to excellent communication skills, one has to be able to work well with their peers. As one progresses in the field, good leadership skills will also be required hence, one needs to learn how to support the colleagues and delegate tasks fairly.

3. **Problem solving**: given the vast amount of data you will have to analyze, it is fair to say that this job requires an analytical mind which is detail oriented as well as well-organized and structured.

4. **Fast learner**: when starting your journey in management consulting, most projects will not be related to what you have learned back at school. One will be challenged to learn new topics whether on finance, economics or even life sciences. Therefore, being able to absorb and digest information fast will help you thrive in the industry.

[1]https://www.forbes.com/sites/terinaallen/2020/02/26/this-is-what-it-takes-to-become-a-successful-management-consultant/

[2]https://www.forbes.com/sites/dailymuse/2013/11/05/be-the-best-consultant-ever-6-things-that-will-make-you-great/

1.4 TCS's Sponsors

The Consulting Society is glad to present to you our sponsors for the academic year 2020-2021.

1.4.1 McKinsey & Company

Consistently named the world's most prestigious consulting firm, McKinsey & Company continues to deliver the top management advice leaders have trusted for nearly a century. Over the past decade, McKinsey has broadened its offerings in areas such as digital transformation, advanced analytics, design, and implementation to help clients succeed in a rapidly evolving business context. With more than 28,000 people, McKinsey serves clients in 129 offices in 65 countries. In Switzerland, McKinsey & Company is represented with offices in Zurich and Geneva. There is no more exciting time and no more exciting place to put your talents to work.

McKinsey&Company

1.4.2 Boston Consulting Group

Boston Consulting Group is the place for people who want to make an impact on business and society. "We partner with leaders in business and society to tackle their most important challenges and capture theirgreatest opportunities." BCG was the pioneering business strategy when it was founded in 1963. Today, they help clients with total transformation-inspiring complex change, enabling organizations to grow, building competitive advantage, and driving bottomline impact.

BCG

1.4.3 Wavestone

At the confluence of IT, Digital & innovation as well as Finance & Management consulting, Wavestone is built on the basis of a unique market positioning and a distinctive value proposition perfectly aligned with the challenges faced by companies and organizations in the digital age. In a world where transformation is key to success, it is the ambition of Wavestone to enlighten and guide the strategic decisions of their clients. Wavestone supports leading companies and organizations in delivering their most critical transformations on the basis of a single, central, conviction that a shared sense of enthusiasm is at the core of successful change. That's what they call "The Positive Way". Thanks to more than 15 years of experience, their Swiss office is well anchored in the local consultancy market. Benefiting from a positive dynamic and great customer success, numerous positions are to be open in the forthcoming years.

WAVESTONE

1.4.4 Bain & Company

Bain & Company is one of the world's leading business consulting firms. They work with top executives to help them make better decisions, convert those decisions to actions and deliver the sustainable success they desire. They advise global leaders on their most critical issues and opportunities: strategy, marketing, organization, operations, information technology, digital transformations, advanced analytics, sustainability, corporate finance and mergers & acquisitions, across all industries and geographies.

For more than 40 years, they've been passionate about achieving better results for their clients - results that go beyond financial and are uniquely tailored, pragmatic, holistic and enduring.

BAIN & COMPANY

The Recruiting Process

2. The Recruiting Process

The recruiting process for consulting firms is very specific and different from other working areas. Nowadays, the consulting firms adopt highly innovative and efficient methods to screen candidates since they need to verify the logical and persuasion skills of thousands and thousands of potential consultants. To succeed in the recruiting process, it is important to follow a well-defined guide which clearly states what you have to expect and how to prepare for this process. Therefore, this chapter will help you do both; it describes the overall consulting recruiting process by exploring all the main steps.

2.1 Selection Process Structure

The selection process for a consulting company is very long and tough, and it requires a high amount of preparation time. The main steps that compose the selection process are the following:

1. Online application with Curriculum Vitae (CV) and cover letter
2. Logical reasoning test (not all consulting companies have it!)
3. Case interviews

The number of case interviews depends on the firm; normally, the candidates must pass two/three interviews of one hour each with several rounds.

2.1.1 Online Application with Curriculum Vitae (CV) and Cover Letter

The first step of the application is to insert your personal data and upload your CV and cover letter on the career portals. This is considered the main filter for screening the candidates since only a minor number of applicants pass this step. To be successful at this first stage, it is fundamental to show in the CV and in the cover letter that you have the skills required and prove to be a top candidate. The three main aspects that must be reported are:

1. Personal achievements
2. Good grades
3. International experience

What to reflect in your CV:

- Consulting companies look for candidates with strong problem-solving skills, dedication and great interpersonal skills.
- Multiple interests is very much valued.

- Focus on contributions and achievements, not tasks.
- Leave no mistake behind!

Key area 1: Education

- Limit yourself to degrees, field of education and university
- Mention average grade if above 5/6
- Mention exchange periods, especially abroad
- List the awards and honors you won

Key area 2: Professional experience

- Limit yourself to experiences in industry (internship, etc.)
- Emphasize contributions and achievements, not tasks!
- Quantify whenever you can!
- Mention responsibilities taken and constraints faced

Ex: ability to successfully complete a project despite constraints (time, resources, quality, regulations, etc.)

- Avoid a simple listing of all experiences

Key area 3: Skills

- Focus on hard "technical" skills but don't overdo them.

While your soft "behavioral" skills are also of utmost importance for employers, they are just too easy to claim on paper and most candidates overuse them. Recruiters tend to overlook them at that stage.

Key area 4: Academic Projects

- Mention mandatory internships, semester projects, Master thesis and PhD thesis.
- List only the most recent and relevant ones.
- Highlight contributions made, responsibilities taken and constraints faced.

Key area 5: Languages

- Mention your languages and level of proficiency.

Key area 6: Extra-curricular activities

- They give an important part in understanding who you are. Mention your involvement, achievements and responsibilities.

ex: competitive sports, students societies, military volunteering, music, etc.

Cover Letter

The Cover letter is a great opportunity for the candidate to stand out from the competition and ensure that his achievements are not overlooked. Therefore, with a strong and unique cover letter you can show why you are the best candidate and why the firm should select you over other potential consultants.

The top consulting firms receive thousands of applications each day; therefore, it is important to show in the cover letter that you are qualified for that position and that you are great fit for the company. The four fundamentals points that must be reported in the cover letter are:

1. Why consulting?
2. Why this firm?
3. What qualities do you think a consultant should have?
4. Which skills do you think to have?
5. Show that you are interested!

Additionally, one can also adopt the me, you and us approach (one paragraph each) where you first talk about yourself (your qualities and reasons behind you going into consulting), then pick a few qualities of the consulting firm that you believe are relevant to you and discuss them in one paragraph, finally talk about how you and the firm can work together.

Beside the contents of the cover letter, it is also of primary importance to take care of its format. The aim is to be concise and report only the relevant points and to fit everything in one page. Being concise would help the recruiters to read your letter without overlooking anything. Finally, you must proof-read several times the cover letter to be sure that you have eliminated all the possible grammatical or spelling mistakes.

2.1.2 Logical Reasoning Test

The logical reasoning test was introduced a couple years back by the top consulting firms; McKinsey has developed "McKinsey Problem Solving Test and BCG has developed "BCG Potential Test". It is an online test which usually lasts almost 1 hour and is given access only after succeeding in the first screening of CV and cover letter. In this test, firms want to verify your analytic and problem-solving skills, such as math computation, data interpretation, business sense and logical thinking.

2.1.3 Case Interview

The case interview is the last step of the selection process before being hired by a consulting firm. Usually, several case interviews are done to test the candidate's skills over different topics. These interviews are divided in rounds of three cases, and the number of rounds depends on the firm you are applying for (e.g. McKinsey 3 rounds, BCG 2 rounds). The final rounds are always done with senior people such as senior managers or partners.

A typical case interview is composed by three different parts that will be described in detail later:

- Personal fit
- Case Study
- Q&A

2.1.3.1 Personal Fit

The first step in the interview is the personal fit and it aims to understand more about you, your motivation and your experiences. It is the first possibility to impress the interviewers and for this reason it requires deep thinking from the candidate and an accurate preparation. The candidate must demonstrate mainly 4 skills:

1. Leadership – show the ability to lead by engagement and not by orders;
2. Problem Solving – be able to solve complex problem in a dynamic and fast way;
3. Ambition and achievement- show to be intrinsically motivated to achieve several goals at the same time;
4. Team player – be able to work with people with different backgrounds and showing that team's goals are more important than personal ones.

Typically, the first questions are about your CV and your past experiences; therefore, you need to be prepared to talk naturally about them and be able to give extra details.

The following questions would be more about your motivation to work in consulting and to work for that firm. Finally, they would ask personal questions about your personality and skills.

For all those questions, it is important to answer in a structured way to transmit the message in a more effective way and demonstrate that you have the required skills to succeed in consulting. One framework which is typically used to answer in the most comprehensive way is called **SCORE**. It stands for:

- **S**ituation: describe the whole situation and your role in it;

- **C**omplication: explain the problem that you and your team faced;
- **O**utcome Expectation: discuss which would have been the results if no further actions were taken;
- **R**emedial Action: describe the actions that you and team took in order overcome the problem;
- **E**nd result: discuss what was the final result and what was your support in order to achieve it.

2.1.3.2 Case Study

The second stage of the interview is the case study. It is an active interviewing method used to judge the candidates on various levels. More precisely, the interviewers want to test your analytical skill, your ability to solve complex problems, how you manage the situations under pressure and prove your ability to communicate in an effective way. You will be interviewed by consultants, senior consultants and even partners.

To succeed in solving case studies, it is important to have a solid preparation; the more you practice, the better you will perform. You need to engage in mock practice sessions months before the interview day. In this way you will have the necessary time to put together all the methods that you will adopt to analyse the problem. Moreover, it is important to prepare the case study with friends because it would help you simulate the real conditions of the interview and to develop the confidence to have the best performance. In the following chapter, you will find valid case studies which will help you for the preparation.

2.1.3.3 Q&A

The final part of the interview is the session of questions and answers. In this part the candidate has the possibility to show again his interest and motivation to work for the firm. Therefore, the candidate must prepare the questions before the interview by researching about the industry and the company. In addition, if you know who will interview you, you should look for their profile on the internet to see their background, position in the company, field of expertise and interest. This will allow you to prepare for more concise and relevant questions.

Finally, if you have some information that you did not discuss during the fit part of the interview, feel free to share it with the interviewer.

Case Frameworks

3. Case Frameworks

3.1 Case Structure

The following section will present the various case frameworks that are useful for case solving. It is noteworthy to mention that there is "no one framework to rule them all". Indeed, a business case might require an adaptation of various frameworks in order to build a structure that covers all the aspects and gears the person towards a solution. As a reminder, a business case interview should be structured from start till the end.

3.1.1 Case Prompt

After receiving the prompt from the interviewer make sure you follow these steps:

1. Restate the question and ask for underlying objectives (clarify the goals: What constitutes success to our client? What do they really want and why they want it?)
2. Ask Clarifying questions: Try to understand the client and his business.

   Where is the firm located? What is the Product? Who is the Customer? Who are we? What do we do? How do we get the money? What Industry are we in?
3. Take some time and lay out structure with clear communication. The structure needs to be MECE (Mutually exclusive and collectively exhaustive): Break down the problem into sub-problems / issues. Once the structure is done, you have to guide the interviewer through it in a structured way so he can follow your reasoning.

   ex: My approach to solve our client's issue will be based on 3 areas: A , B and C.

   Starting with Pillar A, we will question i, ii , iii.

   Then moving to our second bucket B, we will analyze i, ii, iii.

