

CASEBOOK 2023

THE BUSINESS CLUB
IIT (BHU) VARANASI



SCIENCE AND TECHNOLOGY COUNCIL
IIT (BHU) VARANASI



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FOREWORD

As the Councilor of the Science and Technology Council, I am thrilled to introduce the exceptional casebook crafted by The Business Club at IIT (BHU) Varanasi. Over the years, our institution has remained committed to fostering academic excellence and innovation, providing a dynamic environment that nurtures talent.

The Science and Technology Council stands as a beacon of guidance and support for students passionate about leveraging science and technology for meaningful change. This casebook, a commendable initiative by The Business Club, perfectly aligns with our mission to equip students with the skills needed to excel in the ever-evolving realms of business, technology, and consulting. The inclusion of frameworks, industry insights, and practical guidance underscores the commitment to providing students with a comprehensive toolkit for success.

I extend my heartfelt congratulations to The Business Club for their unwavering commitment to education and innovation. This casebook not only serves as a valuable resource but also reflects the dedication and potential that thrives within our institution.

I encourage all students to maximize the benefits of this resource, sharpen their analytical skills, and strive for excellence in their chosen paths. Together, we can continue to elevate our institution and empower our students in the world of science, technology, and business."

Prof. Rajesh Kumar Upadhyay
The Councilor, Science and Technology Council

FOREWORD

A couple of years back, a step was taken by The Business Club to help peers and juniors who sat for placements and internships. The Club received lots of appreciation for curating preparation content for Analyst, Consulting, Quant, and Product Management roles and compiling it into a book, which turned out to be one of the most successful initiatives of the club: "Casebook 1.0". The "1.0" in the name was a deliberate showcase of commitment and confidence by the Club to produce more editions of the Casebook. "Casebook 4.0" is the next step in that direction.

This book, like its previous editions, is an affirmation of the vision of the club to aid the students who want to test their business acumen by venturing into business-related fields.

The past few years' placement and internship data and the students' achievements at various levels point out the trend of rising analytics, consulting, and product management opportunities (culture) at IIT(BHU). Matching the "demand", Casebook 4.0 "supply" not just more, but better cases, interview transcripts, and techniques to help people learn the skill of problem structuring and solving and become more confident with their presentation and articulation process.

Going through the content, I can only imagine the concerted effort of the authors and editors in compiling interviews and transforming them into a book. I want to thank them for adhering to the Club's principles and vision in helping their counterparts prepare for, but not limited to, their placements. I would also like to acknowledge the significant contribution of all the former and current secretaries and club members in taking this instrumental initiative for the college.

Sanchit Gupta
Former Secretary
The Business Club, IIT(BHU) Varanasi

ABOUT BUSINESS CLUB IIT(BHU)

The Business Club, IIT(BHU) Varanasi aims to cultivate a culture of growth and learning among members. It plays a central role in honing vital skills such as analytical thinking, problem-solving, and communication, making it a valuable asset to its participants. Even though it is operating within a technical institute, we cover various fields like finance, economics, product management, consulting, data analytics, and marketing.

In 2020, the club introduced "The Casebook," a crucial resource that significantly contributes to the Institute's Business culture. It acts as a knowledge repository, offering practical cases and solutions to apply problem solving skills in real-world scenarios.

The club provides a supportive and learning-focused atmosphere, with many members securing valuable internships and Pre-Placement Offers (PPOs) from elite organizations across the world. The fact that we function within a technical institute, helps us explore the intersection of business and technology and offer a unique perspective that aids in real-world problem-solving.

Additionally, the club ensures its publication remains innovative and current, releasing a new edition annually. This commitment to staying up-to-date sets the club apart and continues to benefit its members and the broader student community.

**The Business Club
IIT (BHU) Varanasi**

ALUMNI TESTIMONIALS

Rohil Shah, Consultant | Kearney



“ The Casebook was a big checkpoint to understand that I'm able to solve not just consulting cases but product management cases as well to hone my structured problem solving. At the end of the day no matter what problem you're solving, there is a process to it and Casebook covers a huge spectrum of cases to apply that process in various shapes and forms. It helps you ask the most basic first principle questions in every situation so as to get a thorough understanding of the problem and the roadmap to solve it. All in all, Casebook was important in building a thought process which impacts a lot of things and I'd recommend folks to go through it. ”

Manish Rai, Business Analyst | Navi

“ Regardless of the role or company, interviewers demand three key skills: problem-solving, structured thinking, and confident communication. The IIT BHU casebook is an invaluable resource, compiling the latest business cases and culture-fit questions to prepare individuals for interviews. The diversity of cases and the comprehensive analysis provided have been instrumental in my placement-prep journey. Having been part of the previous casebook versions, I can assure you that version 4.0 will be even better. Best of luck during the placement season! ”



Anesh Srivastav, Co Founder| Stimuler



“ The IIT BHU casebook is more than just a collection of cases; it is a go-to guide for structured and critical thinking. Regardless of your field, I suggest that everyone try it out to improve their problem-solving skills; the insights you'll gain are invaluable. Personally, the casebook's lessons were instrumental in helping me shape my professional life and have proven to be an asset for many of my batchmates as well. ”

ALUMNI TESTIMONIALS



Manav Jain, Founder's Office | Zupee

“*The casebook was my go to repos for building my case prep. The diversity in the type of cases and structured approach helped me a lot. While there are other resources for case prep like IIM A Casebook, The PM Interview, Advait Sridhar, etc, I had been recommended to go through IIT BHU's casebook by BITS alumni as well.*”



Sanchit Gupta, S.D.E. | Wells Fargo

“*The IIT(BHU) Casebook has a long legacy of boosting candidates' placement preparation and giving them the confidence to ace every interview on the D-Day. A primer for every case type and an exhaustive question bank, along with hints and suggestions, make the Casebook the perfect guide for any student looking to break into a consulting, product, or analyst role. The Casebook utilizes a conversational format, and hence, proves most effective when cases are practiced with a partner. I wish all readers the best for their preparation. Happy solving!*”



Ishita Sharma, Associate Consultant | Mastercard

“*The IIT(BHU) Casebook is a compilation of previous year questions, experiences, do's, and don'ts that people who have been through the process have contributed to. I believe that this adds to the preparation of anybody preparing for these roles in their placement journey because these insights come from genuine experiences and help you present yourselves confidently in front of the interviewer. I wish all the best to anybody who sits for their interview. I hope this casebook helps you for it*”

WHAT'S NEW AND HOW TO USE THIS BOOK?

"Great things are done by a series of small things brought together." - Vincent Van Gough

Structured thinking and clarity of thought remain highly valued qualities not only in consulting interviews but also in roles like analytics, finance, and product management. Why so? Because these attributes demonstrate your ability to effectively deconstruct problems and pinpoint their underlying causes, helping you in proposing empathetic and actionable solutions!

Articulating the problem effectively, establishing a clear framework, posing pertinent questions, and subsequently suggesting the most suitable solutions is a tried-and-true formula for success in case interviews. Although seasoned professionals make it seem effortless, it's a skill that requires dedicated practice and long hours of effort.

The Business Club at IIT (BHU) Varanasi has assembled this Casebook with the specific goal in mind: to provide you with a seamless learning experience that caters to all your needs in one place, offering a comprehensive resource to refine your approach to solving cases and apply them directly to specially curated cases for this purpose.

While case interviews from a wide range of profiles and companies are at the core of this document, we've gone the extra mile to assist learners in their preparation by providing frameworks as a starting point, industry insights on current trends to complement the lessons from each case. Additionally, there are knowledge sections and introductory materials on finance and economics to lay the foundation for your business acumen, statistics to refresh your mathematical skills, datasheets to keep you up to date.

We strongly recommend practicing cases in groups of 2-4 individuals multiple times each week, taking on the roles of the interviewee and the interviewer alternatively to gain a better understanding of the dynamics of a case interview from both sides of the table. Solving the case should be done individually, and the approach taken by the interviewee, as well as the key takeaways, should be analyzed for learning purposes. Wherever possible, we have included alternative approaches and case facts to ensure a broader range of learning. Deck making also plays a crucial part in case solving, and for the same we have added a deck breakdown of a deck selected in Flipkart APM.

Beyond just interview preparation, we hope that this Casebook helps you develop an analytical mindset and a structured approach to problem-solving in general. Just as much as it holds true for solving cases, the journey of learning is often more significant than the end result.

We hope that this book assists you in achieving your most sought-after aspirations! Happy Case Solving!



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About Consulting

What is Consulting?

Consulting involves providing advisory services to organizations to improve their performance or to assist them in dealing with business problems that may require special expertise. It provides a third party(outsider) perspective to business problems. You're gonna love consulting if you love brainstorming & solving real life business problems.

The problem solving process is a series of analytics & structured approaches that involves primary and secondary research combined with business acumen & creative thinking.
In short, it helps companies, CXOs & other leaders with solving relevant business problems.

Key Working Areas

- **Strategy Consulting** : Services such as drafting & implementing business strategies, mergers and acquisitions, client strategy, organizational strategies, etc come under this part.
- **Management Consulting or Business Consulting** : Involves advice to management towards improving business strategies and operational processes.
- **Operations Consulting** : Includes improvement in the operations level(supply chain, outsourcing, etc) & performance in organizations.
- **Financial Advisory** : The segment covers services such as transaction services, risk management, actuarial valuation, tax advice, audits etc.
- **Human Resources** : Includes all advice and implementation activities related to human capital management and the HR departments.
- **IT Consulting** : A segment that advises companies on how to best use their IT infrastructure & suggests improvements.

Hiring Process

This involves three main parts:

Basic Filter: CV shortlistings,
cover letters, HRQs, etc

Interviews: Few (generally 2-3)
case interviews

Final Hiring call!

Qualities They are Looking For:

Problem Solving Skills



Analytical & problem solving abilities, business acumen & creative thinking. Usually tested in guesstimates and/or case questions.

Soft Skills



Communication & Presentation skills, ability to structure, teamwork etc. Usually tested in HRQs & case interviews.

Leadership & X-factor



Track record, extraordinary projects or achievements in CV. All of these skills can be highlighted through projects and/or contribution in events.

CONSULTING PRIMER

Business Analyst	Associate Consultant/ Consultant	Engagement Manager	Principal	Partner
<ul style="list-style-type: none"> • Pre-MBA Position 	<ul style="list-style-type: none"> • Post-MBA Position 	<ul style="list-style-type: none"> • Project Managers 	<ul style="list-style-type: none"> • Associate Partner 	<ul style="list-style-type: none"> • Position at the absolute top of the hierarchy
<ul style="list-style-type: none"> • Responsibilities: Research, data collection & its analysis, documentation & deck making, financial models too(sometimes) 	<ul style="list-style-type: none"> • Responsibilities: portion of consulting projects to work on, data gathering(a bit), managing few senior clients, leading analysts, problem solving. 	<ul style="list-style-type: none"> • Responsibilities: Project leads, coordinate team's activities, relationship management, partner meetings. 	<ul style="list-style-type: none"> • Responsibilities: Client meetings, selling firm's expertise, development of staffs, oversight on projects, business development & frequent travels. 	<ul style="list-style-type: none"> • Responsibilities: client relationship management, business growth, inspiring initiatives, firm's policy.
<ul style="list-style-type: none"> • Tenure(Usual) - 2 years 	<ul style="list-style-type: none"> • Tenure: 2.5-4 years 	<ul style="list-style-type: none"> • Tenure: 2-3 years 	<ul style="list-style-type: none"> • Tenure: 3-4 years 	<ul style="list-style-type: none"> • Tenure: NA

Problem Solving Structure (Example)

Project - Increase profits of a FMCG company.

Define & Identify:

- Increase profits by 15% by cutting costs & discovering new markets to increase sales.
- Proper understanding of the context & business is crucial.*



Hypothesize:

- Better managed supply chain will reduce costs by 6-8%.
- Expansion to X market & y selling channel will help increase the sales.



Analysis:

- Use critical data of the transportation & inventory management operations to identify potential flaws.
- Analyze market data for different geographies and selling channels & identify opportunities for the client.
- Understand the competitive landscape in the new markets & selling channels.



Decision Making:

- Closing of some inefficient inventories & channels to cut costs, supply of goods based on estimated demand (data analysis)
- Setting up a new selling channel for expanding presence in identified geographies.
- Formulation of detailed sales & marketing plan.



Implementation:

- Implementation of the recommended solutions. This involves a great deal of coordination between various stakeholders involved.
- Monitoring implementation & re-evaluation along the way is equally important to ensure success.



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All about Case Interviews

In a case interview, a candidate is usually tested on these two parameters:

- Personality - Strength & weaknesses and if the candidate is suitable for the job(through HRQs).
- Candidate's problem-solving ability & analytical skills(through case questions).

HR Questions

The main aim is to judge the candidate's personality, strengths and weaknesses & to understand whether he/she would be a good fit for the role & the firm using behavioral and past work experience-related questions.

Case Questions -

Aim :

Case Questions are asked to gauge the candidate's analytical skills, creative thinking, problem-solving ability and general awareness of their surroundings. Apart from these, the candidate's soft skills are also tested.

Approach :

The standard approach to solving a case interview is to first understand the problem by asking some basic contextual questions, then lay out a roadmap(or structure), walk the interviewer through each step and then conclude by presenting logical solutions & suggestions.



Clarify



Framework & Structure



Analyze



Conclude

Understanding the context & problem statement

- A clear understanding of the problem statement is absolutely essential. Candidates can't afford to commit a mistake here.
- Ask clarifying & contextual questions to have a better understanding. Asking good clarifying questions at first would help you see the problem from a much better perspective & will also earn you brownie points.
- Interviewers won't give away all information at once. It's about a candidate's skills to squeeze out all the necessary information.
- Candidates must communicate & validate all the assumptions taken.

Framework & Structure

- Structuring involves putting all the data gathered together & make something out of it.
- Laying out an analysis framework helps the candidate be organized & at the same time, it provides a visual roadmap for both the interviewer and interviewee.
- Candidates should understand that there is no one perfect framework. Rather the framework they are using should be MECE; also it should be thorough but not wasteful.

Analysis of the case

- This involves synthesizing all the findings, squeezing out more info and making some sense out of it,
- Candidates should try to build a logic/theory consisting of various possible outcomes/reasonings, get their hypothesis validated and keep narrowing down the outcomes.
- Candidates should make sure to walk the interview through each step and ask well-directed questions to gather more info & to move in the right direction.

Conclude

- This is be a concise yet very crucial stage. Candidates should come up with logical suggestions for an implementation plan for the client & should also cite the reasons which led to this conclusion.
- One should also highlight any one action that the client should take to mitigate major concerns and should also mention the factors that the client should be aware of that may impact the recommendations.
- Quickly performing a sanity check, i.e. roughly evaluating the proposed solution(quantitatively), might earn you brownie points.

KNOW YOURSELF

- Develop that muscle to walk through the details of your resume and fill in the details.
- You will be asked about a lot of things on the resume. Be prepared to answer those. Why did you make the moves you have? What have been the **most significant decisions** you have made? Where were the challenges and where were the triumphs?
- Create a perfect story such that being in that firm seems like the **next logical step** in your career.
- Give them something to remember you by, some amazing life story, a skill that separates you from the rest, an unique talent that you might have.
- Learn to mitigate weaknesses in your skills or background., also learn the self-insight that is required to answer your interviewer's questions **honestly** and **persuasively**.

KNOW THE FIRM

- What does the firm pride itself on? Try to show those qualities in yourself .For e.g. if a firm takes pride in doing ESG (Environmental, Social and Governance) Consulting, include some ESG projects in your resume and mention them in the interviews.
- Research about the **company** and the **interviewer**. For example, if the interviewer has been recently promoted, ask the interviewer about their role and responsibilities, how the roles and responsibilities have changed since they got promoted or if the company has just merged with any other company ask them how the company policies have changed internally.
- If the interviewer specializes in a particular sector, talk about your experience in that sector and take their opinions on your projects in that sector and certain disruptions or trends that can symbolize the sector recently. For example, if the interviewer has a lot of interest in the e-commerce industry, mention your take on the trends in the industry like horizontalization, verticalization or cross sales and also take their opinions on the same.
- Know the basics of the company like where they are located and how they are structured. If unclear, ask do show some initial understanding though.
- Knowing the firm will help you a lot in **articulating the Why questions**, “why do you want to work in our firm”, “why do you think you are a good fit for our company”.
- Highlight the **values** of the firm, show them you are a perfect fit for the firm. If it is a firm that values an entrepreneurial mindset, highlight that you have tinkered with the ideas, and have a keen interest in startup space.

OBSERVE WELL

- Hints and clues are everywhere. Be on the lookout for them.
- The moment you walk in the office start observing, try to pick up any information that you can.
- Look for the **buzzwords** the company uses to define themselves and try to include them in the good things about you, but be ready to justify them as well.
- Pay attention to the interviewer, things like “**what makes them look interested?**”, “what do they ask you to elaborate on? ”etc.
- If you mess up, listen for a chance to show your skills at a later point.

WHAT THEY ASSESS?

- **Story telling** - As Tyrion Lannister once said “ There is nothing more powerful than a good story”, especially as a consultant your storytelling skills are very important and they will be looking for them during the personal interview
- **Structure and articulation** is very important for a consultant when they have to present to the clients and the interviewer will be looking for it not only during the case questions but also during the personal interview.
- The most important thing that they will be looking for is the ability to perform well while put under the cosh. They will put you in tough situations during the personal interviews just to see how adept you are at navigating through difficult scenarios.
- They also seek answers to questions like “Can you make things happen?” “ **Are you goal-oriented?**” “ Is it you who has been on the driving seat of your life? ”

“WHY?” QUESTIONS

- These questions test your ability to reason and come to a quality conclusion.
- Your interviewer may also use these questions to test for the **consistency of your responses**.
- You can form a comparison between the positives and negatives of the options you had while making the choice.
- **Know your resume in and out** and be prepared for follow-ups to any information you reveal in your conversations with the interviewer.
- While preparing, ask “why” about all the facts on your resume and any major events in your life story that you have elucidated on in the personal round.

TELL ME ABOUT YOURSELF

- This, most probably, will be the first question they ask you and also the one which answers what they want to know about you the most. So, it is of great importance that you put forward a **coherent, compelling, and compact** story for yourself through this.
- Stop from rambling about unnecessary points and talk about stuff that moves the needle. Don't stretch the answer by including irrelevant things.
- Describe your life's wants, goals and your resulting accomplishments. Tell your story in such a way that it seems that you are the one who led your life.
- Give the interviewer something to remember you by, some unique thing about you, some thing that distinguishes you from all the other interviewees.
- Don't just show the smart side of yours also show them the **creative, well thought** and **well mannered** side of yourself.

CLOSING THE INTERVIEW

- You will be asked "**Do you have any questions for us?**".
- Be ready to ask **two to three intelligent questions** that shows your interest and preparation and provide you with any information you think you need.
- Don't ask something that is too obvious in the brochure or web page.
- State that you look forward to a follow-up interview or to receiving an offer from the firm; Ask for the job.
- Ask when you can expect a phone call with the results of the interview. This way you will be able to ask for a feedback about your performance in the interview.
- **Never ask, "How did I do?" directly.**
- Use this **opportunity to showcase your knowledge** of the firm by mentioning questions pertaining to a recent merger that might have taken place, clarify the roles and responsibilities associated with the role, etc.

COMPETENCY BASED QUESTIONS

Be prepared for competency based questions around **work-ethic, leadership, accountability, ownership**, etc. Examples of such questions are enumerated below:

- “Recount an incident” type questions like “**Recount an incident that shows you are a team player**”, “Recount an incident which shows that you are a good leader” , etc.
- Have some **stories ready that can fit in more than one such incident** , for e.g. there will be some stories that portray you both as a good leader and a good team player.

STRENGTHS AND WEAKNESSES

- Clearly identify your greatest strengths.
- State the strengths that have direct relevance in you being a great consultant.
- Identify a weakness that can be perceived as a strength but don't be too obvious saying things like, “**I tend to work too hard**”.
- State a weakness that you can fix or a weakness that won't directly affect you in the job that you are applying for. **Don't say you don't like long hours, traveling or working with people.**
- Whenever you mention a strength, try to back it up with an **anecdote from your life** exhibiting that particular strength.
- Whenever you mention a weakness, mention that you identified it as a pressing problem and **you are working on it**. For example, “I recognized that public speaking was somewhere where I had room for improvement and following that realization, I've enrolled for certain courses and have attended multiple workshops.”
- Don't cough up a huge list of weaknesses.



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Supplementing your Toolkit

ASKING PRELIMINARY QUESTIONS

Preliminary questions carry a two-fold purpose

- Understanding the problem at-hand better
- Seeking more pieces of information regarding the case

They help a candidate in identifying the scope of the problem and the solution expected from them, as well as gauging the situation of the client in-depth. It's recommended that the candidate tries to cover the following two buckets of preliminary questions while seeking more information:-

Defining the objective : Problem statements provided during the case often leave the candidate oblivious to a vital piece of information

For example, consider the following case, "Your client is a daily-use electronics manufacturer which has been facing stagnation in growth of sales. Identify why"

A candidate can uncover the treasures of hidden information by iterating over the case statement and identifying certain keywords.

What are daily-use electronics? What does the company manufacture within this?

Who is the company selling to? How do we define "growth" in sales?

What do we mean by stagnation?

Since when is this happening?

Why is it a problem if the company is facing stagnation in growth of sales?

Another way to better understand the problem is to use the 5W1H framework (What, Why, Where, When, Who, How) to clearly define all the key aspects. Most importantly, fully clarify any new piece of information that you come across.

Analyzing the company : Now that a thorough understanding of the problem has been established, it's important to uncover the other pieces of information critical to the case. These can typically be categorized into the following four types, depending on the client :

- **Product :** The candidate should know what exactly the company sells. What's the product mix like? What problem is the product trying to solve?
- **Value Chain :** How is the product/service being developed? What are the various steps involved? Who are the stakeholders? Who are the customers?
- **Industry :** What's the industry landscape like, is it a monopoly or a perfect competition? If competition exists, then how differentiated are their products/services?
- **Geography :** Understand where the company is located, where it manufactures its products, where the distributors and customers are located, etc.

BREADTH THE DEPTH

Drafting an overall strategy and mini-strategies

Overall strategy

After the preliminary questions have been answered, a scope has been agreed upon. Use the breadth then depth strategy mentioned below to convey the same. Once you relay the strategy to the interviewer, they can correct you if need be and you'll be on the same page.

For example, if you have to go about assessing the possibility of setting up a pet store in Delhi. How you can go about detailing the overall strategy, you can begin by saying that my objective is to assess whether the company should open a pet store or not. To assess this, I'll first look at the financial feasibility of such a venture and then suggest the GTM. Then, you can individually highlight what you'll do for each specific bucket.

Mini-strategies

For the sub-sections, ensure you highlight what you'll be covering. So, it would look something like this:

In assessing the financial feasibility, I shall estimate the profits, for which I shall look at revenue and costs. In revenue, I shall look at the market size, market share, and product lines. In terms of costs, I'll look at fixed and variable costs.

Discussing your mini-strategies and takeaways with the interviewer ensures that you proceed in the right direction, and keeps the interviewer engaged.

Breadth then depth :

While conveying an overall strategy, it is generally utile to follow the breadth then depth approach. In this approach, you begin by detailing the breadth of the structure you'll be following to solve the case and then, after clarification from the interviewer you focus on an individual subsection of all the possible verticals.

In a nutshell, we provide the interviewer a bird's eye view of the approach first and follow that up by looking at the range of possible solutions in a specific bucket.

EXAMPLE-

Assume that a major airline's revenue decline, and the major sources of revenue are ticket sales and in-flight services. So you can convey the structure by saying that on the revenue side, I'll be looking at ticket sales and in-flight services, with ticket sales looking at volume, type of ticket, frequency, and % occupancy, and in-flight services looking at meal categories, airport lounge services, and so on. In this manner, you can detail the approach by first focusing on the breadth or different categories of solutions, and then on the depth or individual factors of a particular bucket.

What?

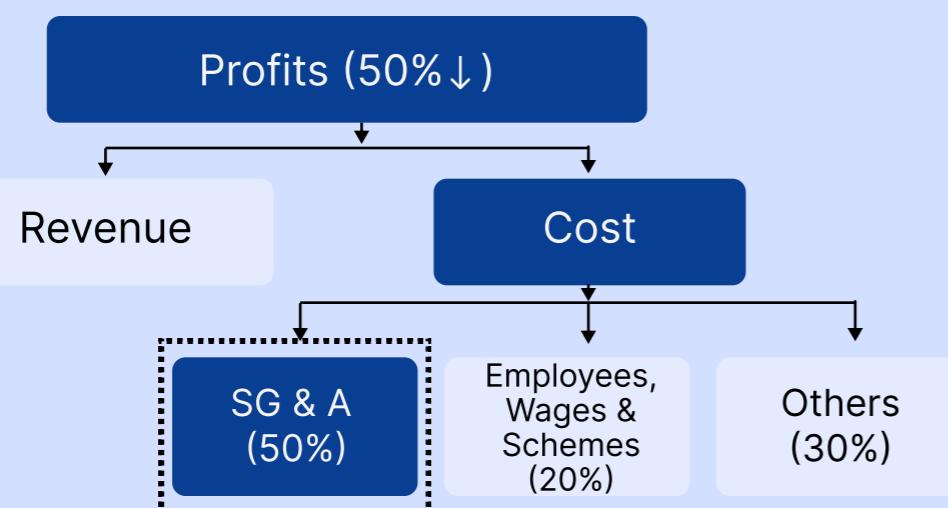
The 80/20 rule states that 80% of outcomes of a given situation result from 20% of the inputs. In other words, we can say that weight isn't uniformly distributed all across the board, and there are some aspects of a problem that carry more weight than the others.

Why?

Using the 80/20 rule becomes a crucial aspect of approaching a case in the consulting world because of limited resources (cost and time) and scarce human capital. Thus, it is a good rule of thumb to integrate the 80/20 rule into your toolkit for dissecting problems.

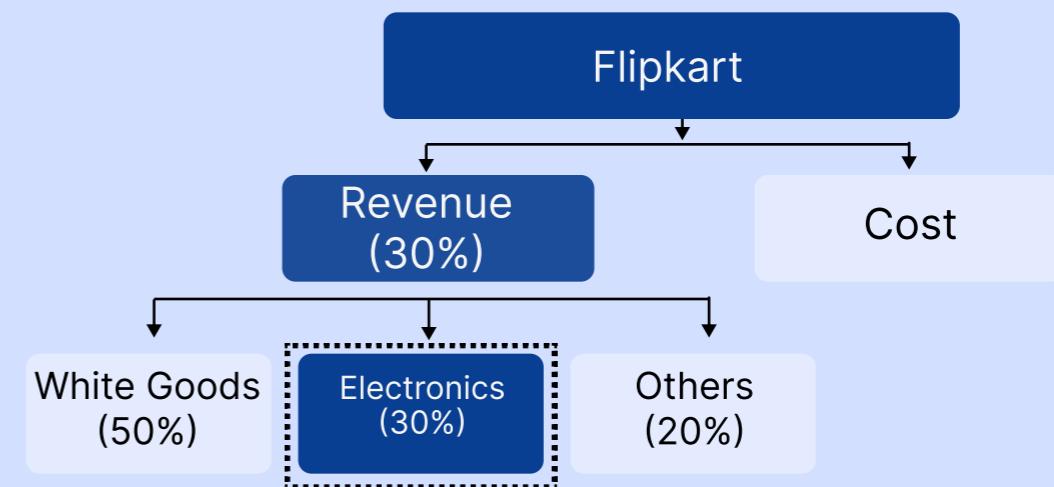
EXAMPLES

Let's say company X has seen a decline in profits by 50% over the past year. You are to identify why and suggest recommendations. After your clarifying questions, you understand that SG&A (Selling, General, and Administrative) costs comprise 50% of costs incurred by the company and employee wages & compensation schemes comprise 20% of the costs.



We will be considering SG & A for our analysis as it has 50% to the overall cost.

But, trends matter the most when it comes to problem-solving. For instance, let's say Flipkart has undergone a decrease in revenue by 30%, and 50% of the revenue comes from white goods (large household appliances like microwave ovens, washing machines, etc), but after clarification, you understand that 30% of Flipkart's revenue comes from electronics and the sales of electronics have gone down by 80%, whereas sales of white good appliances have plummeted by 20%.



Even though Electronics has only 30% contribution to the revenue but as the sales have gone down by 80% we will focus on this segment.

Often in different case themes, we have to drive the interview in a specific way to get to the root cause or the localised issue at hand. Various tools can be used to this end that enable us to get to the problem in a structured and reiterative manner.

MECE (Mutually Exclusive and Collectively Exhaustive)

What is MECE?

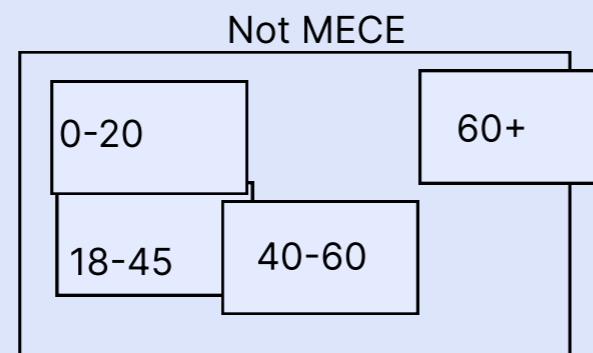
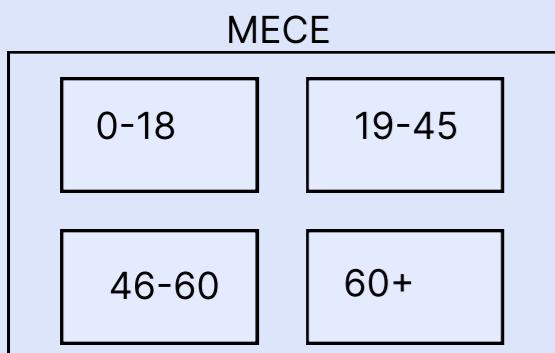
The MECE principle suggests that in order to break any problem, it should split into smaller buckets that are

1. Mutually Exclusive: All subproblems fit into different categories, i.e. they should be independent of each other.
2. Collectively Exhaustive: All subproblems put together should completely define the scope of the original problem.

Why MECE?

Being MECE in their approach helps candidates in breaking complicated problems into simple chunks assisting them in identifying the root cause without the possibility of any duplication.

EXAMPLE



Consider the case of estimating the number of cycles in India. The population of India, in this case, can be split on the basis of various age segments such as 0-18, 19-45, 45-60, 60+ to simplify the challenge of figuring out the proportion of the population that owns cycles.

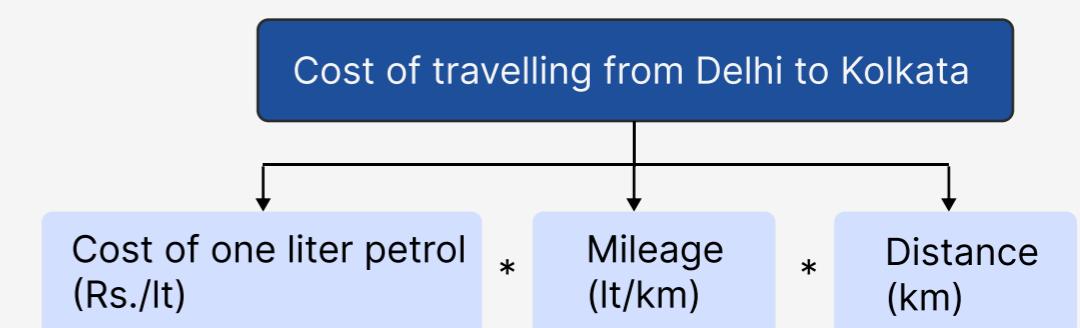
Similarly, MECE splits can be drawn on the basis of gender, rural/urban, product segments, etc. depending on the case at hand.

Mathematical Formulation

The process of mathematically breaking down various case-affecting factors to quantitatively gauge them and drill down to the root cause of the problem in a highly precise manner. So is possible due to the MECE nature of mathematically breaking down things into formulae, where each individual component can be assessed independently and can hence assist the interviewee in going a level deeper in an efficient manner.

EXAMPLE

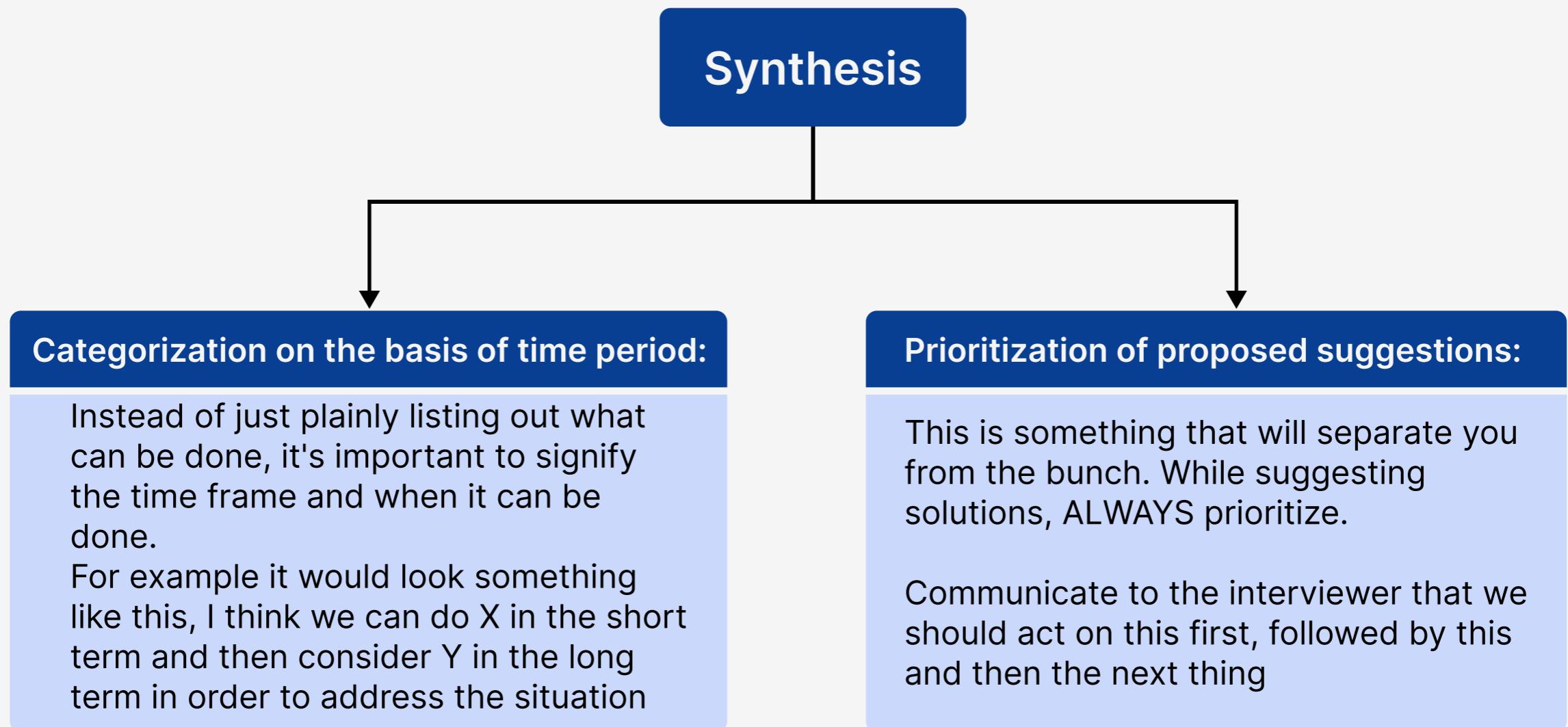
If one were to estimate the cost of travelling from Delhi to Kolkata, they could break the cost into [Cost of one liter petrol (Rs./lt) * Mileage (lt/km) * Distance (km)]. Further, each of the three components can be assessed individually to analyze which factor is causing change in costs.



HOW TO SYNTHESIZE A CASE ?

So, you've done everything right up until now. Asked the right preliminary questions, laid out a good structure. But, a strong synthesis serves as a make or break. So, let's look at how to properly synthesize the case. Here are two things that you should adhere too.

1. While summarizing the case be extremely crisp about the details of the case and mention them in a top-down format without going into the thick of it.
2. Remember two things while suggesting actionable recommendations for the case.



PROBLEM ISOLATION TOOLS

Competitive Benchmarking

Benchmarking with competitors comes in extremely handy and is a very useful tool in your arsenal. It ensures that you don't fall behind or fall short in terms of things like supply chain, tech stack, inventory management, direct, and indirect costs and other facets.

Top Players	Inbound Logistics	Operations	Outbound logistics
 HEROELECTRIC  OKINAWA  AMPERE	<ul style="list-style-type: none"> Benchmarking Storage expenses Benchmarking Inventory Management infrastructure and expenses 	<ul style="list-style-type: none"> Comparing margins across raw materials in sourcing, etc. 	<ul style="list-style-type: none"> Comparing logistics partners across volume, type, and the extent to which they push individual brands

EXAMPLE

An example of the competitive benchmarking of neckbands in terms of sourcing, supply chain, market share (Volume and GMV) can be carried out between JBL and boAt to understand the competitive landscape.

Brand	Wearables (Market Share)	Hearables (Market Share)
boAt	34.3%	42.8%
noise	11.5%	8%
ONEPLUS	8.7%	4.5%

Similar competitive benchmarking can be carried out for Average order value (AOV), frequency and volume of sales, along with gross margins and product cost build-ups.

Company-specific or Industry-Wide Segmentation

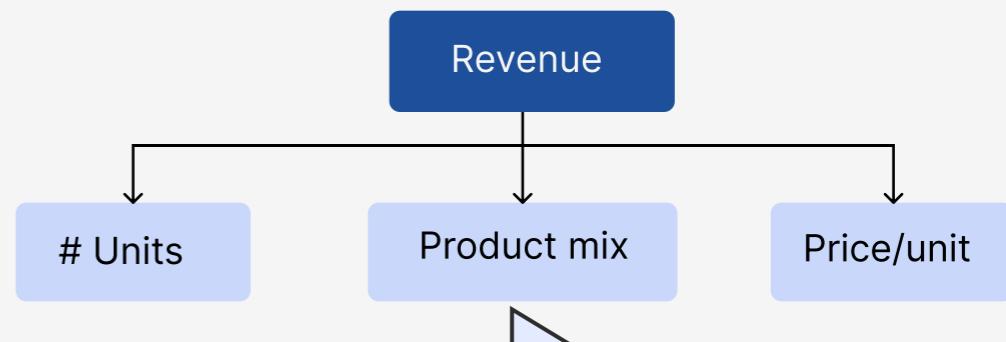
The Company-specific or Industry-wide segmentation essentially provides direction to the interviewee to then proceed with the case.

Carrying out a company-specific or industry-wide segmentation, enables us to understand the market well. It expedites the case-solving process and improves drill speed in arriving to the solution.

EXAMPLE

$$\text{Revenue} = (\# \text{Units}) * (\text{Product Mix}) * (\text{Price/Unit})$$

Now, through a company-specific and industry-wide segmentation, you get to know that it is a product mix issue with one of our product lines shutting down and that is an industry wide issue owing to a legislative amendment passed by the constitution that prohibits the sale of that product line.



In this given, case, it was a product mix issue as one product line had to be discontinued following an amendment passed in the assembly

In the above example, it gave us the conclusion that all companies had to discontinue that product line thereby the interviewee can analyse that and prioritise that issue in the remainder of the case.

What is business acumen?

The ability to understand how businesses operate, their problems and the WHY behind the organization.

How will it help you?

An interviewee needs to understand the business, its customers, its model, among many other things, to be able to appropriately structure their approach and provide sound recommendations.

How to build an acumen?

Step 1 : Pick any industry that you like. It could be something that excites you, you wish to understand better, or you've worked on in the past. In the same industry, pick 5-6 companies (preferably the biggest in the industry for beginners)

Step 2 : Research on the 5-6 companies you've picked. This is to understand their businesses better. It can be done by tracking their stock movement and analyzing the related news pieces.

Carry this on for 3-4 months. While it might seem mundane at first, soon you'll start understanding the functioning of the industry and the standard operating model.

Step 3 : It's time to apply your knowledge. There are two ways to do this. Take up the aforementioned Step 1 and 2 with your friends and have regular group discussions on the same. Case competitions can also be a great way to upskill yourself further in the relevant industries.

Step 4 : Make projects and do internships. Experiential learning will overshadow any theoretical learning that you can take up.



THE
BUSINESS
CLUB

Guesstimates

Guesstimation is the estimation of a 'number' or a 'market size ' of a certain product using very limited information. A guesstimate question aims to test a candidate's logical thinking and reasoning acumen, basically qualitative and quantitative skills. Apart from problem-solving, communication and presentation skills are also very crucial while solving a guesstimate.

Guesstimate is not about finding the right and precise answer but more about the approach used to find the answer. The goal is to make reasonable & logical assumptions and even if you are slightly off, that is perfectly fine.

The following methodology should be used while solving a guesstimate:



CLARIFYING QUESTIONS

Ask a few preliminary questions to understand the problem. Look at the problem from a bigger perspective & take some time to gather your thoughts.



ANALYZE & STRUCTURE

Try to relate the info provided with day-to-day knowledge, make realistic assumptions and try to prepare a structured approach by breaking down the problem into workable segments/demographics.



VISUAL MECE STRUCTURE

Use tree diagrams & visuals while segmentation and make sure to check if your approach & segmentation is MECE & discuss that with your interviewer.



CONCLUDE

Mentally double-check the 'guesstimated values' that you will apply to the pieces of the calculation you developed. Ask to perform a sanity check (that would get you brownie points)

Handy Tips:

- Use well-rounded numbers that are easy to work with.
- Remember and use standard divisions based on demographics(income, gender, geography, etc).
- Avoid guessing any data, if you're not sure, just ask it. At least confirm it.
- Make it engaging, talk through the steps, and convey all the assumptions and the overall approach. No awkward silences!
- Never start solving without discussing your approach.
- Keep your worksheet neat & organized and don't use too much text.
- Always ask to perform a sanity check.

Top Down Approach

Start with the largest universe possible, apply required conditions & filters and break it down into workable segments/demographics.

Keep in mind the following segments:

Demographics(Age, income, gender, rural-urban, etc)

Weekdays vs Weekends, Peak vs Non-peak

Occupancy rate

Replacement Frequency

Bottom Up Approach

Start with some small figures, focus on micro attributes, find replicable blocks and then move towards the general and scale up.

For Example:

Start with detailed products/services information

Take into account the volumes & prices

Then scale up to say, revenue.

Demand-side Approach

Market sizing using the demand size approach involves the estimation of end consumers to whom products or services will be sold & the quantity consumed by them.

Variables to be considered:

Demographics-based segmentation

Frequency of replacement

Seasonality

Supply Approach

The supply-side approach works better in clearly outlined environments. When the target consumer base is highly fragmented or the numbers are non-computable, then the supply-side approach is considered.

The supply-side approach involves the following methodology:

Looking at the market share & volume sales of competitors

Sales growth trend & level of market saturation

Retailer & Distributor segmentation

Bottleneck Approach (Unconventional)

Used by targeting the most fundamental thing in the operational flow of information, flow and goods, controlling/restricting the demand & then forming a structure on it.

It is an unconventional approach yet a very effective one.

The methodology:

- Find the step in the flow which is getting self-constrained (the bottleneck)
- Segmentation (Peak vs Non-Peak, demographics) and Structure
- Assumptions & Calculations

EXAMPLES:

- Seating Capacity in a McDonald's outlet is a constraint (bottleneck) for them & can't be helped
- The maximum no. of Pani-puris a seller can sell in a fixed duration is constant, irrespective of the demand
- The max number of flights that can take off from a runway is fixed

Estimate the market size of healthy food Industry of Mumbai in terms of revenue ?

Before I proceed, I would like to ask a few questions, is that okay?

Go ahead

Would it be fair to assume that fruits and green vegetables fall under the healthy food category? What else could be consider as a healthy food ?

Yes, you can consider fruits and green vegetables to be healthy food. It would also comprise low calorie food such as pulses and sprouts.

Alright, What should be the time period for which we have to calculate revenue for this Industry

You can calculate revenue for a year

Also, I would like to clarify what sources of sales of healthy food do I have to consider? For instance, do I have to consider food used in both residential and commercial segments, Also should I also include the food that government purchases for vulnerable population i.e. Rationing.

Yes you have to consider all the mentioned sources of healthy food distribution for revenue generation, which includes the case for government purchase

Firstly, I would like to segregate the market into Rural and Urban areas of living. With Rural population being 70% of total population. Focusing on that, people in rural areas are self sufficient due to farming as their main activity of work. On the other hand they have lesser access to organised and packed healthy food industry due to either unavailability of packed food

or affordability issues. This in turn directs focus to government provided rations which constitutes 70% of healthy food and the organised food available to non lower class population, while neglecting other contributing factors.

That sounds very logical, you can proceed with that.

Ok, so before moving ahead, since we are mainly concerned with rationing and family wise food distribution, we should be concerned with number of households in rural areas. This can be found, considering an average number of 5 people, in every household. After that, Let s divide the rural population on the basis of income, that is ones that receive the benefits of rationing, which are within an annual family income bracket of 1,20,000 Rs which due to Rural income distribution would be around 90% of total households. Is that safe to assume.

Yes, that is reasonable, proceed with that.

Alright, with the available households, certain fraction would be unaware of the rationing scheme and wouldn t be benefiting from them, though this number would be around 20% of the households that lie in this income bracket. Thus, by assuming total population of India to be 1.2 billion, the number of households that get ration are,
 $= 1.2 * 70\% \text{ (rural population)} * 90\% \text{ (lower income bracket)} * 80\%$
 $(\text{Awareness of rationing}) / 5 \text{ (average number of people per household)}$ billion = 85 million households Now, for every household, can I assume that the government would spend approximately 10,000 Rs per annum on rationing, out of which only 35% contributes to healthy food?

Yes, that would be an appropriate assumption.

Alright, then the net revenue that rationing would generate annually will be,
 $= 85 \text{ million} * 10,000 \text{ Rs (amount spent per household)} * 35\%$

(amount spent in healthy food industry.)

= 300 Billion Rs

Alright, let's move to the other income segment now

Now, the income segment above 1,20,000 Rs would meet their healthy food needs due to the presence of farming as a major activity, and the negligible amount that one spends on packaged and organised food industry. Should I move ahead with urban segment?

You can move ahead with the urban segmentation and neglect this income bracket.

Now, for urban segment of population, we shall follow a different approach. Considering the fact that household eating patterns may differ to a high degree in urban areas and regularity in trends of eating habits would be found for age groups rather than households. So, let's start with segmentation of market based on income groups, i.e. Below poverty line which should be 40% of population , Lower middle class that should be 30 % of population , upper middle class which is 20 % of population and higher class that is 10 % of population. Now due to limited access to organised food industry and lesser availability of funds, can I assume that BPL category would have a negligible contribution in the healthy food industry revenue?

Yes, you can assume that.

Alright, Now for every segment of income highlighted, we can further subdivide the population into age groups that have similar eating habit due to activities of similar nature, i.e. of 0-10, 10-18, 18-30, 30-45 and 45+, however given the time constraint should I club the age group of 0-10 and 10-18 together?

Yes, you can do that.

