

The Product Management Casebook

2024-2025



Our Team



Samridhi Goyal
Editor



Tanmay Sahoo
Co-Editor



Vivin Vincent
Co-Editor



Agniv Saha
Co-Editor



SriSurya Voleti
Co-Editor

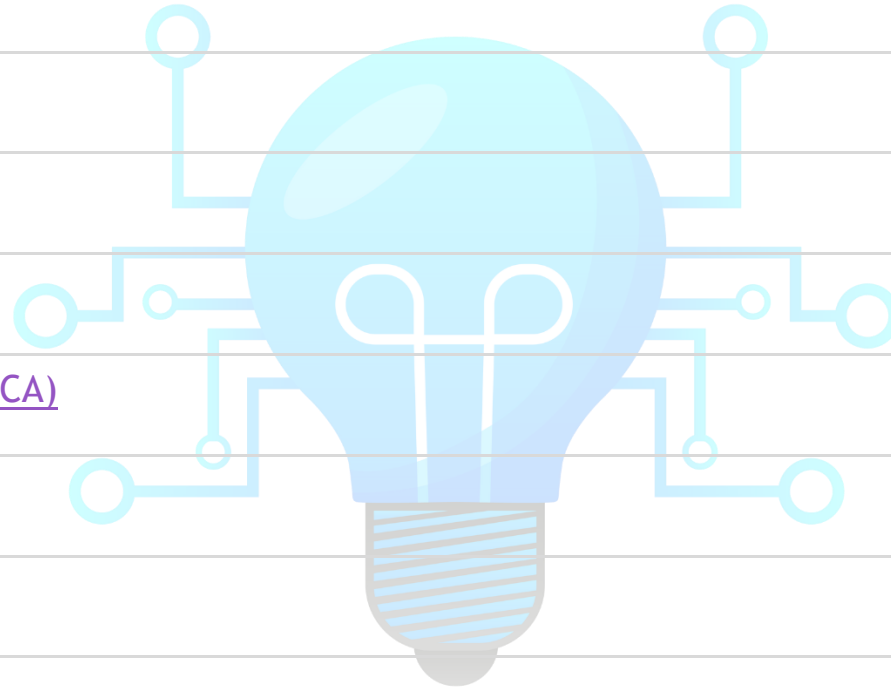


Ayan Chatterjee
Designer



INDEX

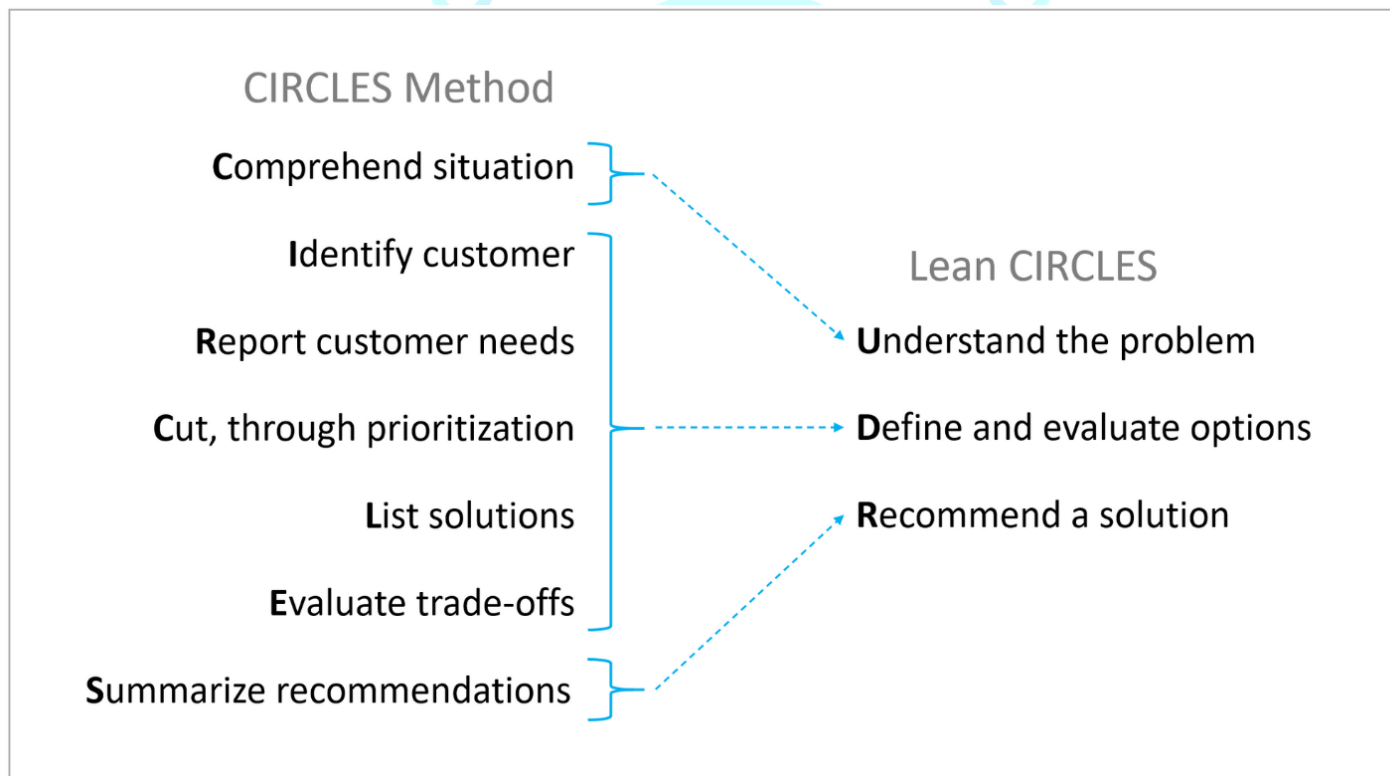
	Page number
<u>Frameworks</u>	4
<u>New Product Design</u>	17
<u>Product Improvement</u>	42
<u>Product Pricing</u>	63
<u>Root Cause Analysis (RCA)</u>	76
<u>Miscellaneous</u>	88
<u>Non-Tech Cases</u>	90
<u>Case based GDs</u>	101
<u>Guesstimates</u>	102



Frameworks

CIRCLES

The **CIRCLES** framework helps you approach product design problems in a structured manner. As shown in the diagram below, **CIRCLES** encourages the candidate to go through seven stages.