   Finally in the 3rd part C, we will study i, ii and iii.
4. Announce hypothesis: Once you start having some information regarding the case, it is time to present your hypothesis and start the hypothesis-driven approach of solving the case. For instance, if this is a simple profitability case and with the information already received, you can state that the problem comes from an increase in costs. Your analysis should now be aimed at confirming or rejecting this specific hypothesis. If you reach a dead end in your analysis, you can clearly state it and reject the current hypothesis. You then reformulate your hypothesis in order to start tackling the revenue aspect of the client.

3.1.2 Analysis

The analysis is the core part of a case solving. This analysis needs to be clearly laid out, structured and geared towards a solution. You need to guide the interviewer at every step of your analysis.

3.1.3 Recommendation

At the end of the case, or when your time is up, the interviewer will make sure to ask you about a final recommendation to the client. Ask for some time to clearly summarize the case and state the recommendation. This closing text should also be structured and follow the following organization:

1. Recommendation (answer to initial question):

   The recommendation should be action-oriented: You need to recommend to the client a specific solution or actions and give 3 reasons for that decision.

   Ex: I recommend the client to go with scenario A for the 3 reasons below:

   - Reason 1
   - Reason 2
   - Reason 3

2. Risk (of selected scenario): Lay out the risks of the chosen solution. What can go wrong? What did you forget to analyze?
3. Next steps: Present mitigation measures on the short and long-term. And mention further analysis to be made or an implementation plan in order to achieve the required objectives.

In summary, make sure Follow the pyramid principle when giving your recommendation: What? (recommendation) Why? (3 reasons) How? (implementation; Next steps).

3.1.4 How to Read a Chart

Reading a chart and understanding its content in order to extract some valuable information should also follow a structured approach. One needs to guide the interviewer through each of the following steps:

1. Analyze: Understand the information in the exhibits. Ask the interviewer for any term or acronym you don't understand.
2. Contextualize: Consider the overall context of the case, link this graph to the rest of the case, does it help you confirm or reject your hypothesis?

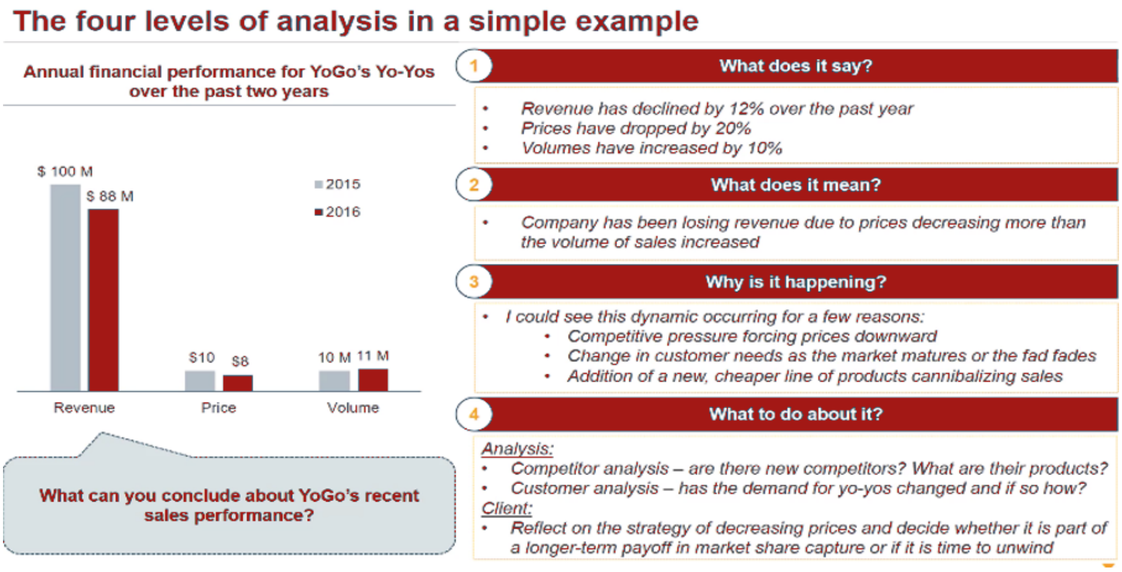


figure 1. Graph Interpretation

3. Interpret: Present business insights extracted from the graph and ask relevant questions. Extract insights from the graph and bring forward next steps to the interviewer in order to lead the case.

As an example: “It looks like the new market is two times bigger than our current market. I would like to study the option of entering this Market. Where do we stand today?”

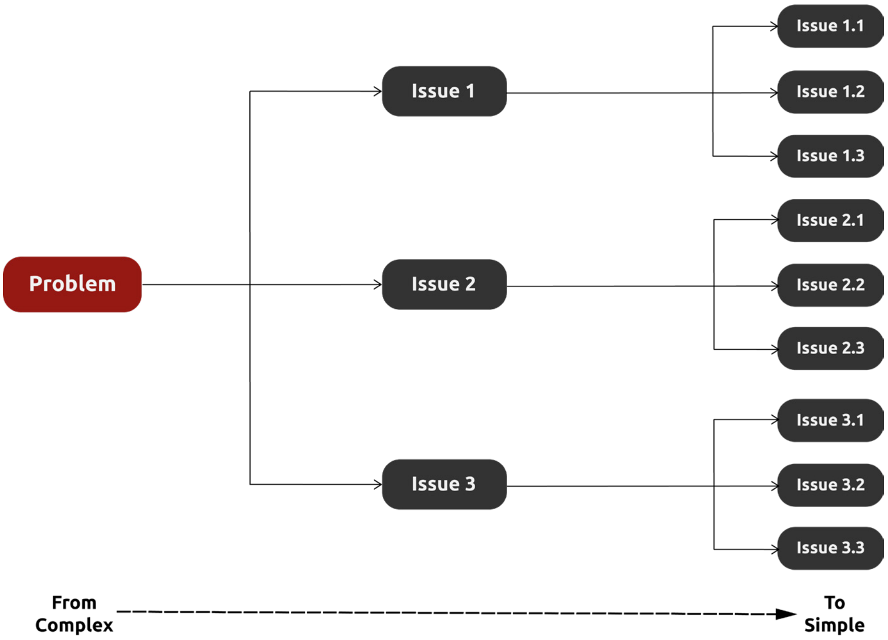
3.2 Case Analysis Principles and Models

The following section will lay out the basic principles behind any case solving technique; these principles and models need to be well incorporated in the analysis but not bluntly replicated.

3.2.1 Issue Tree

The issue tree represents the backbone of case solving. It helps the interviewee structure his thoughts all along the case. The issue Tree is represented via a Tree structure and a hypothesis-driven approach. The tree branches need to be MECE.

Choose which aspect of the branch you want to tackle at first / prioritize by following the Pareto Principle approach: Find which key driver affects most our client's objective.



There exists two types of issue tree:

- Problem-based tree: Used to determine the root cause of a problem "Why problem exists?"
- Solution-based tree: Used to determine a recommendation "How to solve a problem?"

3.2.2 MECE Principle

MECE is a way of segmenting information into sub-elements that are **mutually exclusive** and **collectively exhaustive**. In other words, elements should "exclude" each other, i.e. be distinct, and should "exhaust" the relevant field, i.e. contain everything that belongs to it. MECE as a method should be used when you craft an issue tree for your case structure. Doing so will help you avoid dependencies between different branches of the tree and thus sub-problems can be properly isolated.

Mutually Exclusive: aims at reducing complexity by avoiding overlaps. You need to make sure that the possible solutions or groups are not accidentally considered twice. Proving exclusiveness forces you to carefully look at each option, consequently leading you to a much deeper understanding of the issue.

Collectively Exhaustive: aims at ensuring a comprehensive collection without leaving alternatives. Exhaustive means that all possible options have been considered. The trick is to divide a problem into categories with a finite number of general groups. For example, if you need to make "means of transportation" MECE, don't start just collecting "per foot, train, plane, bicyle, bike etc." Try to find categories, because this practice will prevent you from forgetting important options: wheels vs. no wheels OR air vs. water vs. land.

Example : Breakdown of Costs in a MECE way. Subsequently, an issue tree-like format is used to break down the estimation into its basic components for easier approximation of data.

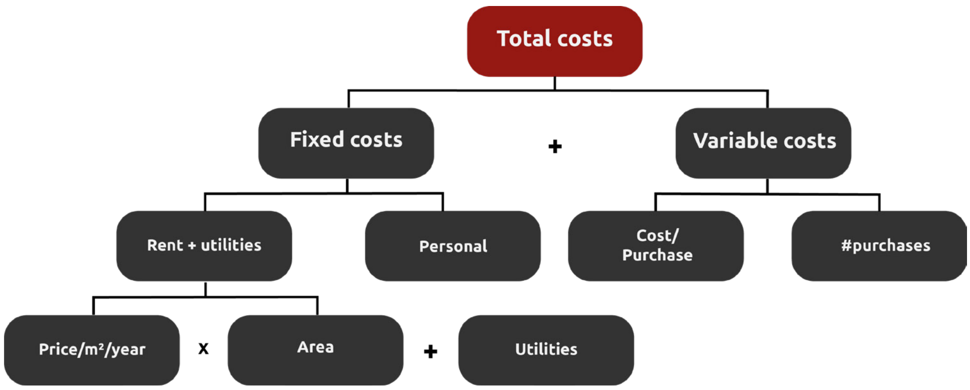


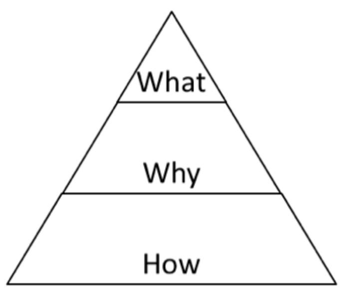
figure 2. Total Costs Issue Tree Breakdown

3.2.3 Pyramid Principle

This principle needs to be followed when structuring a recommendation and when providing syntheses between the different parts of the case.

Always try to give the solution first and then explain why (the rationale behind it).

- What: Theory, hypothesis, recommendation or conclusion
- Why: The reasons (3)
- How: How you want to implement it (Next Steps)



3.2.4 Porter Five Forces

The Porter Five Forces is a market Analysis Framework used to assess the Market Attractiveness (Industry):

- The stronger the 5 forces are the less attractive is the industry

- **Power of Suppliers:** High negotiating power leads to a higher price.

  Some reasons of high negotiating power of suppliers:

  Few suppliers only, Highly specialized good (no substitutes), high switching cost for buyers.

- **Power of Buyers:** High negotiating power leads to lower price.

  Reasons: low switching cost, ability to produce product internally, large volume bought, easy alternatives for buyer.

- **Threat of New Market Entrant:** Market entry barriers:

  Reasons: Economy of scale (new entrant has low volume so high cost per unit), high learning effect of industry players, High investment cost, Government regulation, competitive environment, low accessibility to suppliers and customers.

- **Threat of Substitutes:** High threat of substitute good:

  Reasons: Product at end of lifecycle (mature), similar prices, high number of substitutes.

- **Rivalry within industry:**

  Signs: Very similar products, high number of market players, shrinking growth, high barriers of exit due to high Sunk costs. i.e: costs that cannot be recovered if a business decides to leave an industry.

figure 3. Porter Five Forces

3.2.5 4C Framework

This framework helps to determine a firm's or business unit positioning (Market entry, Market analysis, Product introduction). 4C stands for Customer, Competition, Cost and Capabilities:

- Customer (external): One needs to analyze and determine the market size in terms of revenue, its growth, segmentation by geography or by Product, the customer segmentation, distribution channels, attractiveness and loyalty.
- Competition (external): One needs to analyze and determine the competitive position via the client's market share, his actual and future growth, fragmentation, dynamics of new entrants, trends, performance (ex: profitability)
- Cost (internal): Relative cost position and cost advantage compared to competition, Economies of scale, introduction of best practices, Reorganization of business units.
- Capabilities (internal): To determine what kind of strategy to implement - Core competencies, HR, Technology, Value for customers, Financial resources.