Alright this gets us to consider major channels of age group populations in which revenue of healthy food industry is generated. For instance the following factors would be substantial for the industry, Eating habits of 0-18 which is 35% of population and 45+ that is 15% of population, age groups would be similar as both are supposed to follow a general diet that would be supervised by either the ones they are dependent on (their parents or children) or their dietitian. Major contributing elements in 18-30 age group that is 25% of population would be fitness conscious people and pregnant women, this is due to the fact that healthy food industry would only have substantial revenues from people that follow a regular diet. Fitness conscious individuals would be 2% of general population as observed in surroundings through number of gym attendees verses that of non attendees. For 30-45 age group, which comprises 25% of the population, we will have only fitness conscious individuals and people with chronic diseases and prescribed diet. These individuals would be approximately 5% of total population. Do I proceed with the same?

Yes, you can proceed with this.

Alright, before I move ahead with the revenue for the highlighted segment, I would like to verify the number of pregnant women. This can be done by understanding the fact that an average woman, in consideration with the fertility rate and miscarriages, is pregnant for approximately 2 years in her life (2.2 fertility rate, 9 months per child and miscarriages) Which is mostly in this 18-30 age bracket, Implying that probability that a woman would be pregnant in this segment is = $2 / 12 * 100$ percent Which when multiplied by the number of women will give number of pregnant women annually, thus, making it easy for classification. Would this be a right approach? Should I move ahead with revenue segmentation?

Yes, this is a reasonable approach, please proceed ahead!

Ok, Using the above knowledge we can generate the number of concerned people in every age bracket for the revenue and have segmented the consumer base according to their behaviour. We will calculate the amount that each of the above listed segment spends per day and multiplying it by their population to get the revenue numbers for them per day. After that just calculating the annual counterpart and adding them together we'll get the net revenue of the healthy food Industry.

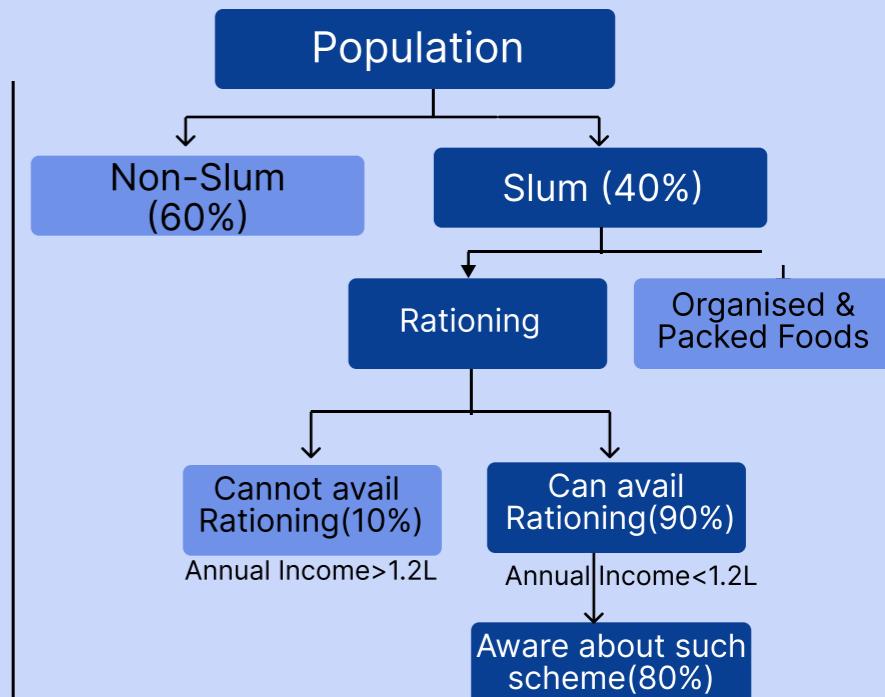
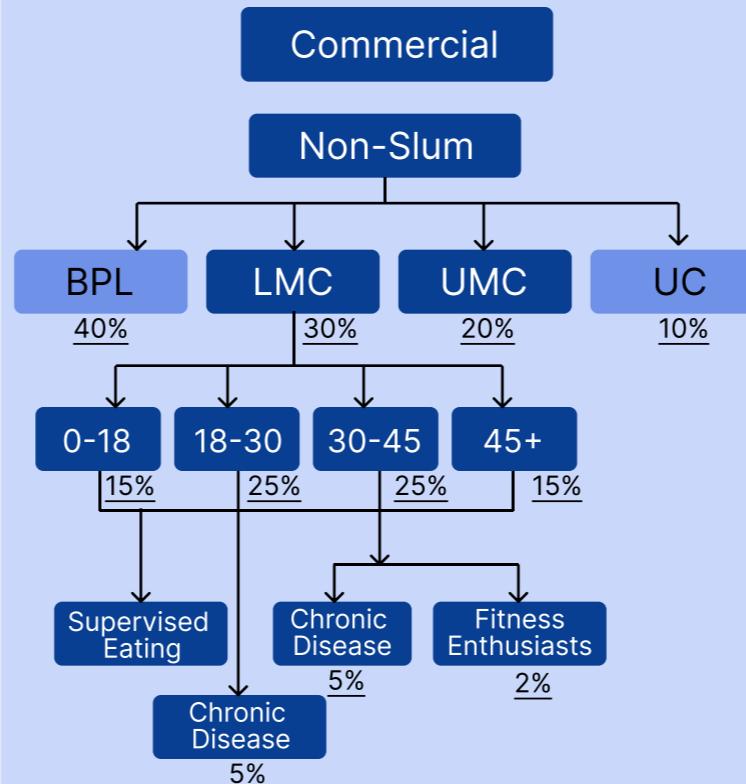
This was a very nice approach, thank you.

PROBLEM STATEMENT: Estimate the market size of healthy food Industry of Mumbai in terms of revenue

CASE FACTS

- **Rationing** was explored as it accounts for a major percentage of the healthy food industry, particularly in **rural areas** and upon clarifying, the interviewer asked us to include it.
- Here, to be available for rationing, an individual's **annual income** should be less than **1.2L** per annum.
- Major consumer personas consuming healthy food include those suffering from chronic disease, fitness enthusiasts, and children who are subjected to supervised eating.

APPROACH:



Total cost incurred by the govt. for healthy food: $\equiv \frac{\% \text{ Healthy food}}{35\%} * \text{Cost per family} * \text{Total eligible families}$

KEY TAKEAWAYS:

- When it comes to policies or schemes that are not that widespread, it is usually very helpful to apply a **filter based on awareness**. For example, the rationing scheme mentioned in the question.
- It is very important to be on the **same page with the interviewer** with regards to what needs to be calculated. For example, had the interviewer talked about the online healthy food industry, the calculations would have been massively different
- **Creating customer personas** like fitness enthusiasts, pregnant women really helps in cases where there is no set consumer type

Guesstimate the number of Coca-Cola bottles sold in India. Before you proceed, keep in mind that I am referring to only Coca-Cola and not soft drinks as a whole and proceed.

Alright, before I go ahead, could you also clarify over what duration you wish to know how many bottles were sold?

I wish to know how many bottles are sold in a single day.

Very well, I'd like to use a demand-based approach to calculate the same. Firstly I would classify the population into 3 brackets based on the tier of the cities they belong to i,e, Tier-1,2, or 3.

Alright. Why do you think such a classification will help you out here?

Firstly, the average income of the people living in tier 1 and 2 cities is greater than those in Tier-3 cities. Further, on average, there are more stores in well-developed cities for people to access coca-cola drinks. Thus, it would make more sense for more bottles to be sold in these cities as compared to Tier-3 cities, and thus such a classification would help me out here.

Well justified, you may go ahead.

I'd further like to divide the people under these groups on the basis of their age into 3 brackets- <15 years old, 15-40 years old, and >40 years old. The drinking preferences of these groups of people will vary for a number of reasons like financial independence, eating habits, and lifestyle; thus, it makes sense to classify them this way.

Alright. Could you give me an idea of how you would proceed to calculate the final number now from these assumptions?

of less than 15 and more than 40 might drink lesser comparatively maybe once a week in tier 1 cities and once in 10 days in tier 2 cities. In the tier-3 cities, this frequency would be even lesser, with those in the 15-35 bracket drinking once a week and the remaining people drinking very rarely say once in 15 days. With this, I will be able to obtain a final answer for the total number of soft drinks consumed, and multiplying that with coca cola's market share, which would be around 50%, would give me the final answer to the guesstimate.

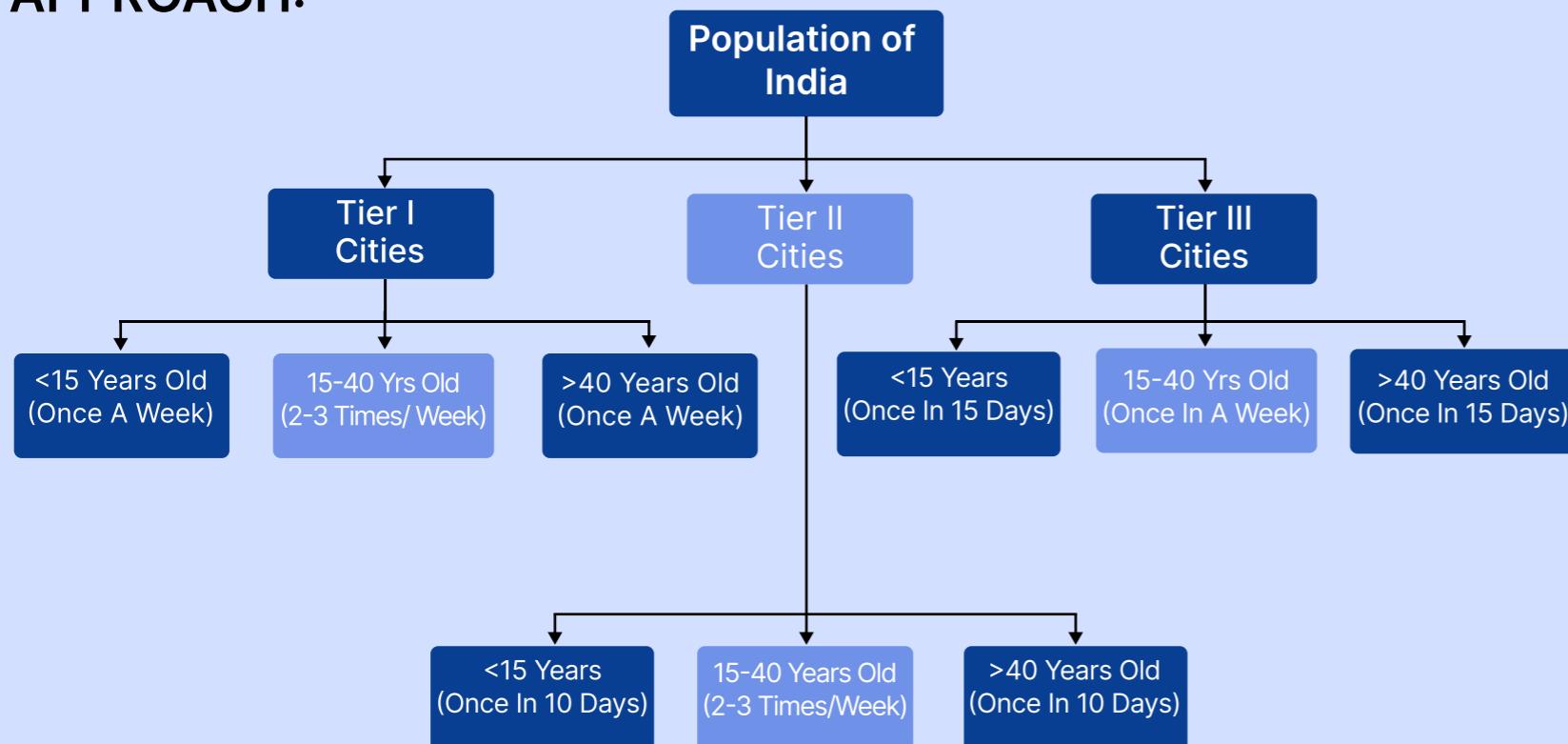
Very well. That makes sense. Do you have anything else to add?

No, that will be all. Would you like me to go into the specific numbers for the individual segments and derive a final answer to the guesstimate now?

No, that will not be necessary. Your approach is sufficient enough, this will work fine. Thank you and good luck.

PROBLEM STATEMENT: Guesstimate The Number Of Coca Cola Bottles Sold In A Single Day In India.

APPROACH:



ALTERNATE APPROACH:

- The candidate could have first divided the **population** on the basis of **age groups** and then divided these groups on the basis on frequency of **drinking** taking into account some more factors like season, demography and climate.
- This would have been a good approach as well, as drinking trends are more well found in an age group than based on the tier of the city which they belong to.

KEY TAKEAWAYS:

It is necessary often to **justify your assumptions** and steps taken towards solving any guesstimate as done here by the candidate. This helps the interviewer follow your line of thinking and shows one's **clarity of thought**. This is a key trait one looks for in any case interview and goes a long way in proving one's credibility.

Estimate the size of the tennis players' market in India.

To define the scope more clearly, I'd like to clarify a couple of questions. Should I include both the amateur (or recreational) and the professional tennis players, or do I focus on individual segments?

For this guesstimate, include both recreational and professional segments

Got it. Additionally, I wanted to understand whether we have to calculate the market size in terms of volume (number of tennis players across India) or in terms of GMV (Gross Merchandise Value).

Good clarifying question. Proceed by calculating the GMV of the tennis players' market

Understood. I hypothesize that it can be calculated using the mathematical formula

$GMV = (\# \text{ Tennis players}) * (\text{Average spend per player})$. Then, I shall estimate the number of tennis players followed by the average spend to get the final answer. Shall I proceed with the approach, or are there any tweaks that I should incorporate into my approach

The approach seems fine. Kindly proceed with the individual calculations.

To compute the total number of tennis players across the country, I shall begin with the population of India, then apply splits on the population based on the following parameters

Area (Rural - 70% /Urban - 30%)

Annual Income (Upper/Middle/Lower Class basis income) (20%, 50%, 30%)

Age (0-15, 15-30, 30-45, 45+) (30%, 30%, 25%, 15%)

Does this seem fine, or should I think of an alternative approach?

Seems alright. Do state why you applied these splits.

Yeah, sure. I applied the area filter of rural or urban because rural India doesn't have access to tennis infrastructure. Additionally, since tennis is a very cost-intensive sport, only the demographic segments from higher income classes can afford the costs associated with the sport. Typically, individuals in the age bracket 0-15 and business professionals having active tennis club memberships will comprise the market.

Perfect. The approach seems fine, do plug in the numbers and estimate the total market in terms of volume.

Got it. Let's take the population of India to be 1.2B. Therefore, 30% of 1.2B will fall under Urban India, which is 0.36B. For ease of calculation, let's assume it to be 0.4B. Further, we'll apply an income filter to get 20% of 0.4B (0.08B) for the Upper Class and 25% of 0.4B (0.1B) for the Upper Middle class, 35% of 0.4B (0.14B) for the Lower Middle class and 20% of 0.4B (0.08) for below poverty line (BPL). We shall discard the lower middle class and the lower class for further calculations since they don't have access to the required infrastructure

This looks fine. How will you go about your calculations next?

Proceeding further, I shall apply an age filter on the two demographic segments. The age brackets are: 0-15 (35%), 15-25 (25%), 25-45 (25%), >45 (15%). I shall then consider the two segments of 0-15 and >45 to estimate the tennis players market as young professionals and a lot of established working people are enrolled in club memberships. Furthermore, given tennis has to compete with sports like cricket, hockey etc. that are legacy sports, thus we'll have to include an interest factor of (10%) for someone looking to take up tennis.

Perfect! What is the resultant figure?

Yeah, so 35% of 0.08B + 15% of 0.08 B + 35% of 0.1B + 15% of 0.1B. Upon adding all the sub-segments the answer that we get is 0.09B, and upon applying a 10% interest factor basis sports, we get the final answer to be 0.009B, which is 9 million

I'll carry out a quick sanity check on the number. If we benchmark the number with the population of India, we get a ratio of 0.009/1.2 we get around 8 tennis players in a sample space of 1000, which seems like a reasonable number. Do you want me to mention certain edge cases that could have made it more accurate

Sure, kindly account for those said edge cases that'll lead to a more accurate answer

Yeah, so a couple of other things that could have been included to yield an even more accurate answer are that both sexes don't have the same access to take up tennis as their career, so a split based on sex could have been included. Other than this, we could also include a tier split, since the vast majority of tennis players come from metros or fairly well-established tier 2 cities

Great! Now, how will you obtain the GMV for the tennis players' market in India.

Yeah, so to obtain the GMV, I shall calculate the operating expenses/typical costs that an average tennis player subscribes to. Then, I shall multiply that with the volume to obtain the final answer.

What kind of costs would these be and could you give us a rough estimate for this number as our client is looking to venture into the market and wants to get an idea of the financial feasibility of foraying into the market.

Typical costs would be the cost of racket, costs associated with tennis accessories (bandana, arm band, tennis jerseys), additionally costs associated with club memberships. Other costs include those related to logistics costs since there are only one or two tennis clubs in cities meaning that enthusiasts would have to travel long distances to reach those clubs.

Could you quantify these costs and give me a number?

Yeah, so the costs are as follows:

Cost of racket : INR 3000 on average annually

Cost of accessories : INR 2000 on average annually

Cost of memberships : INR 20000 on average annually

Other miscellaneous expenses: INR 5000 on average annually

The figure is roughly around INR 30000 annually.

Could you try to put the number into perspective by taking up certain examples.

So, the figure would be roughly around INR 30000 across a year. To cross-check the numbers, we can carry out a quick sanity check, in which we can benchmark this with the typical expenses for food, which are around INR 40000 - 50000 annually. So, it passes the sanity check as it is around 60-70% of the expenditure on food which seems reasonable and goes to show the influence of income on the calculation

Do, you want me to estimate the GMV as well?

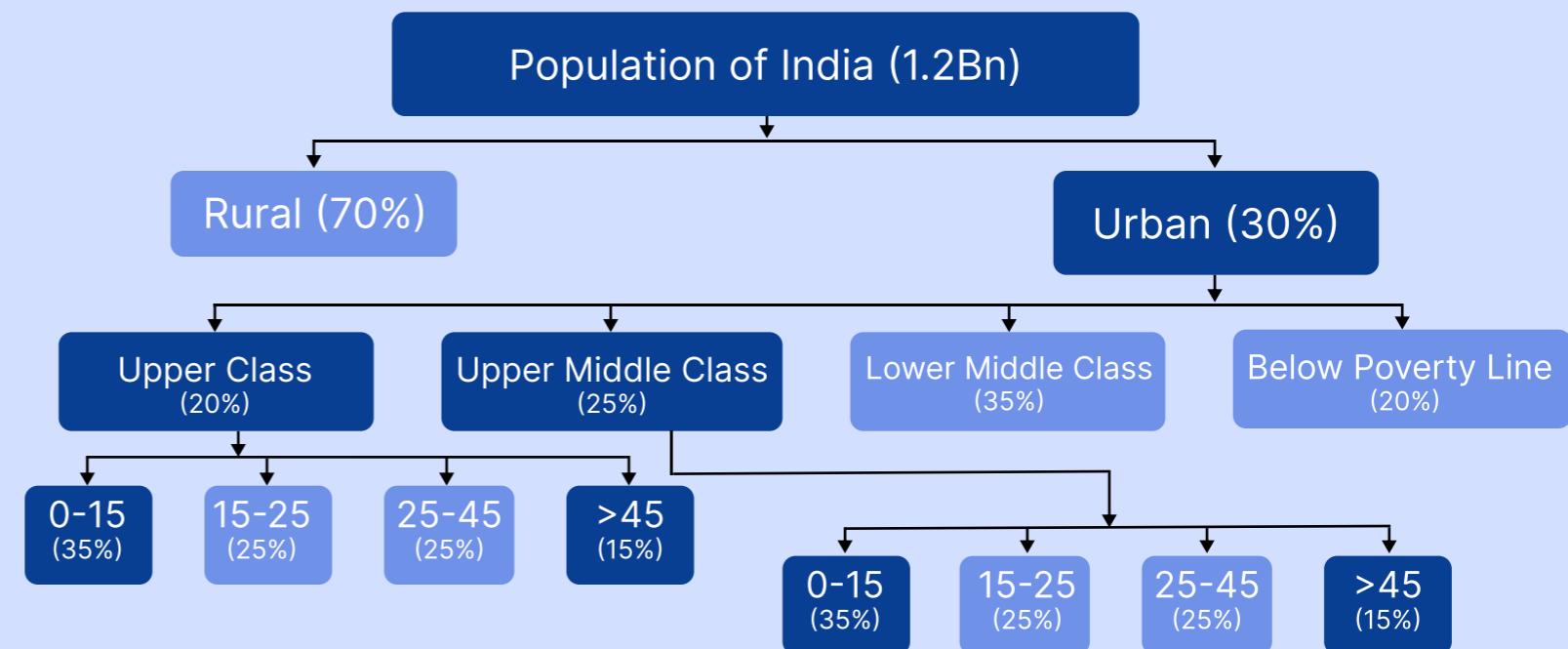
No, that won't be required. We can close the case here. This approach seems fine.

PROBLEM STATEMENT: Estimate the size of the tennis players' market in India.

ALTERNATE APPROACH:

- Given that we had to account for **amateur** as well as **professional** player segments. Separate calculations could have been carried out for both.
- For the calculation of amateur tennis players, the number of players in the **age** segments **0-15**, and **15-25** could be calculated and a very small percentage **(1-2)%** of that could be taken to calculate the **professional tennis players**.
- Working professionals with club memberships pursuing tennis as a hobby can be calculated in a similar manner.

APPROACH:



The total figure thus obtained = 0.09 Bn
 Interest factor in tennis basis benchmarking with different sports = 10%
 So, final answer = 9 million.

KEY TAKEAWAYS:

- Carrying out **sanity checks** based on demographics and geographics help us get a look and feel of the problem. Benchmarking the number of people playing tennis with the entire population and tennis expenses with food expenses helped us establish the viability of the approach
- Accounting for certain edge cases helps you demonstrate breadth of thinking and gets you brownie points

Can you estimate the size of the bamboo toothbrush market sold annually in India?

Certainly, before we begin, may I kindly request some clarifying information?

Of course, certainly.

Is there any specific brand we need to focus on?

No specific brands, we are interested in all bamboo toothbrushes sold nationwide.

Great. Also, should we calculate the market size in terms of the number of toothbrushes sold (volume) or GMV (Gross Merchandise Value)?

A good question. Proceed by calculating the volume of toothbrushes sold in a year.

Alright, I will assume that on average, a single individual uses 3 toothbrushes per year. Does that seem reasonable?

That's a fair assumption.

Now, I would like to segregate the market into rural and urban areas, assuming that rural areas make up around 70% of our population. We do this because the rural market for bamboo toothbrushes is relatively smaller due to lower awareness and availability.

So, are you excluding the rural segment altogether?

Yes, because toothbrushes sold in rural areas are almost negligible compared to urban areas. This leaves us with 30% of the total population, which is 1,400 million people.

So, that would be (0.3×1400) that is 420 million people.

Alright, how would you proceed?

Next, let's segment the market by age. It's our assumption that bamboo toothbrushes may not be suitable for children below 16, as they can potentially harm their sensitive gums. Additionally, individuals aged 45 and above tend to stick with well-established brands, favoring traditional plastic toothbrushes. So, we'll focus on the age group between 16 and 45, as they are likely to be more receptive to innovative products and have heightened environmental consciousness.

That's a reasonable approach, please continue.

Now, assuming the adult population is around 40%, this gives us 0.4×420 , that is 168 million people.

Alright, how would you proceed from here?

Next, let's segment the market by income. We observe that lower-income individuals might find bamboo toothbrushes less accessible due to their relatively higher cost. On the other hand, the upper class tends to prefer electric toothbrushes or premium brands. The upper-middle class emerges as a key demographic for bamboo toothbrushes due to their affordability and eco-friendly attributes. The lower-middle class often opts for budget-friendly toothbrushes from well-established brands. Limited awareness of bamboo toothbrushes also contributes to their lower adoption rates across various income segments.

That makes sense, please go on.

Assuming the upper class accounts for 20%, the upper-middle class for 20%, the lower-middle class for 40%, and the lower class for 20% of the adults, we can estimate how many of them would be using bamboo toothbrushes in each of these segments. We can consider 2% of the upper class, 5% of the upper-middle class, and 2% of the lower-middle class as our buyers.

That gives us $((0.02 \times 0.2) + (0.05 \times 0.2) + (0.02 \times 0.4)) \times 168$, that is 3.7 million people who buy bamboo toothbrushes.

So, what would that make according to your calculations?

Since each person uses 3 toothbrushes per year, we would estimate the number of annual brushes sold to be three times the answer, that is about 11 million people. This top-down analysis provides us with a framework for further market research and analysis.

That sounds like a reasonable approach, thank you.

Guesstimate the number of cars in the city of Delhi.

I would like to ask a few clarifying questions first. Does the number of cars refer to cars owned by all people staying in Delhi or the number of cars running on the roads of Delhi on any given day?

I am expecting the former.

Alright, I would like to use a demand-based approach to proceed with solving this guesstimate.

Sure, go ahead.

I would like to divide the population of Delhi into three segments based on their income. I'm proceeding with the assumption that the people of the higher end can afford two or more cars per household, the middle end can afford one car per household, and those of the lower end cannot afford a car.

Very well, that makes sense.

The total number of cars owned by the resident of Delhi will thus be the total sum of the number of cars owned by the individual segments of its population, which can be calculated easily as the number of households in the segment x No of cars per household wherein the number of households per segment will just simply be the percentage of the total number of households belonging to that segment.

Alright. What do you think the split of the Delhi population would look like?

Delhi being an urban city, its population split would probably comprise 20% belonging to the upper class, 50% belonging to the middle class, and the remaining 30% belonging to the lower class roughly.

Good. Do walk me through the rest of your calculations for the same.

Sure, The average size of a household would be four, to the best of my knowledge. So the final figure would look something like this as per my suggested approach

Upperclass $(30\text{Mn} * 0.2/4) * 2 = 3\text{Mn}$ + Middleclass $(30\text{Mn} * 0.5/4) * 1 = 3.75 = 6.75 \text{ Mn}$

Will this be your final answer, or would you like to account for any other outlier values?

No, I would like to add to it further. There would also be certain people like cab drivers and car rental agencies who own a significant number of cars. This should not affect the answer very much, though. However, I think it would round off my guesstimated number to around 7Mn cars.

Your answer is slightly off the expected number, but your approach to the guesstimate was well-structured enough. That will be all for now, thank you and good luck!

Thank you.

GUESSTIMATE | LEK 2 (1/2)

Estimate number of mangoes in New York in a given month in season.

I'd like to begin by asking a few clarifying questions first. What does "New York" refer to? The state or just the city?

Consider this to be New York State.

Does the number of mangoes refer to the mangoes bought by consumers in a month or the number of mangoes produced? Also, does "in season" mean the time of the year when mango production is optimal?

Number of mangoes refers to the amount purchased by the consumers. We intend to calculate the number during the mango growing season, i.e. summers.

Understood. So I suppose supply won't be an issue and we can take a demand-side approach?

Sure, that sounds reasonable.

Great. So I'd like to start by breaking down the population of New York into an Urban and Rural split. If I remember correctly, New York is composed of 90% urban population and 10% rural population, does that sound fine to you?

Yes. For the sake of simplicity, let's focus only on the urban population for this case.

Got it. Further, the urban population can be split on the basis of income segments of upper, middle and lower class with 10%, 50% and 40% shares respectively.

That seems fair.

Next, I'd like to simplify the situation by splitting these population segments into households. It's well-known that New Yorkers typically live in small apartments, and hence, I'd like to assume the average household size to be 3. Does that make sense?

Yes that is quite accurate. How would you estimate the need for mangoes in each household?

We can further split these income segments into different groups based on focus on health, wellness and affinity to consume fruits, and one final filter on the proportion of such people consuming mangoes.

Kindly walk me through the complete split for the same.

Sure. We can split these segments into 3 groups; fitness enthusiasts, the average eaters, and the people who aren't very health conscious. Upper class can be split as, 40%, 40%, and 20%. Middle class can be split as 20%, 50%, and 30%. Lower class can be split as 5%, 45%, and 50%.

I hope this split is reasonable?

Yeah this looks okay. Please put the filter on people consuming mangoes and hence, calculate the number of mangoes in a given month.

Sure. I expect the fitness enthusiasts to consume fruits everyday, i.e. 30 times in a month. The average eater will consume fruits 20 days in a month. The last category probably consumes fruits 10 days a month. Since mango is a fairly common fruit, it shouldn't be impractical to assume that 20% of the time mangoes are consumed.

Let's take it to be 10% of the fruits.

Alright. Should I proceed with the calculation?

Yes, please.

So the population of New York is approximately 20 million, hence, the urban population would comprise 18 million individuals. That means that upper, middle and lower classes comprise 1.8 million, 9 million, and 7.2 million people. Dividing the population into households of average size 3 gives us 600k, 3 million, and 2.5 million (approximately) households.

Correct.

Now, I'll split these segments into their respective fitness consciousness buckets and calculate the approximate number of mangoes consumed in New York in a given month.

[Calculation]

So my calculation tells me that 10.75 million mangoes are consumed in New York in a given month

Your figure is slightly off, but I liked your approach. This is all for the interview, thank you for coming in.

Thank you.



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Profitability

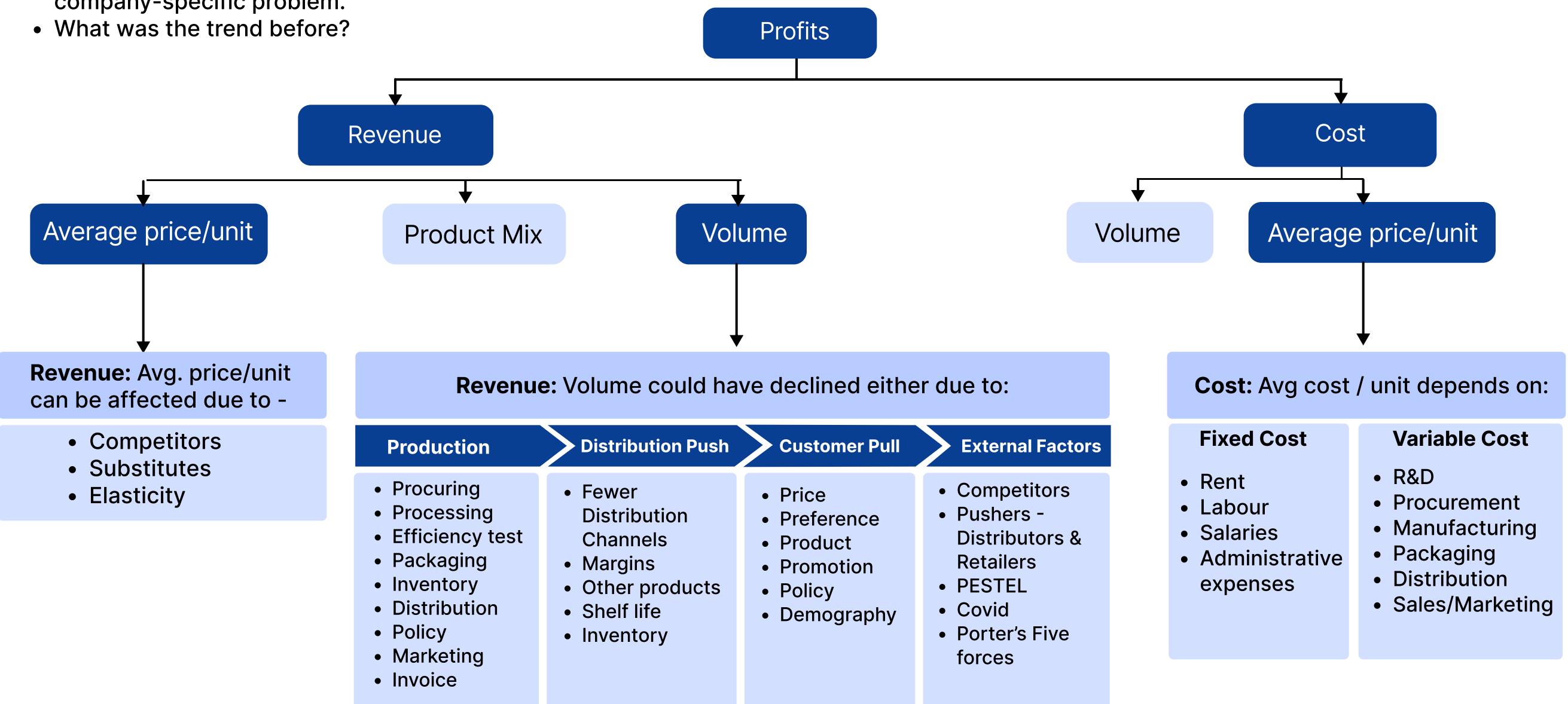
PROFITABILITY CASE APPROACH

This framework should be used for questions on profits, related operations, or new business opportunities.

Profitability cases deal with the cost-side problems, revenue-side problems, or both.

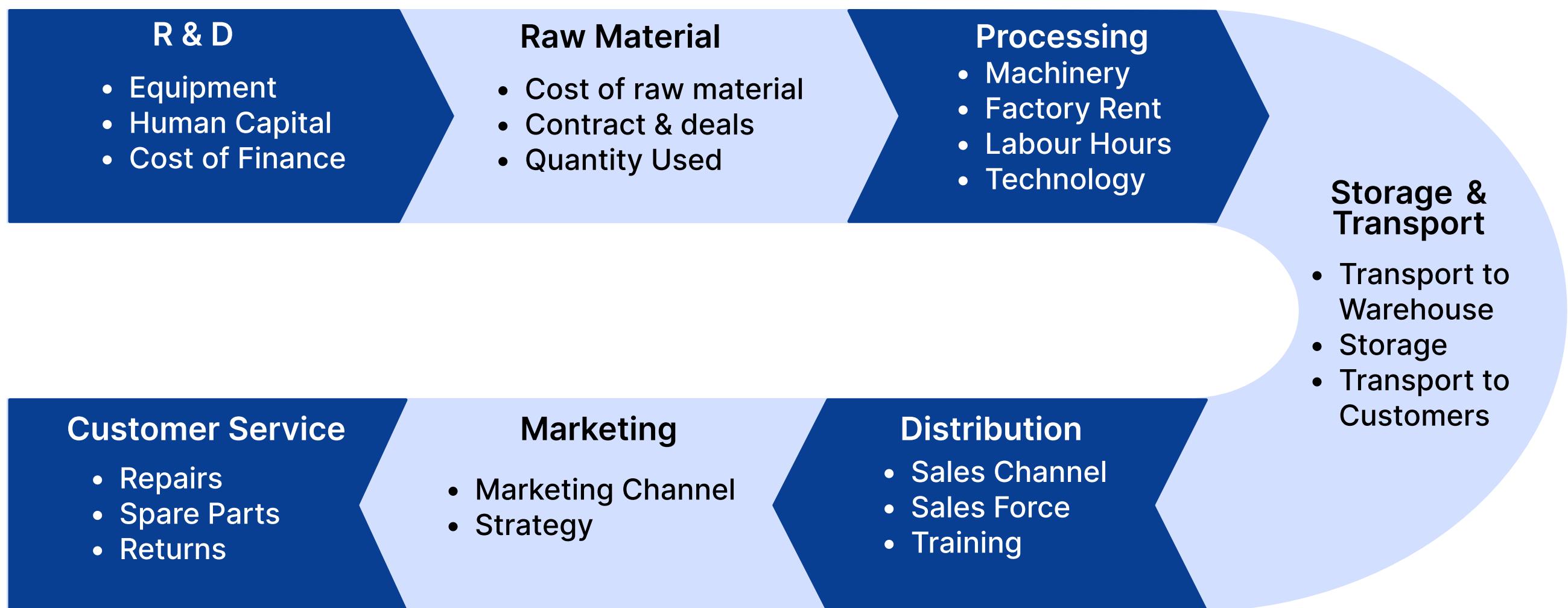
Approach through preliminary questions -

- Get a basic understanding of the business: What products or services does it provide?
- What geographic area does it serve?
- Understand whether it is an industry-wide phenomena/problem or a company-specific problem.
- What was the trend before?



Cost Reduction- Value Chain Analysis

Due to a potential rise in operating costs, the client would likely see a decrease in earnings/profits (bottom line). An interviewee is first expected to identify different cost components followed by validating them, identifying the key cost drivers as well as the levers affecting their value, and finally suggest how the company could change its ways to become more profitable.



PROFITABILITY | RETAIL BANK (1/3)

Our client XYZ retail bank facing declining profits and is unable to compete. You have been approached to find the problem and suggest changes.

Sure, sir. So, I need to focus on finding the issue with our client's declining profits. Is there any other objective I need to keep in mind?

No, please go ahead.

I'll start with a few clarifying questions.

Sure, go ahead.

Does this issue affect a majority of the client's branches, or is it isolated to a specific category such as metro, urban, or rural branches?

This problem is being faced by a specific branch that is located in a metropolitan region.

Given that the problem is specific to a particular branch, it is fair to assume that the problem is not faced by the banking industry in general. Are the competitors located in that region also facing similar issues?

The problem is unique to our client and is not affecting others.

Are there any particular products or services offered by the branch that have seen a decline in customer demand or usage over the past few months, and do we have insights into the reasons behind this decline?

No, the decline is not due to any particular product.

By how much have the profits decreased, and for what period has our client been witnessing this decline?

There has been a decline of 25% in profits over the past five months.

Alright. Since the issue is that of profitability, Could you provide insights into the revenue and cost trends of that particular branch for the last five months?

The revenue has been steadily increasing, but the costs have risen at a much greater rate.

Okay. So, in that case, I'd like to explore the cost components of a typical retail bank branch. Can we identify which of the three categories - Interest, Provisioning, or Operating expenses - did not meet the client's expectations in the cost structure for such a branch?

The interest expenses are comparable to those of similar branches, and the bad debt levels are in line with regional standards.

Understood. It appears that the issue pertains to the operating costs of the branch. The primary operating expenses of the branch would include employee expenses per customer, rent, utilities, stationary and postage, maintenance, and depreciation expenses. Can we gather insights on where the costs have been increasing specifically vis-a-vis our competitors or in comparison to prior periods?

The rent per square meter is in line with other banks in the area and has remained unchanged over the past few years. Likewise, maintenance, depreciation, and utility expenses have also stayed relatively consistent.

PROFITABILITY | RETAIL BANK (2/3)

Okay, so that leaves us with employee expense per customer, which is salary/number of customers handled by each employee, stationery, and postage expense. Considering employee and sales agent salaries first, are the salaries of branch employees and sales agents above the industry standards?

The salary structure of employees for various positions closely resembles those of similar branches.

Okay, so can we infer that the problem revolves around the number of customers each employee serves? Considering the high expense, is it reasonable to conclude that the number of customers handled per employee is lower than industry standards, indicating a potential issue of over-staffing?

Alright. So, how would you further analyze this cost head?

The metric of "customers served per employee" encompasses the number of customers served by each employee, which, in turn, is influenced by the time an employee spends per customer and the total working hours.

Yes correct. So, it has been observed that the time taken by the employee per customer is high. What are the possible reasons for the same?

According to me following can be the possible reasons for high time taken by employee per customer:

- Employees might lack the competency skills or training, resulting in their inability to address customer issues effectively during the initial visit.
- Due to improper segmentation, the customer may have to visit multiple counters to perform a single task.

Due to improper segmentation, the customer may have to visit multiple counters to perform a single task.

Okay. So, firstly promoting the adoption of the bank's mobile app and website among branch customers for accessing essential services such as money transfers and checking account balances. Offer demonstrations when necessary. Secondly, installing self-service kiosks either within or outside the bank premises, facilitating cash deposits and passbook updates for customers, and providing convenient options. Then, training the employees to enable them to better understand the needs of the customer and thereby assist them efficiently. Lastly, implementing a single-window clearance approach for a wide range of services wherever feasible, simplifying customer transactions and minimizing the need for customers to visit multiple service points.

Thank you. These recommendations are reasonable and logical.

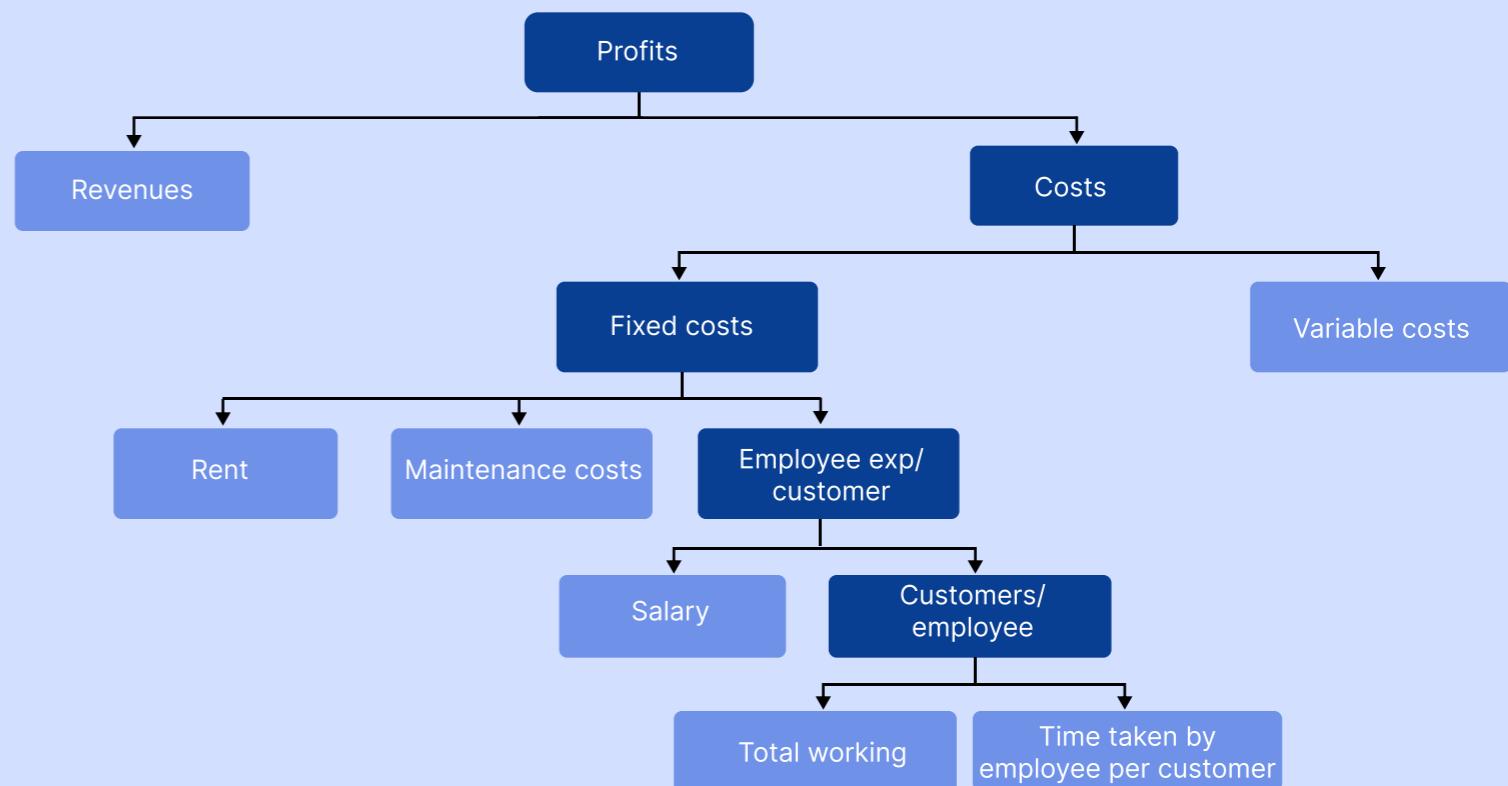
PROBLEM STATEMENT :

Our Client is a major retail bank facing declining profits and is unable to compete. You have been approached to find the problem and suggest changes.

CASE FACTS:

- Client is a major **retail bank**
- Problem of increasing costs
- Problem specific to a **particular branch**
- Interest expense and **bad debt level** at par with other branches
- Fixed cost of employee salary similar to competitors

APPROACH:



KEY TAKEAWAYS:

- Declining costs are majorly due to **higher employee salaries**. This can also be figured through higher customer handling charges.
- Once the problem is identified, it is important to figure out the reasons for the same- this can be done through industry specific metrics which measure efficiency/productivity.
- Candidate needs to develop understanding of the **cost structure** in the banking industry.

Your client is Pharmacy store in New Delhi. They have encountered a decrease in profitability and want you to analyze the reasons while suggesting recommendations for the same.

I'd first like to start with a few clarifying questions. Since when have they been facing this problem? Do we have the magnitude for profit drop?

This has been seen for the last 2 months and we do not have data for the exact drop in profitability.

Alright, considering that profits are a function of Revenue and Cost, am I supposed to focus on any particular segment from them?

Yes, Cost has remained constant since the beginning of the concerned period and Only revenue has gone down. So, focus on revenue only.

Ok. Now, to understand the breakdown of revenue I would like to better understand, what are the segments of products that our client has been involved with? For Instance, Do they deal with both Drug and Non-drug segments of medicines? Has the profit drop for both the segments been equal?

Yes Indeed, they do deal with both Drug and Non-Drug segments of medicines, however the profit drop is only seen in the drug segment.

We can further classify the Drug segment into Prescribed medicines and Over-The-Counter Drugs i.e. The ones that can be purchased without any sort of prescription. Was the profit drop equal in both the segments?

The profit drop was only seen in Prescribed medicines and not for Over-The-Counter Drugs.

Alright, now Channels or Sources for Footfall of Patients that come for prescribed medicines can be, Direct Referrals from different clinics and nursing homes, through any third party prescription, patients with Online Medical Consultancy Prescriptions. Do I have to consider more Sources for patient footfall than the ones listed? Was the profit drop Uniform across all these segments?

No, this consideration for patient footfall sources is exhaustive. Also, The profit drop was only visible in Direct referrals from Clinics and Nursing Homes. Sales from third party prescription and Online consultation prescription were constant in the concerned period.

Ok, so we can directly look into the Clinics and Nursing homes that provide referrals for our client. What are the numbers of such Prescription centers?

There is a clinic in a kilometer of radius and a nursing home that is just on the adjacent space of pharmacy store.

Alright, revenue from this segment is equal to (Number of medicines per person * no of Patients). Has any of these varied in the concerned period?

Yes Indeed, The foottall for this segment of people has gone down sharply in the past 2 months.

This can be due to the following reasons,

1 Prescription Center related issue

- The Clinic/Nursing home referring to a different Pharmacy.
- The Clinic/Nursing home have started their own Pharmacy.
- The Clinic/Nursing home have shifted to online consultancy.

2 Patient related issue

- Choosing a competitor because of better quality or pricing.

Nice approach, and yes the nursing home has shifted to online consultancy and the patients are choosing to use the online services due to the comfort of home. Also, the drop in footfall is also due to the same reason. Now, What would you recommend to our client in order to solve the above issue?

I would suggest the following 2 solutions in order to solve the problem,

- Try to get listed on such online platforms and increase the footfall for the patients in online consultancy prescription.
- Find more clinics and nursing home to integrate with for direct referrals to increase the footfall for direct referral patients.

PROFITABILITY | PETROL PUMP (1/3)

Problem - Your client is a petrol pump owner who has noticed a decline in profits of the pump in the past few months. Please look into the problem and suggest recommendations for the same.

I'd first like to ask a few clarifying questions. Since when exactly have they been facing this problem and was it a gradual or a sudden drop? Did the petrol pump change locations?

This problem started 3 months ago and it was a sudden drop. They haven't changed their location.

Got it. What all products and services does the petrol pump offer?