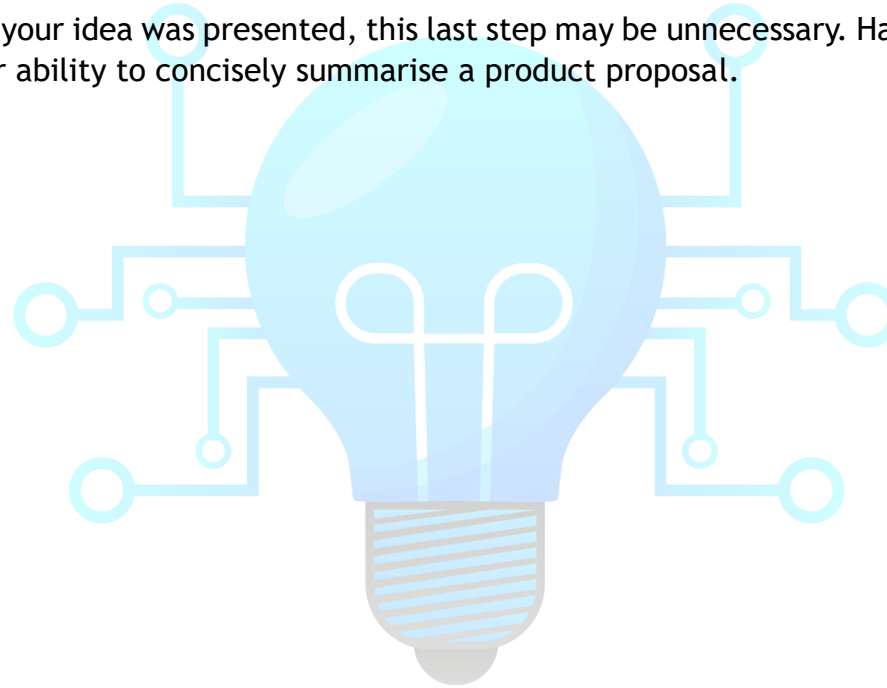


The seven stages of the CIRCLES Method

- **C - Comprehend the situation**
 - Ask basic questions to understand the problem
 - Who is the product designed for? Why do customers need it? How does it work? Where and when is it available? How does the business define customer satisfaction? Is satisfaction or another important metric failing to meet targets?
- **I - Identify the customer**
 - Be prepared and have a list of potential target audiences that will benefit from the product.
 - Then, in the interview, choose one buyer persona that best supports your argument.
- **R - Report the customer's needs**
 - This can be done by creating a user story to delve deeper and understand user needs and their intended benefits.
- **C - Cut, through prioritization**
 - Narrow the various needs of the customer down to one you feel will have the greatest impact.
 - Think about how certain needs would be prioritized according to time, money, or other constraints. Here, a prioritization matrix or A/B testing is appropriate.
 - This stage demonstrates to the Interviewer that you can assess the pros and cons of different scenarios and think strategically.
- **L - List solutions**
 - For the identified need, list several solutions. Many candidates are great at identifying problems but have difficulty solving them.
 - Brainstorming frameworks such as the Reversal Method and Attribute Method can help the candidate think on the spot.



- **E - Evaluate trade-offs**
 - Evaluation requires that the candidate be analytical, objective, and thoughtful. Trade-off criteria should be defined to better get your point across. Solutions should be analysed via a pros and cons list.
 - This stage is important because the ability to critique yourself is important in successfully responding to criticism from others.
- **S - Summarise your recommendation**
 - Depending on how well your idea was presented, this last step may be unnecessary. Having said that, some organizations will want to assess your ability to concisely summarise a product proposal.



ROOT CAUSE ANALYSIS

Root Cause Analysis (RCA) is a pivotal strategy for product managers to pinpoint and address underlying issues. It's especially critical for diagnosing and rectifying problems within products or services. A topic frequently discussed in product management interviews; RCA can be applied using a systematic approach to solve questions that may arise. This method is versatile enough to be tailored to various problem scenarios and can be modified as needed.

Clarify the Problem

Understanding the precise nature of the problem at hand is essential before attempting to resolve it. For instance, if the concern is a 10% increase in order cancellations on Amazon, fundamental clarifying questions could be: What exactly constitutes a cancellation? Which types of orders are being canceled?

Scope Out the Problem

Evaluating the breadth of the issue involves considering aspects such as:

- Geographic distribution
- Temporal trends
- Metric quality
- Platform errors
- Recent changes to the app or product

Form a High-Level Hypothesis

Based on the initial clarifications and scope, it's vital to formulate an overarching hypothesis about the issue.



Gathering Data on Internal and External Factors

Delving into the reasons behind the issue requires investigation into factors that might influence the product:

Internal Factors:

- User journey: Map out a clear, linear user journey and identify where drop-offs occur.
- Technical Factors, etc.

External Factors:

- Regulatory changes or policy updates?
- Market entry of new products or substitutes.
- Sentiment on social media?

Update the Hypotheses Using Data

Refine the hypotheses with the data gathered from examining the internal and external factors, such as:

- Increased cancellations for orders found via the search bar.
- Recent alterations to product listing pages, cart additions, address selections, discount/offers, Wishlist layout, etc.
- Specific payment methods experiencing higher failure rates or the recent removal of preferred payment options.

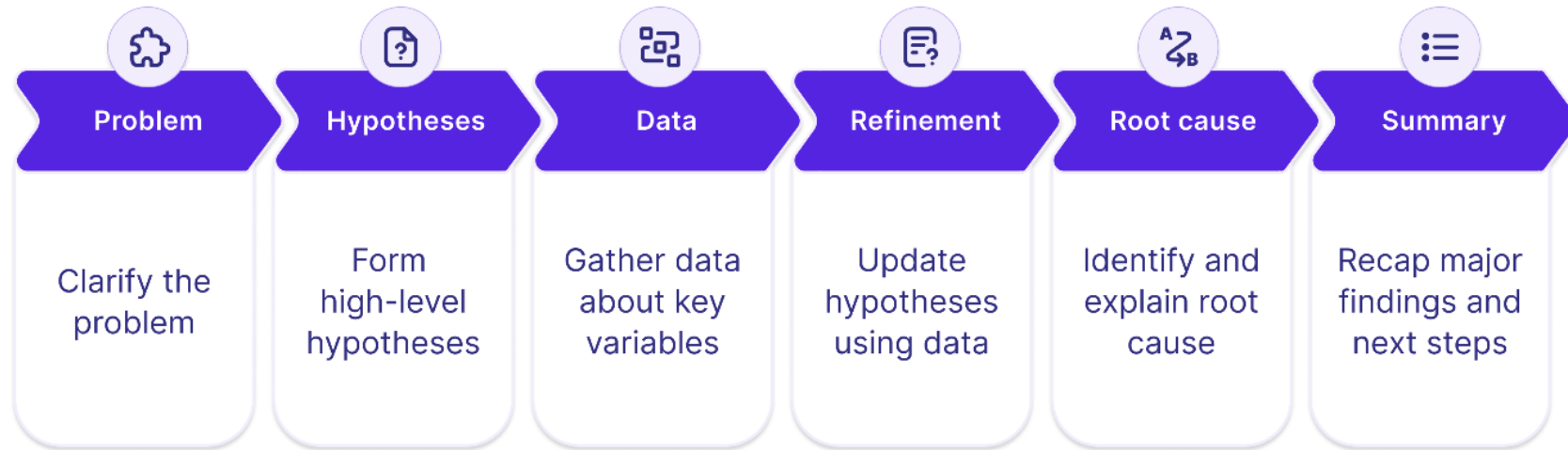
Identify and Explain the Root Cause

Continual refinement of the hypotheses leads to identifying the precise root cause.

Recap and Summarize the Findings

Incorporate Fault Tree Analysis (FTA) as part of the hypothesis-building process, to systematically trace the causes of an event, both internal and external. This aids in creating a comprehensive picture of the issue and supports the formulation of an effective response strategy.





Fault Tree Analysis in Forming Hypothesis:

Fault Tree Analysis (FTA) is a systematic and deductive failure analysis that focuses on one particular undesired event and provides a method for determining the causes of that event. The basic procedure for forming a hypothesis using FTA involves:

1. **Identify the Top Event:** Start with the event of failure you want to study (known as the "top event"). For instance, in the below scenario, the top event is "Doorbell failed to ring."
2. **Work Backwards:** Work backward from the top event to identify all the immediate causes that could lead to the top event. These causes are connected to the top event by logical "OR" gates, meaning that the failure can occur due to any one of these causes. In our problem cited below, these immediate causes are: "Switch fails to make contact," "Bell-solenoid unit fails to ring," and "Low voltage from the battery."
3. **Break Down Each Cause:** For each immediate cause, identify what could cause that event, breaking each down into more specific causes. These could be connected by "AND" gates, which mean that all the causes in this set must occur for the event to occur, or "OR" gates, meaning that any cause could lead to the event.