3.2.6 4P Framework

The 4P framework determines right marketing mix: Align the products of a company with the right price, place and promotion. This framework is mainly used when introducing a new product).

- Right Product: Meet customer needs. Analyze packaging, services and guarantees.

  Understand distinctive characteristics of the product in comparison with competitors: do a Benchmarking analysis.
- Right Price: Competitive Pricing, Cost-based pricing, Price-based costing. Determine the best pricing strategy for our client.

  Goal: Increase revenues.
- Right Place: Placement of product. Analyze distribution system: transportation, storage, distribution channels.

  Focus on customers need, wants and behaviors.
- Promotion: Bundle communication activities with customers.

  Raise awareness of target group

3.2.7 2x2 Matrices and BCG matrix

These matrices represent a visual Summary of the findings: the graph shows 2 variables and provides an effective overview of where to focus.

Examples:

1. **Growth-Share matrix (aka BCG Matrix):**

Assess a company's current product portfolio based on the product lifecycle (Market Growth) and the experience curve (Relative Market Share).

objective: Take Investment or divestment decisions: Feasibility vs Impact analysis.

- Dogs:

- Low relative market share in a slow growing mature market

- Product mostly are not profitable

Divest: Product have negative effect on overall profitability of firm

- Question Marks:

- Low relative market share in a young but promising market (growing)

- Potential of becoming stars if market share can be increased. Otherwise, can turn into a poor dog.

Careful analysis need to determine if to invest or not.

- Cash Cows:

- High Market Share in a slowly growing / mature market.

- Creates the highest cash flow

No further investment due to limited growth but try to "milk" as long as possible.

- Stars:

- High market share in a promising market

Goal: Turn a star into future cash cow: Heavy investment is needed to fight competition and expand market share.

The Ideal path to follow is: Product should develop from question mark to Star to Cash Cow.

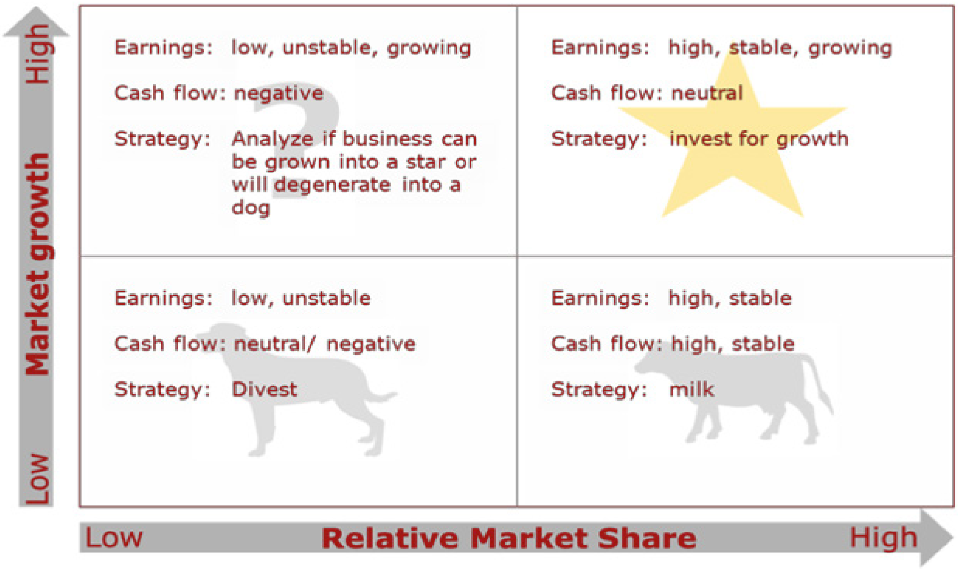


figure 4. BCG Matrix

2. **Ansoff Matrix:**

- Market Penetration:

- Grow within an existing market with existing Products

- Attract new customers (first buyers) which bought previously from competitors (steal market share).

Low risk, Growth Potential

- Market Development:

- Grow in the New Market with Existing Product (regional, national or international)

Risk and Growth Potential higher than Market Penetration.

- Product Development:

- Grow within an existing market but with new Products (or updates)

Risk and Growth Potential comparable to Market Development.

- Diversification:

- Grow in a new market with a new Product

- 3 diversification strategies:

Horizontal: products are often unrelated to current products but have the potential to attract current customers. (ex: notebook manufacturer selling pens)

Concentric: products often display synergies with current products and have the potential to attract new customers. (ex: computer firm selling laptops)

Lateral: new products have no relation or synergies with current products. (ex: computer firm selling notebooks).

High Risk and growth potential; High costs.

figure 5. Ansoff Matrix

3.2.8 External factors - PESTEL Framework

The PESTEL Framework is a tool used in order to analyze and monitor the external factors that impact an organization. The 6 factors are listed below:

- **P**olitical
- **E**conomical
- **S**ocial
- **T**echnological
- **E**nvironmental
- **L**egal

3.3 Common Case Types

The following part will list the most common case types given in an interview. It is highly important to mention that no real case fits in exactly one segment, in fact the cases given might include 2 to 3 different types. For example, a candidate can first be asked to determine the market size of a certain product then find the best pricing strategy and finally propose a clear market entry strategy. In conclusion, the case framework shouldn't be just copied as it is.

3.3.1 Market Sizing

This type of question is common and used by all consulting firms. The aim is to determine the size of a market in terms of units/years or $/year. The expected answer should be in the ballpark of around ± 20% of the actual answer.

Structured approach: make good assumptions and challenge your results.

1. Use an issue tree to structure the problem: Draw it and present it to the interviewer
2. Find tradeoff between accuracy and pragmatism: State clear assumptions, Round up and down the values. Calculation from bottom to top.

   Sanity check the results

Top down approach to present the structure then bottom up to compute the value.

Replacement Concept:

When estimating the market of products that need to be replaced on a regular basis (refrigerators, laptops, cars, lightbulbs, human, phone, etc.), use the replacement concept.

ex: how many babies are born in the world per day?

Think about how many years it takes for the population to be replaced. (assuming a steady population size)

Number of babies born = Total Population / life expectancy

Other common assumptions

- Life expectancy - 80 years
- Population growth rate - between 0 and 1 %
- People per household:
  - city - 3 people
  - Rural - 4 people
- Annual labor capacity per person - 50 weeks/year and 40 hours/week; 2000 hours/year
- GDP per capita - around $50k (or local currency equivalent) for developed countries; varies for developing countries (China ~ $8000)

Note: To take into account the growth or decline of a product you can adapt the previous concept. If the total number of incandescent light bulbs per year is 300M, remember that people are replacing it with fluorescent light now. Assume 50% of old incandescent is replaced with the same type. So total Market size is 150M.

3.3.2 Market Entry

There are two variations of this framework:

1. Introduction of an existing product in a new market (Market development)
2. Introduction of a new product in a new market (Diversification)

Growth questions require a market entry strategy.

Approach:

1. **Clarify the objective**: Why Client wants to enter the market?

Understand the company, its current market and the new market it wants to enter

Evaluate financial aspects and economic implications of the decisions.

2. **Understand firm:**

- Current financial situation?
- Current revenue streams?
- Key strengths and weaknesses (SWOT analysis)?
- Product mix and lifecycle?
- Customers segmentation?
- Distribution channels?

3. **Understand market of interest + Evaluate Attractiveness:**

Step1: Estimate the market size (if not given: see framework A)

Step2: Analysis of Market:

In what stage of lifecycle is the market: introduction, growth, mature or declining? Growth rate?

What is the Customer segmentation and what are the customer's needs?

What is the key technology involved? Any new technologies?

Who are the key players? What is their respective market share? What are their differentiating factors?

What are the trends in market?

Is there any substitute to our products?

4. **Financial Aspect (Profitability):**

Evaluate the financial position of our client.

Costs: What are the expected FC (Fixed Costs) and VC (Variable Costs) of the entry? Are there any barriers to entry?

Revenues: What is the expected price and volume of sales?

Finally, determine the Break-even duration (years) and rate of return of the entry decision.

5. **Recommendation:** State if our client needs to enter the Market?

If yes, how to enter the Market?

Possibility of entering a market:

1- Organically: greenfield operation (build operations from the ground up).

2- Inorganically: Joint-venture or M&A with existing firm.

+ <u>Next steps:</u>

- Timing of Entry
- Speed of Entry (Pilot trial or enter the entire market directly)
- Entry mode (Export Strategy or Wholly owned subsidy)
- Organizational Structure (attached to original market or new structure)
- Competitive advantage: Business strategy

Assesss the market →	Assess competition →	Choose entry option →	Choose business model →	Implement !
Size	Fragmented ?	Short / long term goals	Does product or service need to be localised ?	People with the right skills.
Growth	Consolidated ?	Consolidated ?	Resource needs	Where to start (gateway)?
Deamand drivers	How differentiated ?	Is a local partner needed ?	Is business model flexible to handle change ?	
Geography	Cost advantages ?	Takeover/ merger joint venture ?		
Regulations	China Govt. support ?	Strength of relationships		

3.3.3 Profitability Case

Perform a structured and quantitative analysis of the data to isolate the problem. Then find a solution.

Approach:

1. **Clarify the Problem**
2. **Lay out Structure / Issue Tree:**

If the client is in a highly competitive market, start your analysis by reviewing the revenues.

Share your hypothesis with the interviewer.

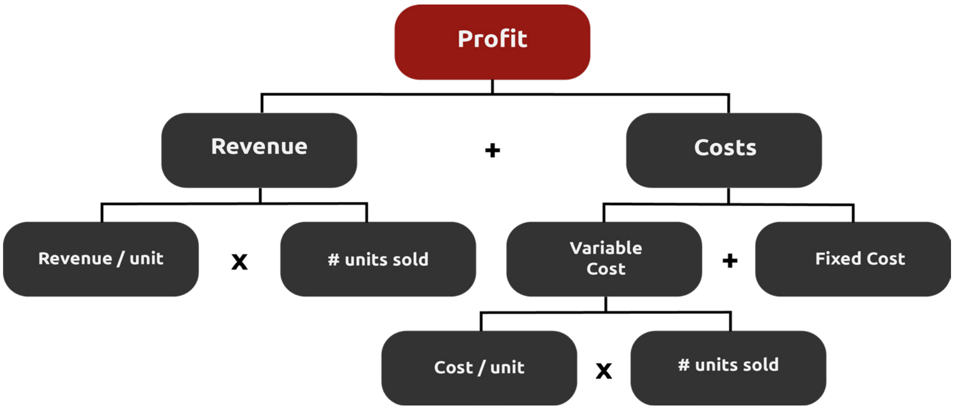


figure 6. Profit Issue Tree Breakdown

3. **Analysis:**

Quantify every information and ask for the change in numbers over time. Always Segment your numbers! (by geography, customer segment, volume, etc..)

Revenue: Segment revenues (geographically, customer segments, products, etc..)

ex: Drop in volume:

Possible reasons can include a new competitor? Some Quality Problems? Less Marketing? Etc..

Costs: Costs are divided in two segments:

a - ***FC: Fixed costs:***

SG&A - Selling, General and Administrative (Overhead): Rent, Utilities.

Marketing

Insurance

Equipment and machineries

R&D (Research and Development)

Taxes

b - ***VC: Variable costs:***

Material: COGS (Cost of Goods Sold)

Labor costs

Distribution costs: Packaging and Delivery

Service or Warranty costs

4. **Recommendation:**

ex: The decline in profit is due to an increase in sales of the product with lower margin. Therefore, total margins have decreased even though sales increased.

- Give 3 reason for that recommendation.
- Present the Risks
- Lay-out the Next Steps:
  - Short Term: Negotiate with suppliers (partnership, batch discount, etc..)
  - Long Term: Vertical integration, New products with higher margin, Pricing Strategy.