Its primary business lies in the sale of petrol, diesel, and oil. It also hosts a convenience store at the pump itself which sells products like car scents, window shades, etc.

And has the decline in profits been concentrated in either of the two lines of business or both have suffered?

Both have faced proportionate declines in profitability.

Alright. Since the sale of petrol, diesel and oil is the primary line of business, I shall focus on it more. I'd now like to break profitability down into revenue and costs. I'd like to focus on the revenue side first. Does that sound good to you?

Yes, please go ahead.

So revenue can be broken down mathematically into $(\text{Petrol Purchased}) * (\text{Price of Petrol}) * (\text{Product Mix})$. Have we noticed a change in either of these buckets?

Yes, as a matter of fact the client has reported a fall in the amount of petrol purchased. This decline has come mainly due to a fall in the sale of diesel.

Seems like a fair assumption. How would you proceed further with this information?

Before I make use of that information, I would like to first break sale of petrol into $(\text{Petrol purchased per customer}) * (\text{Number of customers})$. Have either of the two figures declined?

Yes, the number of customers has declined recently.

Okay. To identify the reason, I'd like to look at the value chain of the customers visiting the petrol pump. I visualize the process as follows:

1. Identifying location of the petrol pump
2. Path to the petrol pump
3. Queue at the petrol pump
4. Quality of service
5. Additional amenities (eg, general store, tire pressure check, etc)
6. Exit

Does this look good to you or should add something more?

Yes this looks satisfactory. How do you suggest we move further?

Is there any issue with the ability of the drivers to locate the petrol pump? Possibly the removal of a sign, a notice or something related that used to direct drivers to the petrol pump earlier? Or maybe the opening of a new pump?

No changes have come up in the information at the drivers' disposal and no new petrol pumps have opened nearby.

Okay, and what about the road that leads to the petrol pump? Any changes in the nature of the road, any blockage, or anything?

Yes, the road that leads to the petrol pump has been under renovation for a while.

Is it affecting the truck and van drivers who wish to refill at the petrol pump? Perhaps a restriction or the constrained size of road?

PROFITABILITY | PETROL PUMP (2/3)

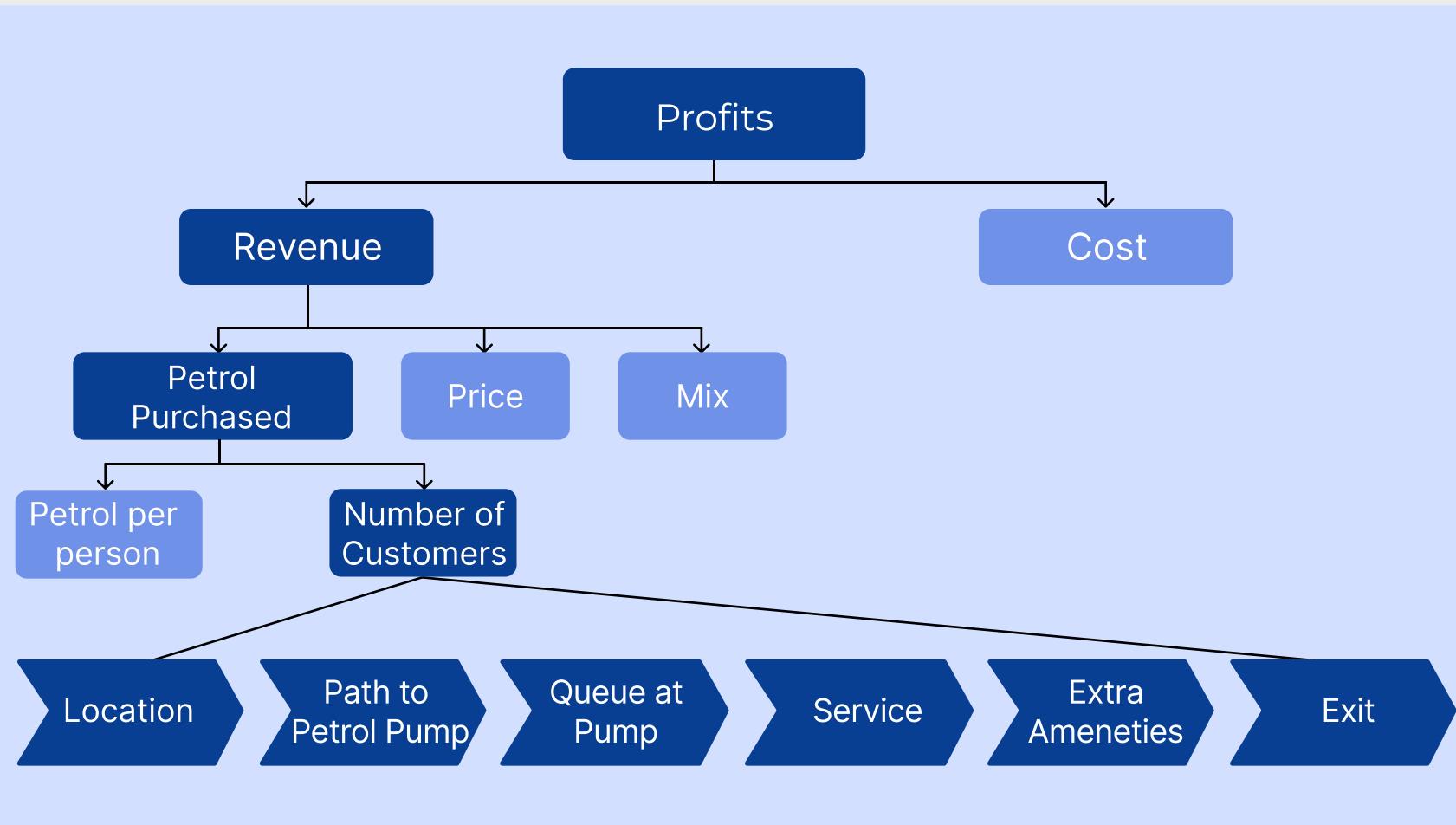
Correct, the smaller width of the road isn't allowing larger trucks and vans to pass, hence, they're forced to use other petrol pumps. You have identified the core issue of the problem. Kindly provide a recommendation for the same.

Sure. Since the problem is with the road leading to the petrol pump, maybe the client could open a temporary pathway to the petrol pump, if feasible. Another option could be to cut down their diesel purchase costs so as to improve the profitability of their business until the road is fully operational again. However, I would prioritize the first solution over the second.

That sounds reasonable. Thank you so much.

Thank you.

PROBLEM STATEMENT : Your client is a petrol pump owner who has noticed a decline in profits of the pump in the past few months. Please look into the problem and suggest recommendations for the same.



CASE FACTS:

- **Decline in profits** of petrol pump was reported due to major fall in the amount of petrol purchased and this was influenced by **fall in the sale of diesel**.
- Here the fair assumption that the primary users of diesel were truck and van drivers, helped to approach the case in a right direction.
- **Accessibility** of petrol pump was hindered due to the road renovation, and this was **affecting** their profits.

KEY TAKEAWAYS:

- Focusing on the primary users of the product line and the accessibility of the product.
- visualizing the **value chain** as being a customer itself helps to easily identify the problem.
- Try to solve an external issue by providing a **temporary pathway** in addition to the internal solutions.

There's a nimbu-pani seller in Mumbai. He's been facing a decline in profits. Find out why and suggest recommendations.

To align with you on the case and define the scope of the problem clearly, I had a couple of clarifying questions. How long has the nimbu-pani seller been experiencing this loss and has it been a gradual decrease or a sudden decrease in profits?

To answer your questions, the nimbu-pani seller has been experiencing a dip in profits over the past 6-7 months and it has been consistent over the same period.

Great, so now that we're on the same page. I shall approach the problem by taking profits as revenue - costs. So, the decline in profits could either be because of the decline in revenue or a cost surge. Should I proceed with the revenue side or inspect the cost side to get the root cause of this problem?

You can proceed with the revenue side.

Revenue can further be divided into the product of volume, product mix, and price/product. Shall I assume the product mix is one as the nimbu-pani seller has only one product line in nimbu-pani.

Yeah, that's a reasonable assumption. You can proceed with the same.

Has there been a change in either the price/product or the volume or the units sold?

No, that has remained constant.

To proceed further, I shall look at the value chain of the revenue side. So, there are three value chain segments: production, distribution push, and customer pull. Has there been an alteration in any of these segments?

I think these are too broad buckets to comment on whether or not certain segments have experienced a change over the past few months or not. Could you clarify what possible reasons you would analyze in these three segments and be somewhat more precise.

Sure, so in the production leg, I'll be covering the following processes: Procurement, Processing, Efficiency testing (QC), Packaging, Inventory, Inbound Logistics, Outbound Logistics.

Given that the volume of nimbu-pani has remained consistent, I hypothesize that it won't be a procurement, processing, efficiency, packaging, or inventory problem. Has there been any change in the inbound logistics (referring to the logistics involved in bringing the raw materials to the manufacturing centres) or outbound logistics (referring to the logistics involved in storing and delivering goods to the end consumers)?

Analysing the outbound logistics processes might yield some valuable insights.

Correct, so the typical value chain of outbound logistics would include the following steps: Order placement by the business or consumer, Transmission & processing of order, Transportation, Delivery to the end customer segment. Has there been any change in either of the steps that are affecting the lemon's efficiency?

Well, we've noticed that the transportation segment might cause the problem. What are your hypotheses on the same?

With a focus on transportation-related hypotheses, following points can be considered:-

1. High Transportation Costs: Optimizing transportation expenses can boost profitability.
2. Delivery Time and Efficiency: Improving these can increase sales.
3. Supply Chain Disruptions: Addressing disruptions can stabilize profits.

PROFITABILITY | LEK (2/2)

We haven't noticed anything related to that which might be of concern or might be causing this issue. Would you like to look at other steps/processes?

To draw the connection between outbound logistics and the loss in profits, I shall map out the user journey of a nimbu-pani seller. As I see it, a common user journey would include the following steps: Picking the nimbu out of the carton, Placing the nimbu in the machine, Squeezing, the nimbu juice out of the nimbu, Pouring out the nimbu juice and giving it to the customer. So, has there been a change in the efficiency or procedures associated with any of these steps. Has the carton been drying up the nimbus rendering a decrease in the final juice that can be extracted out of the nimbu or has there been a change up in any of the other processes.

Yes, there has been a decrease in the amount of nimbus juice that can be extracted out of the nimbus. But, could you pinpoint where in the supply chain or outbound logistics is this taking place?

Yeah, so I hypothesize that the main reason the nimbus are arriving with less amount of juice in them is because they are getting dried up in the transportation process of the outbound logistics. That should be the reason, correct?

Correct. Could you suggest certain recommendations so that the nimbu-pani seller can actually become profitable

Sure. In the short term the nimbu-pani seller can negotiate with the dealers to wet the cartons or sacks that nimbus or brought in, ice could be placed in them to prevent drying. In the medium to long term, we can think of changing our distributors or altering the outbound logistics processes to make sure that the nimbus don't dry up.

Great, those seem like actionable recommendations. Thank you!

Your client is a well-established manufacturing company, and it's been experiencing a decline in profitability. Please identify the problem and propose potential solutions.

I'm eager to get started. Can you please share more information? Where is the company based? What are their core products? And how long has the profitability issue been ongoing?

This is an Indian company specializing in manufacturing packaging materials, particularly carton boxes, for B2B clients in E-commerce and Consumer Durables, such as electronic appliances. The issue with profitability has persisted over the last 2-3 quarters.

Understood. Is this a challenge affecting the entire industry or is it isolated to the company itself? Could you also provide insight into the extent of the decline? And just to clarify, when you mention "profitability," are you referring to the company's profit?

No, this issue is unique to the company. You can consider profitability to be equivalent to profits, and the exact extent of the decline is not relevant.

Thank you for clarifying. To further analyze the situation, I'd like to dissect the profit into its components: revenue and cost. Could you shed some light on whether the declining profits are a result of decreasing revenues, increasing costs, or a combination of both?

Revenues have remained consistent, but costs have increased. Let's concentrate on the cost aspect.

Sure, I'd like to start by examining the firm's value chain to identify if the issue stems from any of its components.

Certainly, please proceed.

The value chain encompasses R&D, Procurement of raw materials, Processing, Storage and Distribution, Retail, Marketing & Sales, After-sales service, and Financial costs. Should I zoom in on a specific component for analysis, or do you have a preference for a comprehensive review of the entire value chain?

(Interrupting) Indeed, the issue is within the Processing step.

All right, I will utilize the process journey to pinpoint potential causes within the Processing stage. Is that acceptable?

Sure, please proceed.

Thank you. Within the Processing step, we have the sub-processes of Offloading of raw materials at the processing center, Core processing involving tasks like cutting, painting, varnishing, and so on, and Onloading of processed goods. Could you kindly guide me on which of these sub-processes should I focus on for a more detailed analysis?

Focus on the Core processing part.

For analyzing the costs within the Processing step, I'd like to categorize them into People, Process, and Technology. People costs would encompass labor and supervisory expenses, Process costs would include machinery and factory-related costs, and Technology costs would involve expenses related to computer systems and software. Could you provide guidance on which cost category to concentrate on?

Focus on the Process costs, particularly the machinery costs.

Understood. Within machinery costs, I'll break it down further into capital/purchase costs of new machinery, machinery operation costs like water, electricity, fuel, coolant, and maintenance costs, including expenses for oil, lubricants, and insurance. Is there anything else I should consider?

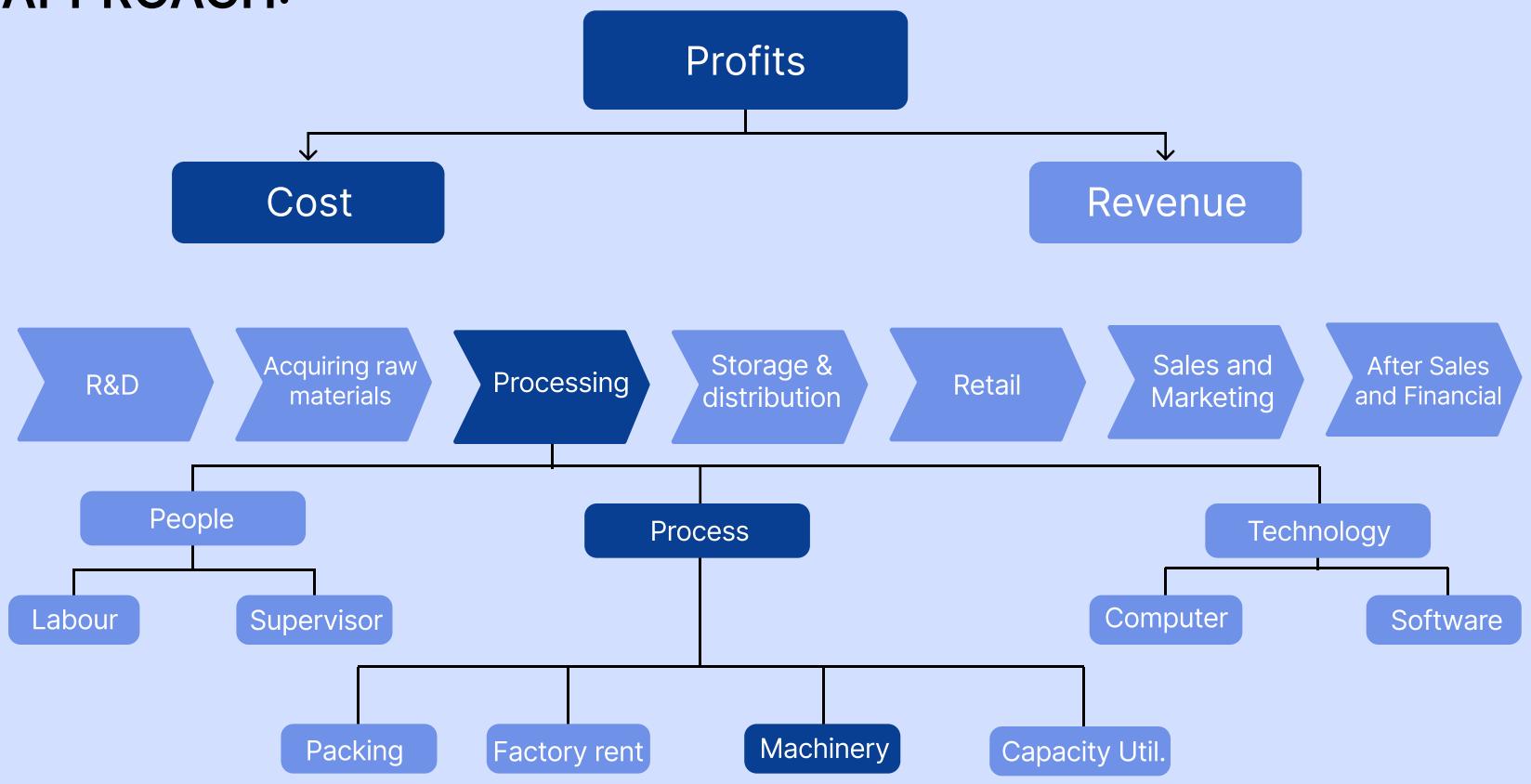
The consumption of oil and lubricants has notably increased. Can you provide insights into why this might be happening and suggest recommendations for the client?

The increased consumption of oil and lubricants could be due to machinery nearing the end of their useful life and/or the recent purchase of lower-quality machinery, leading to higher maintenance requirements. For the short term, I would recommend conducting an audit of all machinery in the company, considering early write-offs or operating machines at reduced capacity as they approach the end of their useful life. In the long term, it would be advisable to identify and gradually replace low-quality machines with high-quality alternatives.

Sounds like a solid plan! We can consider the case closed!

PROBLEM STATEMENT : Your client is a manufacturing company which is currently experiencing financial losses. Identify the challenges faced by your manufacturing company and provide solutions to address these issues.

APPROACH:



CASE FACTS:

- We are talking about an Indian Company in this case.
- The company produces **packaging materials** for business-to-business (**B2B**) customers, specifically catering to the e-commerce and consumer durables sectors.
- **Profits have declined** over the past two to three quarters.
- The problem is specific to the company.
- Expenses have increased.
- Study the facts carefully, identify the challenges, provide solutions to the company and try doing **value chain analysis**

KEY TAKEAWAYS :

- Keep in mind the wastage that is being produced during raw material procurement and processing.
- Take into account offloading during procurement and onloading during storage.
- Segment the processing step into three parts: Raw Materials, Work in Progress (WIP), and Finished Goods. Break down the processing expenses into two categories: Labor Costs and Overhead Costs.



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Root Cause Analysis

ROOT CAUSE ANALYSIS APPROACH

Root cause analysis is a complete analysis of a given situation turning every stone that plays an important role. To understand the approach, we'll take up an example.

Clarifying Questions:

"Asking the right questions" is a common phrase from industry experts and guides. But how to ask the right question. There is no precise path to asking clarifying questions, but you can create a checklist according to the situation. A list may include a part or entire or combination of frameworks like 3C-1P, 5W-1H, BOTMG etc., to make it MECE. Keep in mind to follow a top-to-bottom structure.

For example, if we take up BOTMG.

- **Business Model:** Questions under this segment shall focus on understanding the business model of the company that is under target.
- **Objective:** Clarifying the mission and vision of the institution.
- **Timing:** Knowing the environment of the market and the globe while this situation has occurred.
- **Market Target:** This checklist will give clarity on the target market of the comp.
- **Geography:** It provides the information about the terrain, locality and culture that created .

Creating a proper framework:

Think deeply about the facts you accumulated from the clarifying questions and structure the appropriate framework. There are two ways you can distinguish frameworks:

Internal and external factors:

- i. **Internal factors:** In most cases, these are the factors an interviewee is expected to dwell on.
Includes:

1. Recent developments in the management of the company
2. Products launched by the company

- ii. **External factors:** These factors are generally beyond the company's control but are industry-related problems.

Considering the factors into consideration, one needs to find a perfect framework.

Creating a Hypothesis:

At this stage, evaluating the facts and formulating a hypothesis to find the root cause of the situation.

For example:

In the above example, you can segregate the consumers into divisions like the given below and based on clarifying questions, you can create an appropriate hypothesis.

Superficial Causes

 If you stop here the problem will recur

Root Cause

 A cause you can take action on that can prevent the problem from recurring

You are the Product Manager at Facebook. The traffic on Facebook is down by 3%. Identify why.

I have a few clarifying questions in mind before proceeding with the approach. How do we define "traffic"? Is this drop in traffic happening only on the app, desktop site, or both? Since when is this happening? And was this a gradual drop or a sudden one?

This has been experienced on the Facebook mobile app. We have been noticing falling numbers for the past week and this was a sudden drop. Traffic refers to the number of sessions taken up by the user in a single day.

Got it. And was this drop experienced across the world or was it concentrated in some region?

This is a global issue and not region-specific.

Okay. Number of sessions can come from new users or returning users. Have we experienced a drop in specifically either of the two?

Yes, there has been a fall in the number of sessions by returning users.

I'd like to break the number of sessions as the number of returning users multiplied by the number of sessions launched by a user on average. Has there been a fall in either of the two?

There has been a decline in the average number of sessions launched by a user on average.

So is this an external issue, i.e., has there been a fall in social media usage due to certain restrictions, new legislation, competitors, etc. or an internal issue?

It's an internal issue in the app.

So if it is an internal issue and the number of sessions have been on the decline, I can draw the inference that there is a bottleneck in users launching the Facebook app. Now, the app can be launched in multiple ways, namely, via shared links to posts/profiles, ads, notifications, logging onto a site with Facebook, or directly opening the app. Has there been any drop in sessions launched via any of these routes?

The number of sessions launched through notifications has fallen, the rest have remained the same. You may look into notifications.

Alright. I would like to further break down the number of sessions launched through notifications into number of notifications sent * Click rate. Have we changed the number of notifications sent to users?

No, the same number of notifications are being sent to the users.

So, has the click rate fallen?

Correct. The click rate has fallen by over 30% in the past few days.

The click rate can fall due to multiple factors. It could be due to lack of engaging content, timing of the notification, etc. Have we changed the content that goes into the notification?

Correct. You have identified the problem, we can stop here. Thank you for coming in.

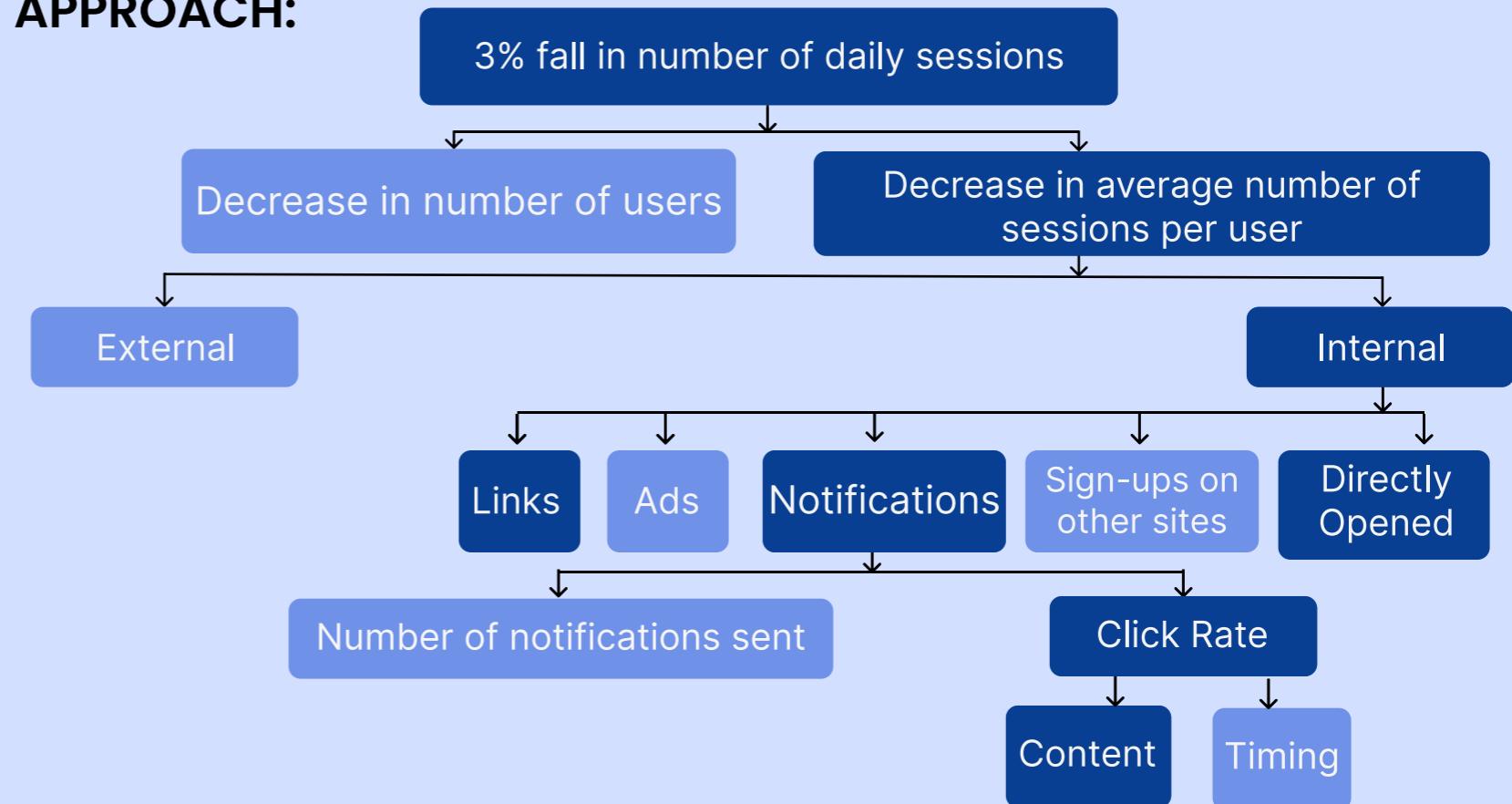
Thank you.

PROBLEM STATEMENT: You are the Product Manager at Facebook. The traffic on Facebook is down by 3%. Identify why

CASE FACTS

- Traffic refers to no. of sessions taken up a user in a single day
- Traffic decline has been recorded on the Facebook App suddenly in the past week
- It is a global issue
- There has been a fall in traffic originating from returning users

APPROACH:



KEY TAKEAWAYS:

- The candidate asked great clarifying questions to clearly define what the exact problem is so as to choose the most optimal framework to approach the problem
- Smaller buckets of internal factors were exclusive in nature, but since they were formed in an unstructured manner, the interviewee runs the risk of not being exhaustive

The Supply side of Housing.com is falling on a quarter-to-quarter basis, identify the problem associated with it

So, what exactly is the supply side of Housing.com?

The houses that we rent as well as the plots that we sell, basically comprise the supply side of Housing.com

What is the exact reason for this fall, Is any one of these two specified domains a major contributor to the fall?

No, it is not specific to any domain, it is common in general to both the domains.

Are there any more products of Housing.com which are facing a fall in the supply side?

No, currently we have to focus only on these two.

Since when are we experiencing this fall and is it observed in some specific parts of the country like north or south India?

This fall can be seen in the last few quarters and yes, it can be predominantly seen in the states in the south.

Is this problem observed with specific users, like are the new users not listing on our site or the existing users have stopped listing? Also based on the demographic data available, can we see anything like high-income users are listing less or users in the rural areas are listing less?

No, we are not observing any such trend according to our data.

Now I am assuming that since housing-related work is serious so most people must be using laptops for the same and there is not any issue with android/ IOS devices.

Yes, you are right. It works on both android and iOS devices.

Let's come to the solution part, I would like to analyse this problem in two ways, one considering the external factors while the other considering the internal factors.

In external factors, I'll analyse the following things:

- The institutes/organisations on which Housing.com is dependent, has that dependency weakened in any way?
- The competitors which are parallel to Housing.com
- The implied audience (the ones who are affected) of Housing.com
- The problems with the existing dealers.

Okay, go ahead.

Are our other competitors like 99 acres, facing the same issue?

No, they are not facing any such issue.

Are we facing any issues on the legal front or some government restrictions, due to which we are not being able to list properties from our side?

Yes, recently a law was passed in the assembly for the southern states which stated that any rental property can only be dealt with through government authorised personnel. This is a new step for government authorisation.

Is this any seasonal trend? Was this fall observed last time in this season too?

No, there is no seasonal trend.

Coming to the internal factors, was there a major change like some other product like makaan.com being launched and the entire audience shifting to the other product from the existing product, basically internal cannibalism?

No, that's not the case.

Then are there any major policy changes like an increase in the rent percentage?

That's not the case either.

So, I analysed that, due to the new government rule in the southern states the user experience for the users in that region is being disrupted. They have to go through an extra step which is either arranging the documents all by themselves or the waiting period is too long.

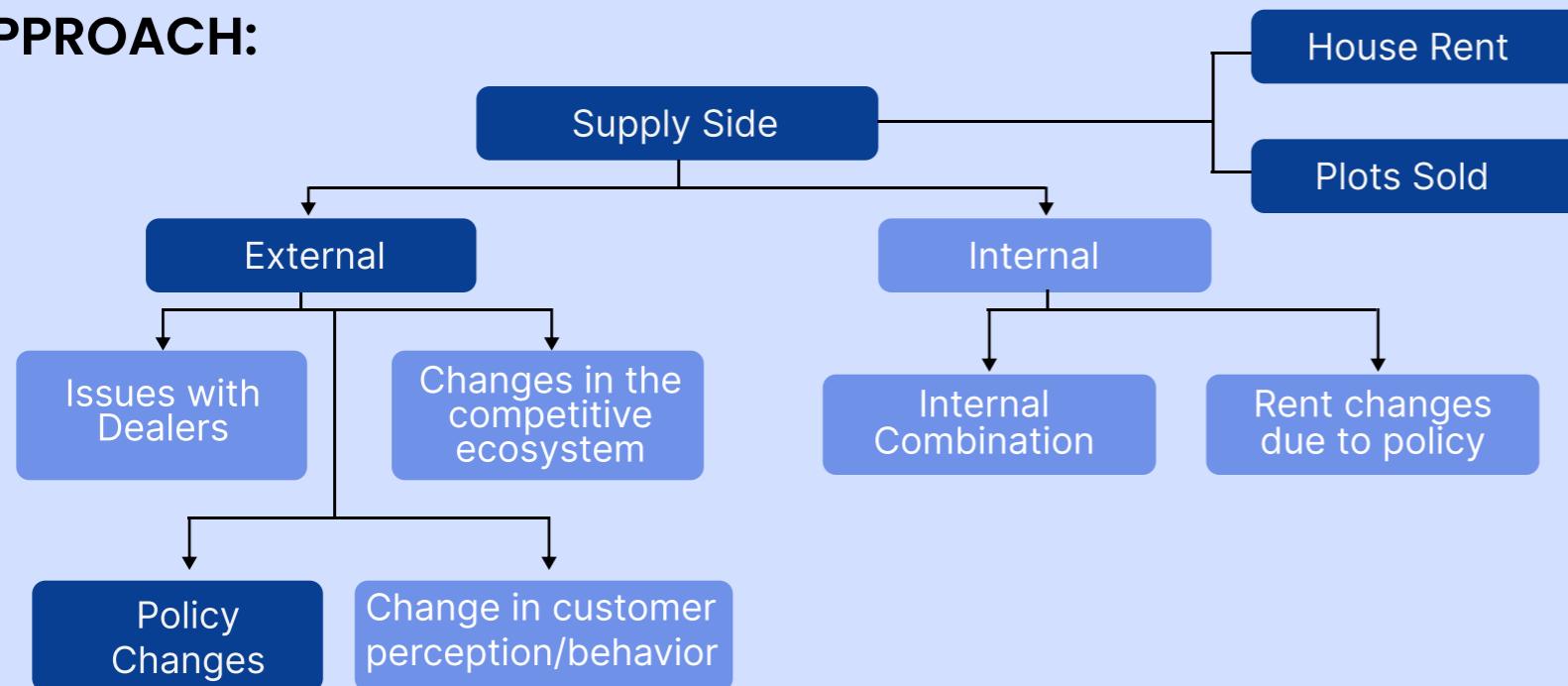
I agree with you. Do you have any suggestions to tackle this?

Yes, we can arrange pre-filled forms for this purpose and give the users a hassle-free experience. We can also offer agents in order to deal with long waiting periods and get our users covered.

That sounds logical, thank you.

PROBLEM STATEMENT : The Supply side of Housing.com is falling on a quarter-to-quarter basis, identify the problem associated with it.

APPROACH:



CASE FACTS:

- The Supply side of housing.com included Plots sold Houses rent.
- North and South India differ significantly in their supply business.
- Owing to a policy change, an additional step of government authorization for southern steps was mandated leading to a dissatisfaction amongst consumers.

KEY TAKEAWAYS:

- For terms like 'supply side' and other similar terms that have different contextual meanings, it becomes increasingly important to clarify and understand their composition.
- The candidate, breaks the issue down into internal and external issues and steers the problem through that framework. Realize that this split is MECE in nature. Whenever laying out a structure, follow similar splits which are MECE. Doing so makes sure that you don't miss out on any possible reason.

Meesho's sales have been declining recently. Diagnose the reason and suggest suitable solutions.

Thank you for the problem statement. I would like to ask a few preliminary questions before getting into the case. What all product segments the company is involved in?

The company has various product segments. Meesho offers products related to baby care, casual & formal wear, home & kitchen products, and cosmetics.

Does the company sell its products all over India? Also, for how long Meesho has been facing the decline? Is the entire industry facing the same issue?

Yes, the company serves pan India. The company has been seeing a decline in profits over the past year. Other competitors have not seen much decline but Meesho has been significantly affected.

Is there any data regarding whether the decline in sales is specific to a particular product segment?

Yes, there has been a decline in sales in the casual & formal wear & kitchen product segments.

Since the profit is declining, there could be a decline in revenue, an increase in cost, or a relative increase resulting in low profits. Initially, let us assume that the revenues are declining and then maybe later, we can have a look at the cost part.

Sure, go ahead.

Now, revenue = Number of units sold * price. Has the company changed its prices recently?

No, there were no recent changes in prices. You may analyze the decline in the number of units sold.

Sure, regarding sales, we have procurement, distribution, and customer demand, like are our customers switching to other competitors. Do we have any information related to these areas?

Yes, the customers are not satisfied with our service and thus looking for other options. Can you please analyze the user experience?

Sure. I would like to divide it into three stages - pre-purchase, during purchase, and post-purchase stage. Do we have any information on where the issue is?

Can you elaborate what all aspects you would cover in these three stages?

So, in the pre-purchase stage, we consider marketing and digital infrastructure. During the during-purchase stage, we consider the availability of products, prices & delivery, and in the post-purchase stage, we consider customer services such as the return of items, feedback, etc.

Yes, so the main reason is availability. What can you think of this?

So as you mentioned earlier, the decline in sales is mainly in casual & formal wear and kitchen product segments. One of the main reasons could be a change in customer preferences of product mix due to COVID. During COVID times, as most of the working population was working from home, there was a decreased demand for formal wear and increased demand for casual wear and kitchen-related products.

Right, there has been an increase in demand for casual wear. The company has been missing out on that readjustment and thus is falling behind. Now, can we have a look at the cost part?

Sure, let us look at the value chain of Meesho So there are three stages - procurement of products and then their outbound logistics i.e. transportation to a central warehouse, then to regional warehouses, and then delivery to the customers. There are other areas as well such as sales & marketing, development of digital infrastructure, rental costs for warehouses, etc. Is there any specific area you want me to look into?

Yes, let's look into outbound logistics. The company has to bear high costs for orders from the north and northeast. Why do you think this is happening?

Do we have information about where the current warehouses are located? And are they actively working?

The company has warehouses in New Delhi, Kolkata and Lucknow. The warehouse in Kolkata has high rental costs, and connecting the northeast region from there is a problem in itself. The warehouse in Lucknow is not so active due to less demand but the others are quite active.

Are there other options available in warehouses? Like, in terms of pricing and demand?

There are cheaper options such as Patna but the company is reluctant to change its distribution structure.

So I can see that in this case, both the transportation as well as the storage costs are increasing. The warehouse in Kolkata is very expensive and the warehouse in Lucknow is very inactive thus producing very less value.

Absolutely. So what would be your recommendations to the client?

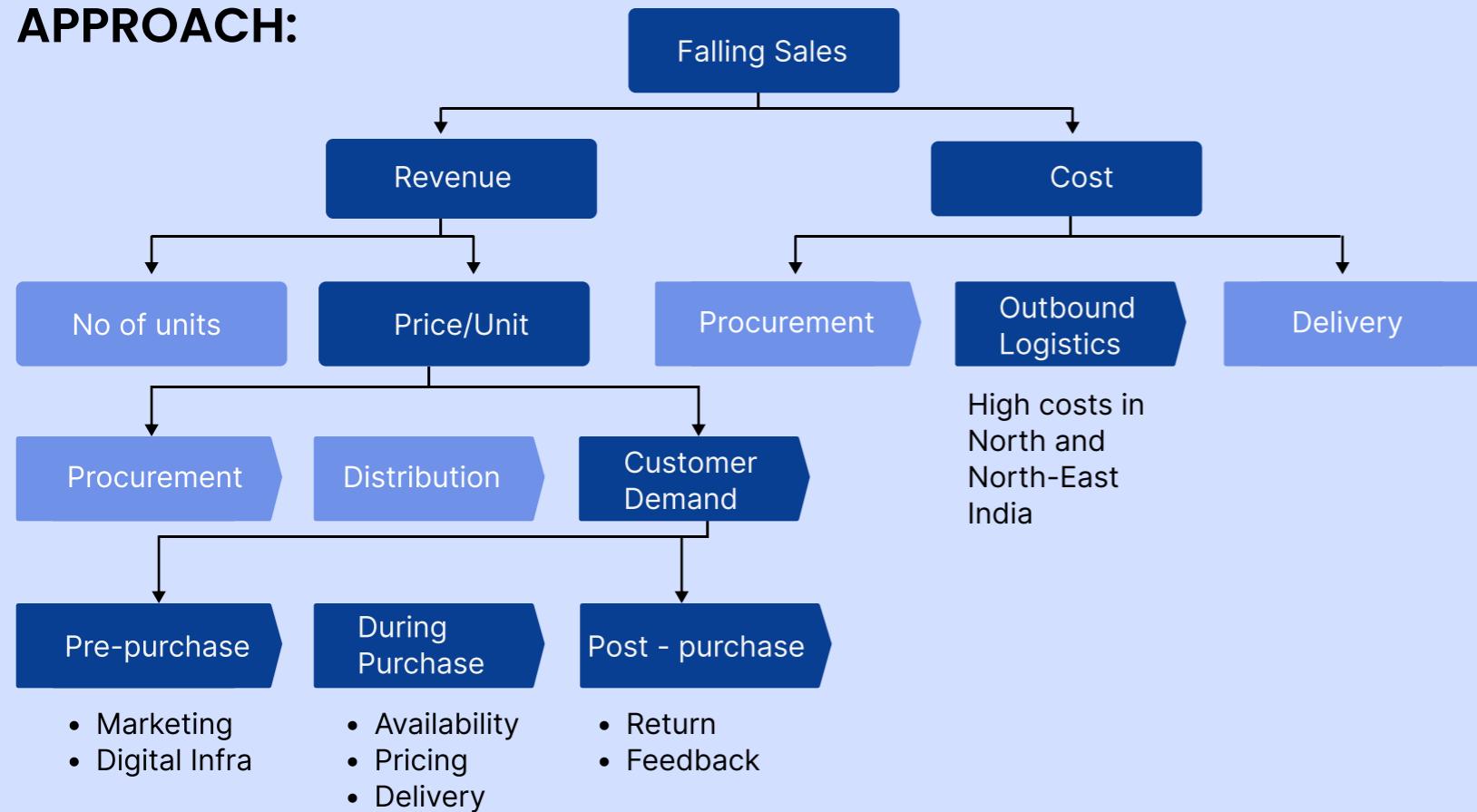
Few recommendations that I would like to give:

- To match consumer demand, the company should try to readjust its product portfolio more often.
- Currently, it should focus more on selling casual wear.
- Regarding logistics, to cut down costs, the company should try to transfer its warehouses from Kolkata to somewhere cheaper(Patna). Also, it should shut down its warehouse in Lucknow or at least give it for lease and open a warehouse somewhere else depending upon their demand demographics.
- Considering the demand in the northeast region, the company should look at the option of opening a warehouse in Guwahati.

Interesting. It was great interacting with you. Thank you!

PROBLEM STATEMENT : Meesho's sales have been declining recently. Diagnose the reason and suggest suitable solutions.

APPROACH:



CASE FACTS:

- Availability failure due to change in customer preference of product mix due to covid.
 - Problem with outbound logistics i.e high cost for orders from north and northeast.
 - Warehouse Rental cost high for kolkata.
 - Lucknow warehouse not active due to less demand .
 - Transportation and storage costs are increasing.

KEY TAKEAWAYS:

- Understanding the industry and its product mix and then focusing on the right product line segment to take further approach.
 - Breaking down each stage of value chain into sub-stages for deep analyzing that where the problem is?
 - lowering the fixed cost i.e(rental cost of warehouse or shifting to cheaper locations) according to sales trend and readjusting product portfolio can help to match the consumer needs.

RCA | LYFT DRIVERS (1/2)

Can you explain the issue you're addressing with Lyft drivers dropping out of a city?

Certainly. We're observing a decline in the number of Lyft drivers actively available to accept rides in a specific city, and it's not attributable to typical fluctuations.

Could you clarify what you mean by "dropping out"? Is it related to the daily active users (DAU) of drivers?

No, it's not about DAU in the sense of successfully providing rides. We're concerned with drivers who are available to accept rides but are no longer doing so in this city.

Is this city relatively small, and is it possible that drivers are operating across city borders?

Yes, the city is small, and some drivers may indeed operate across city borders, which could affect the availability of drivers in this particular area.

Is the drop in driver availability significant, and is it abrupt or gradual?

The drop is significant, and it's happening gradually over time, which is why we're concerned.

Have you noticed similar drops in nearby cities or regions?

No, adjacent cities or regions are not experiencing similar drops, which makes this issue specific to the city in question.

How are you planning to analyze and address this issue?

We're taking a systematic approach. First, we're categorizing the problem into acquisition, engagement, or retention issues based on driver behavior analysis.

Can you elaborate on the categorization process?

Certainly. We're examining various factors.

If it's an acquisition problem, it means new driver recruitment has dropped in the greater area.

If it's engagement, it suggests that drivers are becoming available to ride less frequently in this city.

If it's retention, it indicates that drivers are leaving the Lyft platform at a higher-than-normal rate.

How do you plan to determine which category the issue falls into?

We'll conduct a cohort analysis of drivers in different buckets. This includes examining the acquisition volume and assessing whether drivers who used to operate in this city have shifted to other cities or left entirely.

Once you've identified the category, what's your next step?

If it's an engagement issue, we'll investigate whether it's caused by internal or external factors.

Internal factors could include issues like feature launches/bugs leading to frequent app crashes in this area, hardware outages related to load balancers in this city, or policy changes such as the end of incentive programs.

On the other hand, external factors might involve changes in demand, such as drivers moving to other cities due to low business in this one.

Environmental factors like floods, public events, traffic congestion, or government regulations could also play a role. Competition from other ride-sharing services or PR campaigns against Lyft could be external factors.

How will you differentiate between internal and external factors?

To identify internal factors, we'll closely examine metrics related to software versions, operating systems (Android or iOS), support contact rates, and the timeline of feature releases. For external factors, we'll monitor PR headlines, competitor announcements, demand volume, and news related to the local environment.

Once you've identified the root cause, what actions will you take?

RCA | LYFT DRIVERS (2/2)

The actions will depend on the specific cause.

If it's related to a feature release, we'll collaborate with the engineering team to either roll back changes or fix bugs.

For incentive program issues, we'll work with the relevant teams to resume or update them.

If demand is the problem, we may offer discounts to attract more riders.

Regulatory challenges will involve engagement with government relationship teams and local authorities.

If it's competition or PR-related, we'll devise strategies to address these challenges.

In summary, what's your approach to resolving this issue?

We'll first determine whether the drop is seasonal and then categorize it into acquisition, engagement, or retention issues. From there, we'll pinpoint whether it's caused by internal or external factors and propose the appropriate changes accordingly.

Thank you for sharing a systematic and extensive approach to addressing this issue with Lyft drivers dropping out of the city

You're welcome!!

Daily active users on Instagram have dropped by 20%. How would you go about identifying the root cause?

To identify the root cause of the 20% drop in daily active users (DAUs) on Instagram, I would follow a systematic approach. First, I would rule out obvious reasons and then define and break down the metric to isolate the issue.

I'd consider seasonality patterns, like the fact that weekends usually have the highest usage and holidays see a surge in activity. Since this drop doesn't seem related to seasonality, I would move on. I'd also rule out a broad service outage, assuming that if such an issue existed, the company would be aware and working on fixing it.

What specific breakdowns of the DAU metric would you perform?

Firstly, I'd categorize users into new and existing, which can help isolate issues related to the registration flow.

Next, I'd examine traffic sources, including direct traffic, notifications traffic, and search engine traffic, as well as referral traffic from sources like FB. Additionally, I'd assess whether any new features were deployed on different platforms, such as iOS, Android, Web, Windows, MacOS, and more.

Finally, I'd analyze geographic data to check if the issue is localized to a specific area.

How would you utilize customer support data in this analysis?

Customer support data can provide valuable insights. If there's an increase in complaints related to specific issues, like posts not working on iOS or Android, it could explain why users are becoming inactive.

What about external factors? How would you consider them in your analysis?

External factors can indeed impact Instagram's usage. I would check if any new competitors have launched or if existing competitors introduced powerful features. Additionally, any announcements of hacks or security breaches on competing platforms could erode user trust in Instagram, potentially causing the decline in DAUs.

Could you share your prioritization of reasons and hypotheses based on your analysis?

Based on the analysis, I would prioritize two hypotheses. Firstly, if lower engagement among users of a particular age group or interest area is the cause, I would measure various engagement metrics. Secondly, if a new feature introduced on the app is not well-received, I'd assess the usage of this feature compared to others.

How would you conclude your root cause analysis?

To conclude, if the drop in DAUs has been drastic, it could indicate a sudden change in a feature or usability. If the drop has occurred gradually over several months, it likely means users have lost interest due to reduced interactions with connections, irrelevant suggestions, a lack of content generation, or difficulty in sharing new content.

Given these steps, how would you move forward?

Firstly, I would want to clarify a few points. Is the 20% drop in DAUs a sudden decline or has it occurred gradually over a few months?

It's been happening gradually for about a year.

Is this drop observed only on Instagram, or have similar trends been noticed on WhatsApp and Facebook as well?

It's specific to Instagram, with no significant impact on WhatsApp or Facebook.

Given this information, I'd like to explore potential reasons further. Could there be a specific type of posts that users have reduced sharing, such as a decline in picture posts or video posts?

RCA | INSTAGRAM USERS (2/3)

Mainly, users have reduced sharing picture posts, and this has been consistent across a wide range of users.

Considering it's a worldwide drop, not specific to devices or demographics, and has been happening gradually since April 2020, it could be related to the COVID-19 pandemic. Users typically shared outdoor activities and experiences, which were limited during lockdowns. Have you observed any changes in Click-Through Rates (CTR) or Cost Per Install (CPI) during this period?

Interestingly, CTR and CPI have increased during this time, and the usage of the "Shops" feature has also gone up.

Given these insights, it appears that the drop in DAUs could indeed be linked to the pandemic, as users had fewer opportunities to share outdoor experiences. As the global economy reopens, we can expect to see improvements in DAUs.