4. **Identify Basic Causes:** Keep breaking down each event until you reach the most basic causes, which cannot be broken down further. These are often items that can be checked or tested, such as components or subsystems within the larger system.
5. **Hypothesis Formation:** The hypothesis for the cause of the failure is formed by examining the basic causes and considering which are most likely, given the evidence. The basic causes are your hypotheses for why the top event occurred.

For example, let's see about the FTA:

Top Event: "Doorbell failed to ring."

Immediate Causes: There are three immediate causes identified:

- "Switch fails to make contact"
- "Bell-solenoid unit fails to ring"
- "Low voltage from battery"

Breaking Down Immediate Causes: Each of these is then broken down further:

For "Switch fails to make contact," the causes could be:

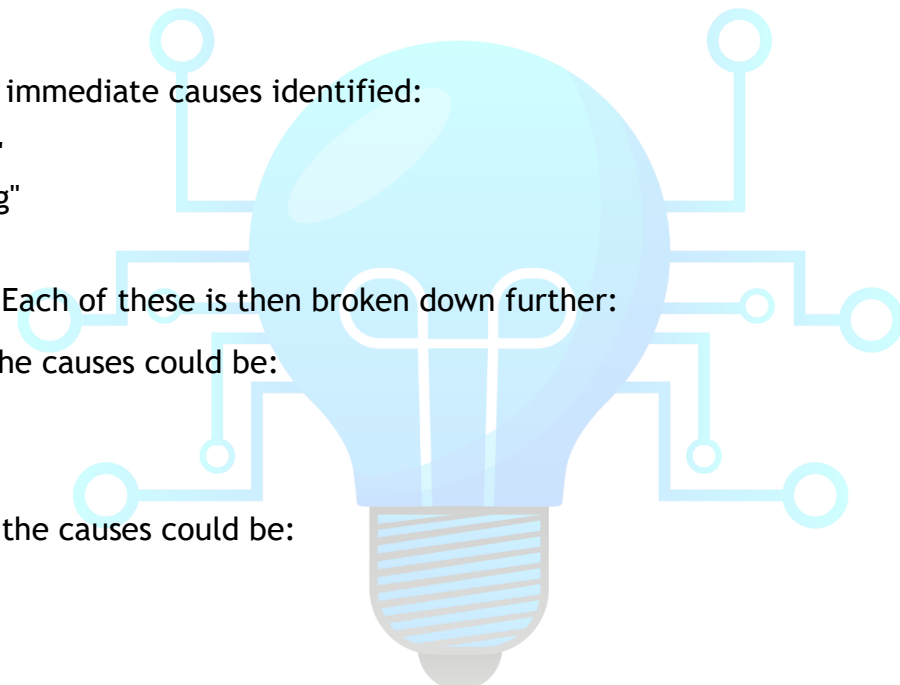
- "Contacts broken"
- "High contact resistance"

For "Bell-solenoid unit fails to ring," the causes could be:

- "Clapper broken"
- "Clapper not attached"
- "Clapper stuck"
- "Solenoid link is broken"

For "Low voltage from battery," the causes could be:

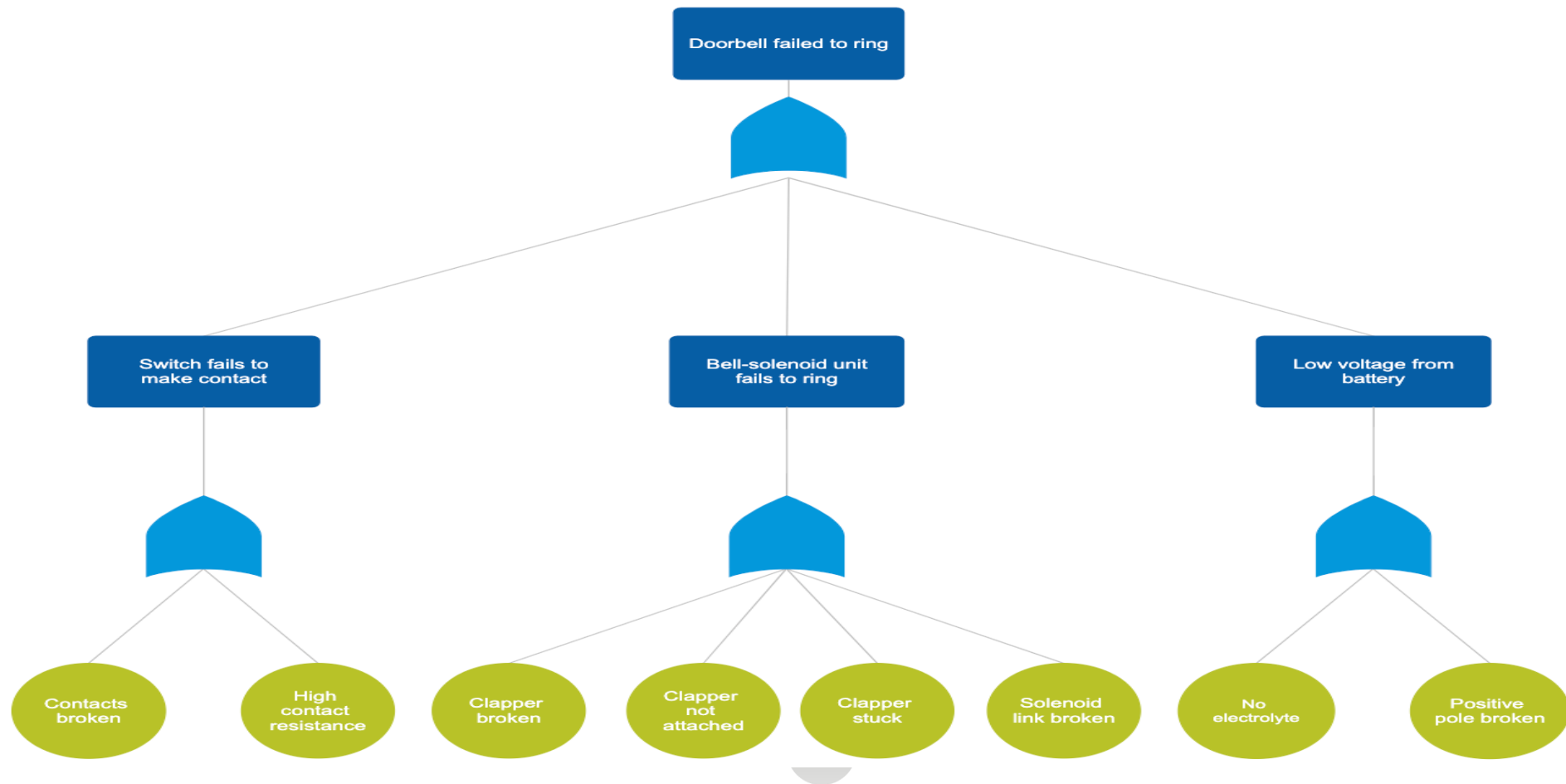
- "No electrolyte"
- "Positive pole broke"



The "Switch fails to make contact" event is analysed and found to have two potential basic causes: "Contacts broken" and "High contact resistance." The "Bell-solenoid unit fails to ring" has four potential basic causes related to different parts of the bell-solenoid unit. Lastly, "Low voltage from battery" has two possible basic causes that would affect the battery's ability to deliver power.