3.3.4 Growth Strategy

As Revenue= Volume x Price. In order to achieve a revenue growth, you can work on increasing the:

- Volume

- Unit Price

The best approach to achieve a durable growth strategy is to:

1. **Understand the client's business and industry:**

- Product:

What is our client's Product mix? In what stage of the Lifecycle of the product are we (introduction, growth, maturity, decline)?

What drives customer satisfaction?

- Industry:

What is the actual State of the industry and is it Growing?

Compare our Client's growth sales to competitors.

Compare Prices? (if product is a commodity, prices are similar).

Customer's Price sensitivity? (if commodity, customer is very price sensitive)

- Marketing:

What are the Client's marketing and sales channels?

What are the Competitors marketing and sales channels?

- Financials:

What is our Client's available funds for growth

Shareholders demands and expectations?

2. **Choose growth strategy (based on above info):**

Two main growth strategy can be considered:

- Grow organically (Green field operation) : Start the operations from scratch and set-up a new office at a new location. (ex: Tesla opening a new production plant in Berlin, Germany).

- Grow inorganically (Joint-venture, M&A, Alliance)

Here are some ideas/recommendations in order to increase the customer base of the client:

- Increase/switch distribution channel
- Expand product line
- Enter new market

- Marketing campaign
- Offer Complementary good: Sell add-on and bundle products
- Lower customer churn rate / Increase customer satisfaction
- Acquire new company.

3.3.5 M&A: Merger & Acquisition

This strategy represents an Inorganic growth. Possible M&A strategies are listed below:

- Vertical Integration: Acquire upstream or downstream supplier (ex: McDonald's has set-up / acquired manufacturing plants to procure raw materials which are used in the preparation of the food)
- Horizontal Integration: Acquire direct competitors (ex: Marriott Hotels acquired Starwood Hotels in 2016)
- Complementary business: Acquire a business so you can offer bundles / deals. (ex: Apple acquired Beats by Dr. Dre; they are now able to offer a discount on beats headphones when you purchase a new MacBook).
- Unrelated business: To diversify portfolio

The ultimate goals of an M&A are to:

- Increase shareholder value
- Have a cultural fit

Approach:

Here is an example of a framework in order to determine if our client objective of acquiring a firm is a good investment:

1. **The client's company:**

- Why does it want to acquire the firm? Possible options can be:

  - Strategic (market position, growth opportunity, diversification of product portfolio)
  - Defensive (acquisition by another competitor could make the competitor stronger)
  - Synergies / Value creation (Cost saving opportunities: Economies of Scale, Cross selling, Brand)
  - Undervalued (Ineffective management or unfavorable market: client has the power to bring the target company to its potential value)

- Which other business does the client possess?

- Client's customers segment?

2. **Target Industry:** (porter 5 forces analysis)

- What is the Market? How big is it?
- What is the Market growth?
- What is the Market Segmentation?
- What is the Focus of the market: High volume / low margin or Low volume / High margin
- Who are the Key competitors? And what is their profitability?
- Any Barrier to entry?
- Any Possible threats?

3. **Target Company:**

- What is the purchase Price? Do a Cost-benefit Analysis
- SWOT Analysis of company: Strength and weakness
- Market Attractiveness:

  - Company's Market Share
  - Company's Growth figure + comparison to competitors
  - Company's Profitability + comparison to competitors
  - Company's Key customers
  - Company's Valuation

4. **Synergies:**

How can client leverage revenues and profitability from target company?

- Does company possess any relevant Patent or useful intangibles? Possibility of a Technology transfer
- Which parts of the company can benefit from synergies? (ex : Distribution channels, IT support, etc.)
- Increase Bargaining power with suppliers due to higher volume bought
- If different suppliers, ability to concentrate purchasing (unify supplier and bargain)

5. **Feasibility and Risks: Economical and Cultural**

- Is the target open for acquisition or merger?
- Does client have enough funds available? If not, can we raise funds through loans?
- Is our client experienced in Integration of new companies?

Potential Risks to be accounted for:

- Organizational / Management risk during integration?
- Political implications?
- Risk of failure?

6. **Recommendation:**

Evaluate the target's financial and qualitative attractiveness for our client.

Should we acquire the target or no?

+ give 3 reasons: upside or downside of the merger.

+ Risks: List some potential risks

+ Next Steps: Propose next steps to our client: How do we plan to overcome / mitigate the risks?

3.3.6 Pricing

The goal of this analysis is to determine the best price for the product, service to be launched.

Approach:

1. **Investigate the client's Company:**

- What are the Products? Market position?

- Make sure to understand the client's objectives: Profit, Market Share, Growth, Brand positioning or competitive response?

2. **Investigate Product:**

- How our product differs from competition? How production differ from competition? What is its unique selling point (USP)?

- Any alternative or substitute for the products?

- In what stage of the product lifecycle are we?

- Any forecast on Supply and Demand in the future?

3. **Choose Pricing Strategy:**

- Competitive Analysis (Benchmarking): Price based on competitors' price

- Any comparable product/service? If yes, how do they compare to our client's product?

- How are they priced?

NB: Competitor might change their price once we introduce our product.

- Cost-based pricing: Compute our costs then add a profit margin (obsolete method)

- Determine client cost structure

- Price-based costing (Willingness to Pay):

- Determine value of product and WTP.

NB: Different customer segment may have different WTP. Charge different price to different customer by changing the "value-added".

Think on how to draw extra money: ex: delivery charge, bundle with other objects.

3.3.7 Valuation

Estimate price of a firm, patent or service in the market. This type of cases is more geared towards financial consulting and investment banking type of interviews.

1. **Discounted Cash Flow method (DCF): based only on expected profit**

Divide projected annual cash flows by a discount rate (interest rate).

-> Determine NPV (Net Present Value)

2. **Industry multiple method:**

Assess value using benchmark to other firms in industry: Use Industry Multiple

Some examples of Multiple ratio:

- Price-to-book ratio (P/B): P= Actual firm valuation; B= Book value of firm (Value of its Asset found on Balance sheet). Find industry average for ratio then multiply by Book value (B) of desired company. The Valuation of the firm is equal to P.

- Price-earning ratio (P/E)

- EBIDTA ratio

Tips: Good guess for industry multiple is 10xEBIDTA

Interest rate: 3% if inflation to 20% for highly speculative investments.

General tips:

This short list will give you some ideas of question to ask during the interview. Attention, this list is not exhaustive but gives you a glimpse of potential thoughts or information you may need in order to solve a case.

Client:

- Size of company?
- Profitability? Growth?

- How a business transaction works?
- Is the Issue / problem company-specific or industry-wide?

Industry:

- At which point of the lifecycle are we now? (introduction, growth, mature, decline)
- Who are the Key players?
- Who are the Suppliers?
- What is the Client's position compared to the rest?
- What changed in the industry: New price? New entrant? Disruptive technology? Regulations?
- What are the Trends? company-specific or industry-wide

Product:

- What is the product? Strength and weakness?
- Lifecycle of product?
- Brand/Reputation?
- Comparison with competitor's product?
- Price of product?
- Customer Segmentation?
- Distribution channel?
- Service?
- Marketing?
- New technologies?

Practice Cases by Type

4. Practice Cases by Type

The following segment includes cases separated by type. The reader can use these cases to practice with a partner or try to solve them on his own before reading the solution.

4.1 Profitablity

4.1.1 Pure and Fresh

Problem statement

Our client, Pure & Fresh is a market leader in the US in the field of refrigerants. They would like to dive deep in their supply chain and focus on restructuring their distribution channels. Therefore, they would like our help to decide whether they invest on either 1 or 4 distribution centers.

What would you recommend?

Information available upon request

- Our client is currently outsourcing all the distribution to trusted and specialized transportation firms directly from the manufacturing plants to the retailer clients who are evenly distributed geographically around the USA.
- The CEO is under pressure from the board of directors who believe that the company could become more profitable by managing its own distribution channels in the next 10 years. However, it is not expected that revenues will change over a short-term period.
- Investing in 4 centers would cost USD 1 billion whereas 1 center would cost 55% less.
- Running 1 distribution center will cost USD 30 million per month and only 20 million per month for 4 centers

Proposed solution:

a) ***Structure; How many distribution centers to invest in (1 or 4)?***

Company	Customers	Products	Profitability
• Current distribution channels • Reasons for restructuring • Short- & long-term goals	• Geographic distribution • Preferred distribution channels • Customers loyalty	• Available substitutes • Product mix	• Costs involved in each scenario • Breakeven point • Pros & cons of 1 vs 4 centers

b) ***Profitability of each plan***

One distribution center:	Four distribution centers :
• Investment needed is 55% less of USD 1 billion = 0.45 x 1 bn = 450 million • 30 million USD in monthly costs	• Investment needed is USD 1 billion • Costs per month USD 30 million

You can calculate how long it will take for the costs of both plans to be even

Cost for 1 center = Cost for 4 centers

USD 450 M + USD 30 M / month = USD 1000 M + USD 20 M / month

Number of months = 55 months or 4.5 years

It would take 4.5 years for the investment on 1 center to break even with 4 centers which is within the timeframe of 10 years required by the company. Additionally, it will cost less to maintain after 4.5 years.

c) ***Advantages of each plan***

One distribution center	Four distribution centers
• Easy to manage • Smaller inventor hence, small deviation in demands • Non-corporate culture (better for some employees)	• Proximity to customers hence shorter delivery time • Possible to have knowledge transfer between centers

d) ***Recommendations***

We recommend our client to invest in 4 distribution centers because it makes sense economically since it will cost less to maintain after 4.5 years which is within the 10 years timeframe of the our client is considering. In addition, the customer loyalty may better as consequence of shorter delivery time/ quicker order processing.

4.1.2 Clothing Retailer

Problem statement

Our client, Fabienne is a market leader in the clothing retailing industry and they have been experiencing a slow growth and decline in profits lately. Your expertise as a consultant has been requested to help with the problem.

What do you recommend?

Information available upon request

- Fabienne has 500 stores in various locations around Europe
- The clothing industry has been growing at a 10% rate in the past 5 years
- The cost of production and price of items have been constant in the last years

Proposed solution:

Market	Profitability	Customers
• What is the current market size? • What are the market trends? • What is the competition landscape?	• What is the current cost structure? • What about revenues?	• Preferred distribution channels • Preferred clothing style

Observations:

Our client is not investing a lot in clothing innovation hence, their new clothes do not resonate with the new trends in the market which is causing customer loyalty to decline. Additionally, their products are mostly displayed in outlets which could be damaging the brands quality perception. The lack of online stores is an issue especially in the era where most people shop online.

Recommendations:

We recommend our client to invest more in innovative clothing to catch up with the current trends and preferences of the customers. In addition, one Fabienne will have to invest in online distribution channels which will help reach various customers which prefer online shopping.