You're correct. We have already observed a 2% increase as things are opening up.

You're welcome, and thank you for the opportunity to discuss this issue.

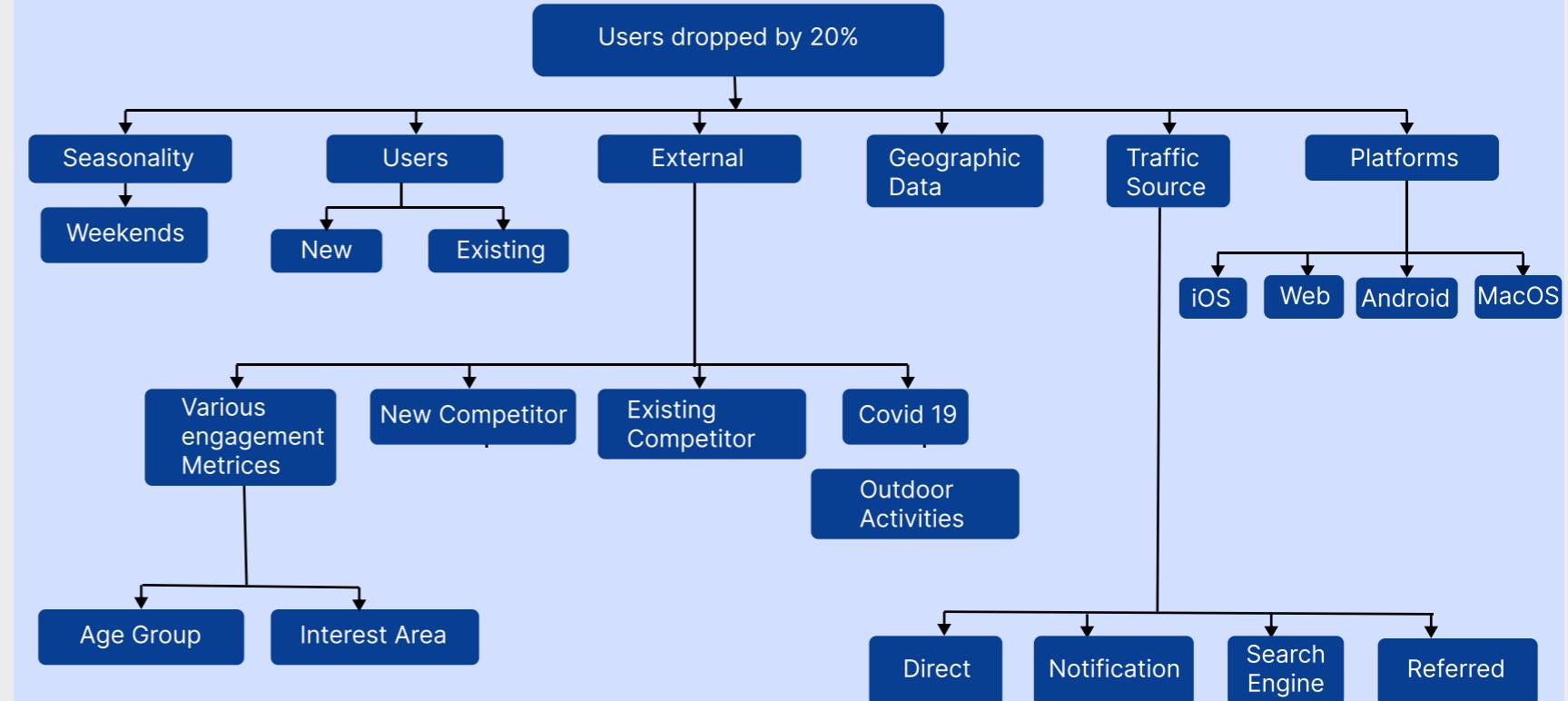
PROBLEM STATEMENT :

Daily active users on Instagram have dropped by 20%. How would you go about identifying the root cause?

CASE FACTS:

- The issue is not related to seasonality or broad service outage
- 20% drop in DAUs is not sudden decline but has occurred gradually over a few months.
- It's specific to Instagram, with no significant impact on WhatsApp or Facebook.

APPROACH:



KEY TAKEAWAYS:

- Candidate did a great job firstly in breaking down the potential internal issues and secondly by keeping the possibilities of any potential external reasons as well.
- Candidate's clarifying questions were on point.
- Asking for the CTR or CPI to verify the possibility of COVID being the reason was a very wise line of thinking.



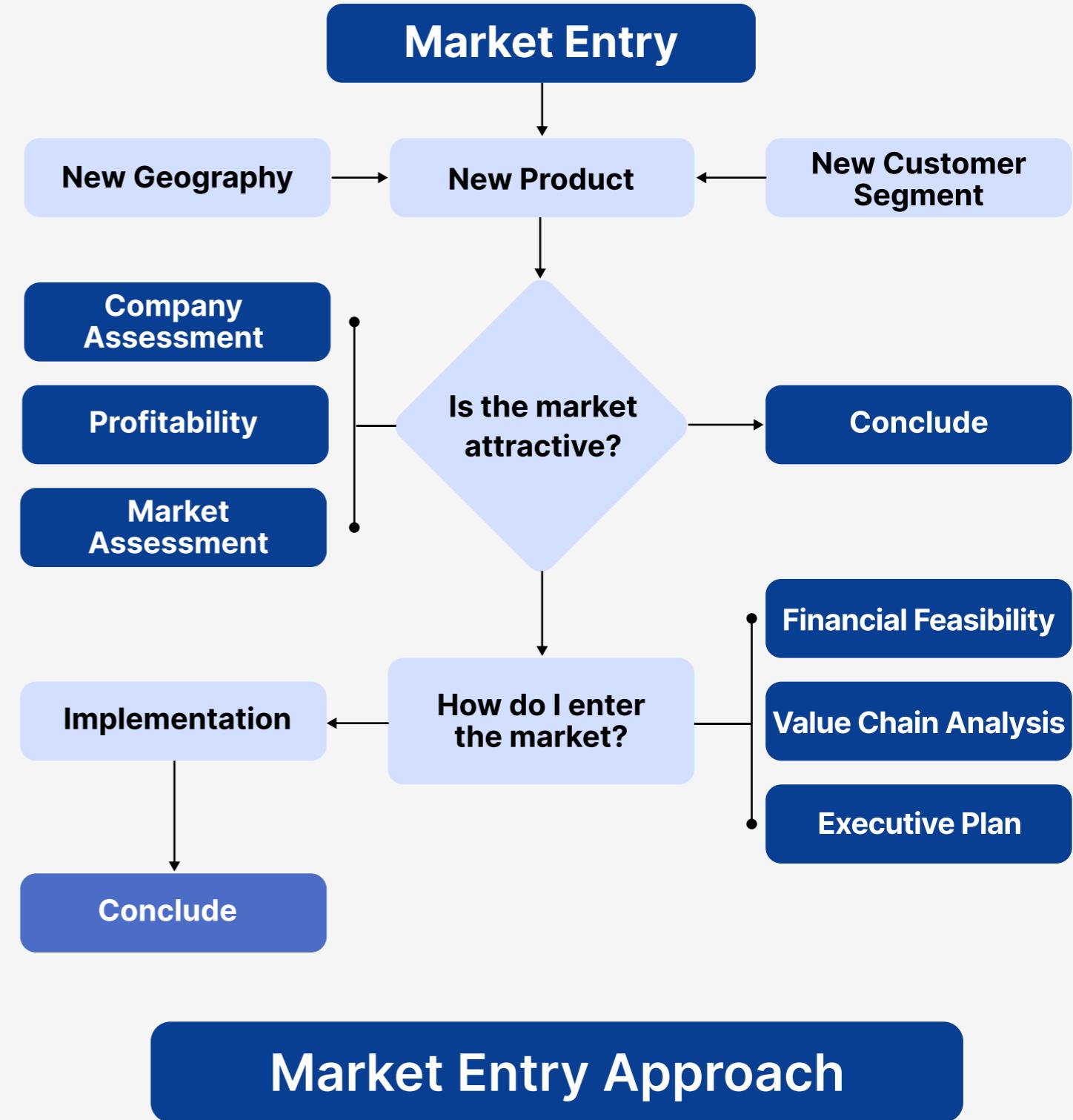
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Market Entry

MARKET ENTRY APPROACH

Now to answer the question “**How do I enter?**”, the candidate should follow the process:

- **Target Value Chain Segment:** Thoroughly understand the target market's value chain and decide which segment of the value chain should the company enter
- **Possible Barriers to Entry:** It is also advisable to often check with the interviewer about possible barriers to entry in this market and pertinent issues
- **Mode of Entry:** Following the completion of the above two steps, the candidates can propose the mode of market entry. Typical modes of entry include **Partnerships, Mergers and Acquisitions, Joint Ventures**, and **organic modes of entry**. Careful perusal and cost-benefit analysis should be carried out before choosing a mode of entry
- **GTM strategy:** To synthesize, the candidate should propose a GTM strategy incorporating all the above-stated information and should outline future targets and objectives



MARKET ENTRY APPROACH

A market entry is a case type that includes candidates to evaluate and decide whether a client company should enter a particular market. These cases can primarily be of 3 types-

 Geography	 Product Diversification	 Customer Segment Expansion
In these cases, candidates whether the business should expand to a new geographical market, for example, if Tesla should enter the Indian market.	In these cases, candidates assess whether the business should launch new business lines into their existing market, for example, if Apple should start selling smartwatches.	In these cases, candidates assess whether an improvement on an existing product or service caters to new customer segments who don't use the product.

Solving any market entry case primarily involves answering the following two questions -

Is the market attractive enough?

If yes, how should the company go about it?

Through this question, the candidate assesses whether the company should take the market opportunity or not.

To answer "Should I enter?", there are two assessments one will have to make – market assessment and company assessment. Company assessment will reveal the company's internal motivations to expand, whereas market assessment shows the external motivations driving expansion decisions.

- **Company assessment:** The first step after receiving any case is to clarify about the company. This includes data like history of previous products, launches and overall vision of the company. Understanding the client's internal motivations will help one solve the case.
- **Market assessment:** The next step is to inquire into the market of interest to understand external motivations for expansion. Is it the market size or the potential market demand? Candidates can use a profitability framework to judge if the market is attractive enough.

If you decide that the company should not enter, you no longer need to answer the next question.

If you decide that it should enter, move on to the next step.

Figuring out how the company should enter the market will involve assessing the feasibility of entering a new market for the company

- Does the client company have the **financial capacities** and **capabilities** to adapt to and profit from the new market?

Figure out whether the client company's financial situation can cover **investment costs**. To do this, you first need to estimate the amount of investment required.

The company's capabilities help it secure market share by **differentiating** it from other competitors in the market. Examples of capabilities are firm-specific competitive advantages such as patented technologies, efficient logistics & production capacities, local knowledge, a low-cost structure, etc.

The candidate can get this data about the company from the interviewer and then proceed accordingly. To better analyze the position of the company, the candidate can use a 3C1P framework just to be exhaustive in their approach.

You are working with Redseer and your client has a massive company that has multiple businesses and they want to enter into the business of batteries. You are expected to outline the considerations that Redseer should keep in mind before making its entry into the Indian market.

Before I proceed, I would like to ask a few questions, is that okay?

Go ahead.

Do any of the company's existing businesses involve battery manufacturing, and is there any connection between established companies entering the Indian market?

No

Does that company need to enter any specific kind of battery industry?

Yes, that company wants to enter into the business of EV batteries more specifically.

What is the main goal of the client? What did they want to achieve by entering into the Indian market for EV batteries? Are they primarily interested in launching a product or making investments in businesses related to the battery domain?

The client's main goal is to expand their presence and establish market share for EV batteries in the Indian market. Apart from this, they believe that there is a significant growth opportunity for EVs because of the government's push toward a more sustainable transportation system.

Are they manufacturing any specific kind of EV batteries that are focused on any specific type of technology?

Whether they want to expand in the industry of lithium-ion batteries or produce a range of different types of batteries.

The client has a specialized focus on Lithium-Ion batteries tailored for electric vehicles. They are renowned for their extensive expertise in Lithium-Ion technology and a track record of manufacturing high-performance batteries.

For what kind of vehicles are they manufacturing batteries?

This applies to all types of vehicles, regardless of whether they are four-wheelers or two-wheelers.

Does the client's company already have any partnerships or resources in the Indian market or they are planning to start from scratch in terms of their presence?

The client is starting from scratch and has limited partnerships with Indian-based companies.

Okay so, I would first analyze the Financial feasibility of the company. It includes analyzing the cost that is associated with each unit whether it is setting up manufacturing facilities, market campaigns, and other expenses and by comparing it with the current financial position of the client company it can be assessed if they have enough resources for the Indian market entry.

Okay so, what factors will you consider to assess client capability and feasibility for entering into the market?

For that, I would consider, whether the client has the necessary capability and resources available, and their ability to adapt Lithium-ion battery technology to meet the needs of the Indian market, this will include adapting to local regulation, establishing an efficient distribution channel and tailoring products to local preference.

MARKET ENTRY | REDSEER (2/2)

That's great. How would you propose the time frame for market entry strategy?

I would consider the timing of the market event, any major industry event, or policy change like the government considers any policy change for the EV sector that is in favor of the company.

If the client enters the Indian market what should be the method of expansion that should be considered?

Considering that the client focus on the lithium-ion battery industry and limited resources in India, so, a partnership-based entry would be better as collaborating with local EV manufacturers, distributors, or technology partnership would provide a strong local presence, and would help them to establish in even a better way.

So, how would you finalize the execution plan for the market entry of the client's company?

Okay so, considering all the facts, the execution plan would involve:

1. Retailing of objective
2. Task, responsibility, and timeline.
3. Partnering with local manufacturer
4. Compressive guide for the client to follow.
5. Automate the entire process with more manufacturers.

This plan would outline negotiation processes, technology transfer, production setup, joint marketing effort.

Moving to probably the last question, there is a big demand for lithium in India but people are not able to manufacture Lithium-ion batteries, So what is your say on this?

I truly agree with that fact but in Kashmir, there are traces of Lithium that has been found and TATA Chemical has suggested a method for recycling Lithium-ion battery. So, in the future, there might be the possibility that Indian companies or industries start manufacturing lithium-ion batteries rather than exporting materials.

Good job, we can close the case here.

MARKET ENTRY - KEARNEY (1/3)

The client is a global multi-brand retailer and wants to enter India. Government rules suggest that 30% of the investment should be in the backend management. The client is looking to invest in milk and dairy products.

What should be the total manufacturing capacity of factories to be set up?

Who is the client and the industry they operate in?

The client is a global company engaged in the manufacturing and retailing dairy products.

What kind of product does the client want to sell?

The client wants to sell skimmed milk.

Who are the main competitors in this market?

The main competitors are retailers such as Reliance Fresh, which sells vegetables and dairy products.

(Having completed the 3C1P questions, I started questioning to create a structured approach.)

How many supermarkets are we targeting in India & what are their sales?

There are 50 hypermarkets with an average sales of 1 crore rupees per month and 500 supermarkets with an average sales of 10 lakh rupees per month.

What is the percentage of spoilage for milk products in these supermarkets?

The spoilage is 5% in hypermarkets and 10% in supermarkets.

How much retail capacity does the client need to meet the demand?

The client wants to occupy 20% of the space in hypermarkets and 10% of the space in supermarkets for their product.

Can I assume the price of each skimmed milk to be 60/litre?

Yes go ahead.

So I would be dividing the entire sales / 60 to calculate the milk quantity required.

1. Total sales:

Hypermarket: $50 \times 1\text{cr}$

Supermarkets: $500 \times 10 \text{ lakh}$

2. Calculating the production capacity considering the additional reserves for spoilage and the capacity to be occupied in supermarkets & hypermarkets and summing them up:

In hypermarkets: $50\text{cr} \times (1+5/100) \times 20/100$

+

In supermarkets: $50\text{cr} \times (1+10/100) \times 10/100$

Dividing the calculated number by 60 we get nearly 3Mn Ltrs per month

That looks absolutely right. Should the manufacturing capacity be consolidated or fragmented?

Should we consider the proximity of retail markets to the manufacturing factories?

MARKET ENTRY - KEARNEY (2/3)

How does this relate to the question?

I considered the pros and cons of consolidating or fragmenting the manufacturing capacity.

The decision to consolidate or fragment the capacity depends on the geography of the markets and the factories.

If the factories are located near the markets, then it would be more efficient to consolidate the capacity and reduce transportation costs and spoilage risks.

If the factories are located far from the markets, then it would be more effective to fragment the capacity and distribute it closer to the markets to ensure freshness and quality.

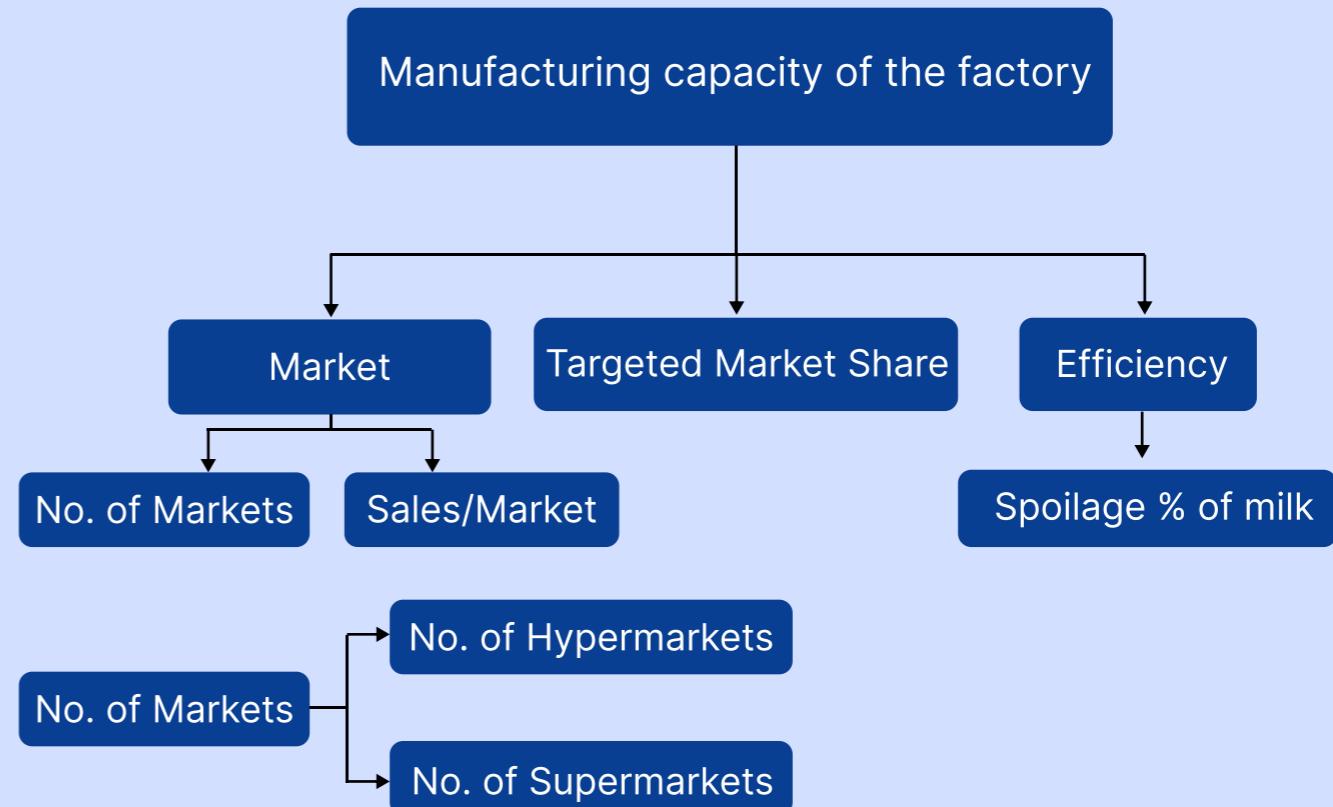
Very well, that makes sense.

PROBLEM STATEMENT: The client is global multi-brand retailer and wants to enter india. Government rules suggest that 30% of the investment should be in the backend management. the client is looking to invest in milk and dairy products.

CASE FACTS

- The client is a global multi-brand retailer with an international presence and is looking to invest in milk and dairy products.
- Company wants to enter in skinned milk market.
- Spoilage % of milk in milk industry is a major number to be considered.
- Geographical locations of the markets is very imporant for such industries's product.

APPROACH:



NOTE: Considering the spoilage percentage in final numbers.

KEY TAKEAWAYS:

- Knowing the company's current situation and goals is crucial in any market entry case.
- Using 3C1P approach for clarifying Questions is important for overall understanding .
- location of the markets is important for deciding the factories should be fragmented or consolidated.
- Having industry-specific knowledge comes in handy as it helps you access the market situation more comprehensively and calculate the market potential solar more accurately.

As a Consultant for a German energy supply firm looking to venture into renewable sources of energy like photovoltaics, you have to analyze the investment opportunities of solar panel deployment in the Indian market and provide an initial Go or No-Go recommendation based on your analysis.

I just had a few preliminary questions, to begin with. Starting off with the internal factors, I would like to know more about the German company. Where all does the company operate from, and what are its core competencies? How far along is it in the know-how of constructing and operating solar panels? Does it have any existing business partnerships or infrastructure in India?

Sure. To answer your questions, the company is present in international markets with plants all around the world. It has expertise in the development, installation, and operation of all kinds of renewable energy sources and has successfully tested and deployed several solar panels across Europe. It does not have any business networks, partnerships, or assets in India.

Got it. Moving on to my next question, what exactly is the scope of the deployment? Is it supposed to be for residential, commercial, or industrial purposes?

The company wants to start by deploying the panels in the industrial sector for the time being.

So, when we say a solar panel, I wanted to understand if I should include only conventional solar panels in the analysis, like rooftop and groundmounted ones, or floating solar panels, as well?

How will this affect the decision?

From what I know, conventional and floating panels both have different capacities and investment costs. The capacity for

floating panels is low, and the investments are high, but it's the other way around for conventional solar panels.

Fair enough. Let's focus on only conventional panels for this case.

Great. Moving on, as far as I know, the technology readiness of conventional solar panels is high in India since India ranks 5th in global solar power deployment. This means that there won't be any R&D necessary for market entry. Is this right?

Yes. Go ahead.

So, I wanted to get a grasp on the costs of conventional solar panels to know the market better. These costs depend on a lot of factors like- The type and issues of the roof or surface Energy consumption The type of technologies used in the system and its installation Size of the installation. Since we are currently going to focus on industrial deployment, the end customers are going to be energy consumers like companies, public facilities, and industries with grid providers and distribution companies as intermediaries. I have some more assumptions about the external market factors. It would be great if you could validate them as well.

Sure.

So, India is within the top 5 countries in terms of the magnitude of energy consumption, with a strong focus on moving towards carbon neutrality by 2070 with coal phase-out, nuclear power reduction, and a strong focus on renewable energy sources There is a pipeline of renewable energy projects being planned by multiple multinational companies providing quite a strong competition. There are a lot of companies and private individuals, as well as government incentives like M SIPS, that provide a favorable environment for investment in renewable energy sources in India. Right?

Yes. Solar energy is a very crucial technology for India's decarbonization plans, and the government is providing several PLIs and subsidies for incentivizing the adoption of solar power. In fact, investments in the renewable energy sector in India have surged more than 125% in the year 2022. Let's do a quick estimation of market potential then, shall we?

Sure. So, for the market potential solar, I need to find the conventional solar panel potential in 2050 in India, right? Cause that is the standard metric for market potential solar in the energy sector.

Right. So, what all data do you need to calculate the market potential?

I'd need to know the -

- land-use estimate for solar energy in 2050 in India
- The approx area of utilization for conventional solar panels for industries
- Number of solar panels per square km that can be installed and,
- The average capacity of an industrial solar panel

Great. So, Consider the high-side land use estimate for net-zero to be 75,000 km² for solar, with 95% area for conventional solar panel systems. 8 solar panel systems can be accommodated per km². Each system has an average capacity of 6.4 MW.

Noted. So, Area available for solar = 75,000 km² Expected area utilised for solar = 72,000 km² (95% of available area) Number of conventional solar panel systems in that area = approx 6,00,000 (8 per km²) Market potential solar in 2050 in GW = (6,00,000 * 6.4) / 1000 = 3800 GW According to my calculations, the total market potential solar for conventional solar power systems should be 3800 GW in India.

Now that you have assessed the future market potential, what should be the next step?

Well, after analyzing the problem across various qualitative assessment factors like Company, Product, Competition, and Market, I'd like to do a profitability calculation to be able to give the Go or No-Go recommendation.

Perfect. Please, let's just go ahead with the general approach of how you'll do that and skip the calculations for now.

The qualitative factors show that going ahead with the investment opportunity would be a wise decision. Coming to the quantitative part I think conducting the profitability analysis for one conventional solar panel system over its lifespan will ensure the general profitability. First, I'll find the sales by taking the product of the capacity, which is usually taken in MWh with the price/MWh, the lifetime of the panel. Next, I'll find the costs by taking the sum of investment costs and the running costs over a lifetime. Finally, the profits will be the difference between the Sales and the Costs. And if the profits are positive, I would suggest the Company with a Go recommendation.

Could you elaborate on the calculation of running costs over a lifetime?

Sure. So the running costs over lifetime is the product of the running costs per annum and the lifetime of the panel. The running costs per annum comprise of fixed costs like leasing and insurance costs and variable costs like operating & maintenance costs. If there's anything else that you'd like to know, I would be happy to answer.

Great. So, we have concluded that the company should go ahead with investing in conventional solar panel deployment in India. That would be all.

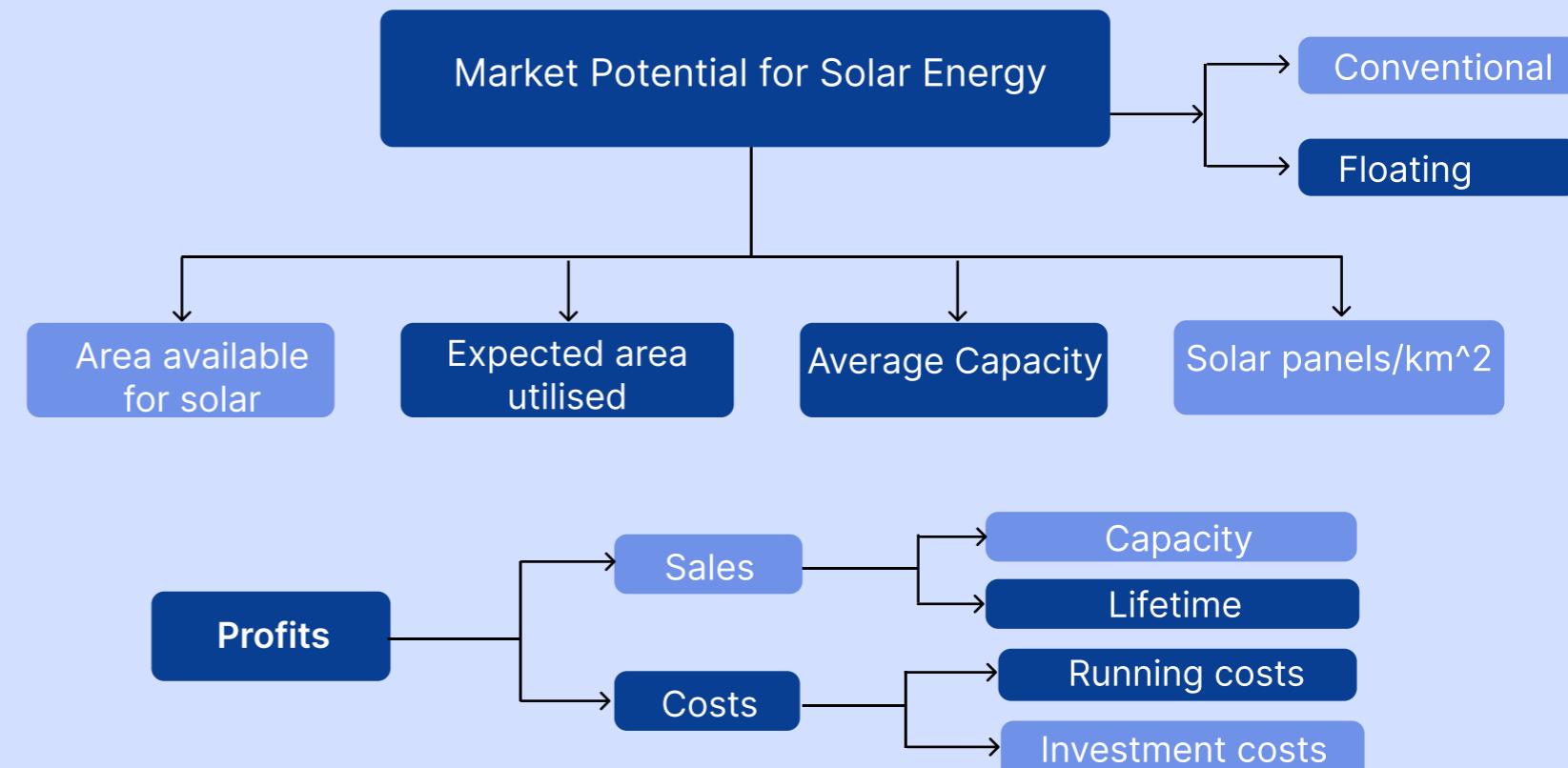
Thank you.

PROBLEM STATEMENT: As a Consultant for a German energy supply firm looking to venture into renewable sources of energy like photovoltaics, You have to analyze the investment opportunities of solar panel deployment in the Indian market and provide an initial Go or No-Go recommendation based on your analysis.

CASE FACTS

- The client is a German company with an international presence and expertise in developing, installing, and operating all kinds of renewable energy sources.
- It does not have any partnerships/business networks in India.
- Focusing on the introduction of only conventional solar panels in the Indian market for the time being.
- Solar energy is a crucial technology for India's decarbonization plans, and the government is providing several PLIs and subsidies to incentivize the adoption of solar power.

APPROACH:



KEY TAKEAWAYS:

- Knowing the company's current situation and goals is crucial in any market entry case.
- Having industry-specific knowledge comes in handy as it helps you access the market situation more comprehensively and calculate the market potential solar more accurately.

Your client is an ex-veterinarian backed by a sizable investment from an investment banking unit. Through a recent survey, they became cognizant of the gap between the supply of pet care products and the demand for these products among concerned dog owners, with 20% of the dog owners opining the unavailability of these stores at optimal locations. On the basis of this finding, the client wants to set up a pet store in Delhi. For that purpose, you have to assess the following two questions.

- What's the market size of the pet owners' market in Delhi, and would it be feasible to focus vertically on the dog owners' market or should we cover all the different pet owners horizontally?
- How should the client enter the market?

May I go ahead with a few preliminary questions?

Sure.

What exactly is a pet for the reference of this case?

Any domestic animal owned for non-commercial purposes like dogs, cats, etc.

Whom can I consider as pet owners?

You can consider households having pets of all income brackets and pet centres where animals are taken care of collectively.

For what timeline or duration should I find the market size?

You can do it on an annual basis.

Ok, to find the required market size, we need to find the product of the price each customer bears annually and the total volume of the customers in Delhi. So let me start with finding the latter one first.

Sounds good; please go ahead.

Sure, so taking the population of Delhi as 2 crores with a split of 70% to 30% for urban and rural, respectively.

you can take that 80 - 20 instead.

Ok, now in the rural section, considering the income factor and low standards of living, we can assume the volume to be negligible in this section as owning a pet accounts for leisure expenses which exceed their affordability. For the urban region, we can again split it into a lower class, middle class and upper class, with each having a share of 20%, 60% and 20%, respectively. Since we are considering the urban section here, we can consider the average household size to be 5, so the number of households in the lower class will be $(2 \text{ crores}) * (0.7) * (0.2) / 5$..which comes out to be around 6 lakhs households, and similarly, for middle and upper class it comes down to 17 lakhs and 6 lakhs households respectively.

Makes sense; please continue.

Now, considering factors such as leisure time and expenses, maintenance costs and income levels, would it be fair to assume that 5% of households lying in the lower class have pets, 10% of households in the middle class and 20% of households for the upper class.

Yes, it does sound fair.

Ok, so after calculation, the number of households that own pets comes down to 30K, 1.7 lacks and 60k for lower, middle and upper classes, respectively. Again the number of pet centres will be insignificant in comparison to the this figure, so we can simply increase the final value by 2% to cater the gap occurred, is that fine?

Correct, Please go ahead.

Alright, now i will move forward with the cost incurred by each individual annually,

The main expenses can be divided into procurement cost and maintenance costs.

For procurement would it be correct to assume 10k rupees for the lower and middle class whereas 15k for the upper class considering that they can afford pets of better breed.

Sounds good.

Ok, now for the maintenance part the major costs incurred account for food expenses, self care products and other accessories like toys, etc. Can i know the cost of few of these products to move ahead with calculations?

You can take a good assumption here.

Alright, so let us assume for the middle and lower class the food cost is nearly 30K per annum, self care cost is 10K and cost for accessories is 5k. And again as the upper class has higher affordability limits, they will opt for premium products so cost split for the upper class will be 50k , 20k and 10k for food, self care and accessories respectively.

What are the resultant maintenance costs?

For lower and middle class the overall maintenance cost comes down to INR 45K annually and for upper class it is 80k. Now, considering procurement happens once in ten years for each households so the final cost incurred per household boils down to INR 46k for lower and middle class and INR 82k for the upper class. So the final market size is INR $(30k)*(46k) + (1.7 \text{ lacs})*(46k) + (60k)*(82k) = 141 \text{ crores}$ which after increasing by 2% comes down to nearly INR 144 crores (final market size). And instead of covering it horizontally by incorporating every animal, it would be more feasible to focus vertically on the dog owners comprising nearly 45% of all the kind of pets owned. So the dog owners' market would be around 45% of the total market size which would be nearly INR 65 crores annually.

Good job. So, is the market attractive or not?

I'd first like to understand the market share that we'd like to accomplish of the entire dog owners' market and the competitors' individual market shares.

Sure, you can assume 2% market share, since the market is very fragmented and legacy brands have a lot of customer loyalty.

Understood, thus the potential revenue that we stand to make would turn out to be 2% of 65 crores, which is 1.3 crores on an annual basis. Additionally, I'd like to enumerate the costs associated with the venture. I hypothesize that shop rent, employee wages, electricity expenses, etc. will fall under fixed costs, which would roughly account and certain variable costs would be those associated with materials like pet food, pet care products, etc. In total, these would be somewhere around 4-5 lakhs on a monthly basis. Should I proceed with this assumption

Given that a lot of dog owners have a reasonable dispensable income, this seems like a fine estimate. You can proceed with the same. Additionally, Consider the fixed investment to be around 10-20 lakhs incorporating marketing , brand-building investment, etc.

Correct, so the profit that we can make is Revenue - Fixed Investment - Running Costs. Thus, the bottom line is around 50-60 lakhs on an annual basis, which seems very promising

Great, so how do we go about entering the market?

Before I begin suggesting that, are there any barriers to entry that might pose a challenge.

Yeah, so we were thinking of setting up the shop in a posh locality which a good percentage of dog owners' reside but there are existing shops there that have nice brand loyalty amongst the customers. Additionally, as of now, we don't have any differentiating factor that would help us accomplish the market share that we target

In terms of establishing our presence in the posh localities, we could consider marketing our pet care facilities and distinguishing them as premium. Additionally, we could collaborate with pet grooming stores (which this posh populace frequents) in order to get access to this populace. There would be other spots like parks or dog races, etc. We can identify them and either partner with such events or use these events as a marketing opportunity

Great, what about the other customer segments? Economy buyers and collective centres?

For collective dog centres, we can come up with schemes to offer them products in bulk at a discounted price initially to build trust and make the customer acquisition process hassle-free. As for the economy buyers, price would be a significant factor. So, that should be looked into to smoothen the acquisition process. Additionally, since the client is an ex-veterinarian, they already have a good network in pets.

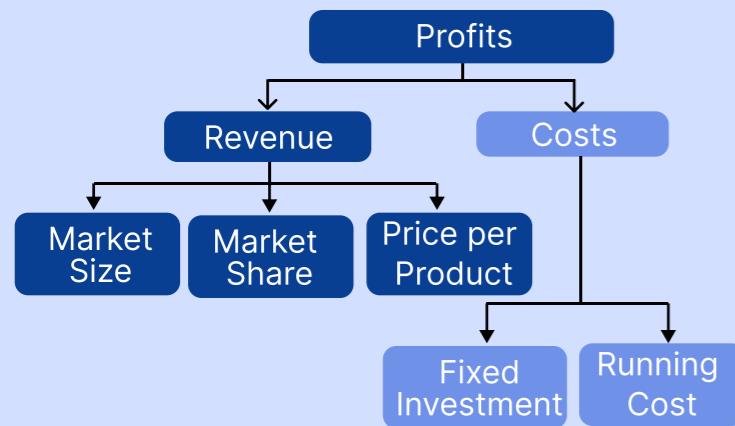
So, how should we enter?

Given that upon assessment, the market turned out to be attractive. I'd recommend entering the market organically, since the client already has a broad network in the dog community, owing to his years of experience working as a veterinarian. We could collaborate with certain pet-grooming centres to establish a better market presence.

Good job, we can close the case here.

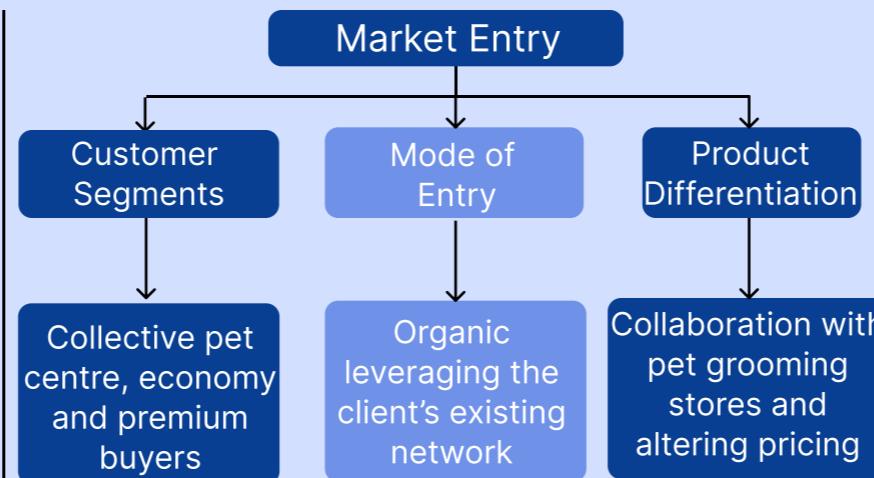
- PROBLEM STATEMENT :**
- What's the market size of the pet owners' market in Delhi, and would it be feasible to focus vertically on the dog owners' market or should we cover all the different pet owners horizontally?
 - How should the client enter the market?

APPROACH:



Profits = 2% of 65 Cr - Fixed Investment
- Running Cost

Profits = 60Lakhs/Annum



CASE FACTS:

- The interviewee could have either focused on all the pet owners horizontally or explored the dog market vertically. Given, that the dog owners' market is a substantial chunk of the entire market, vertical entry was prioritised
- Marketing can be done by partnering with pet grooming stores, which are popular in the posh populace
- Three customer segments were zeroed in on, the collective pet centres, economy dog owners and premium dog owners

KEY TAKEAWAYS:

- The decision of vertical/horizontal entry was made basis the sheer proportion of the dog owners' market from the pet owners' market
- Be on the lookout for subtle clues/tidbits in the question that enable you to make better/more substantiated decisions. For instance, given that it was already mentioned in the question that the client has a strong network owing to his vast experience as a vet, we were able to propose an organic mode of entry into the market

MARKET ENTRY | ENERGY DEVICE (1/3)

Your client is a manufacturer of electronic equipment for industrial customers operating in the US. The Research & Development department has developed a new product -- a device that could replace all typical energy costs using wind technology.

The estimated household price to the customer is around INR 1 lakh, with an estimated investment of around INR 700 crores.

Assess if they should enter the product into the Indian geography or not.

I want to begin with some clarifying questions. First of all, I would like to understand the company's vision in launching such a product.

The company realised that given the rapid surge in carbon emissions, it is the need of the hour to cut down on our carbon footprint to meet international goals. For that purpose, we put things in motion for this initiative. In the process, it also wants to become a do well, do-good company.

Got it. I would like more details about the product we plan to launch.

Our product is a sophisticated device that operates on wind technology, i.e., converting wind energy into electricity. It is an extreme upgrade to the traditional sources in terms of energy efficiency. If the device is integrated on a large scale, it could significantly lower the carbon footprint. Its requirement is exposure to mild to strong wind and periodic replacement of internal fluids and chemicals

I hypothesize two costs :-, Capital and Operational Expenditure. What would the cost to the customer be for these two buckets

The customer only needs to make a one-time investment of INR 1 lakh, and in terms of running operating expenses, they're around 20% of the Fixed investment

There are no wind energy linked incentives provided by the Government. Are there any other incentives worth considering?

As of now, the Indian Govt. hasn't provided any incentives. But, the company is optimistic that the future landscape wrt to incentives is bright as EVs and solar energy devices are already incentivised

What is the landscape of the competitors in the Indian market?

The market is at a nascent stage right now and the market is fragmented with no one having a consolidated share

I shall take some time to structure my thoughts before beginning

Sure, go on

I will find the profits, the company would make from the Indian market using the mathematical breakdown

$\text{Profit} = \text{Revenue} - \text{Cost}$ (Fixed investment and running costs)

Cost is already given, i.e. INR 700 crore.

$\text{Revenue} = \text{market size (in volume)} * \text{market share} * \text{price per product.}$

Guesstimating the market size of the energy-saving devices Since the device requires mild to strong wind exposure, I would like to apply a split based on geography. Could you please provide me with information on the same?

Great approach. The entire country experiences strong winds, but they are seasonal. Some regions like Leh-Ladakh, parts of Rajasthan, Gujrat, Maharashtra, Karnataka, and Kerala, experience strong wind across the calendar.

Since a household needs to make a considerable investment, our target market would be regions with strong wind throughout the year. Such areas are among the top populated states so that I would consider 35% of the total population in the region.

Target market population = 35% of 1.2 bn = 0.42 bn

Also, there are, on an average, 4 members in a household

Target market household = 0.36 bn / 4 = 0.105 bn

Does this seem reasonable to you?

Yes, it is reasonable. Continue.

I shall apply a filter based on affordability of the device, some households can afford the device without any incentives. In contrast, some can afford it after government incentives, and others cannot. The first segments (which can afford the device without incentives) are economically more prosperous than the rest of the areas, so the first segment, i.e. affordable group, can be 3% of the population with an income of more than 10 LPA. The might-be-affordable segment (who have an annual income between 6 lakhs and 8 lakhs) will account for 17% of the population, and the rest is the non-affordable segment. Do the percentage and reasons sounds good?

Affordable segment = 3% of 0.105bn = 0.00315 bn

Might-be-affordable segment = 17% of 0.105 bn = 0.01785 bn

Yes, seems reasonable. Kindly proceed

Further, inside each segment, some portion of the population has potent awareness to understand the need for an alternate energy source. Hence, a division into aware and non-aware portions can be carried out. The affordable segment has greater environmental consciousness, taking it to be around 30% of the population. While, in the might-be-affordable segment, 15% of the population is aware. Do I need to make any changes?

Conscious portion of affordable segment = 30% of 0.00315 bn = 0.000945bn

Conscious portion of might-be-affordable segment = 15% of 0.001785 bn = 0.00026775bn

No, you can continue with your assumptions.

Therefore, if we assume the government of India has provided the incentives in our favour, our total available market will be 0.00036225 bn households.

Our approx gross revenue = INR 121 crore

Comparing the revenue and the investment by the company, the market does not look attractive.

Since, the market doesn't look attractive. Please summarize.

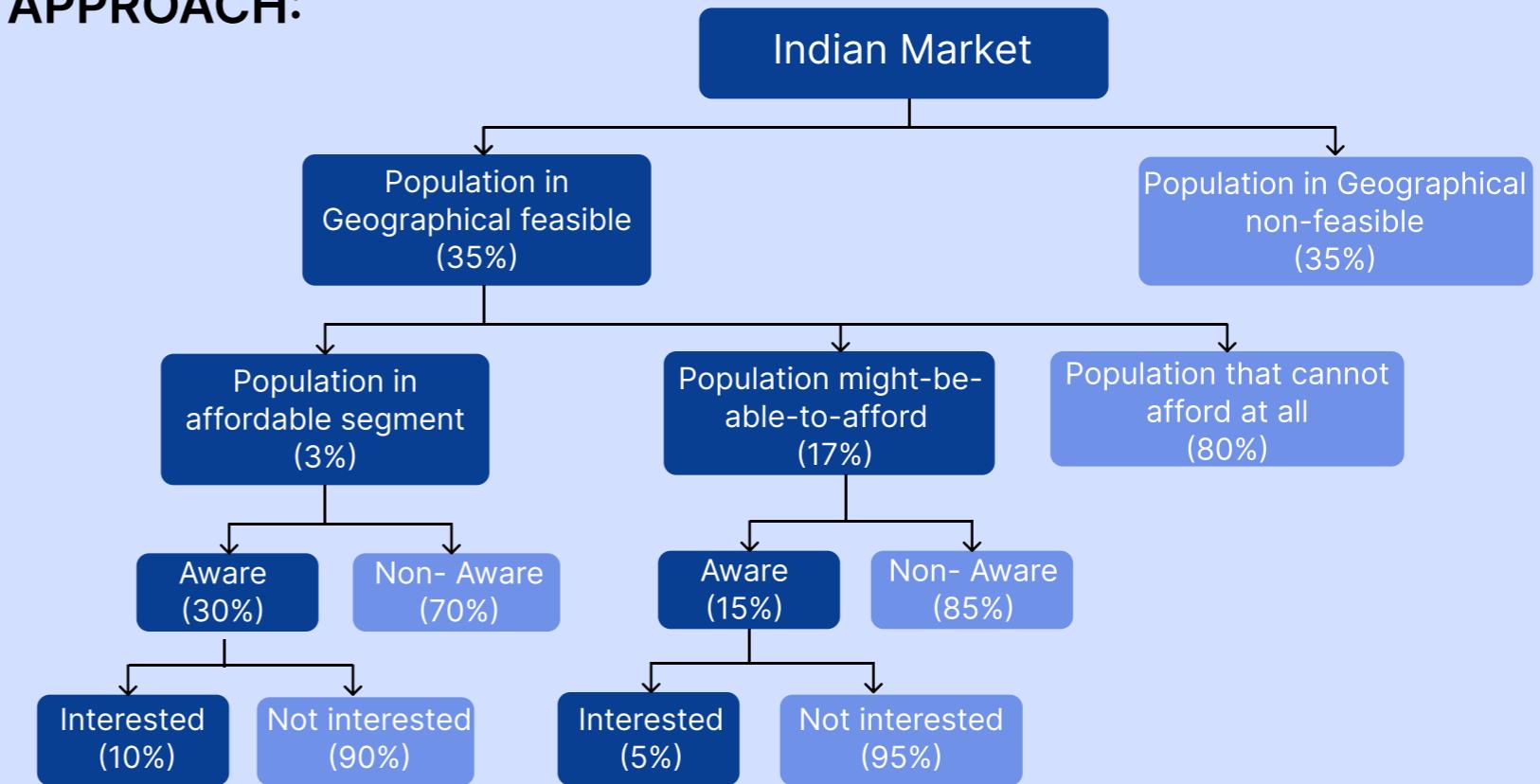
To conclude, I would not recommend entry into the Indian geography basis the following reasons. First, the consumer perception of alternative sources (especially wind) is not very optimistic. Next, the majority of the population resides in non-viable based on geography. Third, the government doesn't have any scheme or incentive, and depending on it would create several problems.