As hypotheses, you would then consider these basic causes and determine which is the most probable explanation for the doorbell's failure. For example, if you recently replaced the battery, "Low voltage from battery" might be less likely, whereas if there is a known issue with switch durability, "Contacts broken" could be a more likely hypothesis.





PRODUCT PRICING

In product management interviews, pricing strategy plays a pivotal role in determining a product's market positioning and financial success. This comprehensive framework provides a structured approach to analyse, recommend, and implement effective pricing strategies. Let's delve into each step of the framework using the Apple Watch pricing case as an illustrative example:

Step 1: Understand the Business Context:

- Begin by understanding the business's overall objectives and the role of the product or service in the company's portfolio.
- Identify the key goals related to pricing, such as maximizing profit, gaining market share, or positioning the product as premium.

Step 2: Analyse Market Conditions:

- Evaluate the current market landscape, including competitors, target audience, and any external factors influencing pricing decisions.
- Consider demand and supply dynamics, customer preferences, and trends in the industry.

Step 3: Define Pricing Objectives:

- Clearly articulate the specific objectives of the pricing strategy, whether it's to maximize revenue, gain market share, or create a premium image.

Step 4: Understand Customer Value Perception:

- Explore how customers perceive the value of the product or service.
- Identify key features, benefits, and unique selling points that contribute to customer value.

Step 5: Assess Costs and Profit Margins:

- Understand the cost structure associated with the product or service.
- Calculate profit margins and consider how pricing decisions will impact overall profitability.



Step 6: Analyse Competitive Landscape:

- Evaluate the pricing strategies of competitors in the market.
- Identify the strengths and weaknesses of competitors' offerings and how your product differentiates itself.

Step 7: Consider Price Elasticity:

- Assess how price changes might impact demand, recognizing the differentiated nature of the product.

Step 8: Explore Pricing Models:

- Consider various pricing models, such as cost-plus pricing, value-based pricing, competitor-based pricing, or dynamic pricing.
- Assess the suitability of each model based on the product, market, and business objectives.
- Some of the Pricing Models are

Cost-Plus Pricing:

- Setting the product price by adding a markup to the cost of production, ensuring a profit margin.
- Example: A construction company charges clients by adding a markup to cover material costs, labour, and overhead.

Value-Based Pricing:

- Determining the price based on the perceived value of the product to the customer, rather than production costs.
- Example: A luxury watch brand prices its timepieces based on craftsmanship, brand prestige, and perceived exclusivity.

Competitive Pricing:

- Setting the product price based on the prices charged by competitors in the market.
- Example: A grocery store adjusts its prices to match or beat those of nearby supermarkets to attract budget-conscious shoppers.

Dynamic Pricing:

- Adjusting the price in real-time based on market demand, competitor prices, or other external factors.
- Example: An airline adjusts ticket prices based on demand, time until departure, and competitor pricing.



Subscription Pricing:

- Charging customers a recurring fee at regular intervals (monthly, annually) for continued access to a product or service.
- Example: A streaming service charges users a monthly fee for unlimited access to its library of movies and TV shows.

Skimming Pricing:

- Setting a high initial price for a new product and gradually lowering it over time as the product becomes more mainstream.
- Example: A tech company releases its latest smartphone at a high price to early adopters, gradually reducing it as newer models are introduced.

Step 9: Evaluate Risk and Mitigation Strategies:

- Identify risks, such as competitors catching up in quality or limiting the market to the upper class. Mitigation involves continuous innovation, maintaining a technological edge, and agile pricing adjustments.

Step 10: Recommendation and Implementation:

- Recommend a tiered pricing strategy, with a base model targeting a broader audience and premium models catering to the upper class. Implement through effective market segmentation and communication.

Step 11: Quantitative Analysis:

- Support the recommendation with quantitative analysis, projecting revenue at different price points, estimating market share, and conducting sensitivity analysis.

Step 12: Alternative Solutions:

- Discuss alternative pricing models, such as a single high premium or a lower-cost strategy. Evaluate the pros and cons before arriving at the tiered pricing recommendation.

Step 13: Finalize the Pricing Structure:

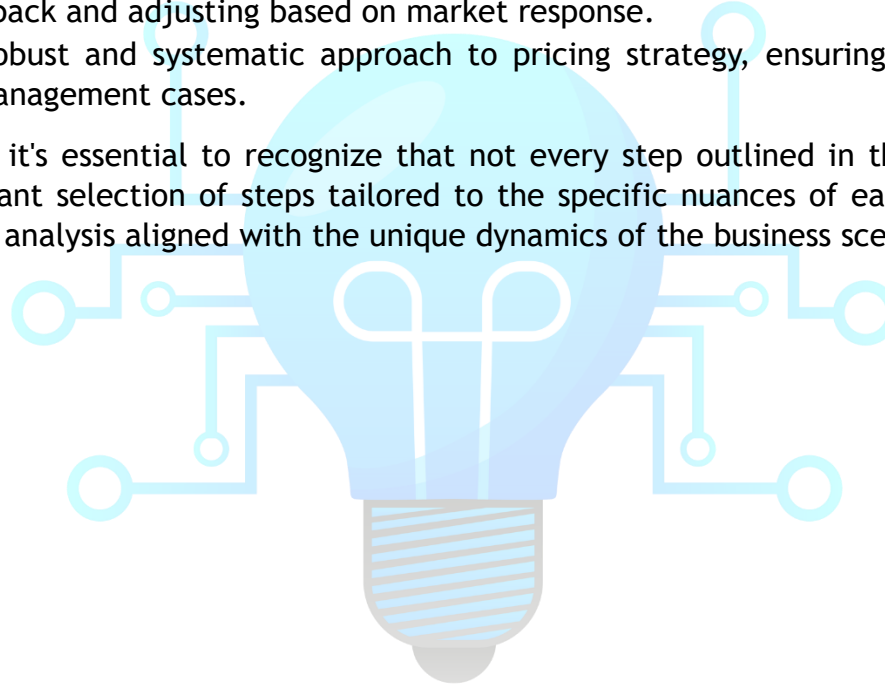


- Specify the pricing structure, including suggested price ranges for the base and premium models. Consider additional factors like financing options to enhance accessibility.

Step 14: Communication and Feedback:

- Plan how the company will communicate the pricing strategy to customers, emphasizing value propositions. Acknowledge the importance of gathering feedback and adjusting based on market response.
- This framework provides a robust and systematic approach to pricing strategy, ensuring a holistic analysis and strategic decision-making in product management cases.

Note: In approaching pricing cases, it's essential to recognize that not every step outlined in the framework may be universally applicable. The key lies in a cognizant selection of steps tailored to the specific nuances of each case. Adapting the framework judiciously ensures a comprehensive analysis aligned with the unique dynamics of the business scenario at hand.



New Product Design

1. Design a LinkedIn for blue-collar workers (Difficult Level: Moderate)

Interviewer: Design a LinkedIn for blue-collar workers.

Candidate: Sure, let's delve into this. Can you clarify why LinkedIn is expanding to blue-collar workers?

Interviewer: To tap into an untapped market and explore new potential.

Candidate: Great. Would you prefer a new app or integration with LinkedIn?

Interviewer: You decide.

Candidate: Alright, let's explore the problem space before deciding. I'd like to focus on blue-collar workers involved in construction, like construction workers, plumbers, electricians, and carpenters, as I have a better understanding of that domain.

Interviewer: Good choice. Proceed.