Exhibit 1: Reviews of Fabienne brands

“I used to love wearing from Fabienne however lately I am looking for more trendy clothing which will resonate with my age. I don’t think Fabienne is that brand.” - Carlota, 25

“I only like to shop online and Fabienne is does not even have an online shopping option. Most of their stores are at least an hour drive from where I live. They are mostly outlets and I do not like to spend my time there.” - Joanna, 35

“This brand does not resonate with my style at all, not anymore” - Maria, 55

Exhibit 2: Investment in innovation in by year

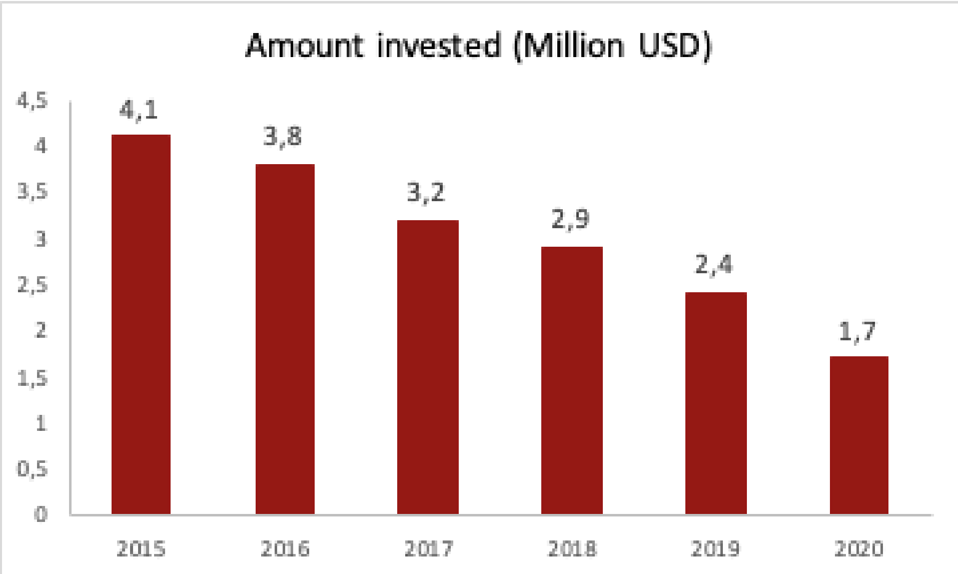


Exhibit 3: Comparison with other major retailers

Retailer	Market share (%)	Amount spent in innovation (M USD)
A	20	25
B	10	18
Fabienne	10	1.7

4.1.3 Bio Products

Problem statement

Our client is Mr. Price and has 10 grocery stores at major city centers in the US. Their profits are currently at USD 200 K per year however, the average is around USD 500 K for similar competitors. They would like to understand why their profits are low and how to resolve the problem.

What is your recommendation?

Information available upon request

- The market is trending towards bio products
- The costs incurred by Mr. Price are 20% higher than its competitors
- All shops are located in high end neighborhoods where bio products are highly preferred

Proposed solution:

Profitability	Customers	Products
• Current costs	• Type of customers	• Product mix
• Current revenues	• Preferred distribution channels	

Exhibit 1: Product mix and revenues

Product	Revenues (%)	Inventory (%)	# of shops
High end (Bio)	60	20	2
Medium enb	30	20	3
Low end	10	60	5

Our client has all shops in high end neighborhoods where the customer prefers bio products however the majority of their shops hence the inventory is targeting low end customers.

Recommendations:

We recommend our client to close the low-end product shops in the neighborhood because these are driving high costs but low revenue streams. Alternatively, our client can consider using these shops to sell high end bioproducts because their geographic location is right.

4.2 Market Entry

4.2.1 Fish Farm

Problem statement

One of your wealthy friends heard of Atlantic salmon fish farming as being a profitable business and he would like to setup a fish farm in Lausanne/Switzerland. His family thinks it's a bad idea. He called you for some advice.

What would you recommend?

Information available upon request

- Fish consumption per capita reached 17.5 kg in 2019 in Switzerland and it is expected to increase by 4% per year
- Switzerland imports 13.000 tons of salmon every year
- It takes up to ten days for Norwegian or Scottish salmon to reach the Swiss consumer
- There is only one firm currently farming Atlantic salmon in Switzerland called Swiss Alpine Fish AG and has been farming salmon for 5 years with a maximum capacity of 600 tones per year with 10% mortality rate
- Your client would like to reach the same production capacity as the competitor in 5 years
- It takes approximately 2 years to farm Atlantic salmon with an output of 5 kg per fish
- It costs about 10 CHF to produce 1 kg of Atlantic salmon (including distribution)
- One can assume market prices to be 25 CHF per kg in the market shelves

Proposed solution:

a) ***Structure***

Should we setup a fish farm in Lausanne or not?

Market	Profitability	Barriers of entry
• What is the current market size? • What is the competition/ distribution landscape? • What are the market trends?	• What is the investment needed • What are the recurring costs? • Breakeven point	• Availability of capital • Government regulations • Available expertise

b) ***Profitability***

It costs 10 CHF to produce 1 kg of Atlantic salmon

The cost in the market shelves is 25 CHF per kg

Profit = Revenues – Costs

Profit = 600.000 kg/year x 25 CHF/kg - 600.000 kg/year x 10 CHF/kg

Profit = 9.000.000 CHF/year

c) *Breakdown*

An investment of at least 6.000.000 CHF would be required in the first 2 years in order to cover the costs of farming. Given that the profitability in the end of the second year is 9 M, one can expect to break even in approximately 1.5 years

d) ***Advantages of farming swiss salmon***

- Swissness is a brand which could complement a positive perception of the product
- Locally produced salmon can reach the consumer faster adding it to its freshness
- Profit margins can be high in Switzerland

e) ***Recommendation***

We recommend our client to start an Atlantic salmon fish farming business. It is worth noting that although the Atlantic salmon farming business is very profitable with about 9 M/year profits, it is quite capital intensive given that the initial investment required to reach our clients goal is about 6 M CHF. Therefore, we recommend out client to start smaller given that he currently does not have expertise to run such businesses. The swiss market seems like the right market to given the possibility to reach high profit margins and added freshness can be an advantage. Additionally, there is not much competition. Next steps below:

i. Get a good location for your farm

ii. Get a good source of water

iii. Get healthy fingerling or juveniles

iv. Understand fish feeds & feeding

v. Start Marketing your fish before they grow-up

vi. Get good and practical fish farming training

Exhibit 1: Stages involved in Atlantic salmon farming

Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
Egg incubation (6-8 weeks)	Smoltification (7 months)	Fingerling system (5 months)	Grow out Tanks (12 months)	Harvesting (1 week)

4.2.2 Atlant Gym

Problem Statement

Our client is a Swiss high-tech GYM, which operates 5 gyms in Switzerland. The Gym offers fitness areas furnished with high-tech equipment. The gym membership is complemented with a sauna, a swimming pool and a tennis court. They are currently evaluating the possibility to expand to France and Germany although they are still not profitable in Switzerland.

Information available upon request

- Our client's business is not profitable yet in Switzerland
- The fitness area operates 24/7 and the other areas have restricted operating hours (6.00 a.m to 8.00 pm)
- A fingerprint technology is used to access all areas
- One can only subscribe on a yearly plan which costs 80 CHF per month and the members can access all areas and activities
- In order to promote the gym, they have a one-day free trial option
- Exhibit 1 - Monthly costs per gym and the currently used capacity
- Exhibit 2 – Costs to open a gym of 200 people in France and Germany
- The average subscription in similar gyms in Germany and France costs about 35 CHF.

Proposed Solution:

1. ***Evaluate the reason they are not profitable***

In order to evaluate the profitability, you have can look at exhibit 1.

As you will see from your calculations, that gyms number 3, 4 and 5 are not profitable simply because they are currently not being used at capacity. Additionally, gym 1 is currently at 90% capacity and the profits are only 1400 CHF per month and at 100% capacity it would only reach 3000 CHF of profit which is not a good margin.

Gym	Max capacity (people)	% capacity used	people subscribed	Cost per monthly subscription	Revenues (CHF)	Cost to operate (CHF)	Profit (CHF)
1	200	90%	180	80 CHF	14,400	13,000	1,400
2	300	60%	180	80 CHF	14,400	12,000	2,400
3	500	20%	100	80 CHF	8,000	12,000	- 4,000
4	100	50%	50	80 CHF	4,000	10,000	- 6,000
5	200	30%	60	80 CHF	4,800	14,000	- 9,200

2. *How can they become profitable?*

Given the results from the previous table, one can become profitable by increasing the capacity of use of the gyms that are falling short in particular gyms 3, 4 and 5. Another way is to separate the fitness subscriptions from the sauna, swimming pool and tennis this way our client will be able to charge a premium from the later. Additionally, if the efforts to increase the capacity fail, one can consider closing the least profitable gyms namely gym 4 and 5.

3. *How much should our client charge their subscribers in Germany and France in order to become profitable in their first year in operation if they open a 200 people gym?*

• *Germany*

Costs in year 1 = 30000 CHF + 8000 CHF x 12 = 126000 CHF

# of subscriptions expected in the 1st year = 200 x 70% = 140 people

Minimum cost per subscription per year to cover costs = 126.000 CHF/140 people = 900 CHF/year or 75 CHF per month.

In Germany, Our client should charge more than 75 CHF to become profitable in the first year.

• *France*

Costs in year 1 = 30.000 CHF + 5.000 CHF x 12 = 90.000 CHF

# of subscriptions expected in the 1st year = 200 x 50% = 100 people

Minimum cost per subscription per year to cover costs = 90.000 CHF/100 people = 900 CHF/year or 75 CHF per month.

In France, our client should charge more than 75 CHF to become profitable in the first year.

Recommendations:

Given that our client is still not profitable in Switzerland, we recommend to focus on their profitability first before expanding to Germany or France. This can be done by either closing the gyms that are not profitable at the moment or by adopting strategies that will help them increase the capacity used in the gyms. Additionally, to become profitable in France and Germany in the first year they would have to charge more than 75 CHF which is quite high for these countries given that the average subscription only costs 35 CHF for similar gyms. Hence we recommend our client to lower the expectations and expect to be profitable on the long term in these countries.

Exhibit 1 – Monthly costs per gym and the currently used capacity

Gym	Monthly costs of operation	Max capacity (people)	% capacity used
1	13.000	200	90%
2	12.000	300	60%
3	12.000	500	80%
4	10.000	100	40%
5	14.000	200	30%

Exhibit 2 – Costs to open a gym of 200 people in France and Germany

	Monthly costs to run 200 people gym (CHF)	Investment needed (CHF)	Expected % capacity used after 1 year
Germany	8,000	30,000	70%
France	5,000	30,000	50%

4.2.3 Swiss El energy

Problem statement

Our client is a privately-owned Swiss electricity supplier company operating in Texas, USA. As one of the biggest solar energy producers in the state, they supply electricity to four major cities in Texas. Every year, the company is measuring its performance using the Economic Value Add (EVA) evaluation technique. In order to be profitable, the EVA must be positive.

The EVA has been negative in the last 6 months and they would like to understand the reason behind that and how to turn around.

What is your recommendation?

Information available upon request

- EVA = Net Operating Profits – (WACC x Capital Asset Base); the unlevered operating income after tax less the fair return on invested capital.
- The company collects monthly bills with regard to how much electricity was used by a particular customer. The price of electricity cannot be changed. It is difficult to change the pricing due to regulations imposed by the American government
- Costs did not fluctuate significantly over the past years
- Revenues remained relatively stable over the last 4 years
- It is possible for the company to expand its service to more cities/communities due to saturation of electricity production
- The fair return on invested capital has increased over the past years.

Proposed solution:

Given that the revenues and costs have not changed over the years, we have to look at other factors affecting the EVA value. As seen above, EVA = Net Operating Profits – (WACC x Capital Asset Base); the unlevered operating income after tax less the fair return on invested capital.

Here we also see that the reason behind the decreasing EVA is the increase in the fair return on invested capital.

Recommendations:

- We recommend our client to revisit the fair return on invested capital to understand the reasons behind its increase. If there is pressure from the investors, maybe it would be better to convince them to reduce the expected percentage of return from invested capital in order to attain positive EVA.

4.3 Growth Strategy

4.3.1 Rare Disease

Problem statement

Our client is PharmaCo, a large swiss pharmaceutical company which focuses in rare diseases. Until five years ago, swiss pharmaceutical companies did not invest much in rare diseases due to the costs involved. However, recently the swiss government started providing funding which has motivated such companies to invest more in the rare diseases R&D. Our client has hired us to consult on the growth of their businesses.

What would you recommend?