PROBLEM STATEMENT : Your client is a manufacturer of electronic equipment for industrial customers operating in the US. The Research & Development department has developed a new product -- a device that could replace all typical energy costs using wind technology. The estimated household price to the customer is around INR 1 lakh, with an estimated investment of around INR 700 crores. Assess if they should enter the product into the Indian geography or not.

CASE FACTS

- This essentially was a product entry case, and thus, began with the market size estimation
- The market turned out to be unattractive owing to low adoption and policy support for the shift to sustainable wind energy in the current ecosystem

APPROACH:



KEY TAKEAWAYS:

- Since, the requirement of the device in question was strong winds, a classification based on geography was carried out to estimate the total market size
- While summarizing, the candidate has substantiated their recommendation with 3 reasons. It is a very good practice to mention crisp and concrete reasons in support of your conclusion

MARKET ENTRY | THREAT TO THE NEW ENTRANT (1/2)

Your client, F-Mart, is the largest discount supermarket chain in South India with 350 outlets. For several years, F-Mart has outperformed the second-largest retailer (220 outlets) in both market share and profitability. However, the biggest discount grocery retailer in North India, N-Superstore, has recently acquired F-Mart's competitor and intends to transform all 220 outlets into N-Superstore branches. The CEO of F-Mart is alarmed by this development and seeks answers to the following questions: Should I be concerned? How should I respond? What advice do you have for the CEO?

This is how I would like to approach the problem: First, I'd like to understand the market in South India to understand how F-Mart has become the market leader. Then I'd like to look at the market in North India to understand how N-Superstore has achieved its position. Finally, we can merge the two discussions to understand whether N-Superstore's strength in North is transferable to our market.

That sounds acceptable.

Let's commence with our analysis of the local market. I'd like to comprehend what is contributing to F-Mart's superior profitability. Is F-Mart more profitable due to a greater number of outlets, or does it generate higher profits per outlet?

It generates higher profits per outlet.

Increased profitability could arise from either reduced costs or higher revenues. Is there any indication as to which of these factors is responsible for higher profits per outlet?

F-Mart's cost structure closely resembles that of its competitors, but it achieves higher sales per outlet.

Greater sales per outlet could be attributed to either higher prices or increased sales volume per outlet. Given that we are a discount retailer, maintaining competitive prices is crucial. It appears that the increased sales volume per outlet is the primary reason.

Can you identify why this might be the case?

This could be attributed to larger store sizes, a wider product variety, or more effective store management.

Store size is consistent, and the product range aligns with competitors. F-Mart's stores, however, employ a different management approach. F-Mart operates under a franchise model, where individual outlets are owned and managed by franchisees who have invested in the store and share in the profits.

In that case, it is likely that F-Mart's outlets are better managed, as the individual store owners have a greater incentive to maximize profits.

You are correct. F-Mart's higher sales are primarily a result of enhanced customer service. Their stores are cleaner, more appealing, better stocked, and offer superior shopping experiences. We have adequately covered the Southern market. Let's now turn our attention to the North Indian market.

How many outlets does N-Superstore have in the North, and how many outlets does its closest competitor operate?

N-Superstore operates 2,200 outlets, while its largest competitor manages approximately 550 outlets.

Are N-Superstore's outlets larger than those of its competitors?

Yes, N-Superstore's outlets have an average size of 22,000 square feet, whereas competitor outlets are 11,000 square feet on average.

This indicates that N-Superstore should be selling nearly eight times the volume of the nearest competitor.

Close. N-Superstore's sales are approximately five times that of the nearest competitor.

I assume that sales of this magnitude provide N-Superstore with significant bargaining power with suppliers. Is N-Superstore's cost of goods lower, resulting in lower prices compared to the competition?

In fact, N-Superstore's cost of goods is approximately 15 percent less than that of its competitors, and its prices are on average about ten percent lower than those of the competition.

I believe I've gathered enough information about N-Superstore. Now, let's explore N-Superstore's potential to succeed in the South. First, I'd like to understand if N-Superstore has established a strong brand presence in our market and whether it offers similar products to F-Mart.

N-Superstore lacks brand recognition in the South. Both companies offer similar products, though F-Mart leans more toward local suppliers.

Is there any reason to believe that N-Superstore's operating costs in the South will exceed those of F-Mart? Specifically, could N-Superstore face higher labor costs, leasing costs, or increased expenses related to raw materials or distribution? N-Superstore may incur higher distribution costs as it needs to transport products from its Northern warehouses to the South.

To some extent, you are correct. F-Mart also faces similar labor costs. F-Mart holds an advantage in distribution costs because it sources more products from Southern suppliers. However, since F-Mart still receives a significant amount of products from the North, the actual advantage over N-Superstore is only about two percent of overall costs.

All these factors suggest that N-Superstore will likely maintain a substantial price advantage over F-Mart's outlets, if not ten percent, then at least seven to eight percent.

I concur with that assessment. Could you please summarize your findings?

In the short term, F-Mart may remain relatively secure. Its outlets enjoy a much stronger brand presence in the local market than N-Superstore's, and they appear to be well-managed. However, as consumers become accustomed to consistently lower prices at N-Superstore, typically seven to eight percent lower, they are likely to shift their loyalty to N-Superstore. The CEO should indeed be concerned about losing a significant market share to N-Superstore in the long run.

Could you suggest potential strategies for F-Mart?

Given that competitive pricing is crucial in discount retailing to retain customers, F-Mart should examine its value chain from procurement to distribution to retailing to identify opportunities for cost reduction and offer more competitive pricing. In procurement, F-Mart can explore negotiating competitive prices with suppliers. It may also consider offering a more focused product selection to consolidate purchasing power and negotiate more competitive prices with suppliers. In distribution, F-Mart should aim to reduce transportation costs. In retailing, exploring the possibility of negotiating lower margins with retailers could allow F-Mart to pass on more savings to customers. Additionally, implementing a loyalty program, such as a frequent shopper program, where customers can accumulate points for future merchandise discounts, could help in retaining customer loyalty.

Thank you. All of your suggestions are intriguing and warrant further analysis.



THE
BUSINESS
CLUB

Unconventional

UNCONVENTIONAL | DALBERG (1/3)

Your client is a large cancer hospital in Mumbai. They have been facing the problem of overcrowding outside the hospital for 6-7 months now. Identify the reason and suggest recommendations for the same.

I'd like to begin by asking a few clarifying questions first. Where is this hospital located and what customer segment does it primarily cater to?

It's located in the outskirts of Mumbai and its major customer segments belong to the middle to upper class.

Alright. I'd like to understand more about the problem now. Did this overcrowding start suddenly or gradually? What is causing this overcrowding, pedestrians or vehicles? What's the typical mode of commute to the hospital for the patients? Does this problem arise at a specific time of day?

This issue started gradually and escalated very quickly within a few weeks. It's mainly due to a large number of pedestrians and the patients typically visit the hospital in a car. The overcrowding is at its peak during 4-6 PM.

Any particular part of the hospital and its surroundings where this overcrowding typically happens?

The crowd is concentrated right outside the reception area and the pathway leading to it from outside the hospital.

Got it. That's all for the clarifying questions. I'd now like to look at the journey of the patients leading up to the hospital and identify the points where the crowding is happening.

- 1.) Driving to the hospital
- 2.) Parking the car
- 3.) Walking to the hospital
- 4.) Getting an appointment at the reception

Do we have any insight on where the patients are spending more time during their visit or where they are witnessing big crowds?

Yes, the patients are spending more time walking to the hospital and getting an appointment

The crowd inside the reception could be causing the crowd along the road by slowing things down. So, I'd like to first look into that. I hope that's fine?

Sure, go ahead.

So, given that there was a rapid increase in crowding outside the reception area, my initial hypothesis is that a lot more patients may have started visiting the hospital. Did the hospital shift its medical focus or introduce a new therapy around 6-7 months ago?

Yes. The hospital started admitting patients of lymphoma and melanoma around 8 months ago.

That change must have led to an increase in the size of staff as well, correct?

Right. The hospital had to increase its staff size by approximately 20%.

That's interesting. I'd now like to shift my focus towards the staff at the hospital. What's the staffing like at the hospital?

So the hospital employs people in 3 shifts of 8 hours each; 9 am - 5 pm, 5 pm - 1 am, and 1 am - 9 am. So the hospital employs people in 3 shifts of 8 hours each; 9 am - 5 pm, 5 pm - 1 am, and 1 am - 9 am. in 3 shifts of 8 hours each; 9 am - 5 pm, 5 pm - 1 am, and 1 am - 9 am.

So there's a shift change occurring at 5 pm during which there is a rapid influx of Shift 2 Workers and an outflux of Shift 1 Workers. Does the staff also enter and exit through the reception area itself?

Yes. The hospital staff check-in kiosks have been installed in the reception area, so the staff is forced to move in and out from there only.

Since it's a case of overcrowding, I'd like to understand whether the hospital made some changes to account for the greater size of staff. I shall assess their journey while checking-out to identify pain points
Wrapping up work at their work stations
Taking staircase/elevator to the reception area
Checking out at the kiosks
Heading to the parking lot
Exiting the hospital
In what all aspects did the hospital make changes?

None, as a matter of fact.

Right. So I can now form a clearer picture in my head around this. Given the increase in staff size but no change in number of kiosks and lifts, the incoming and outgoing staff are spending approximately 20% more time in leaving the hospital. Due to this crowd, people right outside the reception are getting slowed, and further the people on the road are getting slowed and causing crowding. Does that sound reasonable?

Yes, you seem to have identified the core issue behind the problem. Please share some recommendations for the client and then we can wrap up the case.

Sure. First and foremost, the hospital should increase the number of check-in kiosks to reduce the crowd at the reception area. The new kiosks should preferably be installed at other points of entry, if any, to distribute the heavy demand during shift change to ensure that patients don't have to suffer due to an occasional surge.

That sounds reasonable. Thank you.

PROBLEM STATEMENT: Your client is a large cancer hospital in Mumbai. They have been facing the problem of overcrowding outside the hospital for 6-7 months now. Identify the reason and suggest recommendations for the same.

CASE FACTS:

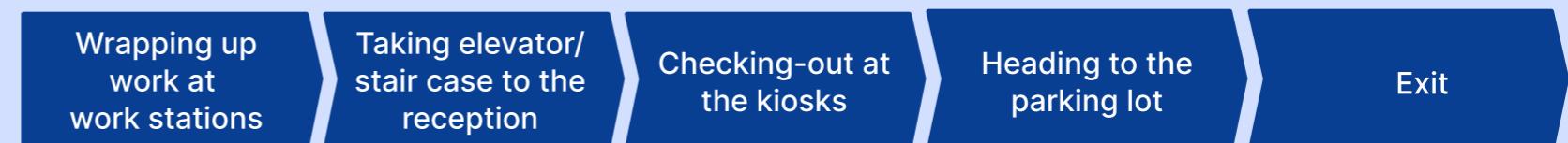
- The cancer hospital had opened up two more specialties in, **lymphoma** and **melanoma** leading to increased staff
- The cancer hospital had **check-in kiosks** at the common entry leading to a lot of congestion at the entry point
- The rapid influx of shift two staff members lead to the congestion

APPROACH:

A Patient's Journey



A Staff Member's Journey



KEY TAKEAWAYS:

- In unconventional cases like these clarifying questions have increased importance as there is no set framework. After understanding that the staff has increased for two new specialties, the **candidate clarified staff timings** through which they concluded that there was congestion due to rapid influx of shift two customers
- It's often advisable to lay out recommendations using the **time bucket**. For example, in the short-term this can be done and in the long-term this should be employed

UNCONVENTIONAL | LEK SURVEY (1/2)

You have to take a survey across educational institutions in Mumbai. How would you go about it?

To begin with, I'd first like to understand the objective of the survey as to what we're trying to gauge and who we are conducting the survey for.

The survey is essentially to validate and understand the customer preferences before we begin with full-fledged market research as part of our current engagement with a client, a leading player in the retail sector

Got it. Additionally, is the objective of the survey to get a look and feel of the company and its perception amongst the student base (internal) or is it to get an idea of the competitive landscape of the retail market (external)

You can proceed with both the internal and external landscapes for the survey

Understood. So, I'll proceed with the internal assessment or company assessment and then look at the external assessment

Sure, go ahead.

In terms of internal analysis, I shall assess the different factors like customer perception of the company and its product offerings, and whether it meets the needs and requirements of the customers.

How will you break down the buckets further?

In the company perception, I shall look at NPS, and brand image across environmental (whether the company's operations and CSR initiatives are potent or not), legal (whether the company complies with legal policies or not), political and social (what does the company offer for the society, alignment with the vision of the company) factors. Additionally, I shall also understand the customer's use case for the company and understand the sales mix across different sales channels like (online/offline). Additionally, for the offline channel, assess which stores do they frequently visit, and their perception of different stores across amiability, hospitality, etc.

Great. In online sales, what will you consider?

For online company sales, I shall look at the perception of the website/

app. How do customers' buying preferences as well as engagement preferences vary across the website or application? Additionally, I shall also assess the frequency with which they visit the app and would include certain questions that benchmark it with the time they spend on games, school essentials, YouTube, etc.

Seems decently exhaustive. What factors do you plan to include in the product offerings?

Right, so for the product offerings, I shall look at the volume of product categories sold and which product category (Appliances, electronics, White goods, hearables, wearables, etc., gaming equipments), is purchased the most. Additionally, I shall also try to make questions around the most favoured product category and most purchased product category across online and offline sales channels.

Great. Now, move on to the external survey

The purpose of the external survey is to gauge the competitive landscape. So, first, off I shall understand the customer perception and customer opinion across how we compare with our competitors in terms of our political compliance, in terms of our environmental consciousness, and also look at our fitment with the customers and pit it against our competitors,

Seems decent. How do you plan to include the different product categories in your analysis

For the product categories, I was planning to create a survey to understand customer preferences across price, product, performance, most frequently purchased categories, whether they prefer purchasing products from our customers and factors like those.

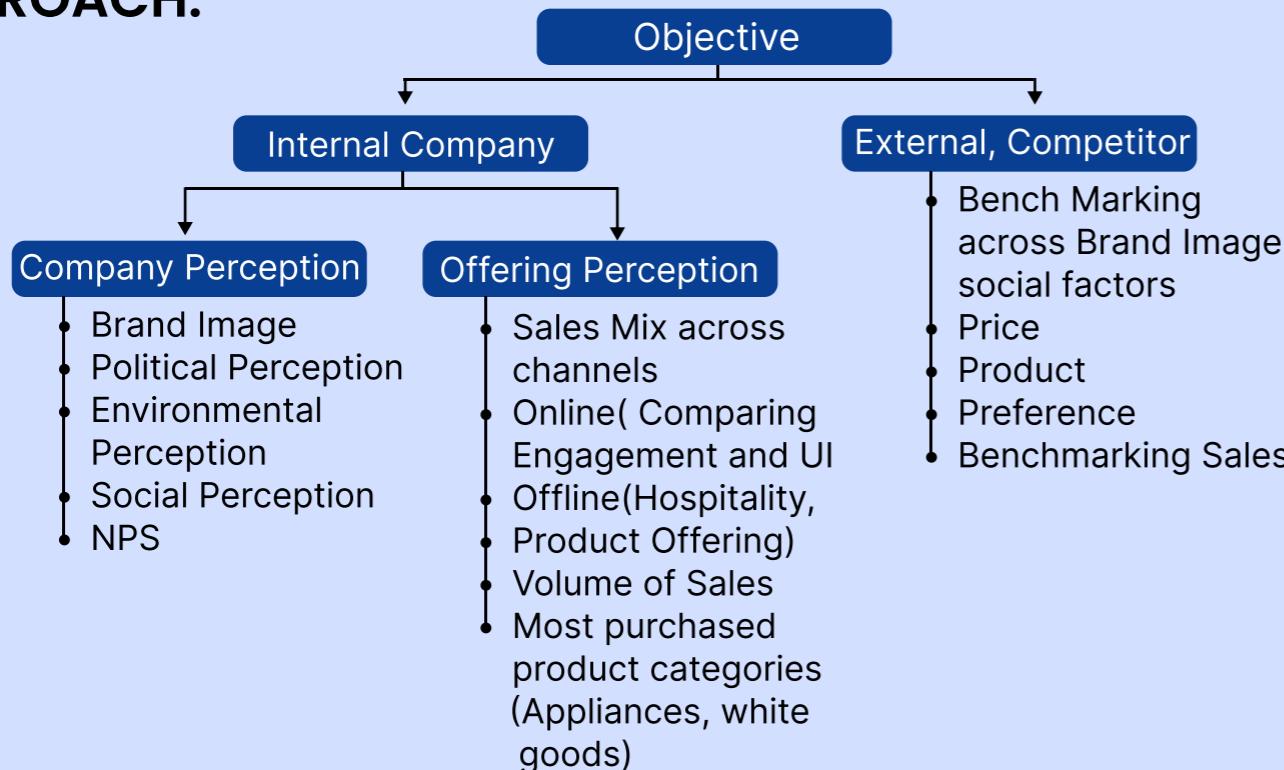
How do you plan to gauge product-market fitment?

In terms of product-market fitment, I shall assess how much the customers' can align with our value proposition and additionally, look at certain gaps that exist in terms of what they need. Maybe, they want more product lines or more options in certain categories. We shall create a dedicated section to assess that.

That seems exhaustive enough, thank you!

PROBLEM STATEMENT : You have to take a survey across educational institutions in Mumbai. How would you go about it?

APPROACH:



CASE FACTS:

- The objective of the survey was two-fold, an **internal analysis** (company) and **external analysis** (competitor)
- Internal analysis was carried out on two levels, the company level and then, analyzing its different product offerings
- A varied range of factors like **NPS**, external perception through environment, etc. were carried out
- In the external analysis, price, product, preference etc, were benchmarked with those of competitors

KEY TAKEAWAYS:

- Since, it wasn't mentioned what kind of a survey the client wanted to conduct, **clarifying the objective** was the first step and provided clear and coherent direction to the case
- A survey is very undefined so it becomes extremely important to be as **exhaustive** as possible, as that would show breadth in thinking, and in the process bag you brownie points

I see that you belong to Odisha; is that correct?

Yes, I am from Odisha.

As we know, Odisha is a very cyclone-prone state and faces a significant number of deaths each year. Imagine you are a consultant working with the government of Odisha to reduce the number of cyclone-related deaths.

Okay, I would like to clarify a few things before I proceed with the case.

- A. Define cyclone deaths.
- B. Is there any particular geography or demography to focus on?
- C. Are there any constraints on government resources or collaboration with any disaster management organization?
- D. Over what period should we measure impact?

Sure,

- A. Anything that can be attributed to a cyclone as the cause of death.
- B. No specific demographic or geography.
- C. No constraints; we are free to use any resources or collaborate.
- D. The period for impact measurement is one year.

First, I would like to define all the stakeholders involved, including:

- A. State government institutions such as police, the state disaster management force, end-to-end healthcare infrastructure, state media, etc.
- B. The national government, which includes the NDRF, armed forces, national media, the Meteorological department, etc.
- C. Media houses, NGOs, and other non-governmental agencies. I would like to structure the causes of cyclone deaths into three classes:
 1. Pre-event,
 2. On-spot (direct impact),
 3. Post-event (event = the official impact time of the cyclone). Would you like me to prioritize a particular class of cause?

Yes, I would like you to proceed with post-event deaths.

Post-event deaths are the major cause of deaths due to cyclones, as the healthcare system and logistics are overwhelmed. The age group most susceptible to death, according to our data, is 60+. Am I correct in my approach?

Yes, can you provide a more in-depth analysis of the criticality of the 60+ age group?

Certainly, there are several reasons why the 60+ age group is critical. They have the highest likelihood of complications, such as hypercalcemia, irregular blood pressure, and high cholesterol, and they have the least amount of time to start treatment once impacted. Additionally, I would like to further categorize this group by geography and income, specifically, into urban-suburban and rural. I would prioritize rural areas for several reasons, including their lower penetration of Public Relation (PRs), higher doctor-to-patient ratios, and limited electrification, which results in reduced access to healthcare facilities. I would like to categorize the problem in three ways:

- A. Connectivity, Critical Advisory & Alerts,
- B. Critical Advisory & Alerts
- C. Patient prioritization.

Can I prioritize patient prioritization?

Yes, you can proceed.

I propose three classes of solution :

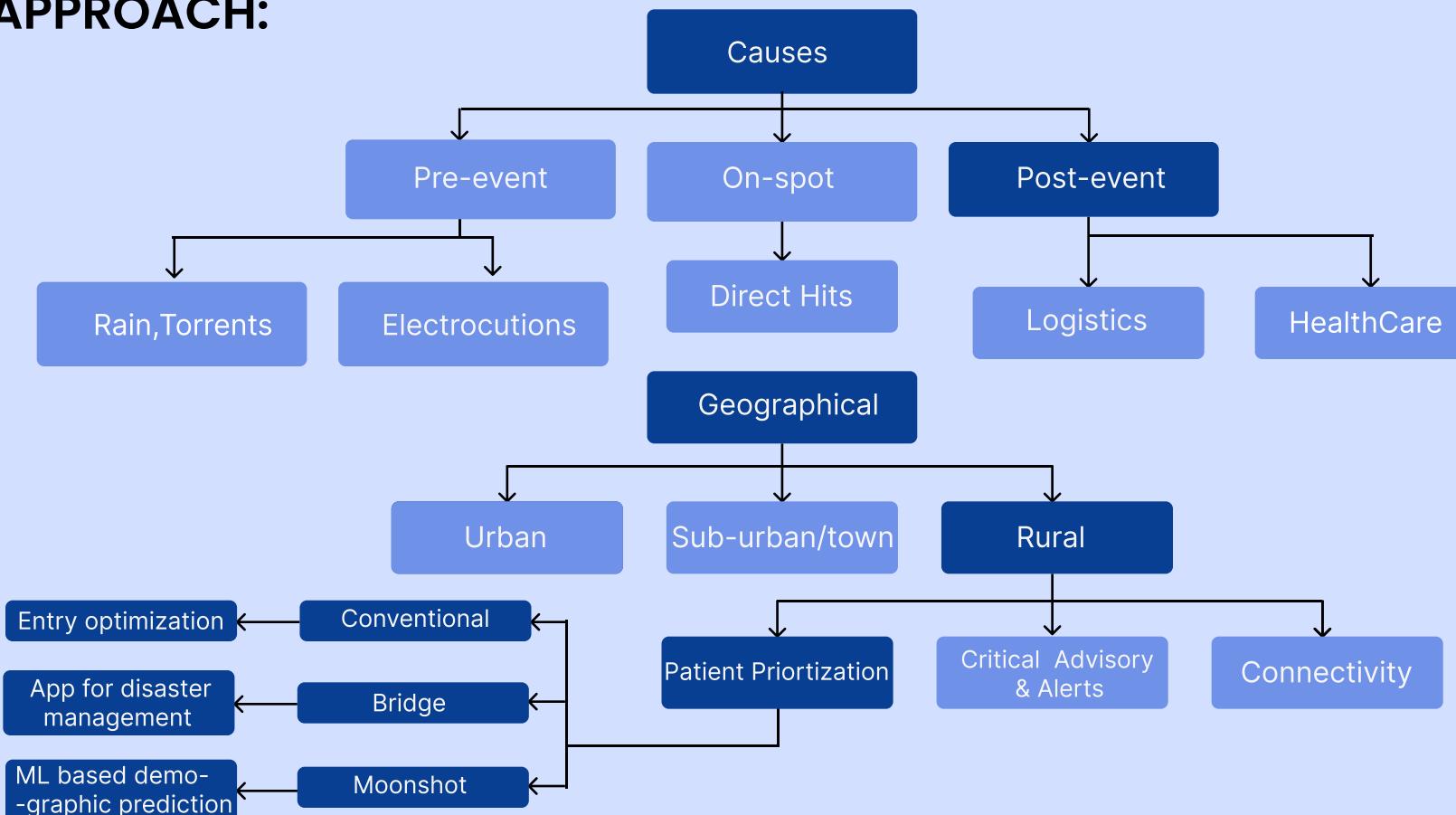
- A. Conventional solution - Entry optimization (age and health data transfer).
- B. Bridge - An app for disaster management (account profiling, a health emergency button).
- C. Moonshot - An ML-based demographic prediction and features for route optimization, critical care, identification, and disbursement of first aid.

Your approach has been satisfactory. It would be great if you could also relate to any present initiatives.

The central government is already testing an instant critical alert system for distribution over the mobile communication network to provide alerts on disasters. Thank you.

PROBLEM STATEMENT : Imagine you are a consultant working with the government of Odisha to reduce the number of cyclone-related deaths.

APPROACH:



CASE FACTS:

1. The 60+ age group is of critical concern due to the highest likelihood of complications and exacerbations, coupled with the minimal time available to initiate treatment.
- Prioritizing rural regions is essential because of their limited media penetration, higher doctor-to-patient ratio (resulting in poorer healthcare), and lower electrification rates.

KEY TAKEAWAYS :

- Post-event fatalities are the primary contributors to cyclone-related deaths, largely attributed to the strained healthcare infrastructure in India. Therefore, addressing this issue is of utmost priority. The categorization in each phase of the case was both mutually exclusive and collectively exhaustive.
- The interviewee demonstrated remarkable insights and up-to-date knowledge regarding the recent testing of the mobile alert system in India, which earned him extra points at the end.



THE
BUSINESS
CLUB

Product Primer

What is Product Management and who are Product Managers?

Product Management is the role and function within an organization that is responsible for a product's overall success. Product Managers work with groups inside and outside of the company to build and execute a plan to make sure the product best meets its financial and strategic goals.



- Centre point of communication
- Whole Product
- Define Product Strategy
- Define Go-to-Market
- Gathering Requirements
- Guiding Engineering
- Guide sales and marketing

Different Types of Product Management Cases

Product Design
Design XYZ product for ABC customer?
Favorite product?

GTM Strategy
How would you market/take XYZ product to ABC market?

Market Entry
Should XYZ company enter ABC market?

Pricing
How would you price XYZ product for ABC customers?

Metric
XYZ metric for ABC product dipped X% this month, what would you do?

Tech Casing
How does internet work?
How would you design Instagram?

Market Trend
What is the next big idea that we should invest in?

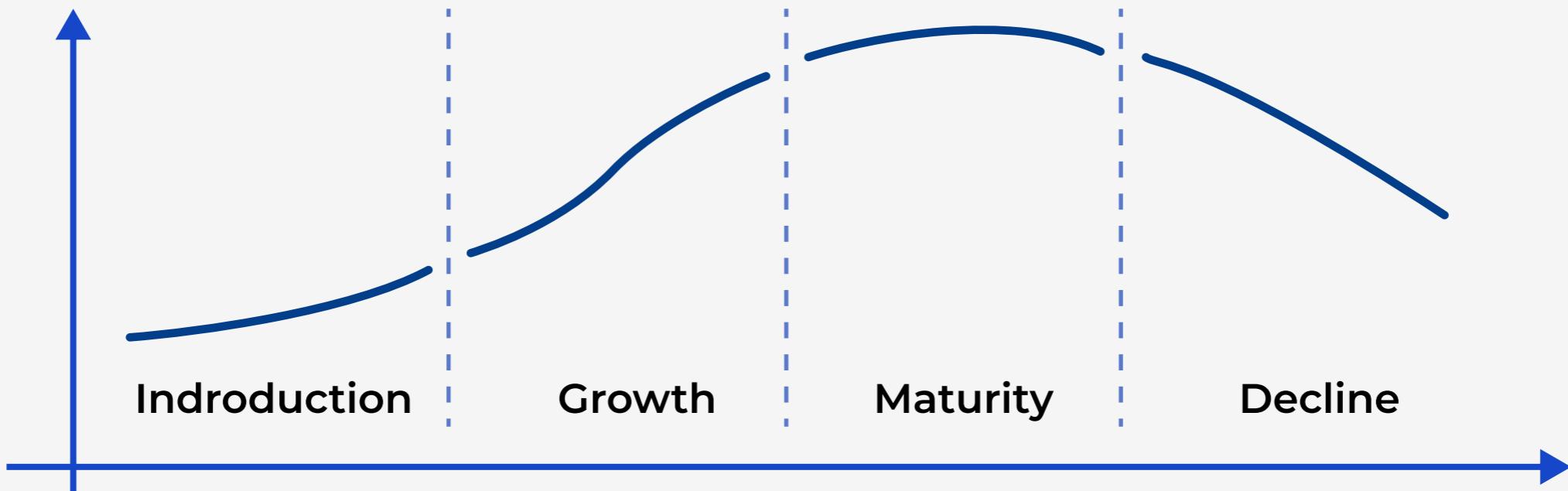
RCA
Analyze the reason for dip of DAU metric by X% over the past 2 weeks

Guesstimate
Estimate market size of XYZ services?

"A great product manager has the brain of an engineer, the heart of a designer, and the speech of a diplomat."
– Deep Nishar, Vice President of Product at LinkedIn

Four major phases of Product Cycle

The Product Life Cycle (PLC) defines the stages that a product moves through in the marketplace as it enters, becomes established, and exits the marketplace.



Introduction

When a product first launches, sales will typically be low and grow slowly. In this stage, company profit is small (if any) as the product is new and untested.

Growth

If the product continues to thrive and meet market needs, the product will enter the growth stage.

Maturity

Eventually, the market grows to capacity, and sales growth of the product declines. In this stage, price undercutting and increased promotional efforts are common as companies try to capture customers from competitors.

Decline

In the decline stage, sales of the product start to fall and profitability decreases. This is primarily due to the market entry of other innovative or substitute products that satisfy customer needs better than the current product.

Product Metrics

What is the question about?

This question tests if you understand what the process of defining metrics .

Approach

- Define what success means for the product:** you need to identify what the business goals for the product are. Once you have set the objectives, think about which outcomes should happen at each stage of the customer journey to achieve these goals.
- Measure customer actions:** For each phase of the customer journey such as awareness, acquisition, conversion, engagement, retention, and monetization, think of ways to measure customer actions that would indicate success or failure of the business goals. List each action as a metric.
- Wrap Up:** Summarize what the business goals and most relevant metrics are.

HEART Framework

	GOALS	SIGNALS	METRICS
Heart	Users find the app helpful, fun and easy to use	<ul style="list-style-type: none"> Responding to surveys Leaving 5-star rating Leaving user feedback 	<ul style="list-style-type: none"> Net Promoter Score Customer Satisfaction rating No.of 5-star reviews
Engagement	Users enjoy the app content and keeping engaging with it	<ul style="list-style-type: none"> Spending more time in the app 	<ul style="list-style-type: none"> Avg session length Avg session frequency No.of conversions
Adoption	New users see the value in product or new feature	<ul style="list-style-type: none"> Downloading,launching game Signing up for an account Using a new feature 	<ul style="list-style-type: none"> Download rate Registration rate Feature adoption rate
Retention	Users keep coming back to the app to complete a key action	<ul style="list-style-type: none"> Staying active in the app Renewing a subscription Making a repeat purchases 	<ul style="list-style-type: none"> Churn rate Subscription renewal rate
Task Success	Users complete their goal quickly and easily	<ul style="list-style-type: none"> Finding and viewing content quickly Completing tasks efficiently 	<ul style="list-style-type: none"> Search exit rate Crash rate

What Are Product Metrics?

Product metrics, also known as key performance indicators, are measurable data points that a company monitors and evaluates to determine the success of a product. Conversion rate, churn rate, and monthly recurring revenue are a few examples. All of these metrics ought to be connected to the product strategy.

Importance of Metrics

Metrics have the potential to deliver incredibly valuable insights and information to organizations and teams. However, for metrics to be meaningful, they must be actionable (i.e., inform business decisions), accessible, and auditable. Meaningful metrics matter because:

- It's easier to win over stakeholders
- They lead to better product decisions
- They provide an early warning signal
- They set the stage for success

AARRR Pirate Metric Framework

Acquisition	How does the customer find you?	- # of impressions on social media. - # of click on ads . - # of people visiting the website. - # of app downloads
Activation	How quickly do the customers sign-up?	- # of users who visited & clicked on the platform for the 1st time. - # of signup on the platform. - # of people registering to newsletters. - # of users filling their details.
Retention	How long do the customers stay active?	- # of people returning on the platform. - average amount of time spend on the platform. - DAU/MAU- It defines user stickiness. - # of people opening your emails.
Revenue	How do you increase revenue?	- # of people transacting on platform. - # clicks on the ads on the platform. - LTV- Lifetime value of the customer. - ARPU- Average Revenue per User - Other: ARR, MRR, GMV,AOV
Refferal	How do customers let others know about the product?	- # of people tagging their friends. - NPS: Net Promter Score - CSAT: Customer Satisfaction Score % of people who recommend to friends.

Agile Product Management

Agile is a process for iterative product development. Teams work in short, incremental "sprints" and often reconvene to assess and modify their work.

Frequent input is encouraged by the Agile methodology. In contrast to the more established, sequence-based waterfall methodology, it touts the capacity to change focus and priority fast. Teams divide long-term plans into several implementation phases.

4 Agile Values

↑ Indivisual and interaction	O Process and Tools
Working Software	V Comprehensive Documents
Customer Collaboration	E Contract negotiation
Responding to Changes	R Following a Plan

Pros and Cons of being Agile

Pros

- Alignment
- Explaining the 'why'
- Executive Visibility
- Transparency

Cons

- Yesterday's News
- Unfulfilled promises
- Undated by Nature
- Resistance to long-term planning

Lean Product Management

What is Lean Product Management?

Lean product management is the application of Lean thinking to product strategy and development. It provides a framework for making product strategy decisions that align with company goals, KPIs, and customer needs.

Lean isn't just about building things, but building the right things at the right time. It helps in optimizing the process and eliminating waste. To put it in a better way, Lean Product Management focuses on delivering work that matters quickly.

What do Lean Product Managers prioritize?

- Customer problems over internal requirements
- Data-driven experiments over assumptions
- Customer problem roadmaps over feature roadmaps
- Idea generation and collaboration over solution mandates

3 Important aspects of Lean Product Management

Customer Problems and needs over Internal requirements	The goal of a business is to maximize stakeholder value but for that, it is first important to maximize customer value ie understanding your customers.
Data Driven Experiments over pre-conceived solutions.	A Scientific approach is necessary for decision making and making a product roadmap. Validating ideas before committing more people is very crucial.
Idea Generation and Collaboration over solution mandates	Great products are built by highly communicative, collaborative and diverse Lean teams. Product manager's success depends on the quality of insights they're basing their decisions.

Scrum Product Management

What is Scrum Framework?

Scrum is a framework within which people can address complex adaptive problems, while productively and creatively delivering products of the highest possible value.

It is used for managing software projects and product or application development and is a framework for developing and maintaining complex products through “view-and-tune”.

It is a genre that follows the agile declaration and principles, integrating three roles, three artifacts, five events, five values, referred to as “3355”.

3	3	5	5
Roles	Artifacts	Events	Values
Product Owners	Product Backlogs	Sprint	Openness
Development Teams	Sprint Backlogs	Sprint Planning Meeting	Courage
Scrum Master	Product Increment	Daily Scrum Meeting	Respect
		Scrum Review Meeting	Focus
		Scrum Retrospective Meeting	Commitment

Kanban Product Management

What is Kanban Framework?

- The Kanban method is an approach you can use to design, manage, and improve flow systems for product development work.
- Adopting Kanban involves starting with your existing workflow and driving change by visualizing workflow, limiting work in progress (WIP) and finishing in progress work before starting new work.
- Kanban doesn't require to adopt any new rules, you can use the roles you currently have on your team.
- Kanban can be used for product development and several different knowledge work settings and is particularly applicable in situations where work arrives in an unpredictable fashion and/or when you want to discreetly deploy work as soon as it is ready.
- It is often viewed as an alternative to the scrum framework.
- Kanban was first incorporated in 2004, by David J. Anderson, who was inspired by the theory of constraints and the Toyota Product System, and used it in Microsoft's IT department.

Kanban Principles:

While the Kanban values guide how your team behaves, the Kanban principles provide guidelines for managing change and approaching work as a collection of services.

Change Management Principles

- Pursue improvement through evolutionary change.
- Encourage people to exhibit leadership regarding their position in the organization

Service Delivery Principles

- Understand and focus on your customers' needs and expectations
- Evolve policies so that you can improve customer and business outcomes

Product Design

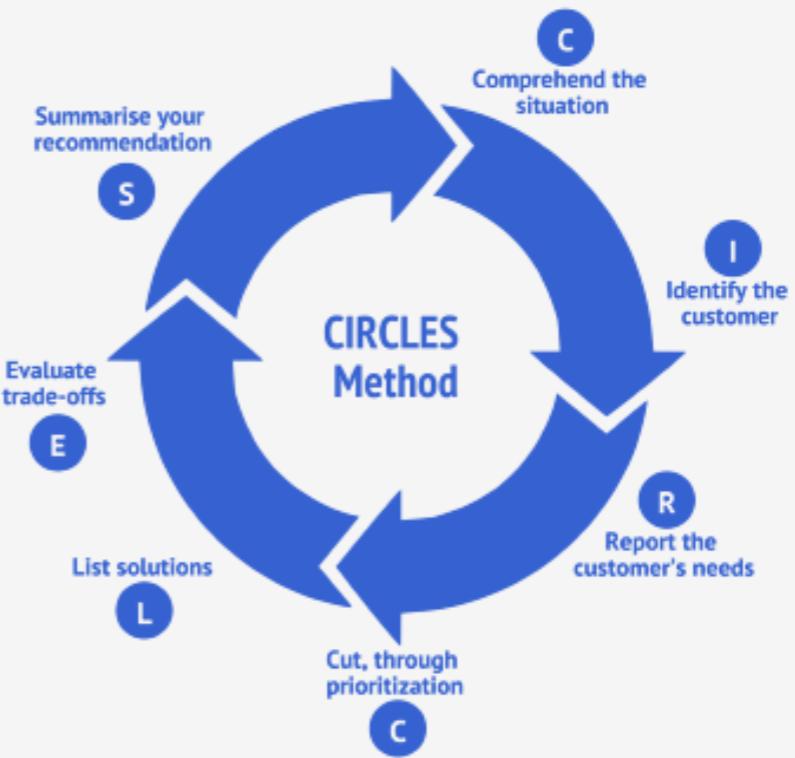
What is the question about?

This interview question tests whether you understand the process of going from customer needs to product development. This process should involve defining who the customer is and what they want to accomplish; defining multiple use case scenarios in which the customer performs activities that are related to your product; and prioritizing what to build.

Approach

- **Clarify the goal:** Clarifying the goals of the problem statement with the interviewer helps to define further course of action in much clear and better sense.
- **State your approach:** Laying down the structure of how you plan to approach findings of the solution can be beneficial. It helps interviewer to know your answer better and rationale behind each step
- **Identify the pain points:** Recognize the different problems being faced by different user groups.
- **Prioritise target user:** Set out all the groups that faces the common major pain points, and that could potentially help to achieve your objectives.
- **Brainstorm solution/ features :** Create a big ideas list and focus more upon solving the pain points of the addressed or prioritized user including
- **Prioritise :** Prioritise your solution based upon different parameters such as Impact vs Effort, RICE(Reach- Impact- Confidence and Effort)
- **Later:** features for MVP, metrics, risks, summarize: Finally summarize the case by providing the Metrics for the success measurement of the product or risks associated with it.

Circle's Method



One of the best way way of structuring the problem is using Circles method :

- C: Clarify.** Ask clarifying questions to narrow the scope.
- I: Identify** the users/customers as personas like food lovers, soccer moms, etc.
- R: Report** on the user's needs
- C: Cut** through and prioritize the use cases
- L: List** solutions
- E: Evaluate** the tradeoffs of your solutions.
- S: Summarize** your thought to give it a structure.

What is MVP?

A minimum viable product, or MVP, is a product with enough features to attract early-adopter customers and validate a product idea early in the product development cycle. In industries such as software, the MVP can help the product team receive user feedback as quickly as possible to iterate and improve the product.

Eric Ries, who introduced the concept of the minimum viable product as part of his Lean Startup methodology, describes the purpose of an MVP this way: It is the version of a new product that allows a team to collect the maximum amount of validated learning about customers with the least amount of effort. A company might choose to develop and release a minimum viable product because its product team wants to:

- Release a product to the market as quickly as possible
- Test an idea with real users before committing a large budget to the product's full development
- Learn what resonates with the company's target market and what doesn't.

What is A/B Testing ?

An A/B test aims to compare the performance of two items or variations against one another. In product management, A/B tests are often used to identify the best-performing option.

There are many benefits to using A/B tests, including:

- Marketers (or product managers) can focus on very specific elements to test
- The results are immediate and easy to analyze
- Unlike surveys, where users' answers are theoretical, A/B tests measure real engagement with the asset

What is GTM?

A Go To Market (GTM) strategy is essentially your marketing plan for making sure your target market knows about your launch – be it for a feature for a whole new product. A GTM strategy applies whether you're breaking into a new market, or trying to reach your current market.

A great GTM strategy relies on user/buyer personas, market understanding, and an understanding of the long term business plan. That's why it's critical for Product Managers to work in collaboration with marketing on a GTM strategy.

Product-led and sales-led are the 2 main types of GTM strategy. A product-led GTM strategy uses the product itself to acquire and retain users.

In this approach, the product serves as a salesperson by providing so much value, the user can't help but upgrade their package. Calendly and Slack are great examples of product-led growth in action.

On the other hand, a sales-led GTM strategy uses marketing to drum up interest for a product, capturing it in content and demo forms.

Salespeople then reach out to those prospects, with the goal of converting them into customers.

This is the approach that Cognism and countless other B2B SaaS companies use.

What is Road Mapping?

The strategic process of determining the actions, steps, and resources required to turn an idea into reality is called roadmapping. A roadmap is a high-level document that articulates the vision and strategic plan.

When it comes to product roadmapping, a product manager and her team are involved in the process. Together, they decide on every prerequisite needed to turn the company's product idea into a finished, marketable product. This involves:

- Pull together all the research
- Lay out the product journey on a roadmap
- Prioritize each item through ranking

The 3 Major Components of the Roadmapping Process:

A roadmap establishes a route from the vision of an initiative to its realisation. The ability to communicate that vision and a clear grasp of it should be the starting points of the process.

Research, strategic planning, and organisation coordination will all be part of the procedure.

Research	Strategic Planning	Coordinating with the Organization
<ul style="list-style-type: none"> • Learn about the challenges that the product's users and customers are experiencing and how the product can help them. • Examine the market and the competitive environment. • Find out what funding and resources the company can devote to this project. 	<ul style="list-style-type: none"> • Establish a hierarchy of priorities. To create a minimal viable product that is ready for the market, rank all important components. • Choose the key elements (themes, epics, features, etc.) to address user issues. • Putting together a development strategy and allocating the right resources. 	<ul style="list-style-type: none"> • Collaborating with other teams to get everything ready for your go-to-market strategy. • These teams include sales, support, professional services, marketing, and others.

Importance of Roadmap

In conclusion, if this procedure is followed correctly, a product manager will be able to lay down a plan. This plan comprises a list of the appropriate resources to realise a product's vision as well as all necessary actions in the most strategically advantageous order.

A roadmap is a useful metaphor in this regard. For instance, you can think of this strategic process as creating a map—a clear path to bring your product to market. It will assist you in staying on track even though you may make multiple stops along the road.

PRODUCT DESIGN | RAAM GROUP (1/2)

Design an app that recommends restaurants to users.

Before moving forward , Could I ask some clarifying questions?

Yes,sure.

Are you referring to only roadside restaurants or should I also consider restaurants in malls,airports, railway stations etc. And what will be our target geography?

No, consider only roadside restaurants. And for the target audience you can choose your native place.

Sure, my native place is Varanasi. Hence, I will continue with that. Should I opt for a complete development of the app or consider the integration of a specific feature?

You can integrate features to an existing app.

What is the intended target audience for our app?

You can choose as per your wish

I am segmenting the age groups into two distinct categories: the first category encompasses individuals aged 1-18 years. Typically, children fall within this group, and they may not be the primary users of such applications due to their age and specific needs. Moving on to the second category, which covers individuals aged 18-35+, I further divide this into two subgroups. The first subgroup consists of individuals aged 18-25, many of whom are likely to be college / coaching students. Their priorities and preferences may differ significantly from the second subgroup.

The second subgroup comprises individuals aged 25-35, who are often in the family stage of life.Their priorities may revolve around family-related activities and responsibilities. Individuals aged 35 above typically have limited usage of such applications, and thus, our primary focus is not directed towards this age group.

That sounds good. Please continue.

Now, within the 18-25 age bracket, they generally prefer budget-friendly dining options which are located nearby. On the other hand, the 25-35 age group tends to prioritize restaurants that provide a family-friendly atmosphere and experience.

Taking into consideration these specific user preferences, I have identified some key features to integrate into the app which are as follows-

Firstly the user will select the option that whether he/she wants family friendly or not.

- Sorting-This feature would basically sort the restaurants from near to far depending on the requirements.
- Map integration-This feature will show restaurants on a map with color coded pins based on the price.
- Logo feature-A symbol of alcohol and smoke would appear on the top right corner who serves drinks and has a smoking culture.
- Confidence meter-This is a kind of rating which would be based on customer rating.

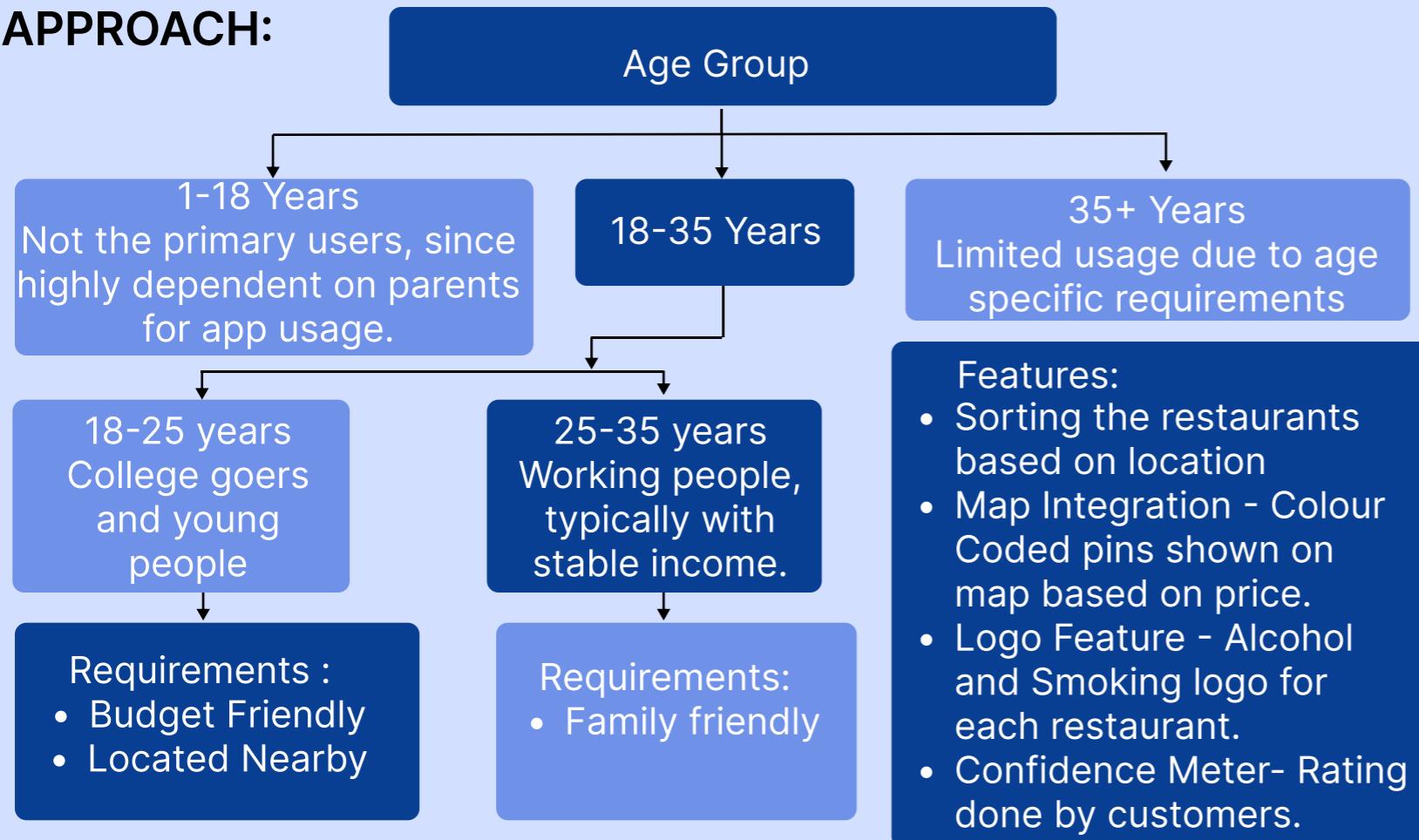
That sounds quite satisfactory, kindly prioritize your features.