Candidate: Generally, blue-collar jobs are contract-based, often acquired through friends or contracting agencies. They don't use resumes, work on shifts or hourly, require specialized skills, and are not very tech-savvy. They prefer face-to-face interaction as they work on-site away from computers.

Interviewer: What pain points do you see for these workers?

Candidate: Finding new jobs, lack of self-marketing skills, uncertainty about learning new skills, complexity of technology, middlemen taking a significant cut from their pay.

Interviewer: How would you address these pain points?

Candidate: Assuming most of the blue-collar workers don't have computers, smartphones nowadays can do all the basic tasks that have to be done and they are always on the move and it is easier to use a mobile phone. I propose an app as a solution and the solutions are:



1. A job-matching system where users can search for postings based on their requirements.
2. A profile-building feature displaying contact information, work experience, skills, testimonials, and pictures.
3. A newsfeed providing information relevant to their skills.
4. A simple UI focused on images and easy navigation.
5. Transparent payment display to show users their pay and any deductions.

Interviewer: What would be included in the MVP?

Candidate: For the MVP, I'd include the job-matching system, profile-building feature, simple UI, and transparent payment display.

Interviewer: What's the product vision?

Candidate: To empower blue-collar workers to be in charge of their careers.

Interviewer: Any upcoming features?

Candidate: A newsfeed with relevant information and expansion to other markets like drivers and farming jobs. Also, a system matching users to vocational training for skill enhancement.

Interviewer: What trade-offs or challenges do you foresee?

Candidate: Attracting job posts to the platform is crucial, as well as overcoming the tech-savviness barrier. We'd need a strong go-to-market strategy to introduce the app to blue-collar workers.

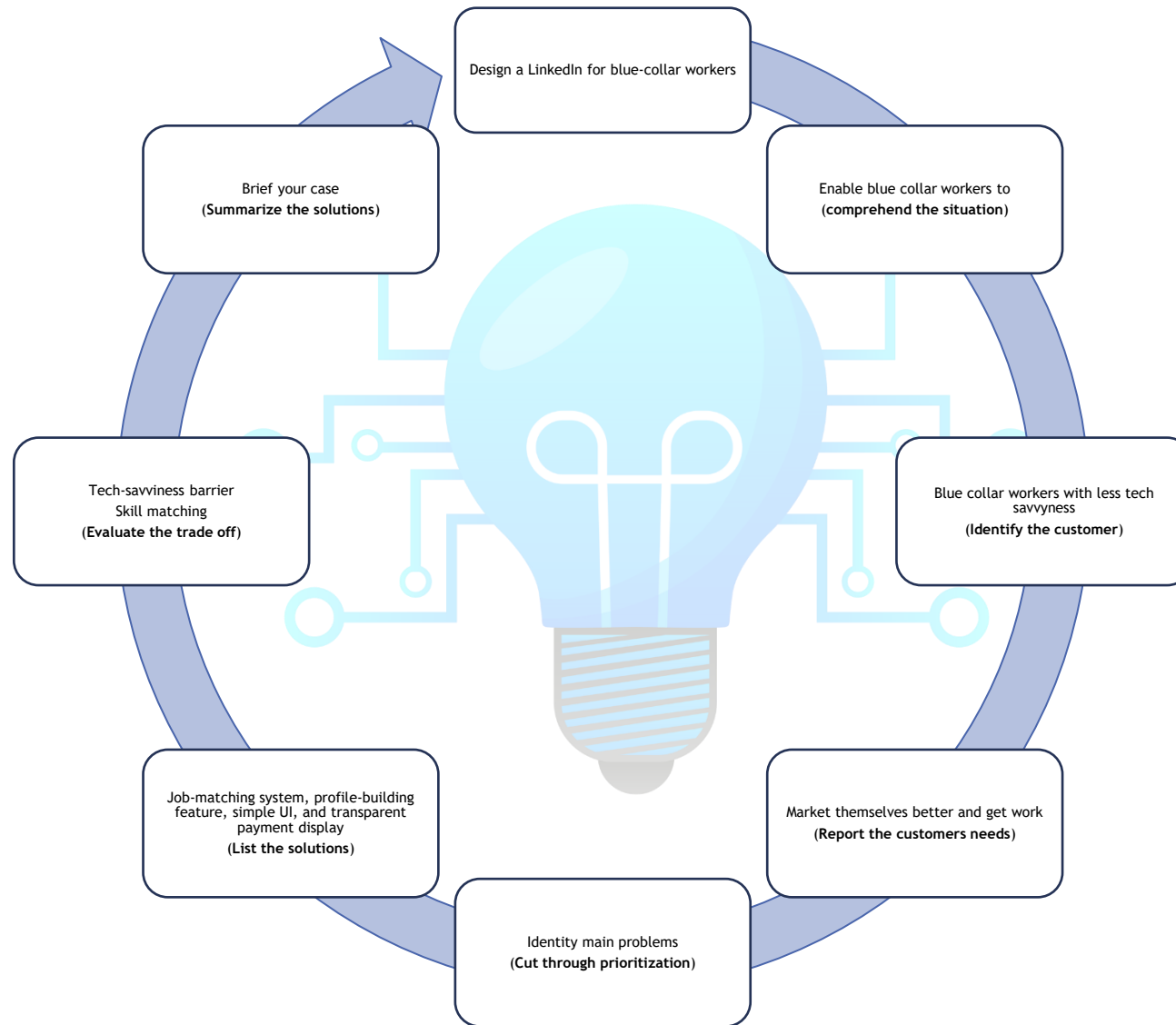
Interviewer: What metrics would you use to measure success?

Candidate: No. of accounts created, completed profiles, no. of jobs applied, and the key metric would be the no. of successful job matches.

Interviewer: Thank you for outlining the design and addressing potential challenges. It seems like a thoughtful approach to creating a tailored app for blue-collar workers.



Summary and Approach



2. Smart Mirror Fitness Coach (Difficult Level: Moderate)

Interviewer: Welcome, and thank you for joining us today. In this scenario, we're exploring the creation of a smart mirror functioning as a fitness coach. Before we proceed, do you have any initial questions or need clarifications about the scenario?

Candidate: Certainly. Could you provide more insight into what is a smart mirror?

Interviewer: It is an electronic display behind the glass. The display can show the viewer various types of information and notifications while they see their reflection in the mirror.

Candidate: Are there any features that are basically available in the mirror

Interviewer: A smart mirror must have a Display of Information and connectivity to the internet and other smart devices. The idea behind smart mirrors is to provide convenience and multifunctionality, integrating digital life into daily routines like getting ready in the morning.

Candidate: Thank you. Could you provide more insights into the intended user base? Are we targeting a specific group, like fitness novices, or enthusiasts, or a broader audience?

Interviewer: Great question. Let's consider a diverse target audience, encompassing beginners to seasoned fitness enthusiasts. The smart mirror should cater to various fitness levels and objectives. Any further questions before we continue?

Candidate: One more clarification. Should we consider integrating AI for tailoring workout suggestions based on user performance and objectives?

Interviewer: A thoughtful consideration. Yes, let's explore the potential integration of AI for personalized workout recommendations. Now, with that clarification, what features do you envision as crucial for this smart mirror fitness coach?

Candidate: Given our audience, essential features would include real-time feedback on posture, a range of pre-programmed workouts for diverse fitness goals, an interactive interface displaying metrics and progress, voice commands for hands-free operation, and compatibility with fitness trackers for comprehensive tracking.