Information available upon request

- Rare diseases affect 250.000 people in the Europe
- Industry leader and the business is worth EUR 2.5 billion and it is growing at 7% a year
- Rare disease industry is USD 50 B worldwide
- Govt provides tax credits for drug development
- The competition is mixed – small startups in biotech and large pharma companies
- Their goal is to quadruple their business in 10 years or less

Proposed solution:

Market	Company	Growth strategy
• Current market size • Competition landscape • Market trends	• Available investment capital • Available expertise • Position in the market • Product portfolio	• Organic growth • Inorganic growth

1. ***Growing organically***

PharmaCo currently has USD 2.5 B in revenue and if we consider the yearly growth of 7% without compound interest, we can calculate the revenue in year 10 as follows:

USD 2.5 B x 0.07 x 10 = USD 1.75 B

Total revenue in year 10 = 2.5 + 1.75 = USD 4.25 B

However, this is still very far from the goal of USD 10 B set initially. Therefore, one should look at the current investments/assets owned by the company in order to assess their worth after 10 years.

2. ***State of the current assets in year 10 (look at exhibit 1 & 2)***

Disease 1:

10 assets x 10 % = 1 drug in the market in year 10

Revenue in year 10 = 1 drug x USD 1 B x 10 % = USD 0.1 B

Disease 2:

20 assets x 15 % = 3 drug in the market in year 10

Revenue in year 10 = 3 drug x USD 2 B x 40 % = USD 0.24 B

Disease 3:

5 assets x 80 % = 4 drug in the market in year 10

Revenue in year 10 = 4 drug x USD 0.5 B x 70 % = USD 1.4 B

The total revenue from the current assets will be USD 1.74 B in year 10.

Hence the total revenue in year 10 will be: 4.25 B + 1.74 B = USD 5.99 B which is still quite low for the target. One solution would be to invest in new assets.

Which disease category would you have our client invest in to maximize potential profits?

Although the peak revenues for disease 3 are lower, this is pretty attractive because the years required to reach market are lower and their success rate is much higher.

How many more assets would be required in this category in order to reach the target?

First calculate the revenue attainable without adding assets from disease 3.

5.99 B – 1.4 B = 4.59 B

How much is necessary to reach the target?

10 B – 4.59 B = 5.41 B

Now calculate the number of assets required

Revenue in year 10 from disease 3 = # of drugs x USD 0.5 B x 70 % = **USD 5.41 B**

# of drugs = 15.45

Now consider that the success rate in disease 3 is 80%

15.45x100%/80% = 19.32 assets

Therefore, our client should acquire 15 assets more to contemplate disease 3 category.

3. ***Recommendation***

Although the rare diseases market is pretty attractive with 50 B market cap worldwide, our clients' goal to quadruple their revenue in 10 years seems rather ambitious with the current assets only. Therefore, we recommend our client to invest in new assets in either disease category. If our client invests in 15 assets in disease category 3, it will be possible to reach the goal in 10 years.

Exhibit 1: Current portofolio

Disease	# of assets	Years to market	Peak revenue (in million USD)	Success rate (%)
1	10	9	1000	10
2	20	7	2000	15
3	5	5	500	80

Exhibit 2:

Years in market	% peak of revenue
1	10
2	20
3	40
4	50
5	70

4.3.2 Hospital Purchase

Problem Statement

Our client owns 10 private hospitals in Turkey and they would like to grow their business by starting automated open-heart surgeries. There are two options: a) purchase robots able to perform the procedure or b) Rent robots (when they are free) from Kalp-tech a small private hospital built with the sole purpose of automated open-heart surgeries.

What would you recommend?

Information available upon request:

- There is a newly developed high precision robot in the market known as RoboTon and this is the most favored by the hospital management.
- There are only 3 robots in market able to perform high precision open heart procedures.
- The hospital needs to hire or train personnel to use the robot.
- There are 60.000 open heart surgeries performed per year in Turkey.
- Our client hopes to capture at least 20% of the market share in 5 years
- The board has decided on an investment of 100 M
- Kalp-Tech has an occupancy rate of 65% so they would like to fill the remaining 35%.
- Kalp-Tech only allows its personnel to operate their robots and an hourly rate would apply.

Proposed solution:

The question is to whether invest in a new facility equipped with high precision robots or acquire a hospital with these facilities in order to grow these businesses. Therefore, we need to compare these two options.

1. **Invest in robots**

   Which robot to invest in?

   Calculate the break-even: Gains = losses

   i. **RoboTon**

   3M USD(one time cost) + 1 MDx200.00 USD (salary)/year + 4Tx60.000 USD (salary) /year + 100.000 .(maintenance)/year

   = 120 (surgeries)/year x 70% (domestic) x 15.000 USD + 120 (surgeries)/year x 30% (domestic) x 25.000 USD

   = 440.000 USD/year + 3.000.000 USD = 1.260.000 USD/year + 900.000 USD/year

= 3.000.000 USD = 1.720.000 USD/year

= 1.74 years or approx. 2 years

ii. Robot X

1.5M USD(one time cost) + 4 MDx200.00 USD (salary)/year + 2Tx60.000 USD (salary) /year + 50.000 .(maintenance)/year = 240 (surgeries)/year x 70% (domestic) x 15.000 USD + 240 (surgeries)/year x 30% (domestic) x 25.000 USD

= 970.000 USD/year +1.500.000 USD = 2.520.000 USD/year + 1.800.000 USD/year

= 1.500.000 USD = 3.350.000 USD/year

= 0.44 years or approx. 0.5 years

Problem: The precision is very low at 85%, could result in a very bad reputation

iii. Robot Y

2 M USD(one time cost) + 2 MD x 200.00 USD (salary)/year + 4T x 60.000 USD (salary) /year + 20.000 (maintenance)/year = 180 (surgeries)/year x 70% (domestic) x 15.000 USD + 180 (surgeries)/year x 30% (domestic) x 25.000 USD

= 660.000 USD/year +2.000.000 USD = 1.350.000 USD/year + 1.890.000 USD/year

= 2.000.000 USD = 2.580.000 USD/year

= 0.77 years or approx. 1 years

Problem: The lifetime is very short (only 5 years) and the precision is lower than RoboTon.

How many robots do they need to treat 20% of the market?

• There are 60.000 surgeries per year so 20% would be 12.000 surgeries.

• So if they invest in RoboTon with a capacity of 120 surgeries a year, then they need 100 Robots. This would cost them 300 M USD.

2. **Surgery capacity for kalp-tech**

= # of surgeries/year = #of robots x #of surgeries/year = 2 Roboton x 10 x 12 + 4 RobotX x 20 x 12 + 5 RobotX x 15 x 12 = 2100 surgeries/year

However they only use 65% of that. Hence, they currently perform 1365 surgeries per year. So they have an available 735 free surgeries.

735 is the number of surgeries our client could outsource to Kalp-tech. Which would not be enough to reach the capacity of 12.000 surgeries a year.

Recommendations:

We recommend our client to invest in their own robots given the ambitious plan to reach 12.000 surgeries in the next 5 years. Investing in RoboTon makes the most sense because it has a higher precision and longest lifetime. Our client needs 300 M to reach the required capacity (100 robots) however, 100 M is a good start and they can purchase robots gradually given that the break-even is about 2 years they can invest their profits thereof. Outsourcing their customers is not a good idea because the available partner (Kalp-Tech) only has an available/outsourceble capacity of 735 surgeries a year which is way off.

Exhibit 1: Market size

There are two types of customers, domestic and medical tourists

Type of customer	Cost for surgery (USD)	Percentage (%)
Domestic	15.000	70
Medical tourist	25.000	30

Exhibit 2: Available robots

	RobotON	Robot X	Robot Y
Surgeries per month	10	20	15
Lifetime (years)	20	10	5
Precision	99%	85%	95%
Maintenance cost per year	100.000	50.000	20.000
# of operators*	1 MD & 4 T	4 MD & 2 T	2 MD & 4 T
Price	USD 3 Million	USD 1.5 Million	USD 2 Million

*MD (medical doctor) + T (technician)

Exhibit 3: Available robots at Kalp-Tech

	RoboTon	Robot X	Robot Y
Rent/h (USD)	4.000	2.000	2.500
Number	2	4	5
Av. Time (h)	3	4	4

4.3.3 Sport Factory

Problem Statement

Our client, SportFactory is a major French sports equipment provider. They have different divisions with the main ones being running, swimming, cycling, and climbing. Its running division has recently asked for a €100 million capital allocation to double its capacity. Our client would hence like to know whether or not he should grant the capital request and what are the key factors and issues he should look at to make its decision. He further asked us to try to evaluate the attractiveness of the running market.

What would you recommend?

Information available upon request:

- Sales
  - 300,000 units are sold each year by SportFactory while the overall industry sell for 3,000,000 units
  - Industry growth has been robust in the past years but is starting to slow down

  Average price per unit is €50 for Sport Factory, while competitors A, B and C sell at average price €52, €55 and €47 respectively
- Cost
  - Average cost per unit is €35, while competitors A, B and C average unit cost is €30, €33 and €25
  - The running division aims for a 10% cost reduction thanks to its expansion
  - Most costs come from assembly and labor
- Profitability
  - The running division is on average generating higher profit than the other divisions but has seen a decrease at the same time the growth of the industry slow down
- Market share
  - The running division is the 3rd largest running equipment manufacturer in France, and account for 20% of the market share
  - On top of SportFactory, 3 other companies are dominating the market: competitors A, B and C with a 35%, 25% and 10% market share respectively
  - The running division accounts for 15% of SportFactory total sales

- Distribution
    - Most of our sales are made through physical stores
    - There are stores in almost every big city in France
- Customers
    - Most of our customers belong to the middle class and are often big families
- R&D
    - SportFactory is considered a fast follower and doesn't have a strong R&D division

Proposed solution:

- The industry seems to have reached maturity and may now be going in the decline phase of the industry life cycle. The industry doesn't seem very profitable.
- Gaining share on the other big competitors might be tricky because of their significant size but there is potentially a 10% market share which could be gained.
- We don't have information on the competitive environment, particularly if there are partnerships between competitors to control prices and quantity produced.
- Doubling capacity seems difficult to achieve as the industry has slowed down its growth
- Profitability analysis:

Company	Profit margin
SportFactory	(50-35)/50 = 30%
Competitor A	(52-30)/52 = 42%
Competitor B	(55-33)/55 = 40%
Competitor C	(47-25)/47 = 47%

Profitability is not a problem but could be concerning due to the recent decrease in the profit margin

Recommendations:

- We recommend our client to wait a bit before granting the capital request as the future of the industry is currently uncertain.
- SportFactory should decrease its cost furthermore if the firm wants to be in line with the profit margin of its major competitors.
- Our client should further investigate the causes of the decline in industry growth and decrease in profit. He should also try to evaluate what will be the impact of an increase in capacity and cost reduction on the industry’s pricing and volume. Particularly, further studies should be made to see if this could put SportFactory as the second biggest player in the industry.

4.4 Pricing

4.4.1 Reusable Coffee Capsules

Problem statement

We have been contacted by a reusable coffee capsule manufacturer in Switzerland to help them develop a strategy to market their products as well as a pricing strategy.

Information available upon request:

- Our client is a pioneer in the reusable coffee capsule technology. The existing capsules are either made of aluminum (recyclable) or plastic (one-time use)
- The reusable coffee capsules will have to be filled with coffee powder before each use.
- The product can be designed and manufactured to fit any capsule-based machine and has a lifetime of 10 years.
- One capsule is loaded with 5 g of grinded coffee powder.
- You can assume that 20% of the coffee drinkers get their coffee from capsule based machines where aluminum and plastic capsules have 50% market share each.
- The cost of production of a reusable coffee capsule is 2 CHF per capsule

Proposed solution:

1. ***Where to start?***

How many distribution centers to invest in (1 or 4)?

Market	Customers	Offering	Company
• Market size – capsule based coffee machine owners • Competition – available substitutes • Market trends	• Geographic distribution • Preferred distribution channels • Customer loyalty & buying power	• Product mix • Other services	• Operational capability • Available distribution channels • Market reputation

2. ***Which market to tackle first?***

Here you can either calculate the market with the best revenue potential or given that the company is in Switzerland and the amount of coffee drank per capita is quite high, you can also decide to start from Switzerland.