Yes sure, to prioritize these feature, I will be using Value vs Efforts approach, According to this the feature at the topmost priority will be the sort feature , next would be the Logo feature , followed by the Map integration feature and the feature that has the least priority is confidence meter.

Great job, we can close the case here.

PROBLEM STATEMENT: Design an app that recommends restaurants to users.

APPROACH:



CASE FACTS

- The app should integrate features into an existing platform.
- The target audience includes 18-25 and 25-35 age groups with distinct dining preferences.

KEY TAKEAWAYS:

- To streamline your case, ask clarifying questions like in the above case it was easy to solve for a particular geography and age group.
- It is necessary to justify the assumptions for each case.

FAVOURITE PRODUCT | RAAM GROUP (1/2)

How often do you use digital products, and do you have a favorite product?

I use digital products quite frequently, and yes, I do have a favorite product. It's in the payment sector - Google Pay (GPay).

What makes GPay your favorite product?

GPay is my favorite digital product for several reasons. Firstly, it serves as an essential utility app because payments are an integral part of my daily life. It essentially replaces the need for a physical wallet, solving problems like carrying cash or cards. Second, it enhances security by reducing the chances of theft since I don't need to carry physical money. Third, GPay provides easy access to my entire bank account, which is incredibly convenient.

Moreover, with respect to its competitors such as phonepe and paytm it GPay is higher on the value to cognitive load chart. Also, it is easier to use in market places ,that is, single handed use in corporate features like "Swipe to Pay", single button to copy UPI ID, etc. Furthermore, GPay has effectively addressed specific pain points through features like the request feature, which simplifies financial interactions with others.

Lastly, GPay has added a layer of engagement to its platform by introducing fun games, such as flying kites and mango collection. Additionally, I have a personal memory associated with GPay when my mom made her first online recharge using the app. It's these personal touches that make GPay memorable and enjoyable to use.

Okay, we got your point. You seem pretty impressed with the app, would you like to throw some light on some ways to improve the product?

Great, I would like to clarify here if there is a particular metric or parameter you would like me to solve for?

No, you are free to pick any and move ahead with the improvement.

Okay, So I will pick a problem based on Social Psychology which also has the potential to drive community engagement metrics. The problem I've identified is the inconvenience of splitting and settling bills with friends. This issue primarily affects college students aged 18-24.

For receivers, asking for money and justifying the request, keeping track of completed payments, and dealing with requests that expire on G Pay are significant pain points. Additionally, managing different group splits can be challenging. For senders, there's often embarrassment in being asked to split a bill, uncertainty about the exact amount to pay, and the hassle of managing different group splits. Lastly, even if you user uses apps like Split wise there are a lot of restrictions to move to another payment app and pay.

To solve this problem, I suggest introducing a "Split" feature on G Pay. This feature would have three major aspects. Firstly, it would allow users to split money instantly or within saved groups, which are groups created with people they frequently hang out with. Secondly, which is a moonshot solution is integration with Whats-app groups, along with a split tracker, which would enable users to import groups directly. This approach would simplify the process of splitting bills among friends.

Are there any potential risks or challenges associated with implementing this solution?

Yes, there are potential risks to consider. One challenge is ensuring that proper accounting history is provided to prevent drop-offs. Additionally, GPay's market penetration, currently at 34%, might make it challenging to onboard users who are already familiar with other UPI apps. Overcoming these challenges would be essential for the successful implementation of the Split feature.

Thank you for sharing your insights and improvement suggestions.

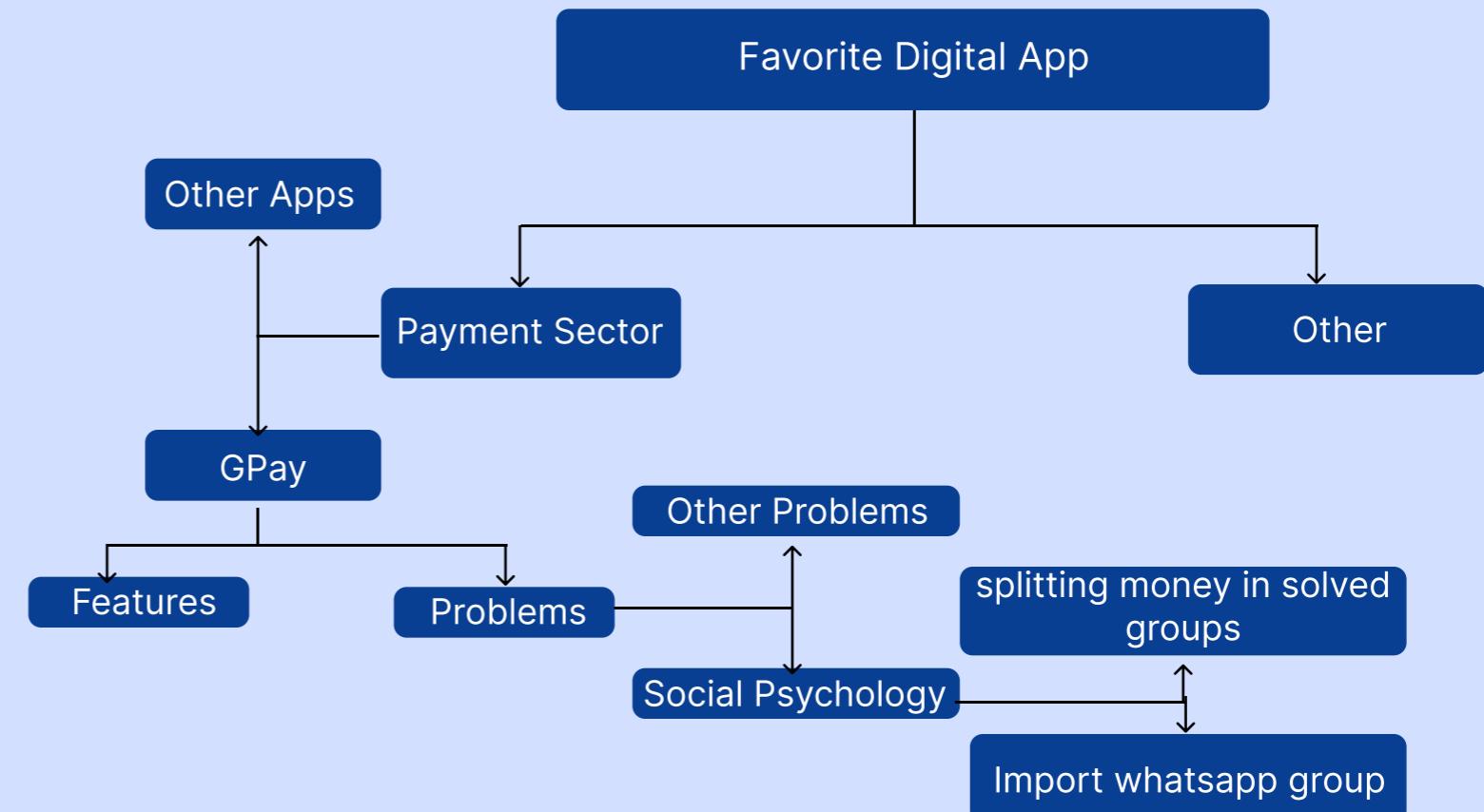
You're welcome. I believe that addressing real-life pain points like bill splitting can further improve the UX and community engagement.

PROBLEM STATEMENT: Provide recommendations to improve Google Pay app.

CASE FACTS

- The Candidate considered GooglePay as his favorite app considering it was higher on the value to the cognitive load chart, easier to use i.e. single hand feature and also solved the right problem through request feature.
- The Candidate also classified the major target audience i.e. college students and people of age 18-24 years. Additionally, different types problems were identified from the receiver's as well as sender's end such as expiration of payment request and no option to split the payments

APPROACH:



KEY TAKEAWAYS:

- The justification provided for favorite product by candidate covered all qualitative and logical reasons with appropriate storylining.
- The business objectives and needs were considered while discussing the potential pitfalls which is often overlooked by interviewees.

Design an app that helps you to plan road trips with friends.

The end goal is to figure out the entire flow so that the user can go from signing in to planning the entire trip. That would be a success.

Yes , we can say that.

First, we must mention who will use the app.

Would it be just one person planning the entire trip or will the whole friends group plan the trip together ? (The interviewee starts designing the app flow .)

- So firstly, we begin with into screen and then on the second screen they can sign up.
- The intro screen will tell the users how easy it is to plan trips with the app in comparison to searching on Google
- The sign up screen will ask the users for details like name, email, password or they can simply sign up via Google or Facebook.
- Signing up with Facebook makes it easier for the app to access the friends of the user.
- Following the sign up page there would be a tutorial on how to use the app.
- Then there would be a home page consisting of a list of all the trips planned by the user.
- If the user is new there would be a create trip option, following that there would be a questionnaire asking the user questions like: What country they would like to visit, the type of trip they want to stay. What is their budget, what kind of vehicle they are driving, how they can drive, and how many people are going with them?

Shouldn't we ask about the dates on which the users are planning the trip?

- Oh yes! We should be asking that question just after asking that question just after asking where they are planning to go.

- Then we will generate a travel plan.

- One thing that I would like to ask is whether we should include a feature that tells the user tourist sites which sites are popular and those which are preferred by the locals as an optional feature.

Yes, we should include that.

- After the questionnaire is over a travel plan will be generated which can be liked by the user who can add it to their travel plan and further edit it as they wish.
- The travel plan would include all the sight-seeing spots with pictures,estimated budget and depending on whether the user is traveling by an EV or a gas car there would be a charging planner and locations of gas stations respectively.
- There would be a route with circles and when they click the circles there would be a beautiful picture of that location. The route would further have locations of gas stations and EV charging points.
- The user can further edit the route and the sight-seeing locations that they don't want to see.
- If the user likes the travel plan the app would then ask them whether they want the app to book a hotel at the destination chosen.
- The app would then encourage the user to book the hotel via the app by providing discounted prices due to their collaboration with those hotels. The user can also skip this, and the final plan is saved.
- Then the app will ask the user to the home page and show them the trip created.

Since this app helps in planning a road trip with friends, what criteria are you using to share the trip plan externally instead of having that feature built into the app?

- Yes, on the home page we can also ask the user to enter the email IDs of the friends with whom they are planning the trip then they can edit the trip plan as well.

That seems like a good app covering all the features!

RCA | YOUTUBE COMMENTS (1/3)

The number of comments on Youtube are going down in this week, try to figure out the reason.

Could you provide specific data regarding the decrease in comments over the past week?

There has been a drop of around 15%.

Is the drop in comments faced equally by both Youtube Shorts and regular youtube videos ?

Consider just the regular length youtube videos.

Is the drop seen only in comments or other engaging features as well, such as views, likes, etc?

No, the decline is only faced in comments.

I think there can be several reasons for this, I would like to take the MECE approach to list down the several potential reasons due to which the problem might be occurring.

Sounds good to me, start breaking the problem down.

As far as I can think of, there can be 4 factors affecting the metrics: Systematic problems, External problems, Internal Problems and a few Uncontrollable factors.

Okay. Start elaborating and breaking each one of them down, start with the uncontrollable factors.

Uncontrollable factors can be like, Political changes - Some policy may have banned youtube in their regions, Rise of poor & un-engaging content or Downturn in the creation of content.

There's no issue with any of these, let's move ahead towards the other 3 potential problems.

In that case, we should firstly be starting with the systematic problems. There can be a technical problem due to which the decline is happening.

Can you give a few examples of any such technical problems?

I can think of 2 of them as of now, there can either be a Malfunction or Technical glitch in the system that logs every new comment in the database or there might be Algorithmic alterations like change in the formula that calculated the metric i.e, no. of comments.

You've only pointed out the glitches that can be in the comments part, do you think there can be a technical problem in any major feature of youtube that might've caused the decline?

There might've been a glitch in some major features like opening of the youtube application or playing of a video but as the numbers of all the other features are not affected, these type of glitches are out of question.

Fair, lets move ahead towards the other two potential problems.

The other 2 can be broken into Internal and External problems. Where Internal problems can be the following: Break of Patterns - A change in the feature that went against user's prior neural patterns, ex - displacement of comments section, Feature cannibalisation - An anti-feature may have resulted into this or High volume of error - Users might be facing difficulty in typing, posting comments. And external can be following: Competitive outperformance - Competitors have announced a new product or a feature, Negative connotation - Change in market trends and sentiments that are against commenting or Demographic - Drop due to a specific demographic.

RCA | YOUTUBE COMMENTS (2/3)

Why didn't you put the external factors as a subset of uncontrollable factors?

While they might appear similar but classifying them differently was important because the external factors, like competitor launching a new feature, can be neglected internally by the company, like in this case launching that feature, but uncontrollable factors are those that can not be neglected by the company, like a govt banning youtube in a country.

Makes sense, do you think there can be any more classifications?

As far as I can think as of now, all the potential problems can be covered under these four terms. The approach to reaching the root cause would be discussing about each of them one by one to find out where the problem is at.

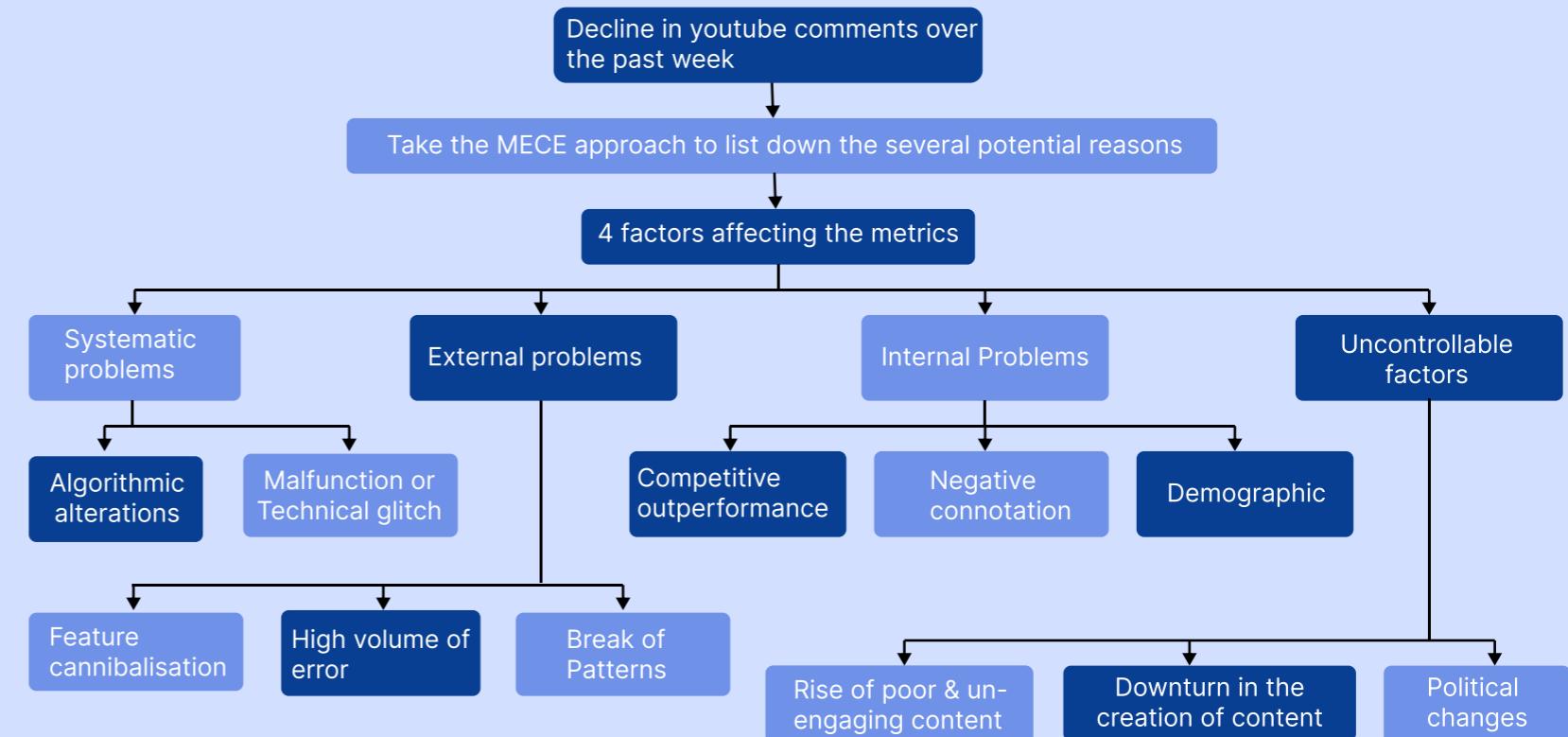
No need to do that, I'm satisfied with your approach. It was a good interview.

PROBLEM STATEMENT : The number of comments on youtube went down by 15% in this week compared to the last week. What might be the reason for this ?.

CASE FACTS:

- Only regular length youtube videos and youtube shorts.
- Comments is the only metric affected, there is no decline in like, views or any other metric.

APPROACH:



KEY TAKEAWAYS:

- Best way to reach to the root cause in this case is to break down the potential problems and address each one of them individually.
- Breaking down of problems should happen at more than 1 level i.e, we can break down the issues further into more sub-issues or sub-sub-issues.

FAVOURITE PRODUCT | ZOMATO (1/3)

Hi, let's try solving a product case. Tell me, what products you use on a day-to-day basis and your favorite product?

As a college student, there are various products that I use on a day-to-day basis, which help me make my life run smoothly. Some of them are GPay, Gsuite, WhatsApp, Zomato. The product that I enjoy using the most is Zomato

Okay, so can you give me reasons why Zomato is your favourite product?

There are several reasons that make Zomato my favourite product

1. **User-Friendly Interface:** Zomato's interface is easy to understand, providing a seamless and intuitive experience for users. It simplifies the process from onboarding to ordering food, ensuring users face no hurdles in understanding how to navigate the platform.
2. **Innovative and Creative:** Zomato is known for its innovation and creativity. It offers a range of unique features, including special dining and delivery promotions, restaurant categorization based on top dishes, and noteworthy initiatives that benefit the environment and society.
3. **Aesthetic Appeal:** The look and feel of the product are aesthetically pleasing, enhancing the overall user experience.

These factors collectively make Zomato my preferred product.

Do you have any idea about the market share of Zomato and its primary competitors?

Over a significant duration, the food delivery industry was primarily governed by two major contenders, Swiggy and Zomato. Nevertheless, in recent times, Zomato has emerged as the leading authority in the sector, while smaller rivals like Uber Eats and Foodpanda have also entered the scene.

Why do you not use other platforms like Swiggy and others?

My main motivation is Zomato's exceptional experience. As a budget-conscious student, I value great deals. Zomato helps me explore diverse cuisines and the loyalty program's discounts reinforce my loyalty. This makes Zomato my top choice over alternatives like Swiggy and Uber Eats.

Now, can you please break down the stakeholders involved in the Zomato supply chain?

So, according to me, there are mainly 3 stakeholders involved in the complete supply chain of Zomato. Firstly, the restaurants from where the food is being delivered. Secondly, it's the delivery partner who delivers the food from the restaurants to the end consumer. And lastly, it is the customers.

Cool. And that perfectly works. So now can you please list down the pain points of these three stakeholders?

Certainly. Restaurants primarily aim to increase their order volumes and revenue while also desiring enhanced publicity to reach a wider city audience.

In contrast, delivery partners seek efficient and smooth order deliveries and aspire to receive a higher number of orders, but travel-related fatigue and fuel expenses pose significant challenges.

End consumers, particularly students working late nights, expect timely and secure food deliveries, emphasizing the need for convenient, hygienic, and safe late-night food options.

Now, as we have figured out the pain points of these stakeholders, could you please shed some light on the various ways through which you can solve these problems?

We can support our restaurants by introducing a rating-based listing system. Higher-rated restaurants (e.g., 4 out of 5) will enjoy better visibility, giving them an advantage in attracting orders over lower-rated

ones (e.g., 3.5 or below).

Incentivizing restaurant excellence is key. We propose a "Restaurant of the Month" program to highlight the top eatery in each area, increasing its citywide visibility and attracting a broader user base.

Certainly, here are the points for the initiatives aimed at delivery partners:

1. **Electric Vehicle Programs:** Launch electric vehicle programs in tier-one cities, initially focusing on cities like Mumbai, Bangalore, and Pune.
2. **Expansion:** After establishing networks in initial cities, expand these initiatives to other urban centers, including Delhi and Lucknow.
3. **Rest Spots:** Provide designated rest areas along delivery routes with essential facilities like restrooms and water to enhance the comfort and well-being of delivery partners.
4. **Performance Recognition:** Implement a system to reward top-performing delivery partners with bonuses, motivating them to excel in their roles..

Enhancing user experience through precise predictions and real-time updates boosts satisfaction. Early arrivals further elevate it. Zomato could explore a late-night food chain to cater to nighttime cravings.

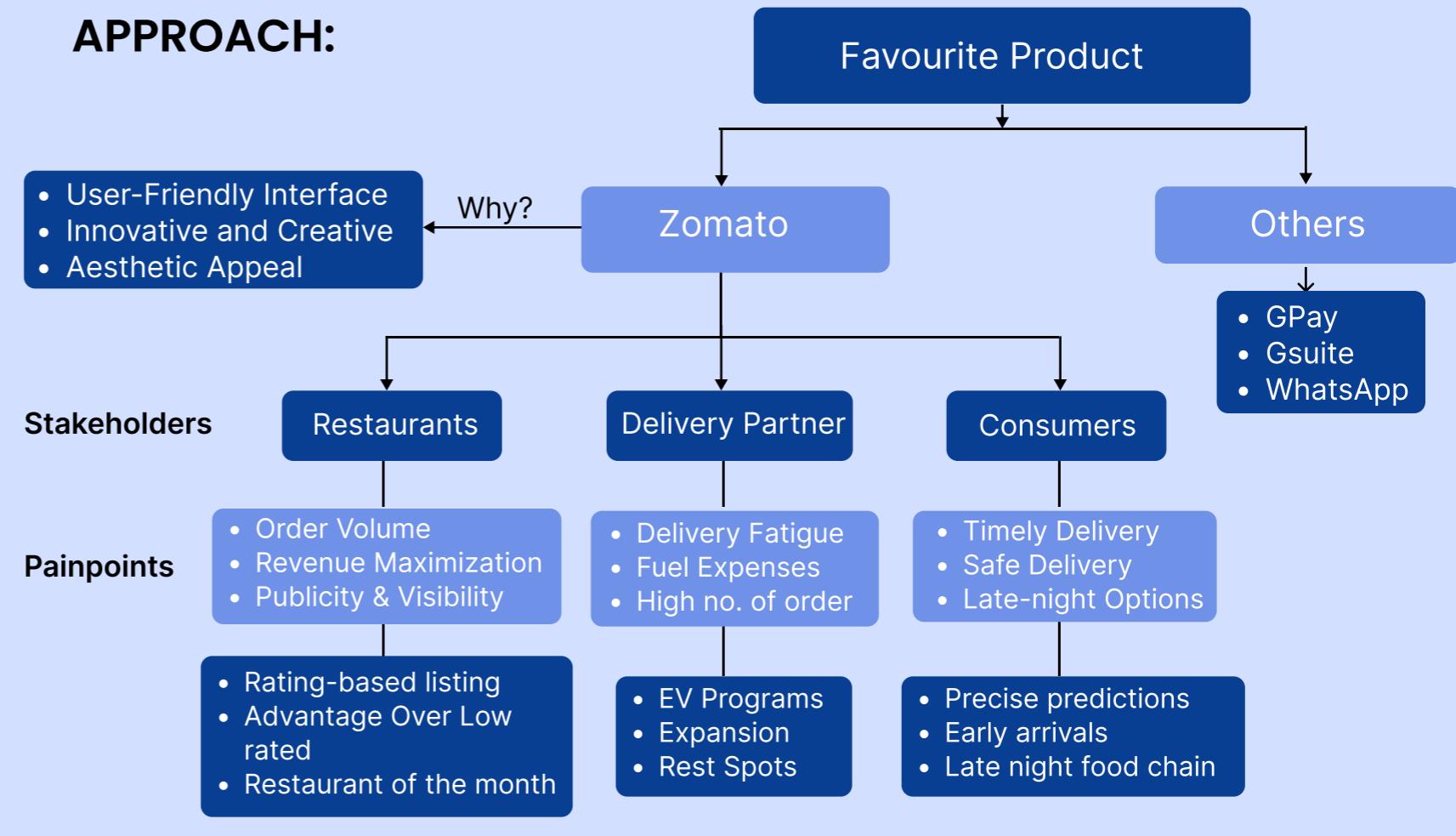
Thank you for these solutions. We can close the case now.

PROBLEM STATEMENT: Product design and analysis of Zomato app

CASE FACTS:

- The user prefers Zomato over other food delivery platforms like Swiggy and Uber Eats due to the experience it provides, budget-friendly deals, and loyalty programs.

APPROACH:



KEY TAKEAWAYS:

- For better understanding of reasoning behind a good product, refer to Dieter Ram's principle of Good Design
- In order to understand the pain points better understand the user journey of the stakeholders.
- Knowing general facts and industry insights helps in interviews.



THE
BUSINESS
CLUB

Deck Breakdown



Introduction

Manav Jain is a 2023 graduate from IIT(BHU), Varanasi from the department of Computer Science and Engineering and have had interned at Shaadi.com, Cred(Founder's Office) and at Zupee(Founder's Office) where he received a PPO.

Passionate about reading, he strives to approach problem-solving with a first-principled mindset. The excitement for human motivations and the exploration of their neuroscience, evolutionary, and anthropological origins provide him with immersive flow experiences.

Problem Statement for the Flipkart APM

The world faced a COVID-19 Pandemic in 2020 and people from all walks of life were impacted. As we enter into a post-pandemic world, the world faces a new a set of challenges.

Find a problem in post-pandemic world that can be solved with a product.

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Additional points in the problem statement

- What makes this a post-pandemic problem and what potential impact can solving it create?
- Who will you solve for first and why?
- What part of problem will you solve first and why?
- How would you measure the success of your solution?
- What might be the possible pitfalls in your solution?

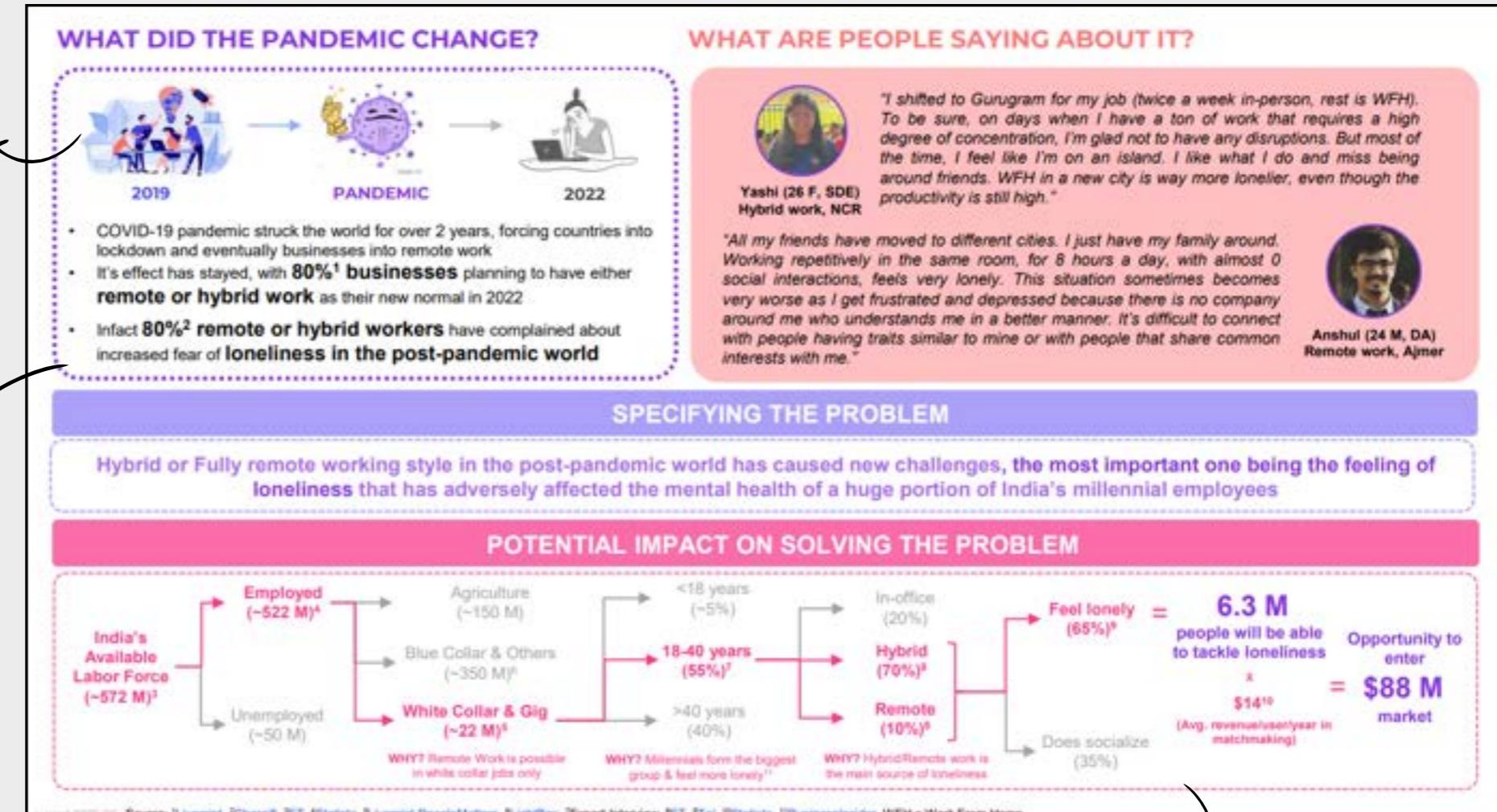
Approach

I focused on the problems caused by the Covid-19 pandemic and what happened after it. First, I carefully looked at the problem, studying its details, who it affected, and why it happened. I always start by understanding the problem well. Then, I used a method called Circles to organize and assess different solutions to solve the issues we found in the post-pandemic world.

[Link to the original deck](#)

PAGE 1 (1/2)

- At the start, I set the stage by discussing the **pandemic's impact** from 2019 to 2022.
- The presentation primarily focused on tackling the **loneliness issue intensified by the pandemic**.



- I assessed the magnitude of the problem, even if it was based on estimations, to provide a sense of the issue's scope.
- At each stage of the presentation, I ensured that all data points were properly sourced to enhance transparency and verifiability.

PAGE 1 (2/2)

WHAT DID THE PANDEMIC CHANGE?



- COVID-19 pandemic struck the world for over 2 years, forcing countries into lockdown and eventually businesses into remote work.
- It's effect has stayed, with **80%¹ businesses** planning to have either **remote or hybrid work** as their new normal in 2022.
- Infact **80%² remote or hybrid workers** have complained about increased fear of **loneliness in the post-pandemic world**.

WHAT ARE PEOPLE SAYING ABOUT IT?

 **Yashi (26 F, SDE)**
Hybrid work, NCR

"I shifted to Gurugram for my job (twice a week in-person, rest is WFH). To be sure, on days when I have a ton of work that requires a high degree of concentration, I'm glad not to have any disruptions. But most of the time, I feel like I'm on an island. I like what I do and miss being around friends. WFH in a new city is way more lonelier, even though the productivity is still high."

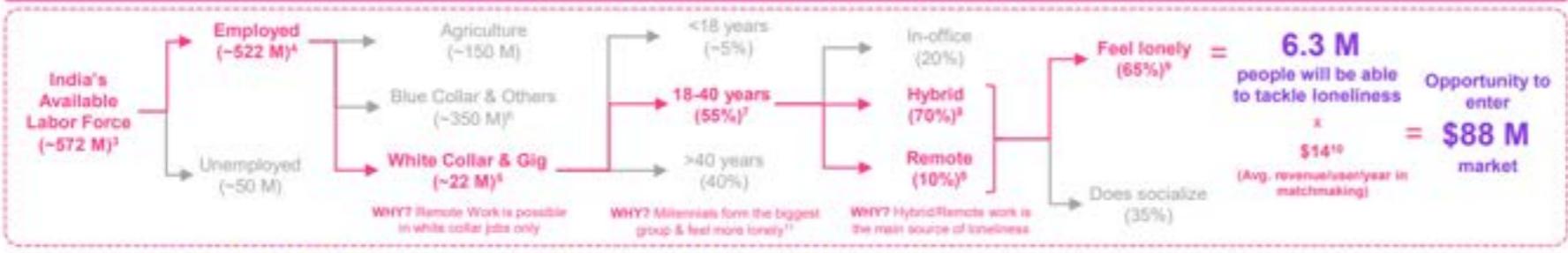
 **Anshul (24 M, DA)**
Remote work, Ajmer

"All my friends have moved to different cities. I just have my family around. Working repetitively in the same room, for 8 hours a day, with almost 0 social interactions, feels very lonely. This situation sometimes becomes very worse as I get frustrated and depressed because there is no company around me who understands me in a better manner. It's difficult to connect with people having traits similar to mine or with people that share common interests with me."

SPECIFYING THE PROBLEM

Hybrid or Fully remote working style in the post-pandemic world has caused new challenges, the most important one being the feeling of **loneliness** that has adversely affected the mental health of a huge portion of India's millennial employees

POTENTIAL IMPACT ON SOLVING THE PROBLEM



India's Available Labor Force (~572 M)³

Employed (~522 M)⁴

Unemployed (~50 M)

Agriculture (~150 M)

Blue Collar & Others (~350 M)⁵

White Collar & Gig (~22 M)⁶

<18 years (~5%)

18-40 years (55%)⁷

>40 years (40%)

In-office (20%)

Hybrid (70%)⁸

Remote (10%)⁹

Does socialize (35%)

Feel lonely (65%)¹⁰

Opportunity to enter market = \$88 M

WHY? Remote Work is possible in white collar jobs only

WHY? Millennials form the biggest group & feel more lonely¹¹

WHY? Hybrid/Remote work is the main source of loneliness

I integrated customer stories into the presentation to provide valuable insights into the real-world experiences of individuals affected by loneliness.

Following the problem overview, I focused on **articulating a clear problem statement**, in line with Flipkart's problem-first approach.

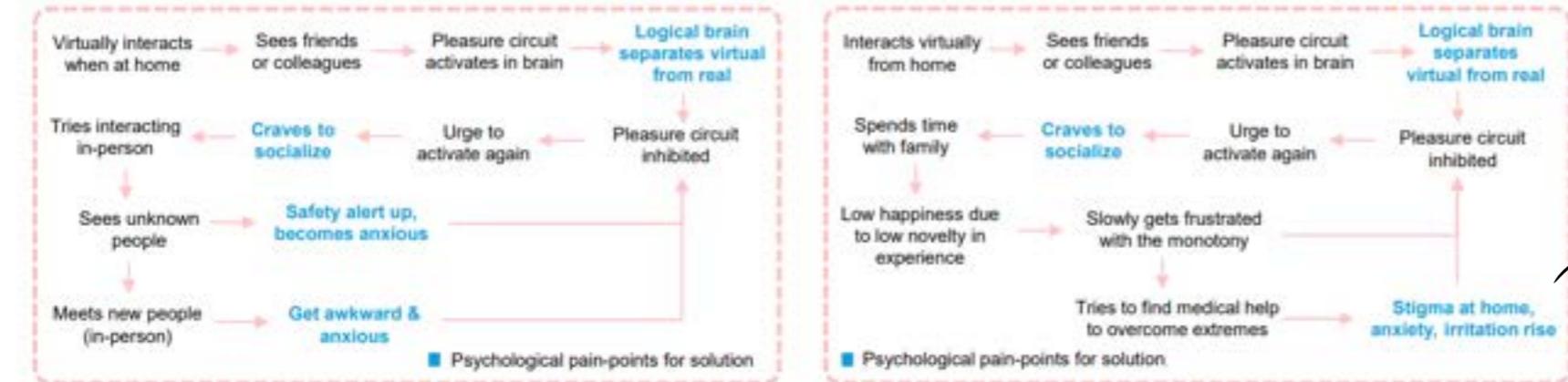
- The structure of the presentation was **designed for brevity and ease of navigation**
- Also, guiding the audience's focus to my specific target market.
- Lastly, I emphasized the importance of providing sources and footnotes to maintain the **credibility of the information presented**.

PAGE 2

UNDERSTANDING THE TARGET USERS BETTER

	Ira Modi (23 F)	What makes life difficult?
		<ul style="list-style-type: none"> Ambivert, new to Bengaluru, works hybrid in-office twice a week Makes friends in office & but wants to meet a diverse set of people Feels awkward when talking to unknown people in the city Friends are busy or stay too far, doesn't have anyone to socialize with
	Raj Singh (27 M)	What makes life difficult?
		<ul style="list-style-type: none"> Extrovert staying at home in Meerut, works fully remote Family interaction has become monotonous, friends are in other towns Loves Cricket, but can't find people to play with Sometimes feels the need for therapy, but fears the stigma at home

IDENTIFYING PSYCHOLOGICAL PAIN-POINTS TO AID SOLUTION DESIGN



IDENTIFYING OUR PRIORITY USERS

Target User	Market Share ¹	Market Growth ¹	Spending Power	# psychological pain-points	Occurrence freq.
Works hybrid (Ira)	~80%	High	Medium	4	High
Works fully remote (Raj)	~20%	Low	High	3	High
Reasoning	Research data	Market trends	Remote workers save relocation expenses	Based on psychographic analysis done above	Qualitative Score

Via: 2015 DR Source: 'ET'

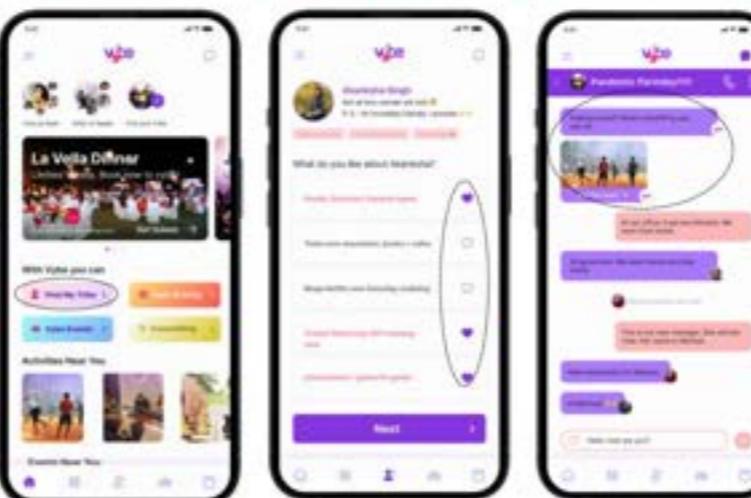
Prioritized target segments based on market share, growth trends, and qualitative parameters, offering justification for the chosen cohorts.

- Developed two personas to understand the pandemic's impact and the challenges it presented to individuals.
- Conducted interviews with 510 people to uncover user behavior and preferences, focusing on aspects of profiles and the criteria for group creation.

- Crafted a narrative aligned with the persona to address loneliness through Try Finder.
- Identified two user patterns: hybrid workers and fully remote workers, recognizing their distinct challenges.
- Explored the psychological aspects of loneliness through a psychological journey to understand how individuals experience and cope with it.

PAGE 3

SOLUTION A : VYBE's TRIBE-FINDER



- The approach always started with a **concise one-liner solution summary**.
- The problem I aimed to solve was based on a **personal challenge faced** during my Google internship.
- Selecting a problem I deeply empathized with was a deliberate choice.

- Monetization strategies** included engagement prompts such as cafe outings and games, with potential opportunities for cross-selling ads.
- The **user engagement cycle** would continue as users invited their friends, contributing to a personalized and seamless experience.

- The **solution concept** involved developing a Tinder-like system for making friends.
- Users would engage in actions like swiping through profiles, exploring them, and expressing interest.

- The **core change in the solution** was the transition from one-on-one matching to group formation.
- Groups would form when ten or more people mutually liked each other with a score of five or higher.

PAGE 4

SOLUTION B : HOST AN ACTIVITY



SOLUTION C : ATTEND VYBE EVENTS



To ensure the quality and legitimacy of these user-generated events, a verification process was implemented, managed by a product named "vibe."

Team-Organized Events-

- The third solution involved organizing events conducted by Team Y.
- This initiative aimed to take the lead in arranging meetups and hosting various sessions.
- Emphasis was placed on outlining operational details, highlighting the significance of technical design, and underlining the importance of each element within the overall plan.

- **Facilitating Events-** The second component of the solution focused on enabling both virtual and in-person events. This idea was born from the personal challenge of finding engaging events to participate in.

- **User-Hosted Meetups-** To address this challenge, the platform allowed users to create and host their own meetups and activities.

PAGE 5

SOLUTION D : BOOK A COUNSELLING SESSION

Users can book one-on-one counselling or therapy sessions seamlessly

```

    graph LR
        HomeScreen[Home Screen] --> ConsultNow[Consult Now]
        ConsultNow --> BrowseExperts[Browse experts]
        BrowseExperts --> BookAppointment[Book Appointment]
        BookAppointment --> ConsultFees[Consult fees]
        ConsultFees --> FollowUp[Follow-up]
        FollowUp --> Prescription[Prescription]
        Prescription --> Therapy[Therapy]
        Therapy --> PhoneIcon[Phone icon]
    
```

Other Details

- Experts onboarded by Vybe from partner hospitals
- Sessions can be offline based on user preferences

TECHNICAL DESIGN

```

    graph LR
        User[User] <--> Confirmation[Confirmation]
        Confirmation <--> ConsultationService[Consultation Service]
        ConsultationService <--> Details[Details]
        Details <--> Expert[Expert]
    
```

Consultation considerations

- Privacy & security to be industry compliant as patient data is sensitive
- Refund policy to be in place when appointments are cancelled

PAIN-POINTS ADDRESSED

- When loneliness starts disrupting daily activities, Vybe helps users consult experts for medical help
- Virtual consultations help people holding stigma for mental health related help

Doctor Listing View
Users can book appointments

WHICH PAIN-POINTS SHOULD WE SOLVE IN MVP?*

Parameter / Solution	Tribe Finder (A)	Host an activity (B)	Vybe Events (C)	Counselling Sessions (D)
Pain-points Addressed	<ul style="list-style-type: none"> Finding new people with similar interest Knowing people before meeting Less awkward when meeting in groups Meet/Leave multiple groups as needed 	<ul style="list-style-type: none"> Breaking from the monotonous WFH No guilt of breaking off after activity Avenue for interest-based socialization 	<ul style="list-style-type: none"> Breaking from the monotonous WFH Avenue for interest-based socialization Expanding social circles or networks 	<ul style="list-style-type: none"> Support for mental health Stigma removed via online consultation
# users reached ¹	★★★★	★★	★	★★
Impact on user ²	★★★	★★★	★★	★★★★
Potential ARPU ³	★★	★★★	★★★★	★★★★
Prob. of success ⁴	90%	85%	80%	85%
Effort/Cost to implement ⁵	★★	★★★	★★★★	★★★★
Competition barrier ⁶	★	★★	★★★	★★★★
Net Result	MVP	PHASE - 1	PHASE-2	PHASE-3

*Qualitative Analysis used for prioritization

1. A focuses more on Ira's needs (80% market), D focuses on Raj's needs (20% market). B,C focus on both personas but require a lot of offline logistics. C is the most difficult to scale. Hence A,B,D,C
2. D provides direct medical help. A, B can be used at any time, C is weekly, hence D,A,B,C
3. A, D are commission (D = 10xA), B,C are direct but C is mega-event (C>B), hence D,C,B,A
4. A is novel & scalable, D has proven implementation. B, C are running experiments, hence A,D,C,B
5. C needs venue, host, D needs partners, A, B are simple tech flows, hence C,D,B,A
6. A is a novel feature, B is used outside India, C is in India, D is everywhere, hence D,C,B,A

7. Net result is calculated as ($\# \text{ users} \times \text{Impact} \times \text{ARPU} \times \text{Prob.}$) / (Effort + Cost + Barrier)

- Prioritization is Key**-Emphasizing the importance of prioritization, which involves deciding what content to focus on.
- Effective Communication with Flowcharts**- Flowcharts are highlighted as a powerful tool for communicating complex information concisely.
- Defining MVP Components**-The central question of what to include in the Minimum Viable Product (MVP) is raised, signifying the need to make strategic choices.
- List of Pain Points**- Creating a comprehensive list of existing pain points to understand the challenges that need to be addressed.

- Summary Chart**- Mention of a summary chart that encompasses solutions and the associated pain points they intend to resolve.
- Prioritization Framework**- A straightforward framework is discussed, which involves evaluating user value and business value to guide prioritization decisions.
- MVP Development**- Ultimately, the MVP takes shape based on these considerations, forming the foundation for product development.