Interviewer: A solid set of features. Now, let's delve into challenges. What hurdles do you foresee in developing a smart mirror fitness coach?



Candidate: A challenge might lie in ensuring precise form detection, particularly for intricate exercises. Crafting an intuitive user interface that aligns with the real-time workout nature could be another hurdle. Additionally, addressing privacy concerns tied to camera usage for form detection is crucial. Lastly, integrating AI for personalized recommendations poses challenges in terms of data accuracy and user trust.

Interviewer: Valid concerns. Let's explore alternatives to improve form detection accuracy. What features or strategies could enhance the precision of form feedback?

Candidate: One solution could involve incorporating additional sensors like depth sensors or wearables to complement the camera's form detection. Another approach might entail implementing a machine learning model trained on diverse body types and workout scenarios. Allowing users to manually calibrate the system based on their body proportions is also an option for more accurate form feedback.

Interviewer: Interesting alternatives. Considering all aspects, which solution would you prioritize to boost form feedback accuracy?

Candidate: Given the pivotal role of accurate form detection in ensuring effective and safe workouts, my priority would be the first solution—integrating additional sensors like depth sensors or wearables. This comprehensive approach addresses the potential limitations of relying solely on camera-based detection.

Interviewer: A sound choice. To wrap up, could you briefly outline the technology requirements for implementing this smart mirror fitness coach? What technologies or components are crucial for its functionality?

Candidate: The technology requirements encompass a high-quality camera system for form detection, additional sensors like depth sensors or wearables, a responsive interactive display, robust AI algorithms for personalized recommendations, voice recognition capabilities, and seamless integration with fitness tracking devices or apps.

Interviewer: Well-analyzed. Thank you for your insights. This concludes our discussion on the smart mirror fitness coach. Any final thoughts or questions?

Candidate: Thank you. I believe a thoughtfully designed smart mirror can transform home fitness, and I appreciate the opportunity to explore this scenario.



3. Design a communication app for children (Difficult Level: Moderate)

Interviewer: Design a communication app for children

Candidate: What are the business goals for this initiative?

Interviewer: Please assume.

Candidate: Goals could be to:

improve communication skills/ communicate with classmates/friends better/ enter a new market/empower a child with a disability to communicate better/etc.

I'll assume that the goal here is to enable children to communicate and engage better with their classmates since I have personally seen my niece and nephew (17 and 13) miss having fun with friends at school due to COVID lockdowns.

Candidate: Are we referring to a mobile app?

Interviewer: Yes.

Candidate: Is there a preference for a certain form of communication like verbal? Written? Visual?

Interviewer: Assume any.

Candidate: Based on my experience, I've seen my nephew and niece are comfortable with written (texting) communication. When we say children, I would think of the following categories: Infants/Toddlers/Teens/Adults. Is there a preference?

Interviewer: No.

Candidate: I would like to choose Teens since it seems less likely that infants/toddlers would need a communication app because usually, children start their schooling after the age of 3. Most adults these days use social networks and other technologies to communicate. Teens usually are inquisitive, discovering new things, making new connections, striving to fit in and seek social approvals, etc., and communication/expressing their thoughts can become very crucial to achieving these goals.

Interviewer: Any more clarifying questions?



Candidate: Yes, are there any other specificities about these children that I need to be aware of such as how much the smartphone penetration among the teenagers?

INTERVIEWER: No, most of them own a smartphone with an internet connection and live with their parents.

Candidates: Let's start with teens in India: They are tech-savvy, spending most of their time on their phones, and they love to explore.

Interviewer: Good, go ahead.

Candidate: *User segments in teens* can be classified based on myriad factors, but I'd like to keep it simple here. I'll go with 2 basic personality types.

a) *Introverts:* Do not know how to express themselves/their opinion usually suffers from an inferiority complex have fewer friends friendly yet restrained don't like excessive attention

b) *Extroverts:* Loves to go to parties very expressive have a huge friend circle limelight lover bold and loud

Potential Secondary users:

1. Parents
2. Teachers
3. Caretakers

For this exercise, I'd like to go with the 'Introvert' sub-segment since my nephew and niece are introverted teens and I am a bit familiar with their traits. If this sounds good to you, I'd like to proceed by brainstorming about their needs/pain points and some potential solutions.

Interviewer: Please proceed.

Candidate: Just to recap, we'll be aiming to help introverted teens bond and engage better with their peers through a mobile app focused on communication.

Product Vision: Empower children to communicate, engage, and bond better with their peers (I have mentioned 'children' in the product vision and not 'introverts' because the vision is for the long term. We could also use 'People' instead of 'children')



Core Needs:

1. Express their opinion/feelings without being judged
2. Connect with other people having similar interests
3. Make some new friends
4. Feel safe amongst the crowd.
5. Be able to enjoy group activities/conversations
6. Share their likes/interests/hobbies with others
7. Be able to enjoy solitude when necessary
8. Want recognition/social approval from their peers
9. Feel comfortable in their own skin

Needs 1,2,3,4 sound foundational for Introverted teens to adopt and engage without the platform. If this sounds good to you, I'd like to proceed with some solutions to address these needs.

Interviewer: yes.

Candidate:

1. *App capability 1:* To address need 1, we could try anonymous profiles where teens could express their opinions/feelings without any clue to their identity. Some other alternatives could be to have a fun profile with avatars and imaginary personal details. This will bring the fun factor and delight to our users as well as help in addressing need 4.
2. *App capability 2:* To address need 2, we could use AI algorithms to build a recommendation engine. We could consider several parameters for matching similar interests, like hobbies, favourite subjects, movies, cartoon characters, games, places, foods, teachers, sports, etc. Such information can be part of the profile page.
3. *App capability 3:* We could build AI to evaluate the teen's chat frequencies and time spent talking to other people to understand the bonding level and maybe recommend potential friends based on this evaluation. If a teen is more comfortable talking to someone and talks often, it could be a sign that they would be more likely to add people with similar traits to their friend list.
4. *App capability 4:* Feeling unsafe can happen due to various reasons like lack of social approval from their friends, being bullied, unable to fit in, etc. I would assume the biggest safety concerns would be due to bullying. We could come up with smart speech/text/sentiment analysis algorithms that will detect in real-time any signs of misbehaviour and bullying and discourage



the bully from continuing the same. We could also use chatbot technology to intervene in communication if such instances are detected.

Given the above solutions, I can foresee some challenges:

Because teens are still in the learning stages, they might unknowingly use language/words that may come off as abusive/bullying to the algorithm and this might create an unpleasant experience for the user. This risk can be mitigated by training the algorithm to consider several other parameters (like the history of previous bullying, any reported issues, etc.) before flagging the behaviour as bullying/inappropriate.

Some users may take “freely express” too far and may post something inappropriate. Good introductory videos during the onboarding can be helpful to introduce the users to different types of inappropriate posts and refrain from using them.

Data, privacy protection would need to be maintained at all times because any lapse in the same would invite anger from parents/schools/governments. The app would need to ensure compliance with any kind of child protection policy in the specific country of launch.