3. ***What are the pros & Cons of reusable coffee capsules?***

Pros

- Saving money
- Contribute positively to the environment – 10 years life time whereas the other type either is thrown away or recycled (which also is an expensive process)

Cons

- From the business point of view, it might not be advantageous – May sell small volumes every year because of the life time
- The consumer has to fill the capsule with coffee before each use – not convenient

4. ***How much does one person save by using reusable capsules per year?***

Since the advantage would be its durability and no requirement for recycling, it is much fairer to compare it with the environmentally friendlier version (aluminum).

In Switzerland (aluminum capsules):

Amount of coffee drunk/year x cost saving per coffee = 6.31 kg/year x 0.4 CHF/0.0005kg x 20% x 50% = 504.8 CHF per year

5. ***Pricing strategy***

There are different strategies for determining the pricing

Based on value, cost of production, competitive pricing and willingness to pay.

Cost based: The cost of the capsule would be easily reached only after drinking 5 coffees hence this is advantageous to the consumer however not for the capsule manufacturer.

Value based: The value offered is far higher from the point of view of the environment

Competitive pricing: There are no similar products to compare with

Willingness to pay: In all countries the willingness to pay is quite high

Given that the consumer would be saving about 500 CHF a year, and with a lifetime of 10 years, there will be 5000 CHF saved over time.

Instead of allowing the consumer to pay off the cost of the capsule in only 5 coffees, one could potentially multiply that by 50-100 times. Hence the final price could be 20 – 40 CHF per capsule. This would give a significant profit margin to the manufacturer as well.

6. *Recommendations*

We recommend our client to start marketing their reusable coffee capsules in Switzerland because it is where they are based and the customer based seems to be quite high. The pricing can be determined based on the willingness to pay and the value brought by the reusability of the capsules which are both quite high in Switzerland. Once the swiss market is conquered, the next step could be to start marketing in other countries where online platforms could offer an advantage. For better marketing, focusing on the environmental advantage as well as on the cost savings can prove to be advantageous.

Exhibit 1: Yearly coffee consumption per capita in Europe

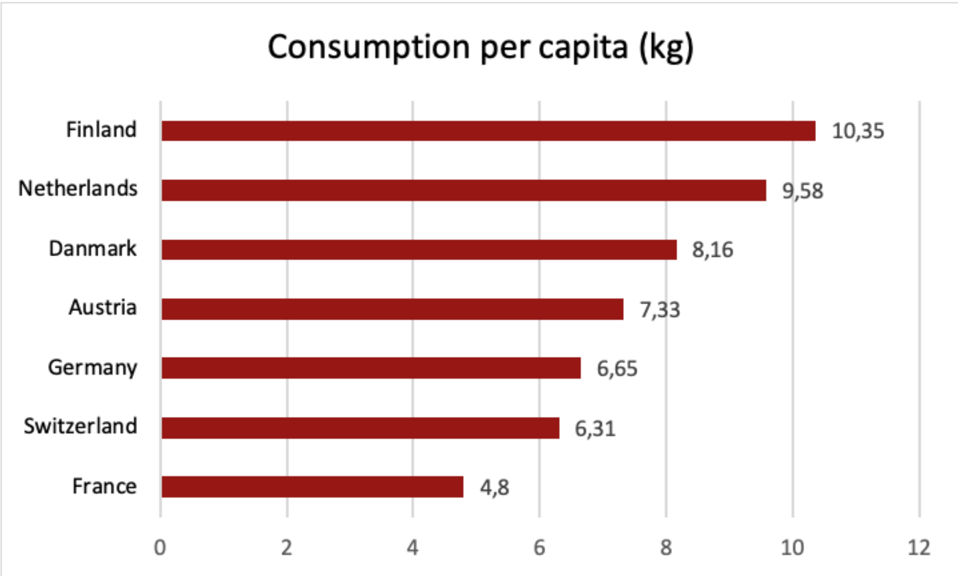


Exhibit 2: Cost savings for coffee drinkers

		Cost per drink (CHF)		
Country	**Population (M)**	**Aluminum capsule**	**Plastic capsule**	**Reusable capsule**
Switzerland	8.6	0.5	0.3	
Finland	5.5	0.8	0.5	
Netherlands	17.3	0.3	0.3	0.1
Germany	83	0.6	0.4	
France	67	0.3	0.3	
Denmark	5.8	0.7	0.5	

4.4.2 Laptop Introduction

Problem statement

Our client is a major consumer electronics manufacturer and reached out to us in order to get some help. The company is preparing to launch a new innovative laptop. The laptop contains many features that other laptops do not have, and a big hype surrounds the launch of the product.

Given the situation, how would you go about determining the right price for this laptop?

Proposed solution:

Part 1: What information would you want to have?

(This is a brainstorming question; the candidate needs to list all the potential information he might need in order to move forward in his analysis at a later stage)

- Goals of pricing strategy (gain market share or maximize profit)
- Product lifecycle
- Penetration strategy
- Price structures: competitive analysis; cost-based pricing and price-based costing (willingness to pay)
- Value vs. Competition
- Costs
- Cannibalization with other current products offering
- Ways to capture differences in customer willingness to pay
- Other potential revenue streams (downloads, accessories, etc..)

Part 2: At what price would you launch the new laptop and why?

Information to hand to the candidate:

Assume for now that the marketing department has done a study to determine the customer willingness to pay and has found the following:

- 20% of potential buyers would pay up to 1’000 CHF
- 40% of potential buyers would pay up to 800 CHF
- The remaining 40% of potential buyers would pay up to 600 CHF

Information to hand to the candidate UPON REQUEST:

- Costs are divided into fixed and variable costs

- Variable cost = 500 CHF per laptop
- No fixed costs
- Volume of sale: No exact value, any market size will yield the same answer (choose a simple assumption ex: 1)

Solution:

Assumption: Market size volume is equal to 1

Pricing Strategy Option	Price	Cost	Profit Per Laptop	Volume	Profit
1	1'000 CHF	500 CHF	500 CHF	20% x 1	100 CHF
2	800 CHF	500 CHF	300 CHF	60 % x 1	180 CHF
3	600 CHF	500 CHF	100 CHF	100% x 1	100 CHF

-> Pricing the laptop at 800CHF will maximize the total profit.

Remark:

- A lower price captures the customers with a higher willingness to pay! (For pricing strategy 2, we can capture the buyers willing to pay 1'000CHF and 800 CHF so volume = 20 % + 40% = 60%).
- Profit = Volume x (Price – Cost)

Recommendation:

I would recommend the company to charge 800 CHF for its new laptop, since it is the profit-optimal price for this laptop.

If, however, we have the flexibility to change the price over time, I would launch at 1'000 CHF in order to target the bracket of customers with the highest willingness to pay, then later reduce the price to 800 CHF. This strategy will allow us to maximize the client's overall profit.

Risks:

1. Our analysis is based on a customer survey
2. Another competitor might soon launch a new product with the same qualifications as our laptop and at a lower price. This will lead to a large volume of lost sales for our client.

Next Steps:

1. Do a good marketing campaign
2. Product Differentiation: work on a cheaper version of the laptop in order to offer a product that falls within the budget of the customers with a low willingness to pay of 600 CHF.

3. Offer packages with the laptop in order to attract the customers (ex: Free external wireless mouse with every laptop purchased, or free Microsoft Office license for 2 years, etc..)

4.4.3 Painting & Co

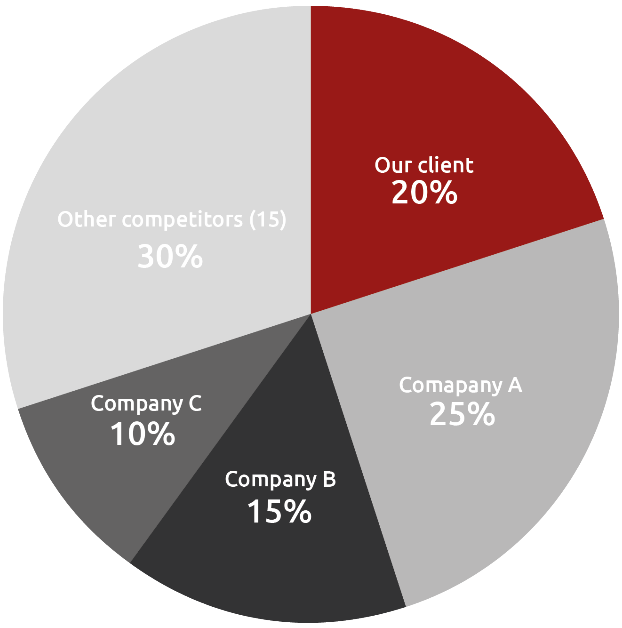
Problem statement

Our client, Painting & Co is a medium-size Swiss painting producer that operates in the French-speaking part of Switzerland. However, a new competitor who charges lower prices just entered the market. Our client is wondering whether they should lower the price by 10% to stay competitive, or if they should adopt a different strategy.

What would you recommend?

Information available upon request:

- The competitor and our client produce very similar products
- Our client sells about 50 000 painting pots per year at CHF 25/unit
- The variable cost of production per pot is CHF 10
- The fixed cost of production is CHF 250 000



Proposed solution:

Profit Analysis:

- Before the price reduction:

Revenue = 50 000 x 25 = CHF 1 250 000

Total fixed cost= CHF 250 000

Total variable cost = 50 000 x 10 = CHF 500 000

Profit1 = 1 250 000 – 250 000 – 500 000 = CHF 500 000

- After the price reduction (assuming no change in sales volume):

Revenue = 50 000 x 25 x 0.9 = CHF 1 125 000

Profit2 = 1 125 000 – 250 000 – 500 000 = CHF 375 000

Difference in profit:

(Profit2 - Profit1) / Profit1 = (375 000 - 500 000) / 500 000 ≈ %25

A 10% decrease in price causes a 25% profit loss.

Sales volume analysis:

Follow-up Question: How much market share our client can loose before the price decrease becomes a better option?

We want Profit3 = Profit2

Y x 25 – 200 000 – Y x10 = CHF 375 000

Y =(575 000)/15 = 41 667 pots

Difference in sales volume = (Profit2 - Profit1) / (Profit1) = (41 667 – 50 000) / (50 000) ≈ –17%

If our client looses more than 17% of its market share, the price decrease is a better option

Competitor analysis:

Question: What is the expected market share of the new competitor?

- The new entrant competitor holds together with 14 other competitors 30% of the market share. We can thus assume that the new competitor holds around 0.3/15=2% of the market share.
- Our client is one of the 4 big players in the market(2nd biggest) with a market share of 20%.
- Even if the new competitor takes 2% of the total market share, and our client loses 2% of the total market share, it only represents a 2/20= 10% loss in sales volume for our client.

Recommendations:

- We recommend our client not to decrease the selling price as it would represent a big drop in profit. Moreover, the new competitor is small and the potential losses in sales volume are small and result in smaller profit losses, compared to the drop in selling price.
- However, the new competitor could stand out from the other competitors and take a higher market share. In this case, if it results in a loss in sales volume of 17% for our client, the latter should decrease its selling price.
- Our client should also be looking at the reaction of the other big players of the market and adapt its strategy accordingly.

4.5 Merger and Acquisitions

4.5.1 B-Construct

Problem statement

Our client is a Swiss construction company which acquired another construction company of the same size called ConsaGerm. The main reason for the acquisition is that the acquired company has a large market share and a future potential growth in the region.

Nevertheless, this acquisition was not considered a success. The acquisition price was too high, and our client could not maintain the expected market share in the region.