PAGE 6

MEASURING SUCCESS FOR ALL THE FEATURES

	Discovery	Adoption	Repeat Usage	Monetization
Tribe Finder	<ul style="list-style-type: none"> # of page views, CTA clicks Home to Profile page conversion 	<ul style="list-style-type: none"> # profiles viewed per session / user # of groups formed per month / user % conversion in meet-up prompts 	<ul style="list-style-type: none"> # daily & monthly active users % returning on profile page / day Churn rate 	<ul style="list-style-type: none"> Avg. meet-up trx.¹ value per user # trx. made per user per month Partner on-board & churn rates
Host an Activity	<ul style="list-style-type: none"> # of activities viewed, CTA clicks Home to Activity page conversion 	<ul style="list-style-type: none"> # activities hosted per month # activities joined per month / user % no shows for activities 	<ul style="list-style-type: none"> % users hosting/joining again Churn rate 	<ul style="list-style-type: none"> Average revenue per user Avg. refund value / month
Vybe Events	<ul style="list-style-type: none"> # of event views, CTA clicks Home to Events page conversion 	<ul style="list-style-type: none"> # events attended per month / user Avg. time spent viewing event / user % no shows for events 	<ul style="list-style-type: none"> % users returning to attend events Churn rate 	<ul style="list-style-type: none"> Avg. entry fee value per user Avg. refund value / month
Book Counselling	<ul style="list-style-type: none"> # of experts browsed, CTA clicks Home to Experts page conversion 	<ul style="list-style-type: none"> # profiles viewed per session / user # of consultations taken / user % no shows for consultations 	<ul style="list-style-type: none"> % users taking follow-up sessions % users returning for counselling Churn rate 	<ul style="list-style-type: none"> Avg session fees paid per user # consultations made per user Expert on-board & churn rates

POTENTIAL PITFALLS & WORK-AROUNDS

TRIBE FINDER	HOST AN ACTIVITY
<ul style="list-style-type: none"> Not enough groups are formed because users don't like >5 traits of other profiles. Groups die out because users don't engage on the group chat after introductions. Users don't plan in-person meet-ups owing to safety concerns. 	<ul style="list-style-type: none"> Maintain activity photos to motivate users to host an activity on their own. Show pop-ups of the low no-show rates in previous activities to gain user trust. Make refund policy explicit. Prompt users to complete interest questionnaires. Cross-sell Tribe Finder as alternative.
VYBE EVENTS	BOOK A COUNSELLING SESSION
<ul style="list-style-type: none"> Users are not interested in Vybe Events. Users are not able to plan it in their schedule. Users who attend feel left out in certain events. 	<ul style="list-style-type: none"> Highlight networking opportunity by showing how many people nearby are attending the event. Prompt users about the full refund policy in case of abrupt cancellation to motivate them. Make use of community managers to constantly engage the audience.

1. TRX = Transaction

Metrics and Precautions-

- For each proposed feature, it's vital to outline the significant metrics, potential challenges, and workarounds.
- While it might not always be feasible to include all these details, it's strongly recommended.

Prioritized Solution Focus-

- For the prioritized solution, special attention should be given to defining the metrics and recognizing potential pitfalls.
- Metrics serve as a means to translate user actions into quantifiable data, allowing for the tracking of these actions.
- It's crucial to align metrics with actions, and in some cases, even devise custom metrics to suit specific needs.



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Fin & Eco Overview

Definition	Formula	Key takeaways
Represent the potential benefits that an individual, investor, or business misses out on when choosing one alternative over another.	<p>Opportunity cost = FO – CO Where, FO = Return on best Forgone option CO = Return on Chosen Option</p>	<ul style="list-style-type: none"> • Opportunity cost is the forgone benefit that would have been derived from an option not chosen. • Considering the value of opportunity costs can guide individuals and organizations to more profitable decision-making. • Opportunity cost is a strictly internal cost used for strategic contemplation; it is not included in accounting profit and is excluded from external financial reporting.
The time value of money is a basic financial concept that holds that money in the present is worth more than the same sum of money to be received in the future.	<p>The most fundamental TVM formula takes into account the following variables-</p> <p>FV = Future value of money PV = Present value of money i = interest rate n = number of compounding periods per year t = number of years Based on these variables, the formula for TVM is $FV = PV \times [1 + (i / n)]^{(n \times t)}$</p>	<ul style="list-style-type: none"> • Time value of money means that a sum of money is worth more now than the same sum of money in the future. • This is because money can grow only through investing. An investment delayed is an opportunity lost. • The formula for computing the time value of money considers the amount of money, its future value, the amount it can earn, and the time frame.

Definition	Formula	Key takeaways
<p>Net present value (NPV) is the difference between the present value of cash inflows and the present value of cash outflows over a period of time.</p>	<p>If there's one cash flow from a project that will be paid one year from now, then the calculation for the NPV is as -</p> $NPV = [\text{cash flow}/(1+i)^t] - \text{initial investment}$ <p>Where,</p> <p>i=Required return or discount rate</p> <p>t=Number of time periods</p>	<ul style="list-style-type: none"> Net present value, or NPV, is used to calculate the current value of a future stream of payments from a company, project, or investment. The discount rate may reflect your cost of capital or the returns available on alternative investments of comparable risk. If the NPV of a project or investment is positive, it means its rate of return will be above the discount rate.
<p>The internal rate of return (IRR) is a metric used in financial analysis to estimate the profitability of potential investments. IRR is a discount rate that makes the net present value (NPV) of all cash flows equal to zero in a discounted cash flow analysis.</p>	$0 = NPV = \sum_{t=1}^T \frac{C_t}{(1 + IRR)^t} - C_0$ <p>Where-</p> <ul style="list-style-type: none"> C_t=Net cash inflow during the period t C₀=Total initial investment costs IRR=The internal rate of return t=The number of time periods 	<ul style="list-style-type: none"> The motive of IRR is to find a discount rate such that the total present value of annual nominal cash inflows equals the investment's initial net cash outflows. IRR is ideal for analyzing capital budget projects to understand and compare potential future annual returns. IRR helps investors determine the return on investment of various assets.

Definition	Formula	Key takeaways
<p>The Profitability Index (PI), also known as the Investment Value Ratio (VIR) or Return on Investment Ratio (PIR), describes an index that represents the ratio between the costs and benefits of a proposed project. It is calculated as the ratio of the present value of expected future cash flows to the initial amount invested in the project</p>	<p>The profitability index can be computed using the following ratio:</p> $\text{Profitability Index} = \frac{\text{PV of future cashflows}}{\text{initial investment}}$	<ul style="list-style-type: none"> • A PI greater than 1.0 is deemed as a good investment, with higher values corresponding to more attractive projects. • Under capital constraints and mutually exclusive projects, only those with the highest PIs should be undertaken.
<p>The payback period can be defined as the period of time required to recover its initial cost and expenses and cost of investment done for the project to reach a time where there is no loss no profit i.e. breakeven point.</p>	<p>The fundamental formula for calculating the payback period is :</p> $\text{Payback period} = (\text{Cost of Investment} \div \text{Average Annual Cash Flow})$	<ul style="list-style-type: none"> • Shorter paybacks mean more attractive investments, while longer payback periods are less desirable. • Account and fund managers use the payback period to determine whether to go through with an investment. • One of the downsides of the payback period is that it disregards the time value of money.

ASSETS

Business assets are anything of value to a company that helps promote company productivity, efficiency and revenue. An asset is a resource with economic value that an individual, corporation, or country owns or controls with the expectation that it will provide a future benefit.

CLASSIFICATION

1 Tangible assets are assets with a specified monetary value. A company's leadership might buy or sell tangible assets to increase the company's financial stability.

EXAMPLE - Cash reserves, Land, Inventory, Rental facilities

2 Intangible assets are non-physical financial resources that can increase a company's revenue.

EXAMPLE - Trademarked processes or product designs, Customer goodwill, Employee expertise

3 Current or short-term assets are assets that a company can translate into revenue by the end of the current fiscal year or that provide a monetary benefit within that period.

EXAMPLES - Cash, Debt owed by customers, Commercial inventory, Raw materials

4 Noncurrent assets, or long-term or fixed assets, are assets that a company might not turn into cash within the fiscal year, but that provide a long-term benefit to the company.

EXAMPLES - Property, Production equipment, Patents

KEY TAKEAWAYS

- Assets are reported on a company's balance sheet.
- They are bought or created to increase a firm's value or benefit the firm's operations.
- An asset is something that may generate cash flow, reduce expenses or improve sales, regardless of whether it's manufacturing equipment or a patent.

LIABILITIES

A liability is a financial obligation of a company that results in the company's future sacrifices of economic benefits to other entities or businesses. A liability can be an alternative to equity as a source of a company's financing.

CLASSIFICATION

1 Current Liabilities : Current liabilities are those liabilities that are due and need to be paid within an accounting period (which is usually a year or 12 months). Current liabilities are also known as short-term liabilities due to the relatively short turnaround time. Examples : Interest Payable, Accounts Payable, Short term loans, Accrued Expenses, Bank overdraft

2 Non-Current Liabilities : Non-current liabilities, which are also known as long-term liabilities are financial obligations that are due in over a year's time. These liabilities help businesses acquire capital assets by providing the required capital. Examples : Deferred tax liabilities, Bonds payable, Capital leases, Debentures

3 Contingent liabilities : Contingent liabilities are a special type of liability that may occur during the course of a business, depending on the outcome of an event that may take place in the future. In accounting standards, contingent liabilities are recorded as potential or probable liabilities only if they have a 50% chance of occurring and when the amount of liability can be estimated properly. Examples : Product Warranties, Lawsuits

KEY TAKEAWAYS

- Liability can also mean a legal or regulatory risk or obligation.
- In accounting, companies book liabilities in opposition to assets.
- Current liabilities are a company's short-term financial obligations that are due within one year or a normal operating cycle (e.g. accounts payable).

CASH FLOWS

Cash Flow (CF) is the increase or decrease in the amount of money a business, institution, or individual has. In finance, the term is used to describe the amount of cash (currency) that is generated or consumed in a given time period.

CLASSIFICATION

- Cash flow from operations(CFO)
- Cash flow from financing (CFF)
- Cash flow from investing (CFI)
- Cash from Operating Activities – Cash that is generated by a company's core business activities – does not include CF from investing. This is found on the company's statement of cash flows. (the first section)
- Free Cash Flow to Equity (FCFE) – FCFE represents the cash that's available after reinvestment back into the business (capital expenditures).
- Free Cash Flow to the Firm (FCFF) – This is a measure that assumes a company has no leverage (debt). It is used in financial modeling and valuation.
- Net Change in Cash – The change in the amount of cash flow from one accounting period to the next. This is found at the bottom of the Cash Flow System.

KEY TAKEAWAYS

- Cash received signifies inflows, and cash spent signifies outflows.
- The cash flow statement is a financial statement that reports on a company's sources and usage of cash over some time.
- A company's cash flow is typically categorized as cash flows from operations, investing, and financing.

SHAREHOLDER'S EQUITY

Shareholder's equity is the residual interest of the shareholders in the company and is calculated as the difference between Assets and Liabilities. Shareholders' Equity Statement on the balance sheet shows the details of the change in the value of shareholder's equity during a particular accounting period from its beginning till the end.

BASIC ACCOUNTING EQUATION

$$\text{Shareholders' Equity} = \text{Total Assets} - \text{Total Liabilities}$$

INVESTOR'S EQUATION

$$\text{Shareholders' Equity} = \text{Share Capital} + \text{Retained Earnings} - \text{Treasury Stock}$$

COMPONENTS

- Common stock
- Preferred stock
- Retained Earnings
- Additional paid-up capital
- Treasury shares

KEY TAKEAWAYS

- Positive shareholder equity means the company has enough assets to cover its liabilities, but the company's liabilities exceed its assets if it is negative.
- Retained earnings is part of shareholder equity and is the percentage of net earnings not paid to shareholders as dividends.
- Shareholder equity gives analysts and investors a clear picture of the financial health of a company.



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Statistics for Business

Statistics is the area of applied math that deals with the collection, organization, analysis, interpretation, and presentation of data.

When considering what business statistics is, there are two major types of statistics used in business, which are descriptive statistics and inferential statistics.

Descriptive statistics are used to describe a set of data points, while inferential statistics is used to analyze a set of data and use those as a basis to make predictions on how the data will change in the future.

Consider, for example, a company that sells pizzas. The company gathers data such as the count of sales, average quantity purchased per transaction, and average sales per day of the week. All of this information is descriptive, as it tells a story of what actually happened in the past. In this case, it is not being used beyond being informational.

Let's say the same company wants to roll out a new pizza. It gathers the same sales data above, but it crafts the information to make predictions about what the sales of the new pizza will be. The act of using descriptive statistics and applying characteristics to a different data set makes the data set inferential statistics. We are no longer simply summarizing data; we are using it to predict what will happen regarding an entirely different body of data (the new hot sauce product).

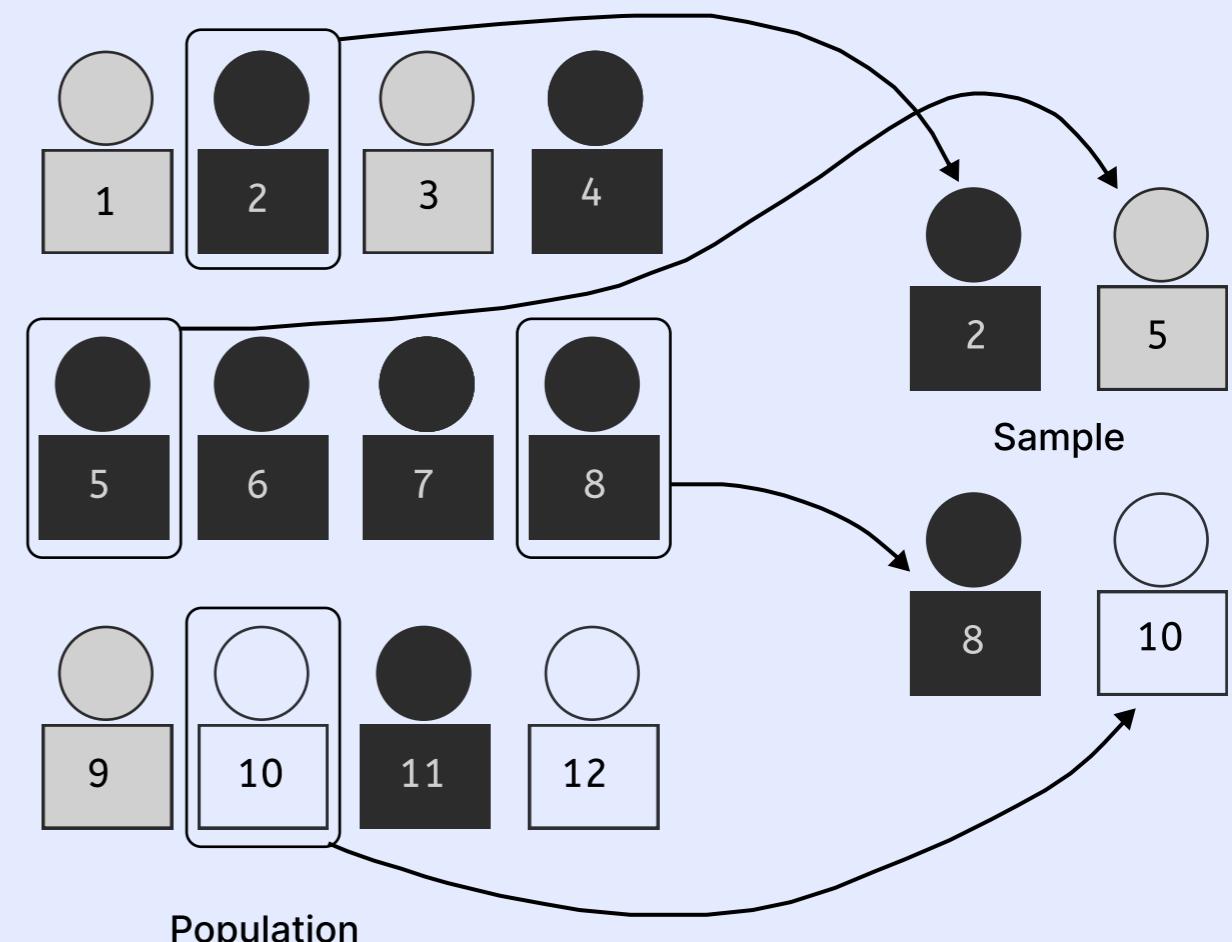
In a nutshell, descriptive statistics focuses on describing the visible characteristics of a dataset (a population or sample). Meanwhile, inferential statistics focuses on making predictions or generalizations about a larger dataset based on a sample of those data.

POPULATION AND SAMPLE

In the above paragraph, we spoke about sampling the population.

Population is the entire group that you wish to draw data from. It can apply to any group from which you will collect information.

A **sample** is a representative group of a larger population. Random sampling from representative groups allows us to draw broad conclusions about an overall population.



VARIABLES

A variable is any characteristic, number, or quantity that can be measured or counted. A variable may also be called a data item. Age, sex, business income and expenses, country of birth, capital expenditure, class grades, eye color, and vehicle type are examples of variables.

Variables can be broadly categorized into numerical and categorical. Numerical variables are either a set of discrete or continuous numbers. Continuous numerical variables can take in an infinite number of values, whereas discrete can only take in a set of finite values. Categorical variables are of two types - ordinal and nominal. As the name suggests, ordinal categorical variables have some order or pattern.

For example, our education levels follow a pattern - pre-school, high school, undergraduate, post-graduation, Ph.D. On the other hand, nominal categorical variables lack any order or levels.

MEASURES OF CENTRAL TENDENCY

Central tendency refers to a dataset's descriptive summary using a single value reflecting the center of the data distribution. Measures of central tendency do not just refer to the central value within an entire dataset (median). Instead, it is a general term used to describe a variety of central measurements.. The mean, median, and mode are the measures of central tendency.

MEAN:- The mean, considered the most popular measure of central tendency, is the average or most common value in a data set. It is the sum of all observations divided by number of observations.

The critical thing to remember about mean is that it's sensitive to outliers. And the outliers may alter the mean in a significant way

MEDIAN:- It is The central or middle value in the dataset. In simple words, the median divides the distribution into two halves, i.e., half of the observations lie above the mean and half below it. Median signals "middle" of the distribution.

The median is less affected by outliers and skewed data than the mean and is usually the preferred measure of central tendency when the distribution is not symmetrical.

MODE:- The value that appears most often in the dataset. It is not a very relevant descriptive stat when the data is continuous, but it is the only measure of central tendency that could be used for categorical data. E.g., Gender, you can simply say whether the mode is female/male/other.

MEASURES OF DISPERSION

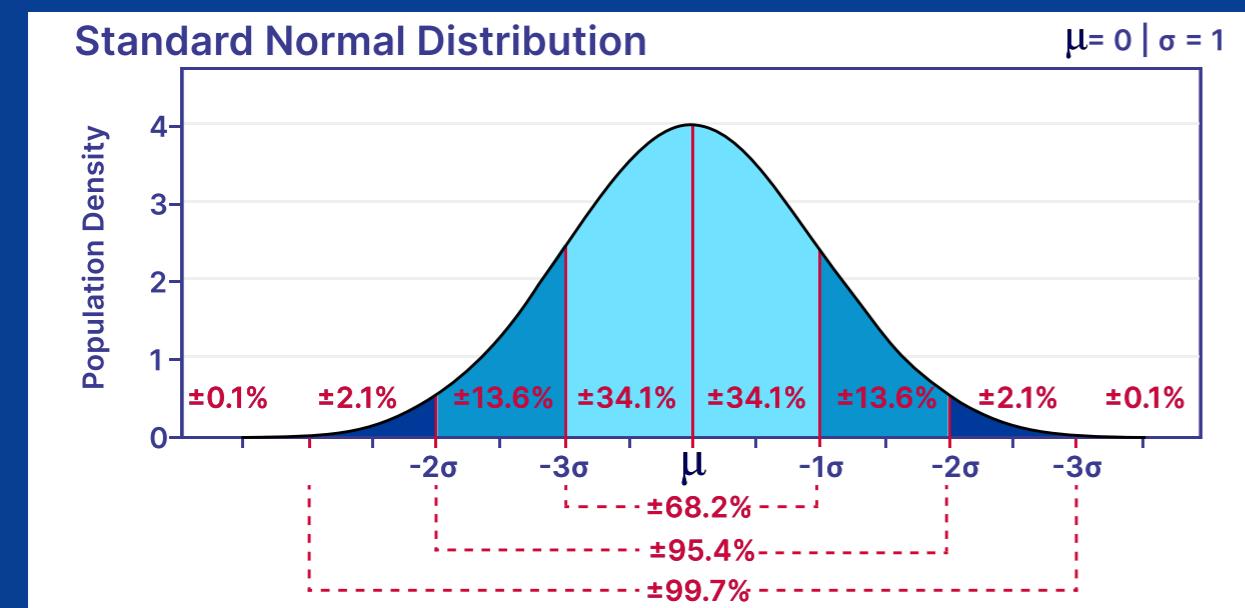
Dispersion, spread, and variability all refer to and denote the range and width of the distribution of values in a data set. Measures of dispersion describe how values are distributed or spread out. determine how far apart the data points appear to fall from the center. Common measures of variability include:

VARIANCE:- It is the average of the squared difference from the mean. However, because of this squaring, the variance is no longer in the same unit of measurement as the original data.

STANDARD DEVIATION:- It is the square root of the variance. It is the same as the original unit of measure and, therefore, much easy to measure. Standard deviation measures how much the data is dispersed about its mean. Low standard deviation implies that most values are close to the mean. High standard deviation suggests that the values are more broadly spread out.

Standard deviation and variance play an essential role in the risk analysis of stocks. The more the SD of a particular stock, the more the risk, i.e., the more the stock price fluctuates, the more the risk.

One important thing to note is that for a normal distribution (data that is symmetrically distributed around the mean in a bell shape), 68.2% of data lie within one SD of the mean, 95.4% around 2 SD of the mean, and so on.



FREQUENCY DISTRIBUTIONS

Distribution shows us the frequency of different outcomes (or data points) in a population or sample. We can show them as numbers in a list or table, or we can represent them graphically. Used for both quantitative and qualitative data. depicts the frequency or count of the different outcomes in a data set or sample.

The frequency distribution is generally presented in a table or a graph. It allows for a more structured and organized way to present raw data.

Common charts and graphs used in frequency distribution

presentation and visualization include bar charts, histograms, pie charts, and line charts.

HYPOTHESIS TESTING

Hypothesis testing in statistics is a way for you to test the results of a survey or experiment to see if you have meaningful results. You're basically testing whether your results are valid by figuring out the odds that your results have happened by chance.

Let us understand some basic terms before going into the details:-

Hypothesis:- A hypothesis is an educated guess about something in the world around you. It should be testable, either by experiment or observation.

Null hypothesis states that there is no significant difference between the original value and the one that comes from intuition.

Alternative hypothesis states that the null hypothesis is not true and behavior diverges from the actual behavior.

P-value:- A p-value measures the probability of obtaining the observed results, assuming that the null hypothesis is true. A p-value is a metric that expresses the likelihood that an observed difference could have occurred by chance. As the p-value decreases, the statistical significance of the observed difference increases. If the p-value is too low, you reject the null hypothesis.

Level of significance:- It is the criterion for determining whether a test statistic is statistically significant or not. It is denoted by alpha(α). If the p-value comes out to be less than the significance level, we reject the null hypothesis. Otherwise, we can't reject the null hypothesis. Alpha is generally taken as 0.05.

Let us now understand the steps involved in hypothesis testing through an example. Suppose that in a town of 1000 people, 50% are male and 50% are female. However, women complain that they are being called to jury duty more than men. A jury consists of 50 members. In the next jury, it is noted that there were 36 women and 14 men. It may seem very confusing initially, but it's easier than you think. All you need to do is:

- State your hypothesis and level of significance,
- Determine p-value
- Compare p-value to the level of significance

Stating the hypothesis and level of significance

- **Null hypothesis**, $H_0: P = 0.5$

This states that the jury number happened by chance, and there is nothing wrong with the selection of jury members.

- **Alternative hypothesis**, $H_a: P \neq 0.5$

This states that there is a bias and the jury number did not happen by chance.

The variable P is the odds of women being selected.

- **Level of significance** is 0.05

This states that if 36 or more women ending up on a jury have less than a 0.05 chance of occurring at random, then we will reject our null hypothesis.

- **Determine p-value**

Our assumed data follows a binomial distribution, so the probability of 36 women being selected in the jury comes out to be 0.0013. This is the p-value for our hypothesis.

- **Result Interpretation**

Since the p-value is less than the level of significance, we reject the null hypothesis. In case the p-value is greater than the level of significance, we fail to reject the null hypothesis.

Alternative Approach using critical values

A critical value is a point on the scale of the test statistic beyond which we reject the null hypothesis. It is derived from the level of significance (α) of the test. The critical value for a two-tailed test is generally taken as 1.96, which is based on the fact that 95% of the area of a normal distribution is within 1.96 standard deviations of the mean.

We compare the critical values (based on α) and test statistics (like z test, t-test, chi-square test, etc.) to verify the hypothesis. The test statistic takes your data from an experiment or survey and compares your results to the results you would expect from the null hypothesis. Three common test statistics are:

1. Z-test

Sample is assumed to be normally distributed and calculated on basis of parameters like mean and standard deviation. Null hypothesis is that the mean of the sample is the same as the original dataset.

$$z = (x - \mu) / (\sigma / \sqrt{n})$$

x = sample mean

μ = population mean

σ / \sqrt{n} = population standard deviation

2. T-test

It also assumes the distribution to be normal and is used to compare the mean of two samples. $t = (x_1 - x_2) / (\sigma / \sqrt{n_1} + \sigma / \sqrt{n_2})$

x_1 = mean of sample 1

x_2 = mean of sample 2

n_1 = size of sample 1

n_2 = size of sample 2

3. Chi-square test

It is used in the case of categorical variables. Null hypothesis is that the two variables are independent.

$$\chi^2 = \sum [(O_{r,c} - E_{r,c})^2 / E_{r,c}]$$

$O_{r,c}$ = observed frequency count at level r of Variable A & level c of Variable B

$E_{r,c}$ = expected frequency count at level r of Variable A & level c of Variable B

If the value of the test statistic is lower than the critical value, we accept the null hypothesis or else reject the hypothesis.

For an in depth look, check out our Analytics Internship guide for data science/analytics roles [here](#)

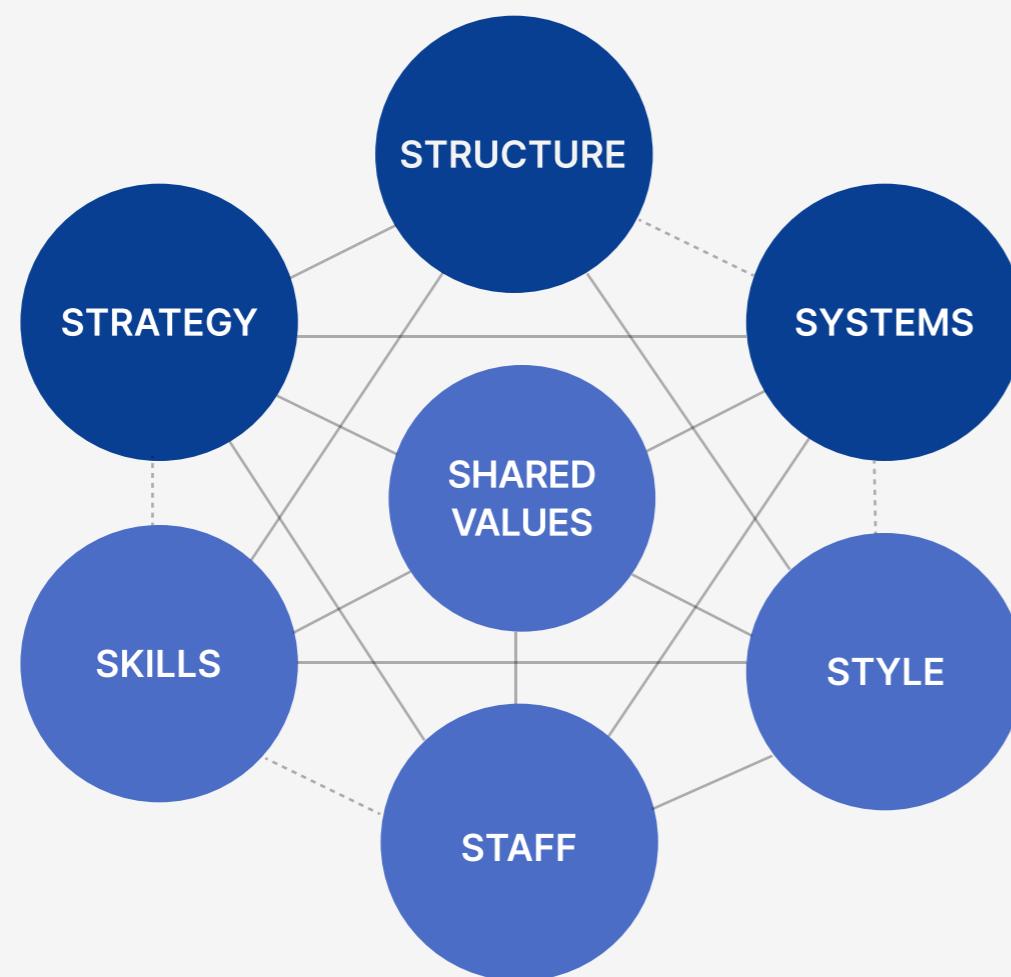


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Frameworks

MCKINSEY'S 7S FRAMEWORK (1/2)

- The McKinsey 7S framework is an organizational tool that focuses on harmony and balance within the organization. It can be applied whether you're going through change or to help identify weaknesses and opportunities in your organization.
- It includes seven equally important factors(3 hard, 4 soft) that need to be in balance for a healthy and competitive organization.
- Hard Elements:** The elements which can be easily recognized and treated by the management in case of any issues are known as hard elements.
- Soft Elements:** These elements are complex and dynamic. These factors, usually define the organizational culture.



Why?

All the seven elements are interconnected and can be aligned together to achieve effectiveness in a business. The Framework is mainly used to trace performance problems in a business to subsequently change and/or improve these. The 7S model is kind of a thermometer to take the temperature of your organization. If one of the seven factors of the McKinsey 7S example is out of balance, that indicates your organization isn't healthy. Something needs to change.

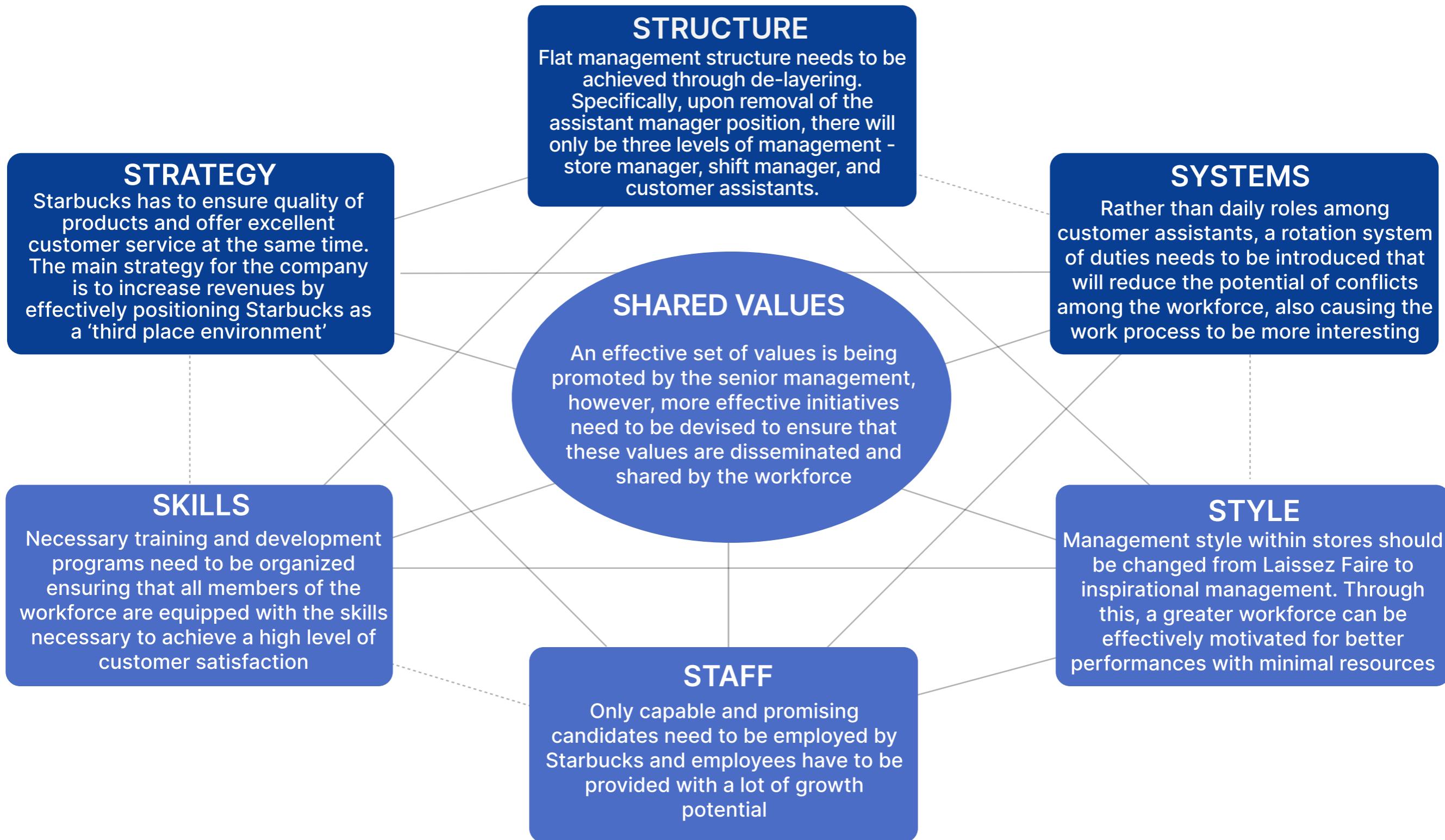
The 7S Framework constitutes a good framework in which gaps between present and desired future situations can be traced and adjusted.

When?

The McKinsey 7S framework can be used to:

- Understand the weaknesses of your organization.
- Keep a change project on track
- Align departments during mergers or acquisitions
- Implement employee improvement strategies
- Determine how to become more competitive
- Uncover areas of opportunity.

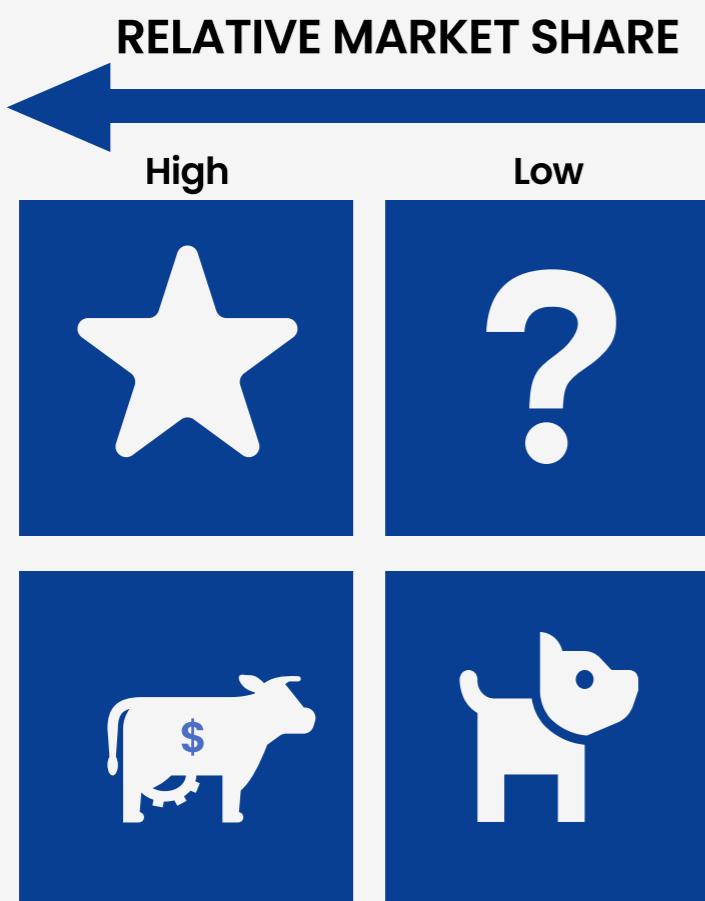
EXAMPLE: 7S FRAMEWORK FOR STARBUCKS



BCG GROWTH-SHARE MATRIX

The BCG matrix is a corporate planning tool, which uses **relative market share** and **industry growth** rate factors to evaluate the **potential of the business brand portfolio** and suggest further investment strategies.

- It is classified into four categories based on combinations of market growth and market share relative to the largest competitor, hence the name “growth share”.
- This framework assumes that an increase in relative market share will result in an increase in the generation of cash.



High Growth, High Share.
A significant amount of investment should be made in “Star” products.

High Growth, Less Share.
Investment should be made in “Question Mark” products depending on their chances of becoming stars.

Low Growth, High Share.
“Cash Cows” should be milked so products can be reinvested in “Stars” and “Question Mark”

Low Growth, Low Share.
Businesses should liquidate, divest, or reposition products in the “Dogs” category.

Why?

Basically, the BCG matrix is a tool used to assess the current value of a firm's units or product lines. The Matrix expresses complex ideas with unmatched clarity. It uses graphical representations of a company's products and services in an effort to help the company decide what it should keep, sell, or invest more in. The matrix helps companies identify new growth opportunities and decide how they should invest in the future.

When?

The BCG matrix would be suitable to see if

- The firm is a large manufacturer
- The firm has a diverse product range or if they have multiple business units(SBUs)
- The firm has reasonable levels of market shares in some markets

The BCG matrix is helpful when you need to assess multiple product lines to determine which are profitable or otherwise.

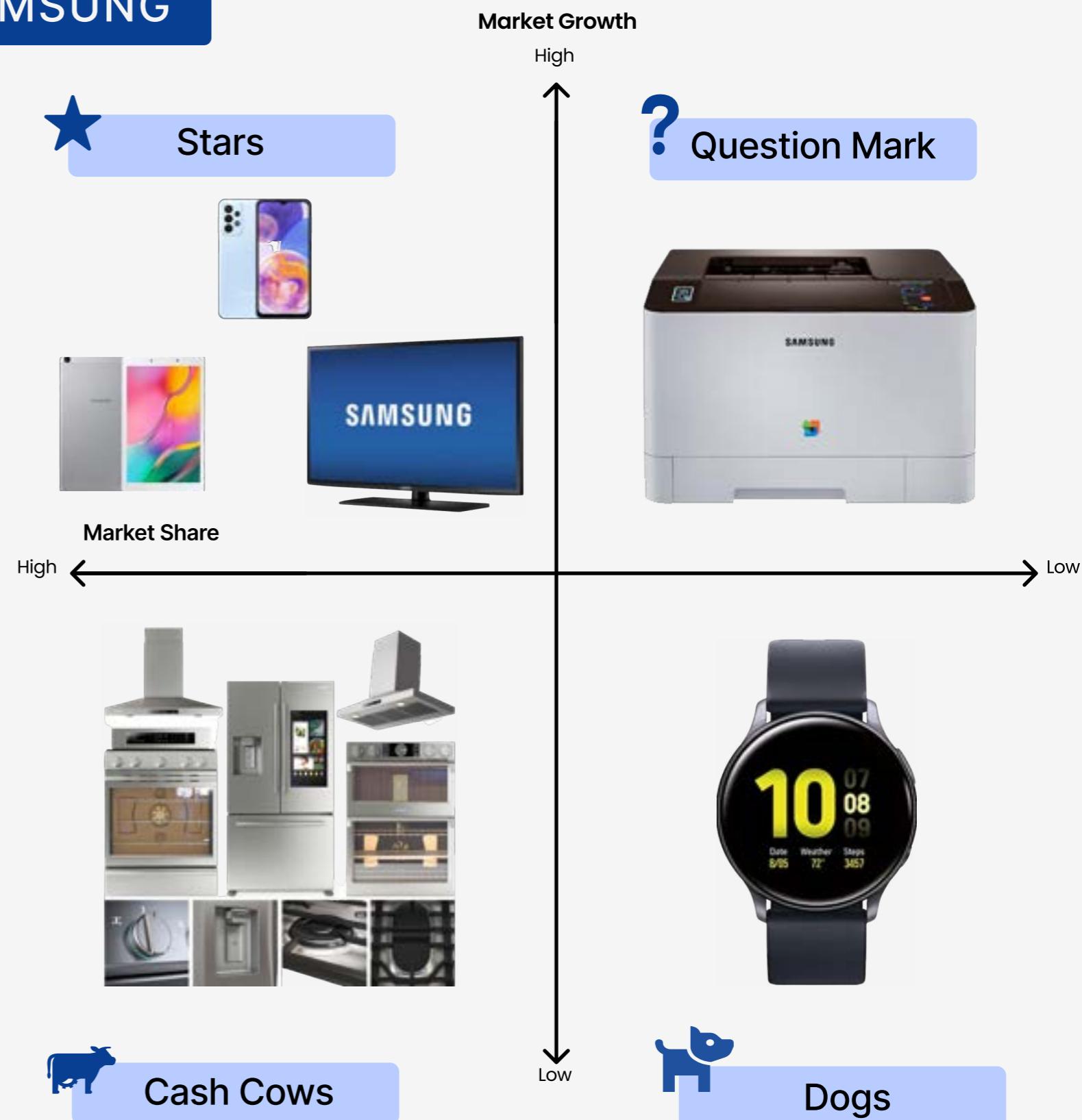
EXAMPLE: BCG MATRIX OF SAMSUNG

Note:

The BCG matrix is a decision-making tool, and it does not necessarily take into account all the factors that a business ultimately must face. BCG matrix can help as general investment guidelines but should not change strategic thinking. The quadrants are simplified versions of reality and cannot be applied blindly.

Limitations:

- It does not include other external factors that may change the dynamics.
- Market share and industry growth rate are not the only factors for profitability. Also, a high market share does not necessarily mean high profits.



INTERNAL/EXTERNAL ANALYSIS

What is Internal / External factor analysis ?

The Internal-External (IE) Matrix is a portfolio management tool used for comparing divisions of an organization in terms of revenue and percentage of profit with respect to the Internal Factor Evaluation (IFE) matrix and External factor evaluation (EFE) matrix scores.

The IE Matrix is based on the analysis of internal and external business factors which are combined into one suggestive model.

It is a strategic management tool that is used to analyze the current position of the divisions and suggest strategies for the future.

When to use Internal / External factor analysis?

Applied when a business needs to gain an insight into working conditions and strategic positioning.

Used when a company needs to know about its market growth and market share.

To do a Portfolio analysis of a company.

Can be used for developing a detailed corporate strategy comparing the company's results with the IE matrix of competing companies.

Also helps to evaluate the balance of different departments and provides the background for making strategic decisions for departments in the context of the whole organization.

EXTERNAL VS INTERNAL

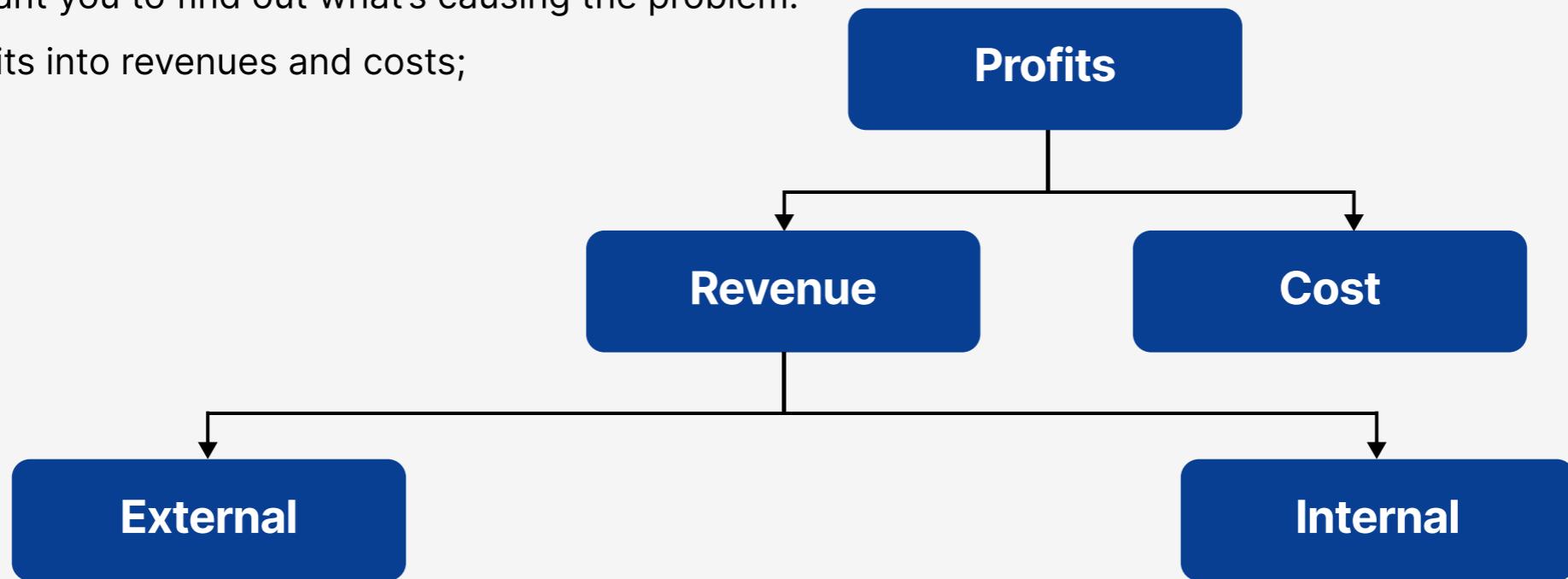
This is a quick and easy method to segment information about a particular entity. The internal branch concerns the inside of the said entity, such as functions within a company; the external branch describes anything outside that entity.

To apply this framework, we initially propose a hypothesis that the main problem is caused by either External or Internal factors. We then gather information to identify whether our hypothesis is true. If true, keep drilling down to get the final cause of the problem and then give solutions to fix it. If not, go back up, state a new hypothesis and drill down again.

EXAMPLE: LAYS

Lays- A company specialized in making chips has found its profits going down badly for the past few years. They want you to find out what's causing the problem.

You split their profits into revenues and costs;

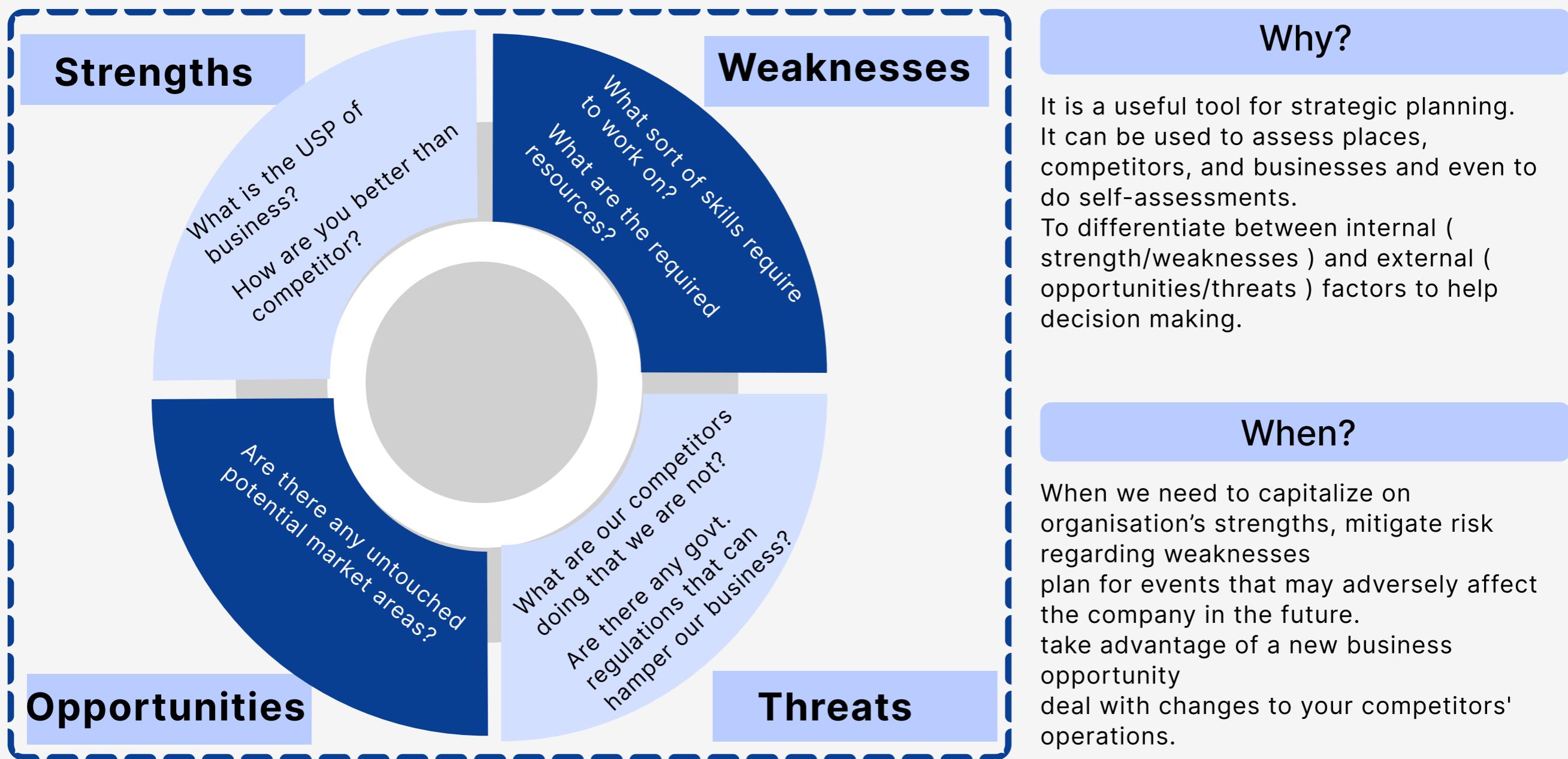


External factors account for industry wide problems like supply chain disruption or customer behavior change to another product etc.