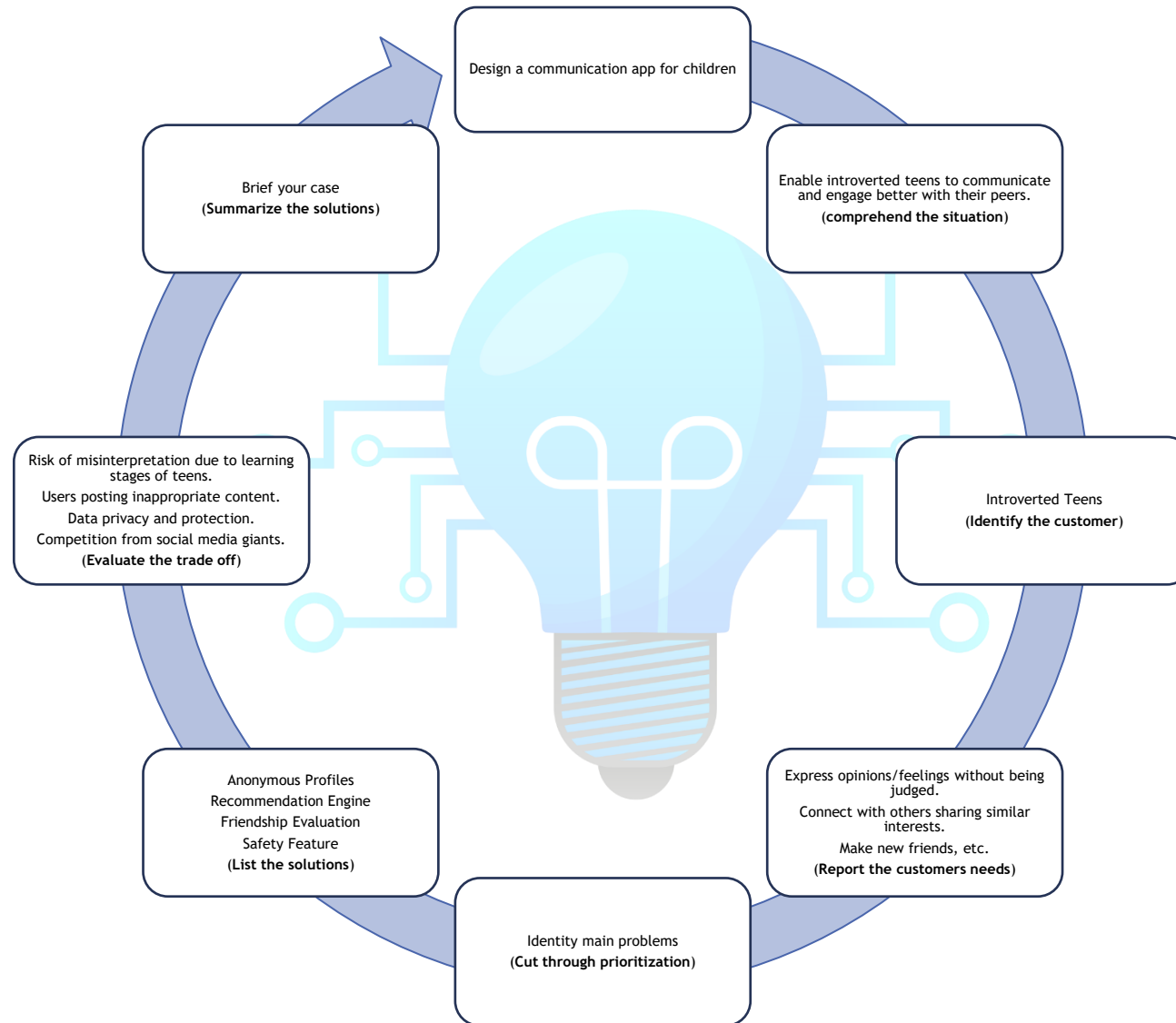
Social media giants like Facebook, Instagram, or any other competitor may launch similar products and try to catch up quickly. We could take the first-mover advantage and ensure a fun and engaging user experience to delight our users and differentiate ourselves in the market.

In order to measure the efficiency of our solution in addressing our user's core pain points, I would think our key KPIs will be the following

1. User Experience score
2. DAU
3. Stickiness factor
4. Number of positive reviews from parents/kids



Summary and Approach



4. Design Uber for Kids (Difficult Level: Moderate)

Interviewer: Good day! Today, we have an interesting case. We're looking to design a service similar to Uber but exclusively for children. Parents are seeking a secure, reliable, and convenient transportation solution for their kids when they can't drive them. How would you approach this?

Candidate: Good day! Before we delve into designing the child-centric transportation service, could you provide a bit more context? Specifically, what are the specific challenges or pain points parents are facing that make them seek such a service?

Interviewer: Certainly. Parents are looking for a safe, reliable, and convenient transportation solution for their kids when they're unable to drive them. The challenges include ensuring the safety of children during transit and providing a service that parents can trust. How would you approach addressing these concerns?

Candidate: Thank you for clarifying. To better understand the landscape, could you share more about the demographics of the potential users? For instance, are we targeting a specific age group of children, and what regions or cities are we initially considering for this service?

Interviewer: Good questions. We are primarily targeting parents with school-going children, aged between 5 and 15 years. The initial launch would be in urban areas of cities with a significant working parent population. Now, moving forward, how would you go about identifying the unique needs of parents, children, and schools in this context?

Candidate: To address this, I would start by identifying the primary stakeholders - parents, children, and schools - understanding their unique needs, which include safety, fun, comfort, and trust. For parents, I assume the key needs would revolve around safety, reliability, and trust. For children, it would be about ensuring a fun and comfortable ride. Schools might be interested in a service that aligns with their schedule. Is my understanding accurate, or are there specific needs you have in mind?

Interviewer: Exactly. Now, when it comes to brainstorming ideas, what features and technologies would you consider?

Candidate: I'd brainstorm features like safety measures, kid-friendly vehicles, and in-car entertainment. On the technology side, a user-friendly app, tracking features, and driver verification would be essential.

Interviewer: Great. Now, thinking about potential risks, what concerns might arise, and how would you mitigate them?



Candidate: Safety concerns, legal regulations, parental trust, and liability are key risks. To mitigate this, we'd conduct thorough background checks for drivers, implement safety certifications, and ensure comprehensive insurance coverage.

Interviewer: Good approach. Moving on to constraints, what limitations should we keep in mind?

Candidate: Regulatory, geographical, cost, and scalability limitations are important. We could start in cities with less stringent regulations and optimize operational costs, possibly by partnering with schools for designated pick-up/drop-off points.

Interviewer: Smart. Now, considering existing services, how would you analyze them and what competitive advantages would you aim for?

Candidate: I'd study existing services to learn from their successes and failures. Differentiation would come from specialized child safety features and a seamless experience for parents.

Interviewer: Insightful. Regarding user experience, how would you envision a seamless process for booking, pick-up/drop-off, and feedback?

Candidate: Designing a simple app interface for easy booking and monitoring, coupled with clear communication channels and post-ride feedback options, would be crucial for a seamless user experience.

Interviewer: Good focus. Now, looking at solutions, what phased approach would you propose for launching this service?

Candidate: In Phase 1, we'd launch in pilot cities, emphasizing safety and reliability. Phase 2 would involve expanding to more cities, leveraging positive feedback, and refining services based on user experiences.

Interviewer: Thank you for outlining this approach. It seems comprehensive, aiming to provide a safe, reliable, and enjoyable transportation service for children. Any final thoughts?

Candidate: Thank you. I believe this approach aligns with the unique needs of parents and children while addressing concerns related to safety, trust, and convenience.

Interviewer: Indeed. Your insights are valuable. This concludes our discussion on designing a child-centric transportation service. Thank you for your thoughtful responses.



5. Design a cooking assistant specifically tailored for Alexa/Echo (Difficult Level: Moderate)

Interviewer: Welcome! Today, we have an intriguing case. We're looking to design a cooking assistant specifically tailored for Alexa/Echo, providing voice instructions for users while cooking. Keep in mind that video access on the device is not available. Our primary goal is customer acquisition. Any initial thoughts or clarifying questions?