Information available upon request:

- Both construction companies operate in the private and public sectors. Also, they both execute eco-friendly projects
- Revenue making: the price of initial contracts x number of clients x premiums (%). Additionally, In the case of eco-friendly contracts, some subsidies are given by the government.
- The acquisition will let the company enter the large and eco-friendly German market. Consequently, the company footprint and revenues will supposedly grow.
- It is considered that synergy between the 2 firms will bring 30% cost reduction on the costs.
- Total Costs:

  B-Construct: 10,000,000 CHF

  ConsaGerm: 5,000,000 CHF
- New Headquarter cost:

  B-Construct: 25% of total costs

  ConsaGerm: 15% of total costs
- IT costs:

  B-Construct: 10% of regional costs

  ConsaGerm: 10% of regional costs
- Regional overlap between firms (regional costs):

  B-Construct: 70% of total costs

  ConsaGerm: 50% of total costs

Proposed solution:

Questions to be asked:

1. ***What aspects would you consider when describing this transaction? What key elements would you analyze?***

- Company:
  - Complementarity of products? Good
  - Performance? Both companies have good revenue figures for last years
  - Market penetration? South Germany
- Market:
  - Competitors? B-Construct is acquiring its main competitor on the market in this sector in Europe
  - Potential Growth? Fast-growing market
  - Market acquisition: New market in South Germany
- Finance:
  - How the financing of the acquisition will go? Cash reserves + Bank financing
  - Costs? Acquisition price + costs of transactions + additional costs

2. ***What do you see as potential benefits of this acquisition for our client B-Construct?***
   - Increase in revenues (taking into account acquisition costs)
   - Higher share of the market
   - Economies of scale

3. ***What are potential cost-related synergies related to this transaction?***
   - Real estate
   - IT costs
   - IT equipment
   - Logistics
   - Staff costs
   - Marketing
   - Overhead costs (administrative, legal and insurance fees).

Observations/ Analysis/ Possible Solutions:

The two companies are eligible for synergies. The following calculations will show us what synergies are possible and what potential cost savings can be achieved.

A reasonable percentage of costs that can be saved through synergies: 30%

B-Construct. Total cost: 10,000,000 CHF

ConsaGerm. Total cost: 5,000,000 CHF

Cost for new headquarter:

B-Construct: 25% x 10,000,000 = 2,500,000 CHF

ConsaGerm: 15% x 5,000,000 = 750,000 CHF

Total cost of Headquarters=3,250,000 CHF x 30% ≈ **980,000 CHF**

Cost for staff:

Eligible for synergies, but not definitive

Cost of real estate:

Eligible for synergies: Big regional overlap. Thus, it is possible but not definitive

IT costs

B-Construct: 70% x 10,000,000 x 10% = 700,000 CHF (cost in regions x total cost x share of IT costs)

ConsaGerm: 50% x 5,000,000 x 10% = 250,000 CHF (cost in regions x total cost x share of IT costs)

Total IT costs after synergies: 550,000 CHF x 30% = **950,000 CHF**

Cost of travel:

Not eligible for synergies, No information on that.

Recommendations:

Indeed, the acquisition will result in cost savings. The acquisition price is not available. This, no valuation on acquisition costs can be provided.

Total cost savings thank to synergies is: **980,000 CHF** + **950,000 CHF** ≈ **2,000,000 CHF**

Since the two construction companies are regionally complementary, the acquisition makes sense. As a result, 2,000,000 CHF or 13.5% (=2’000’000/(10’000’000+5’000’000)) of the total costs can potentially be saved through the acquisition.

4.5.2 CRISPR gene editing technology

Problem statement

Our client is a major generics pharmaceutical company in the US and they are considering entering the gene editing market however, they do not have any experience in the field. Therefore, they would like to either acquire a startup using CRISPR technology or start their own CRISPR technology and they would like to know how to approach the matter.

Information available upon request:

- The acquisition is part of efforts to grow their businesses on the long-term
- CRISPR gene editing is a genetic engineering technique in molecular biology by which the genomes of living organisms may be modified. It is based on a simplified version of the bacterial CRISPR-Cas9 antiviral defense system
- Our client is located in the USA but the startup is located in Taiwan
- The startup has recently received a series B funding of 500 M from the Taiwanese government with the condition that the startup keeps its headquarters in Taiwan for at least 20 years
- Our client has enough capital for both scenarios

Aspects to look at first

Cultural factors	Leadership factors	Organizational factors
• Local working norms • Languages • International cultural differences	• Overlap of leadership roles • Differences in leadership style	• Differences in organizational structure: functional, divisional, matrix structure • Process fit • HR, reward system, KPI measurement.

Recommendation:

We recommend our client to invest in its own department because clearly there are no synergies between our client and the Taiwanese startup except the fact that they are both in life sciences. In fact, the regulations, languages and work culture between both governments and companies differ vastly. None the less, there are major time differences which would cause difficulties in coordination between Taiwan and HQ in the USA. By investing in their own gene editing department, they would be able to have more control over all operations.

5. Miscellaneous Practice Cases

5.1 Kröna Bank

Problem statement

Our client, Kröna Bank is a major Swedish bank that provides financial services as well as issuing credit card for an annual fee of Kr900. Recently, a new online bank entered the market, providing financial services as well but without any annual fee. Our client would like to know how if they should change their strategy to adapt to this new situation.

What would you recommend?

Information given upon request:

- The two credit cards give the same advantages in term of insurance and other services, the only difference is the annual fee
- After the first year of subscription Kröna Bank offer a discount of Kr 100 on the annual credit card fee
- The average annual income of the Swedish population is Kr 295 000. On average 10% of the income is converted into euro
- The Exchange fee is 2% of the total amount paid to the retailer
- Tax on currency change is 5% of the total amount paid or withdraw at the ATM
- Interest on credit card balance is 10%
- Assume 60% paid by credit card and 10% of payments made on negative credit card balance

Revenue generation of the two banks:

Sources of revenue:

- Annual fees (only for the Kröna Bank)
- Tax on currency change
- Interchange fees for retailers
- Interest on credit card balance

Table 1 – Revenue generation by card per year

Revenue	Kröna Bank	Online Bank
Annual fee	Kr 900	/
Tax on currency change	0.1 x 295 000 x 0.05 = Kr 1475	0.1 x 295 000 x 0.05 = Kr 1475
Interchange fees for retailers	0.6 x 295 000 x 0.02 = Kr 3540	0.6 x 295 000 x 0.02 = Kr 3540
Interest on credit card balance	0.6 x 295 000 x 0.1 x 0.1 = Kr 1770	0.6 x 295 000 x 0.1 x 0.1 = Kr 1770
Total	900 + 1475 + 3540 + 1770 = Kr 7685	900 + 1475 + 3540 + 1770 = Kr 6785

Possible Solutions:

Our client Kröna bank has different possibilities to adapt its strategy:

- Do nothing, hoping that he won't loose customer
- Increase the discount after the first year, with for example a Kr 400 discount
- Totally remove the annual fee, and compensate the loss by slightly increasing the currency tax or interchange fees
- Add free services that the online bank can't provide (e.g. yearly meeting with a financial advisor)

Analaysis:

- Difference in revenue for the 2 banks the 1st year = (7685–6785)/7685 ≈ 12%
- Difference in revenue for the 2 banks after the 1st year (discount of Kr 100) = (7585–6785)/7585 ≈ 11%
- Difference in revenue for the 2 banks after the 1st year and with a Kr 400 discount = (7285–6785)/7285 ≈ 7%

Recommendations:

- We recommend our client to slightly increase the discount on the annual credit card fee so as to reward our client for its fidelity. Indeed, totally removing the annual fee will be hard to compensate as it represents a 12% revenue loss.
- The online banking still frighten some customers who are afraid of not being able to talk to someone rapidly in case of problems. We can thus assume that the customer base is different and

that the new entrant is not too much of a threat.

- On top of that, we recommend our client to provide extra services that its online competitor can't do, due to its online positioning.

5.2 Healthy world

Problem statement

Our client HealthyWorld is a big pharmaceutical group that wants to realize inorganic growth. They recently heard of a Swiss company named SyringTop that produces syringes, and they know that this company is currently looking for investors. Our client would like to know if they should rather invest in it or make a proposition to buy it. If they choose the investment, they would like to know whether the ROI will be higher than 15%.

What would you recommend, and how do you intend to help them make their decision?

Information given upon request:

- *SyringTop*
  - Have factories in two countries: Switzerland and Cambodia
  - Factory in Switzerland is working at 70% of its capacity, while the one in Cambodia is at 100%
  - Produces two types of syringes, high precision and standard.
  - Factory in Switzerland can produce 20 M syringes per year (15 M standard and 5 M high precision), while the one in Cambodia is limited to 15 M (only standard ones)
  - Valuated at CHF 400 M and looking for an investor to inject CHF 100 M in its Cambodian factory to produce an extra 15 M high precision syringes per year
- *HealthyWorld*
  - Have around CHF 500 M for investments and acquisitions
  - Outsource the production of 30 M standard syringes and 20 M high precision ones
  - All its factories are located in Switzerland
- *Syringe industry*
  - Demand for standard syringes has dropped by 5% last year and seems to keep declining
  - Demand for high precision syringes has on average grew by 12% in the past three years
  - Competition is strong, especially in the standard syringes, with 60% of the global production being made in the US.

Summary table to be shared upon request:

	Cambodia		Switzerland	
Type of syringe	**Standard**	**High precision**	**Standard**	**High precision**
Selling price	CHF 5	CHF 8	CHF 5	CHF 8
Direct costs	CHF 1.5	CHF 3	CHF 3	CHF 5
Indirect cost	CHF 1.5	CHF 1.5	CHF 1	CHF 1

Investment analysis:

	Cambodia		Switzerland	
Type of syringe	**Standard**	**High precision**	**Standard**	**High precision**
Unit profit	5 – (1.5 + 1.5) = CHF 2	8 – (3 + 1.5) = CHF 3.5	5 – (3 + 1) = CHF 1	8 – (5 + 1) = CHF 2
Units produced at full utilization	15M	15M	15M	5M
Total profit per year at full utilization	CHF 30M	CHF 52.5M	CHF 15M	CHF 10M
	30 +52.5 + 15 + 10 = CHF 107.5M			

- With the CHF 100M investments, our client has 20% (100/500) of the shares of SyringTop
- We assume transportation costs from Cambodia to Switzerland to be negligible due to the high value per kilo
- ROI = (Annual revenue x Percentage of the shares)/(Initial investment)

  = (107.5 x 0.2)/100 = 21.5%

-> Producing high precision syringe give higher unit revenue (two times more in Switzerland and 75% more in Cambodia)

-> It seems more interesting to develop the Cambodian factory compared to the Swiss one. However, we should keep in mind that the main sales target market of SyringTop is in Switzerland.

-> The increase in production in the Cambodian factory would generate an extra profit of CHF 52.5 M, assuming a 100% utilization

Acquisition analysis:

- From the above table we know that SyringTop is expected to make an annual profit of CHF 107.5 M at full capacity
- The full utilization of SyringTop's factories corresponds to the exact needs of HealthyWorld and we can thus consider full capacity
- We know that SyringTop is currently valued at CHF 400 M
- 400/107.5 = 3.72 years
- HealthyWorld will start to make profit with the acquisition of SyringTop after 3.72 years

Recommendations:

- Our client should acquire SyringTop as it will quite quickly start to generate profit for our client and it's in the range of their acquisition budget.
- The investment should be consider if the client is more risk averse and has fewer money for this kind of expenses, which is not the case here. However, the ROI is above the 15% required threshold and also fulfill HealthyWorld's requirements.
- Despite the drop in demand for standard syringes SyringTop still remained profitable producing these kinds of syringes. Moreover, the increase in demand for high precision ones seems very promising to invest in.
- Synergies should be made between HealthyWorld and SyringTop as it would ensure our client to secure a profit of CHF 107.5 M as the production capability of SyringTop would be used at their maximum.

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