Internal factors account for the company's own problems like management issues, underperforming production units, fraud etc.

SWOT ANALYSIS (1/2)

The framework used to evaluate a company's competitive position and to develop strategic planning. SWOT analysis assesses internal and external factors, which also describes its current and future potential.



EXAMPLE: STARBUCKS

S



- Strong brand Recognition.
- Recognizable chain worldwide.
- High quality unique Products.
- Extensive International Supply chain.



O



- Diversify product for Cultures.
- Expand in Asia and Africa.
- Use technological advances as way to distribute Products.
- Introducing New Products.

W



- High prices.
- Easy to imitate Products.
- Product often don't account for cultural diversity.
- Recall of products.



1971

T



- Competition from low-cost coffee sellers.
- Other businesses can imitate their Product.
- Competition with big outlets.
- Change in customer behaviour.



1987

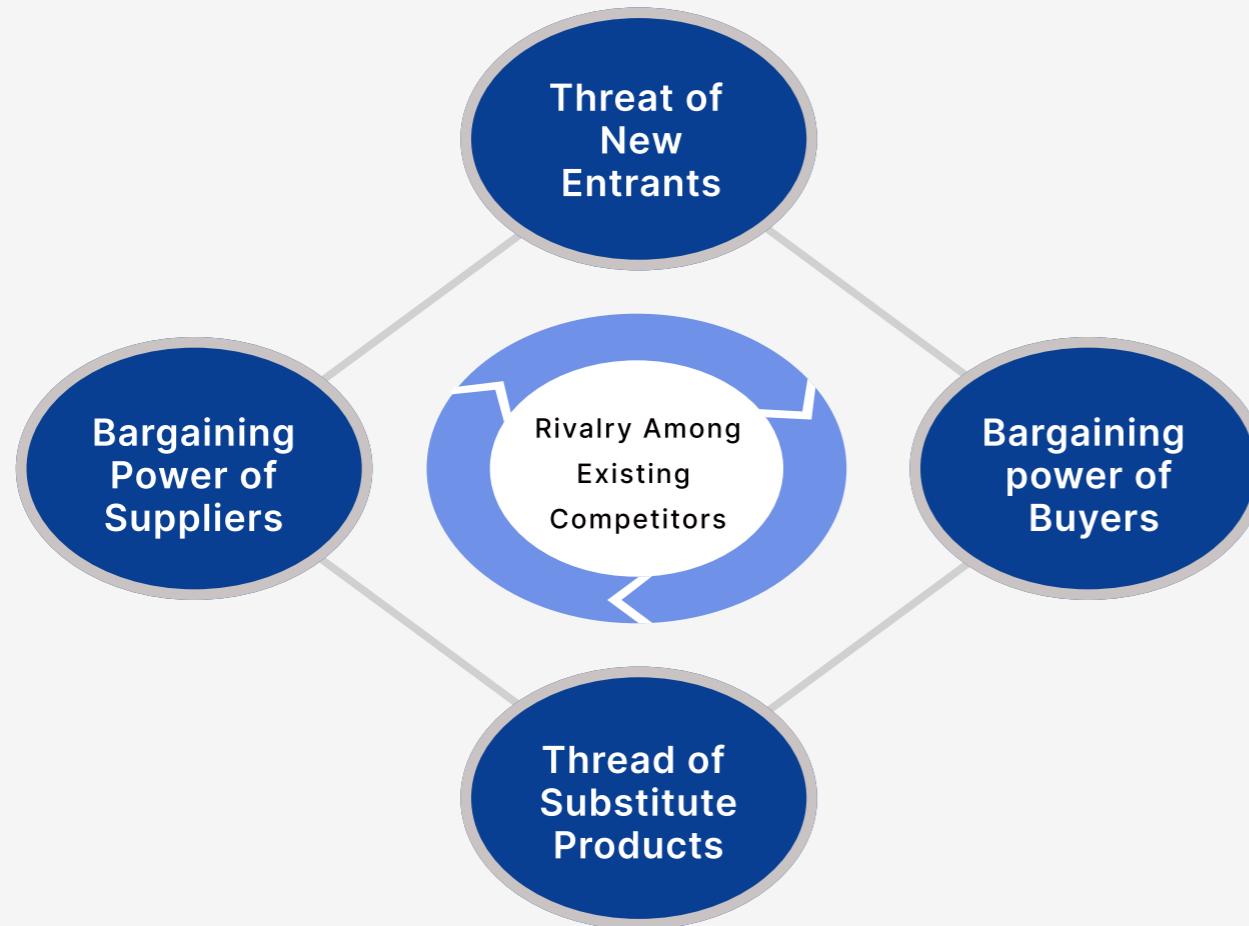


1992



2018

PORTER'S FIVE FORCES FRAMEWORK(1/2)



Why?

- To understand the main competitive forces at work in an industry
- To assess the attractiveness of an industry
- To pinpoint our areas of improvement
- To improve profitability

When?

- While evaluating competitive forces influencing a variety of business sector.
- Can be used for understanding competitive position of a company
- While determining the profit potential of a business sector

Bargaining power of Buyers	<ul style="list-style-type: none"> • Analyses power , control and potential to raise their prices. • It considers supplier of raw material
Bargaining power of customer:	<ul style="list-style-type: none"> • Examine consumers power and their effect on pricing and quality. • It consider no. of consumers
New entrants threat:	<ul style="list-style-type: none"> • Analyse the hurdles for competitor while joining the market place. • This include absolute cost advantages, access to inputs , economies of scale , strong brand identity.
Threat of substitute products or services:	<ul style="list-style-type: none"> • Studies consumer behaviour to switch for a competitor's product or services. • It consider no. of competitors , their price, quality and their profit

EXAMPLE: AIRLINE INDUSTRY

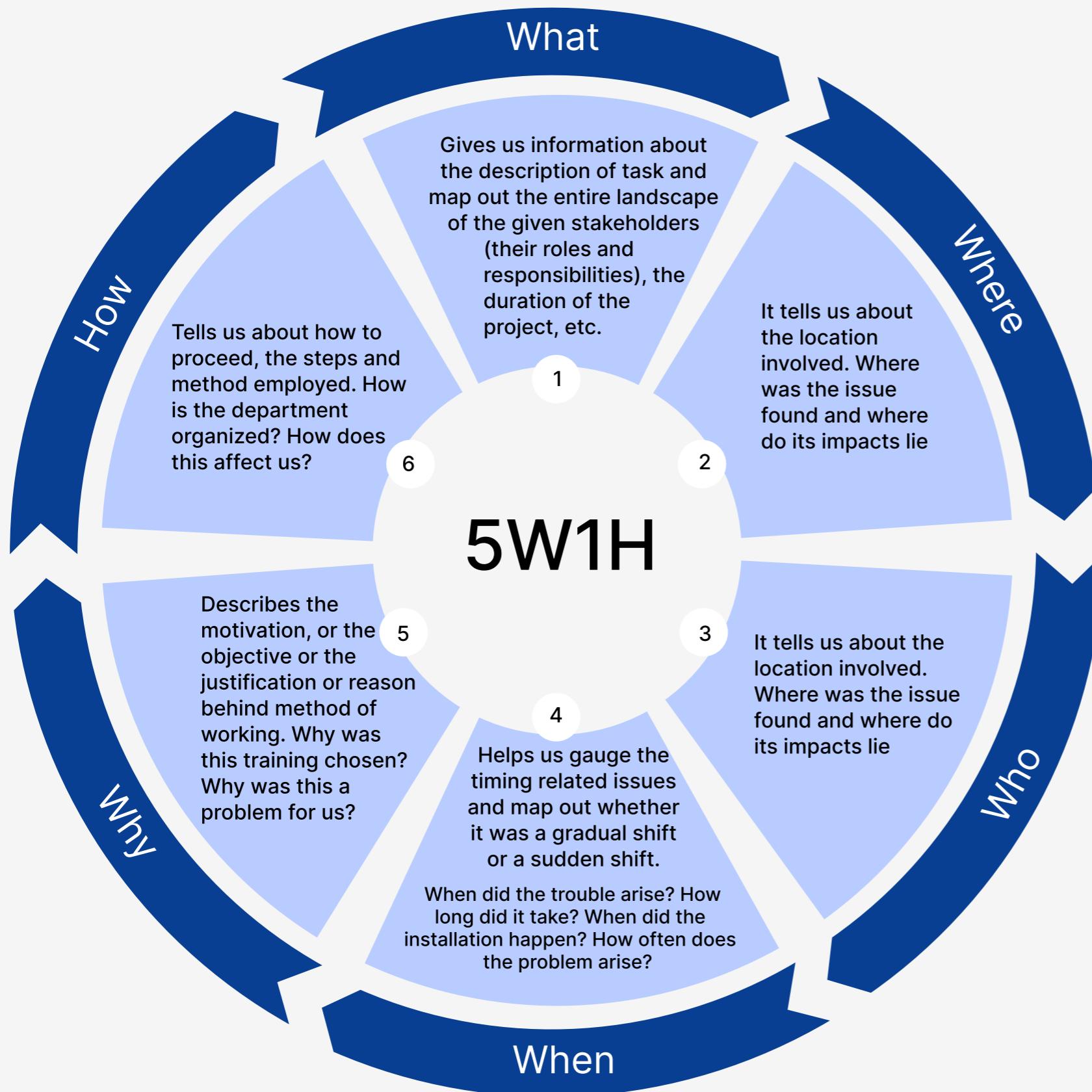
Competitive rivalry

- Highly competitive due to entry of low cost carriers
- Tight regulations of industry where safety becomes paramount leading to high fixed cost and barrier to exit.
- Stagnant in terms of growth
- Many players are of similar size leading to competition between those firms.

Bargaining power of supplier:	<ul style="list-style-type: none"> • In airline industry it can be considered very high since while looking at the major inputs we see that it depends on the fuel and aircrafts. • The price of aviation fuel is subject to fluctuation in global market for oil which can change widely depending upon geopolitical factors.
Bargaining power of customer:	<ul style="list-style-type: none"> • Customer are able to check prices of different airline companies through online price comparison websites.
New entrants threat:	<ul style="list-style-type: none"> • This can be considered as low to medium • New entrants need license, insurance, distribution channel and other qualifications that are not easy to obtain.
Threat of substitute products or services:	<ul style="list-style-type: none"> • The general need of customer is traveling • So besides going by airplane there are many other alternatives for traveling depending upon the urgency and distance. • This threat can be considered as medium to high



5W1H FRAMEWORK(1/2)



Why?

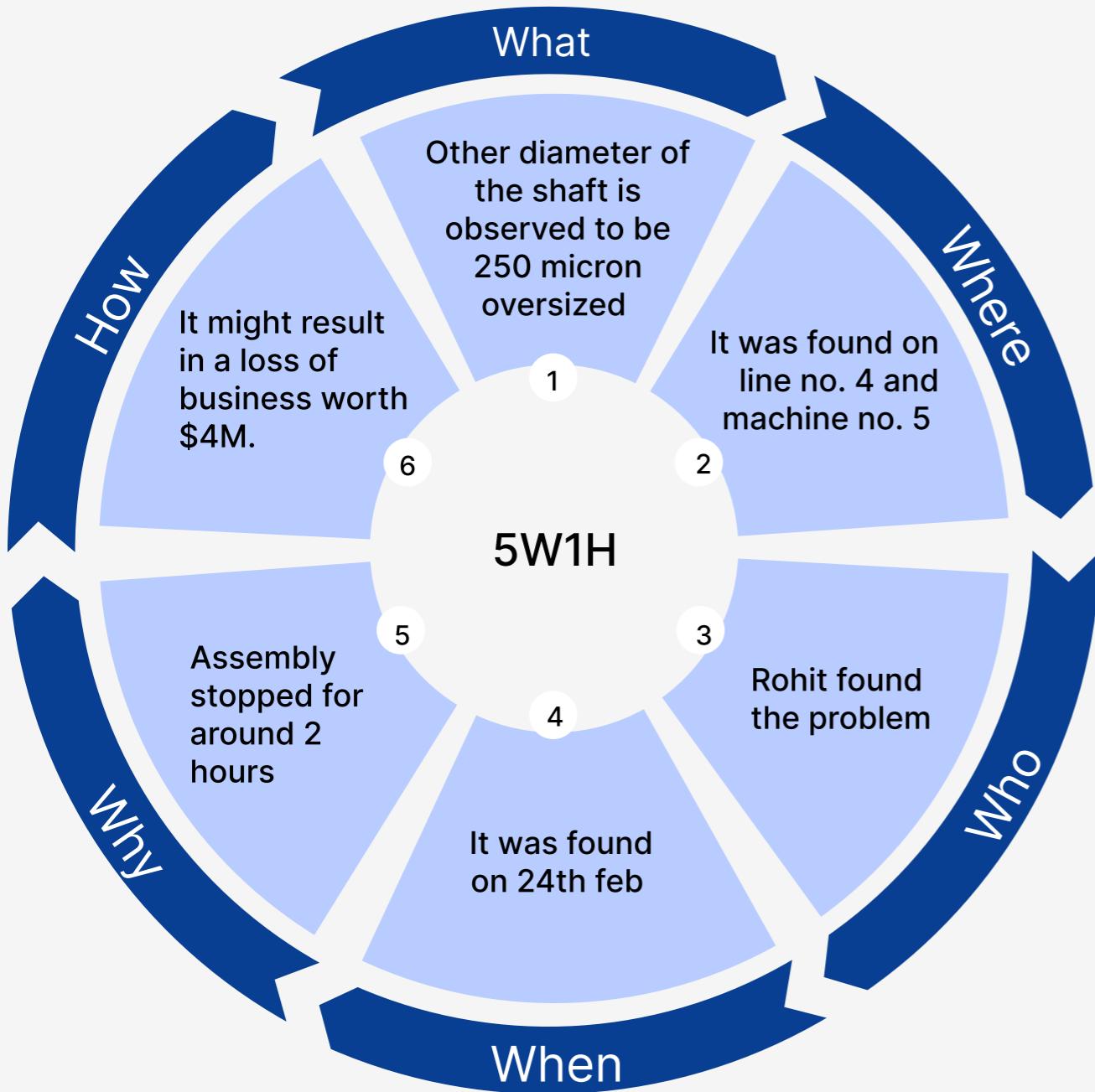
- It can be utilised to understand the problem completely and helps us get a look and feel of the entire problem to arrive at the solution or to get a clear direction of how to approach. It helps in developing a preliminary strategy
- Can be used to obtain 360 degree view of the problem and increases the drill speed to reach the solution

When?

- At the strategy level to design or improve a market entry strategy for instance
- At the management level to improve organisation and processes
- At the quality level as a problem resolving support tool
- At the innovation level to boost emergence of solution and ideas
- At the Product Manager level in general

EXAMPLE:

Problem: Shaft OD(Other diameter) is found 250 micron oversized



- **WHAT is the problem?**
Other diameter of the shaft is observed to be 250 micron oversized
- **WHERE was this problem found?**
It was found on line no. 4 and machine no. 5
- **WHO found the problem?**
Rohit found the problem
- **WHEN was the problem found?**
It was found on 24th feb
- **WHY is this a problem?**
Assembly stopped for around 2 hours
- **HOW big/severe is this problem for us?**
It might lose a business of \$4M.

3C & 1P FRAMEWORK

"3C & 1P" will assist you in understanding what qualitative concerns drive and impact a business.



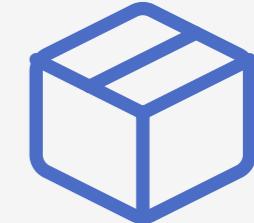
Customer



Competition



Company



Product

Who is the customer?

- identify segments (segment size, growth rate, % of total market)
- compare current year metrics to historical metrics (look for trends)

What does each customer segment want?

Identify keys needs

What price is each segment willing to pay?

Determine price points and price elasticity/sensitivity

Customer Segments:

- Size, Growth Rate and Trends
- Demographics

Customer Wants and Needs

- Needs
- Wants

Price Sensitivity/Elasticity

- Disposable income
- Purchasing Power
- Price Points

Competitor Concentration & Structure

- Monopoly/Oligopoly/ Competition
- Market Share Concentration

Barriers to Entry

- Existing Market
- Ease of entry for new entrants

Competitor behaviors (Target customer segments, products, pricing strategy, distribution strategy, brand loyalty)

Industry Regulation

Typical Life-Cycle of Industry

- What are your company's capabilities & expertise
- What is the company's brand & culture?
- How is its financial situation?

Capabilities and Expertise

- Technical Edge
- Distribution Channels
- Cost Structure

Brand Value

- Perception
- Loyalty

Internal Culture and Organizational Structure

Financial Situation

- Nature of product (think out loud about the product, its benefits, why someone would buy it)

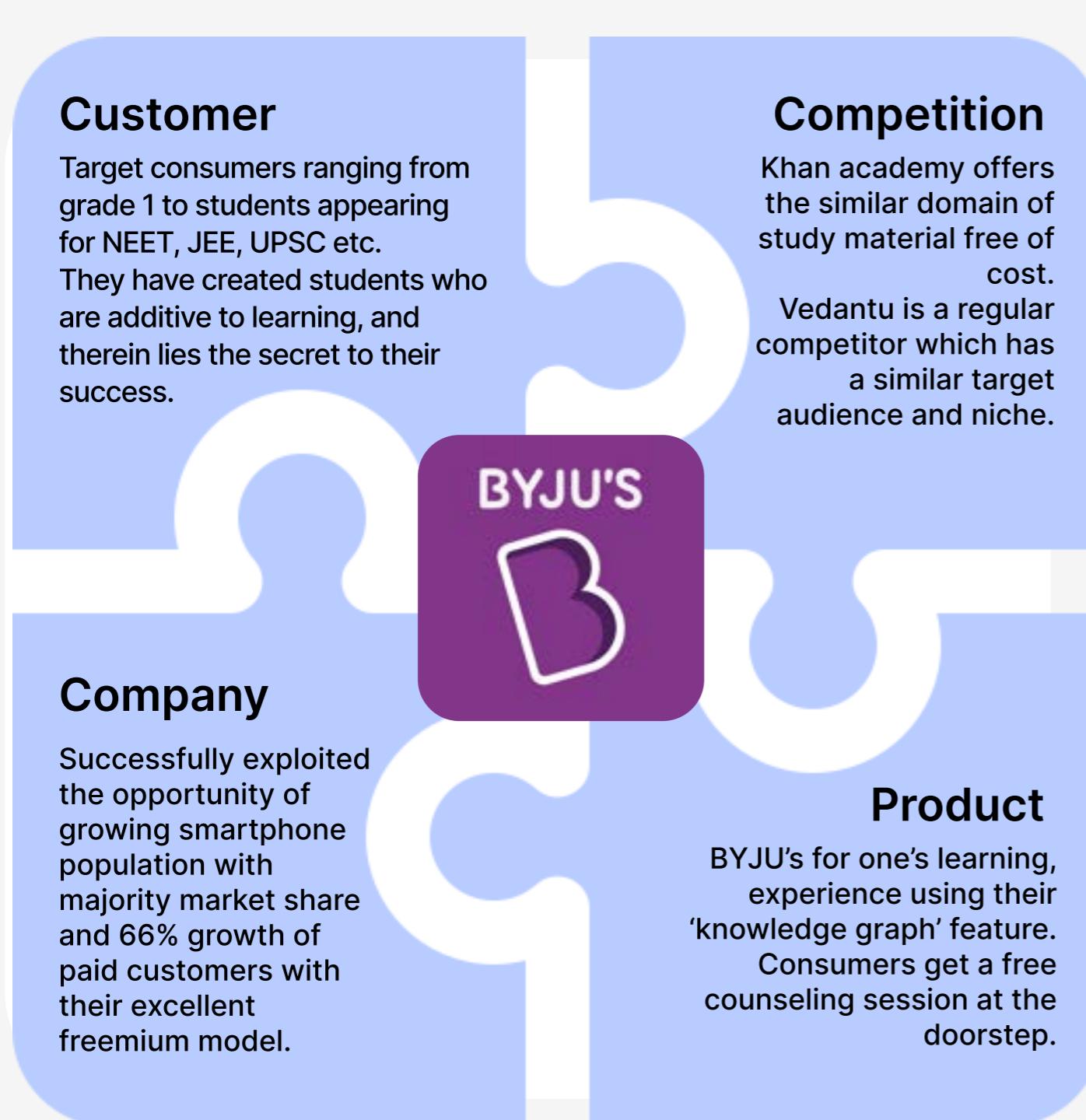
• Commodity good or easily differentiable goods (could company increase differentiation)

• Identify complementary goods (can we piggy back off growth in compliments or near compliments?)

• Identify substitutes* (are we vulnerable to indirect competitors namely substitutes?)

• Determine product's lifecycle (new vs. almost obsolete)

EXAMPLE: 3C1P FRAMEWORK FOR BYJU'S



Why?

"3C & 1P" will assist you in understanding what qualitative concerns that drive and impact a business.

When?

This framework is appropriate for a wide variety of client and company situations, including :

- New market entry or a new product
- Starting a new business
- Company position assessment
- Developing a growth strategy
- Divesting or making a turnaround



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Industry Insights



Value Chain

Upstream

- Exploration: Identification, assessment and extraction of resources
- Production: Separating oil, gas, natural gas, and water

Midstream

- Transportation: Gathering and transport to refinery
- Storage: Storage and preservation of oil in reservoirs and tankers

Downstream

- Refining of crude oil and natural gas
- Distribution via B2B or B2C channel



Key drivers for Revenue & Cost

Revenue

- Crude oil and gas prices

Cost

- Cost of machinery and equipment
- Maintenance of pipelines, transportation vessels and storage setups
- Operational costs of refineries
- Logistical costs

Key Performance Indicators for Value Chain

KPI

Production Volume Per Day

Formula

Number of Oil Barrels produced per day

Production Costs Per Unit

Production costs per unit = $(\text{Total fixed costs} + \text{Total variable costs}) / \text{Total units produced}$

Reserve Life

Estimated life in years of the reserves = $\text{Reserves left} / \text{Production Volume}$



Top Players

Company

Market Share

Market Cap.

- IOCL
- Reliance Petroleum
- BPCL
- ONGC
- OIL

32.0%

24.0%

9.00%

8.45%

1.32%

INR 1.30T

INR 17.43T

INR 763.47B

INR 2.32T

INR 3.011T



Industry trends & Highlights

- Demand growth:** The demand for primary energy is expected to nearly double by 2040
- Expansion:** India aims to commercialize 50% of strategic petroleum reserves to raise funds and build additional storage tanks to offset high oil prices
- Govt. Support:** 100% FDI in upstream and private sector refining projects
- Budget:** Custom duties on critical chemicals for petroleum refining were reduced

INDUSTRY INSIGHTS: HEALTHCARE



Value Chain

Consulting

- Patient arrives at the hospital as per awareness

Diagnostics

- Medical History
- Screening based on the Symptoms.
- Diagnosis through pathological tests.

Admission

- Emergency Section
- On boarding and referral cases
- OPD and IPD

Treatment

- Medical Infrastructure
- Medical Supplies
- Quality of Doctors
- Surgical/Non-Surgical Procedures

Post-Treatment

- Treatment Charges and Insurance Claim
- Follow-up check-ups



Key drivers for Revenue & Cost



Key Performance Indicators for Value Chain

Revenue

Cost

KPI

Formula / Description

- Patent Licensing and royalties
- Growth in over-the-counter drug sales
- Patient bills
- Rise in chronic ailments
- Increasing average population age
- Rise in awareness

- Infrastructure- buildings and equipment
- Salaries - doctors and other staff
- R&D costs
- Transportation - of equipment, amenities, and drugs
- General and Administrative Expenses

- Average Hospital Stay
- Bed Occupancy Rate
- Staff-to-Patient Ratio
- Patient Drug Cost Per Stay
- Patient Mortality Rate

Evaluates the amount of time patients are staying

Monitors the availability of hospital beds

Ensures you have enough staff to cater to patients

Improves cost management of medications

Prevents patient mortality under your care



Top Players

Company

Number of Beds

Market Cap.

- Apollo Hospitals
- Fortis healthcare institute
- Narayana hrudayalaya
- Aster DM

12,000

8.69 (in USD bn)

4,000

3.10 (in USD bn)

5,849

2.63 (in USD bn)

6,300

1.95 (in USD bn)



Industry trends & Highlights

- Industry Outlook:** The Indian healthcare sector is expected to record a three-fold rise, growing at a CAGR of 22% between 2016–2023 to reach US\$ 372 billion in 2022 from US\$ 110 billion in 2016. India has been ranked 10th in the Medical Tourism Index (MTI) for 2020-21 out of 46 destinations by the Medical Tourism Association.
- Investments:** In the Union Budget 2023-24, Rs 89,155 crore was allocated by the govt for various schemes. India currently holds the fourth position in attracting VC funding to the health-tech sector, with investments of US\$ 4.4 billion between 2016 and 2021, with US\$ 1.9 invested in 2021 alone.
- Government initiatives:** 748 e-Hospitals were established across India as part of the central government's 'Digital India' initiative. 117,771 Ayushman Bharat-Health and Wellness Centres (AB-HWCs) are operational in India.



Value Chain

Inbound Logistics

- Route Selection
- Fuel
- Flight/Crew Scheduling
- Facilities planning

Operations

- Gate operations
- Aircraft operations
- Onboard services
- Baggage handling

Outbound Logistics

- Flight connections
- Rental car and hotel reservation systems

Marketing & Sales

- Promotion & Advertising
- Travel agent programs
- Group Sales
- Electronic Tickets

Marketing & Sales

- Support centres
- Complaint follow-up
- Lost baggage service



Key drivers for Revenue & Cost

Revenue

- Cargo and Passenger revenues
- Package and tours
- In-flight services

Cost

- Fuel
- Rental of Flight Equipment, hangar cost
- Flight Equipment, Maintenance and Overhaul
- General and Administrative Expenses

Key Performance Indicators for Value Chain

KPI

Departure Punctuality

Percentage of flights departing on time at the planned origin airport from all operated flights

Regularity

The regularity KPI reflects the percentage of operated flights concerning planned flights

Seat Load Factor

Calculated as the percentage of checked-in passengers to aircraft's available seats



Top Players

Company

Market Share

Market Cap.

Interglobe Aviation Ltd

44%

90,818 Cr

SpiceJet Ltd

13.7%

2.202 Cr

AirAsia (India) Limited

13.4%

Not Listed

Air India

9.0%

Not Listed

GoAir

5.0%

Not Listed

Vistara

4.7%

Not Listed



Industry trends & Highlights

Industry Outlook: India is expected to overtake China and the United States as the world's third-largest air passenger market in the next ten years

Investments: The Indian Government is planning to invest US\$ 1.83 billion for the development of airport infrastructure along with aviation navigation services by 2026.

Artificial Intelligence: A new market study predicted a CAGR of 46.4% for AI in the aviation market by 2024. It is being used to deliver a personalized traveling experience maximizing customer satisfaction.

INDUSTRY INSIGHTS: RETAIL INDUSTRY



Value Chain



Key drivers for Revenue & Cost



Key Performance Indicators for Value Chain⁰²

Revenue	Cost	KPI	Formula
<ul style="list-style-type: none"> Disposable income of people Store locations and demographics Margins and turnovers Store image and trust 	<ul style="list-style-type: none"> Raw materials Licensing fees Distribution Promotion Rent/storage cost Processing Costs 	Average Transaction Value	Total Sales from Transaction/Total Distinct Count of Transactions
		Inventory Turnover Ratio	Cost of inventory sold / Average Inventory Cost (Helps figuring out how fast an inventory moves)
		Gross Margins Return on Investment	Total Gross Profit / Average Inventory Cost (Measure of profit earned from the amount spent)



Top Players

Company	Market Share	Market Cap.	Industry trends & Highlights
Reliance Retail	30%	17,65,000 Cr	
Avenue Supermarts	22%	2,36,860 Cr	
Future Retail	18%	183 Cr	
Aditya Birla Fashion and Retail	4.0%	20,466 Cr	
Shoppers Stop	2.0%	7,380 Cr	<ul style="list-style-type: none"> Demand growth: The demand for primary energy is expected to nearly double by 2040 Expansion: India aims to commercialize 50% of strategic petroleum reserves to raise funds and build additional storage tanks to offset high oil prices Govt. Support: 100% FDI in upstream and private sector refining projects Budget: Custom duties on critical chemicals for petroleum refining were reduced

INDUSTRY INSIGHTS: FMCG



Value Chain

Inbound Logistics

- Sourcing Raw Materials
- Quality Test
- Warehouse Storages

Operations

- Production
- Quality Control
- Packaging
- Warehouse Storages

Outbound Logistics

- Distribution

Marketing & Sales

- Market Research
- Branding, Advertising, and Promotion
- Sales Analytics

Customer Service

- Service and After Service Facilities.



Key drivers for Revenue & Cost



Key Performance Indicators for Value Chain

Revenue

Cost

- Volume of Sales
- Profit Margins

- Raw Materials
- Processing Costs
- Distribution
- Promotion

KPI

Packaging: Machine Uptime

Product Development: Average Product ROI

Customer Service: Average handle time

Formula

Measures the efficiency and availability of the company's manufacturing machinery.

Net profit earned by new product*100/ Costs to produce new products

Measures the average amount of time spent on each call



Top Players

Company

Market Cap. INR

J&J

35.63T

HUL

5.87T

Marico

755.14B

ITC

5.6T

Nestle

2.2T



Industry trends & Highlights

- **Industry Outlook:** The FMCG market in India is expected to increase at a CAGR of 14.9% to reach US\$ 220 billion by 2025, from US\$ 110 billion in 2020. Household and personal care account for 50% of FMCG sales in India.
- **Digitization:** Post COVID-19, digitization was an emerging FMCG trend during 2021. India's rural segment experienced a 10.6% growth.
- **Government Support:** Investment approval of upto 100% of foreign equity in single brand retail and 51% in multi-brand retail.
- **Production Linked Incentives(PLI) :** Scheme to boost exports through an outlay of \$1.42 billion.

INDUSTRY INSIGHTS: E-COMMERCE



Value Chain

Inbound Logistics

- Storage
- Demand Planning
- Inventory Management

Operations

- Transformation of raw materials - Changing all inputs into the final product

Outbound Logistics

- Delivery Planning
- Logistics Partners
- Omnichannel Fulfillment

Marketing & Sales

- Advertising
- Promotion
- Pricing

Services

- Customer Service Servicing
- Restoration and Refund
- Exchange



Key drivers for Revenue & Cost



Key Performance Indicators for Value Chain

Revenue

Cost

KPI

Formula

- Sales commissions
- Advertisements
- Strategic affiliate partnerships
- Featured listings

- Operating Expenses
- Shipping costs
- Inventory management
- Returns and refunds

Cart Abandonment Rate (CAR)

$$1 - (\text{Total Number of Completed Transactions} / \text{Total Number of Shopping Carts}) \times 100$$

Inventory Turnover

$$\text{Cost Of Goods Sold} / ((\text{Beginning Inventory} + \text{Ending Inventory}) / 2)$$

Operational Efficiency

$$\text{Operating Expenses} / \text{Total Revenue}$$


Top Players

Company

FY2021 Revenue

Estimated MAU

- Amazon
- Flipkart
- Nykaa
- Myntra
- Snapdeal
- India MART

INR 16,379 Cr
INR 43,357 Cr
INR 3,800 Cr
INR 2,466 Cr
INR 510.2 Cr
INR 753 Cr

322.54 MN
242.62 MN
20.83 MN
48.03 MN
56.41 MN
56.41 MN



Industry trends & Highlights

Industry size: India's e-commerce sector is expected to reach US\$ 111.40 billion by 2025 from US\$ 46.20 billion in 2020, growing at a 19.24% CAGR, with grocery and fashion/apparel likely to be the key drivers of incremental growth

Prominent trends: Omni-channel commerce, upselling and cross-selling are prominent trends along with personalization

D2C digital businesses: An increment in the D2C digital businesses echoes the competitive advantage that the D2C model hoards over brick and retail stores. Nike has started to pull off from offline stores

INDUSTRY INSIGHTS: HOSPITALITY



Value Chain

Procurement and Suppliers

- Regular Goods
- Inventory Management and Planning

Industrial Operations

- Housekeeping Services
- Transportation Services
- Inbound and Outbound Logistics

Industrial Services

- Food and beverage services
- Online check-in services
- On-demand services (e.g., medical room)

Marketing & Sales

- Analyzing customer demands by their buying behavior
- Customized campaigning



Key drivers for Revenue & Cost



Key Performance Indicators for Value Chain

Revenue

Cost

KPI

Formula

- Room Tariffs
- Food and Beverage Services
- Events and Recreational Activities

- Rent, construction, and maintenance
- Employee wages
- Raw materials (for services)
- Electricity and fuel prices

Luxury Segment: Occupancy Rate

% of rooms that are currently occupied

Upper and Mid-scale Segment: Average room rate

Average room rate paid per customer for each room.

Mid-to-Lower Segment RevPAR (Revenue per Available Room)

Average daily room rate * Occupancy Rate



Top Players

Company

Market Share

Market Cap.

Taj Hotels

25%

INR 318B

Oberoi Hotels

17%

INR 99.42B

Chalet Hotels

15%

INR 70.61B

Hyatt Hotels

6.3%

INR 10.38B

Hotel Leela

0.5%

INR 6.52B



Industry trends & Highlights

- **Industry Outlook-** Its contribution to GDP in FY 2020-21 was 4.7% and is responsible for 7.3% of the country's total employment
- **Tourist arrival through E-Tourist Visa-** increased with a CAGR of 39.44% from 2016-19, this saw a decrease in FY-2020-21 due to covid.
- **Impact on ForEx -** The hospitality industry is an important sector to bring Forex, and from 2016-19, Forex grew at a CAGR of 7%. However, this number decreased in FY-2020-21 due to covid restrictions. (Forex is the Amount of foreign currency reserves, Particularly used for a country)



Value Chain

Inbound Logistics

- Receiving raw materials from suppliers and distributing them through their production line to start production.

Operations

- Transforming raw materials into the product the company is designing

Outbound logistics

- Collecting, handling, storing and distributing the product to its destination.

Marketing & Sales

- Advertising /Promotion
- Management of the distribution
- Sales and relationship with customer

Services

- Customer Support after selling product
- Product Maintenance
- Customer Retention



Key drivers for Revenue & Cost



Key Performance Indicators for Value Chain

Revenue

Cost

KPI

Formula

- Vehicle Manufacturing and Sales
- Parts and Accessory Sales
- Financing Services

- Raw material and distribution costs
- Automated Production Lines
- Labour Costs
- Product Development and Marketing

Logistics: Safety

Restricted to plants where handling is done by company personnel

Quality: Incomplete Vehicles

Indicates number of incomplete vehicles at the e.o.l., for problems of material/components unavailability

On time Shipping Rate

Number of automobiles shipped timely, on average



Top Players

Company

Market Share

Market Cap.

Maruti Suzuki

42.75%

33.80

Hyundai

16.24%

28.85

Tata

11.45%

23.29

Mahindra

6.86%

19.66

Kia

5.71%

23.21



Industry trends & Highlights

Industry Outlook- The India passenger car market was valued at US\$ 32.70 billion in 2021, and it is expected to reach a value of US\$ 54.84 billion by 2027, while registering a CAGR of over 9% between 2022-27.

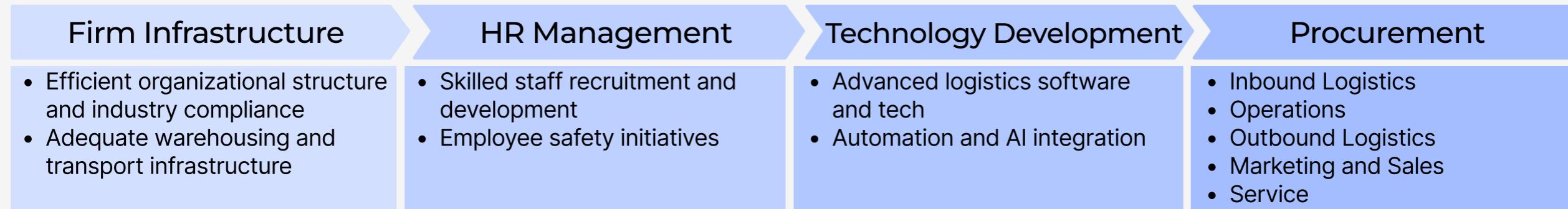
Investments- Industry attracted Foreign Direct Investment equity inflow (FDI) worth US\$ 32.84 billion between April 2000-March 2022, accounting for 6% of the total equity FDI during the period.

Funding- EV startups that attracted funding in 2021 were Ola Electric (US\$ 253 million), Blusmart (US\$ 25 million), Simple Energy (US\$ 21 million), Revolt (US\$ 20 million) and Detel (US\$ 20 million).

INDUSTRY INSIGHTS: LOGISTICS



Value Chain



Key drivers for Revenue & Cost



Key Performance Indicators for Value Chain

Revenue	Cost	KPI	Formula
<ul style="list-style-type: none"> Supply Chain Visibility Digital Logistics Collaboration Fill Rates 	<ul style="list-style-type: none"> Warehousing costs - Incoming goods and storage Fulfillment cost - pick and pack Shipping costs - delivery Other costs - return 	Order Management: Order Accuracy	(Orders delivered on time without any errors / Total orders received) * 100
		Supply: Capacity Utilization	(Actual Weight of Goods Transported / Maximum Possible Weight that can be Transported) * 100
		• Inventory: Inventory Turnover	Net Sales / Average Inventory at Selling Price



Top Players

Company	Market Share	Market Cap.	Industry trends & Highlights
CONCOR (Container Corporation of India Ltd)	40,153	38.92	
Blue Dart Express	19,100	42.60	
Aegis Logistics Ltd.	7,404	47.93	
AllCargo Logistics	6,977	7.58	
TCI Express Ltd	6,175	20.73	<ul style="list-style-type: none"> Industry Outlook- The Indian logistics sector is valued at USD 160 billion. The sector contributes around 13 to 14% of the country's GDP and employs over eight million people directly Globalization and compliance - Globalization is forcing many logistics companies to focus on a strategy of achieving delivery KPIs while keeping costs in check. The need for increased flexibility across the supply chain is paramount along with recognizing that no single solution to the growing complexity will be one-size-fits-all. Integrated 3PL Services - As e-commerce continues to expand beyond epic proportions, businesses are bringing in heavy assets in trucking and adding freight brokerage capabilities and warehouse facilities to provide deep integration into customers' systems



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Datasheets: Varanasi & Beyond

India's Income based population split

Average saving rate in India ~ 30% of income. (Varies depending on income level)

The average consumption rate of India is ~70% of income. (Varies depending on the income level)

Segment	Share of Income
• Food	35%
• Travel	10%
• Transportation	10%
• Education	5%
• Health	5%
• Housing	10%
• Discretionary spending	25%

Rural Areas	
• Upper Middle Class	10%
• Medium Class	40%
• Lower Middle Class	30%
• Below Poverty Line	20%

*Average household size is 5.2 in rural India.

Urban Areas	
• Upper Middle Class	30%
• Medium Class	30%
• Lower Middle Class	40%

*Average household size is 4 in urban India.

Sector Spread of population

Sector	Contribution GDP	Workforce
Agriculture	18%	45%
Industries	29%	25%
Services	53%	30%

Age Spread	Population
0-14 yrs	30%
15-24 yrs	19%
25-34 yrs	15%
35-44 yrs	13%
45-54 yrs	9%
55+	14%

Indian Population Statistics

- Total Population
- Growth Rate
- World Percentage
- Density
- Land Area
- Median Age
- (Population) Urban : Rural
- Average Household Size
- Lok Sabha Constituency
- Literacy Rate
- Sex Ratio(F:M)
- Age Expectancy(M:F)

142 Cr
0.70%
17.70%
464/ km ²
3.287 million km ²
28.7
36.4% : 63.6%
4.6
543
74.04%
943:1000
69.1 Yrs M , 72.4 Yrs F

Religion wise Distribution

Religion	Hindu	Muslims	Christianity	Sikhs	Others
Population(in %)	80%	14%	2.5%	1.5%	2%

Population Distribution by City

City	Population
Delhi	32 Million
Mumbai	21 Million
Bengaluru	11.6 Million
Hyderabad	9.2 Million
Ahmedabad	7.6 Million
Chennai	6.4 Million
Kolkata	6.2 Million
Surat	4.5 Million
Pune	4.3 Million
Kanpur	3.8 Million

IIT BHU and Varanasi Statistics

Population Statistics of Varanasi	
• Population	3,676,841
• Male	1,921,857
• Female	1,754,984
• Rural	2,079,790
• Urban	1,597,051
• Population Density	2395/Sq. Km
• Literacy	75.6%
• No. of Wards	100
• No. of Tehsil	3
• No. of Block	8
• No. of Nyay Panchayats	108
• No. of Gram Panchayats	760
• Nagar Nigam	1
• Nagar Palika Parishad	1
• Nagar Panchayat	1
• % of Working Population	33%
• Number of Ghats	88
• Sex Ratio	913

Political Situation	
• Parliamentary Constituencies:	3(2 Partial)
• Assembly Constituencies:	8
• Polling Centers	1245
• No of Voters	27,35,177
• No of Male Voters	13,82,925
• No of Female Voters	13,52,252
• Polling Booths	3361

Area Distribution of Varanasi	
• Area	1535 Sq. Km
• Metropolis	82 Sq. Km
• Forest Cover	262.48 (17.10%)
• Very Dense Forest	0
• Moderately Dense Forest	1.00%(15.35 Sq.km)
• Heavily Dense Forest	16.10%(24713 sq. Km)
• No of Ghats	88
• Length of Ganga	7 km
• National Highways	5
• No of Railway Stations	27
• WaterBodies	1.28 Sq. Km
• Builtup Area	62.43 Sq. Km

IIT BHU Statistics	
• Total No. of Students	6030
• Student-Teacher Ratio	23:1
• Student-Staff Ratio	16:1
• Area of Campus	1300 Acres
• Sex Ratio	1:5
• Number of Canteens	17
• Number of Recreational Centers	2
• Number of Hostels(Girls)	4
• Number of Hostels (Boys)	15
• Avg Hostel Capacity(Boys/Girls)	1903 Double seated 549 triple seated 233 single seated
• Number of Departments	18 Departments

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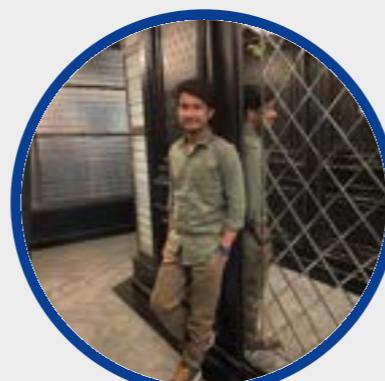
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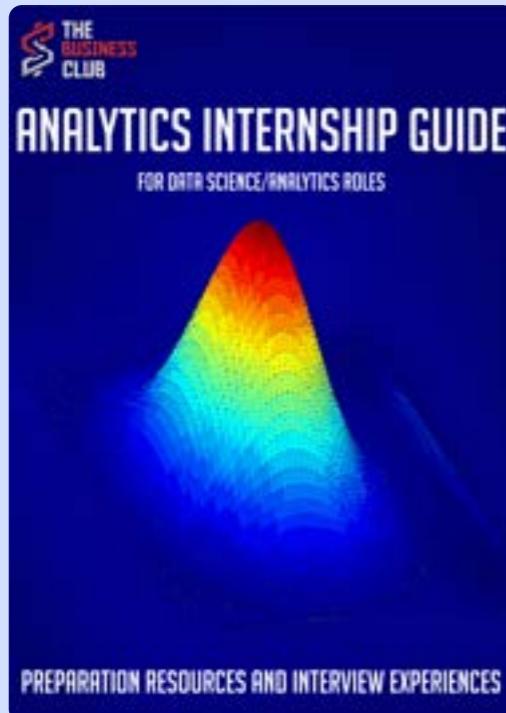


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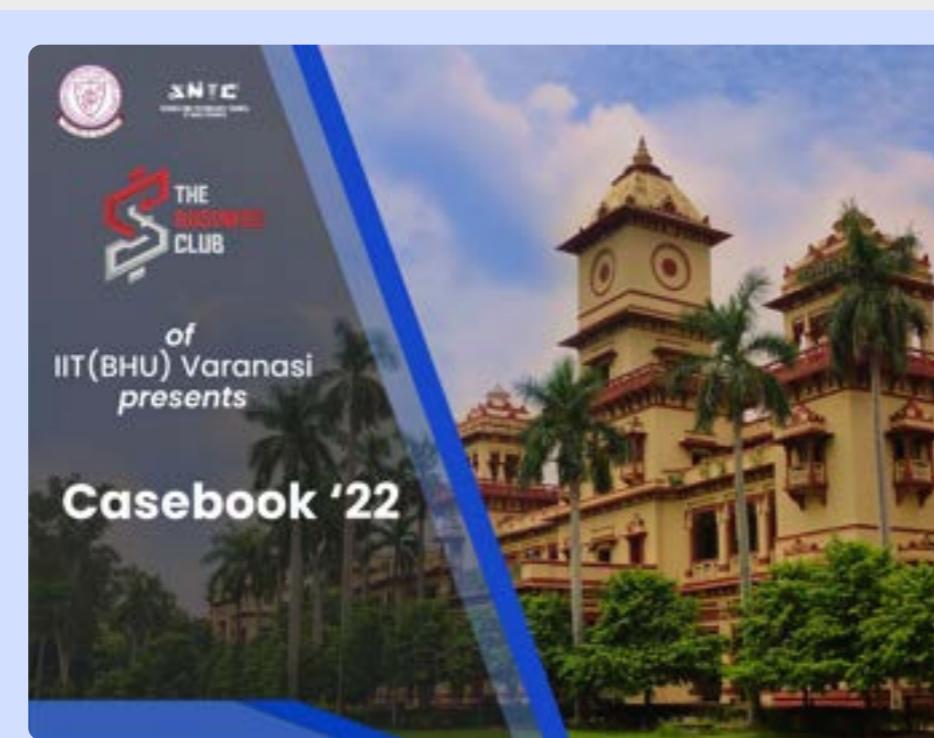
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