Candidate: Thank you. To clarify, are we exclusively focusing on acquiring new customers for Alexa/Echo through this cooking assistant feature, or should we consider retaining existing customers as well?

Interviewer: Excellent question. While the primary focus is on customer acquisition, enhancing the experience for existing customers could be a secondary consideration. Now, let's delve into identifying our target customers. We've considered homemakers and people who enjoy cooking. Any thoughts on why we've excluded chefs and amateurs from our primary target?

Candidate: I understand. Chefs might find this feature less beneficial as they're likely experts in cooking and may have reservations about using recipes from various sources. On the other hand, amateurs might require more visual guidance than just audio instructions. Therefore, homemakers, who possess cooking skills and actively seek new recipes, seem to be the most suitable target audience. Is that the intended understanding?

Interviewer: Spot on. Now, let's understand the needs of our target customers, particularly homemakers. They often repeat specific recipes, explore new ones, and sometimes cook for larger groups. Additionally, they express an interest in listening to music while cooking. How would you prioritize these needs based on Reach, Impact, and Effort?

Candidate: Considering the factors, listening to recipes appears to be the highest priority. It has a broad reach, a significant impact on the user experience, and seems relatively easier to implement compared to other needs.

Interviewer: Great analysis. Quantitatively, do you have any estimates on the potential reach of this feature?

Candidate: Absolutely. We can leverage market research data to estimate the number of households with individuals who enjoy cooking regularly. This would help us quantify the potential reach of our cooking assistant feature.

Interviewer: Good point. Now, let's move on to the proposed solution. We're thinking of a step-by-step cooking instructor. Could you share your thoughts on the salient features and potential trade-offs?



Candidate: Certainly. I propose a comprehensive step-by-step cooking instructor with features such as the ability to skip or repeat steps using voice commands, asking questions about quantity and time, setting timers, starting and stopping instructions, and jumping to a specific step by calling out the title. Quantitatively, we could conduct user surveys to gauge the interest level in each of these features and prioritize them accordingly. The pros include flexibility, detailed guidance, and a hands-free experience. However, it's essential to acknowledge potential trade-offs such as the user possibly forgetting step titles or numbers and challenges in understanding the color of ingredients or dishes through audio instructions.

Interviewer: Well-articulated. Considering the prioritized needs and the proposed solution, do you think there's anything missing, or would you like to suggest additional features?

Candidate: One consideration could be integrating a feature for users to save their favorite recipes or create personalized playlists. This could contribute to enhanced user engagement and long-term retention. Quantitatively, we could measure user engagement through app analytics, tracking the number of saved recipes and playlist creations.

Interviewer: Excellent suggestion. Let's explore alternative solutions. An alternative could be integrating a voice-activated recipe search feature, allowing users to discover new recipes verbally. Another could involve partnerships with popular recipe platforms for a wider content library. How would you prioritize these alternatives?

Candidate: Both alternatives have merits. However, considering our goal of customer acquisition, the step-by-step cooking instructor aligns more closely with the identified needs and provides a unique value proposition. It's crucial for our solution to stand out in the market.

Interviewer: Agreed. Your insights are thorough and well-reasoned. If there are no further thoughts, this concludes our discussion on designing the cooking assistant. Thank you for your detailed analysis.

Candidate: Thank you for the opportunity. I believe the proposed solution aligns well with the identified needs of the target audience. Looking forward to the next case.

Interviewer: We appreciate your thoughtful responses. This concludes our discussion for now.



6. Design a Meta Product for space travel (Difficult Level: Hard)

Interviewer: Design a Meta Product for space travel.

Candidate: I would first like to ask a few clarifying questions.

Can we discuss more about what we mean by a product for space travel?

Is it like a physical product or a software product?

Any existing suite of products that we want to integrate this into?

Interviewer: It can be a digital platform - a combination of software and services, integrated in a single ecosystem. It's not a physical product like a spacecraft, but rather a platform that would enhance the experience of space travel, both for astronauts and potential space tourists. We're open to integrating this with other existing services.

Candidate: Any particular platform or region we are focusing on for starting?

Interviewer: You can decide.

Candidate: So, moving forward, space travel is not impossible anymore. With many companies investing and exploring space travel, it's clear that this is an emerging and promising domain. People like Elon Musk and Jeff Bezos with their respective companies are actively exploring this space. Given these advancements, there is a significant opportunity for a product that aids in space travel, and it's a good idea to start planning now and work on the big picture.

Speaking of Meta's mission, to bring the world closer and focus on communities, I want our product to resonate with that mission. The goal should be to design something that not only aids space travel but also brings space enthusiasts closer, fostering a community around the excitement of space exploration.

Interviewer: Sounds good.

Candidate: I would first like to discuss the users who are involved in this space, and then I will be choosing the user who will be most impacted by our product. Then I will focus on the user needs/job to be done by our product, discuss some potential solutions, and then prioritize the features we can build for our MVP.

I've identified three primary user groups:



1. *Space Enthusiasts and Travelers:* These individuals are either well-versed in space knowledge or have a curiosity about it. They're passionate about the idea of venturing into space, whether driven by genuine interest or sheer curiosity.
2. *Astronauts:* This group comprises individuals who have experienced space travel, be it for missions, exploration, or stays at the International Space Station.
3. *Space Travel Providers:* These are organizations or entities facilitating space travel, like SpaceX, Blue Origin, NASA, and other similar players.

Of these, I believe focusing on the first group—space enthusiasts and travelers—offers the most promise. They're in the exploration and excitement phase and are likely more receptive to a new product that brings them a step closer to realizing their space travel dreams.

While astronauts are equipped with the requisite knowledge and resources, the companies providing space travel already have substantial infrastructure. Our product might be more effective in generating enthusiasm among potential space tourists, preparing them for the experience, and bridging any informational gaps.

Interviewer: Focusing on space enthusiasts and travelers sounds right. Now, can you list out what they might want or need when it comes to space travel?

Candidate: Space travel is coming, but not super soon, so maybe we don't need a product right now. But we can make something that gets people ready and excited for it. Here's what I think people might want:

Learn About Space Travel: They'll want clarity on the basics. Questions like, "Can I really travel to space?", "When's it going to be possible?", and "What does the journey include?" might be on their minds.

Experience of Space: The curiosity of how it feels to float among the stars will likely drive their interest. They'll wonder about the sensations and views in space. *Connect with Fellow Enthusiasts:* They'd probably love to share their excitement, discuss plans, or even team up with others equally passionate about space travel. *Prepare for the Journey:* Space travel isn't just a trip; it's an adventure. They'll realize the need to get their bodies and minds ready for the experience.

Find the Right Space Travel Provider: Once it's feasible, they'll be on the lookout for trustworthy companies or agencies offering space journeys.

Financial Planning: Considering the potential expense of space travel, they'll be figuring out costs and planning their budgets accordingly.



Interviewer: what are the solutions you can think of for these problems?

Candidate: Given the needs of space enthusiasts and travelers, I have some ideas in mind. Considering Meta's strong foothold in the AR/VR domain, I'm thinking of a virtual space experience to bridge the gap between anticipation and actual space travel. Let me break it down:

1. *App Introduction:* I'm envisioning an application accessible through Meta's VR headset. Let's name it "Meta Explore." Users would sign up, create an avatar, and develop a personal persona.
2. *Personalized Experience:* We could gather basic information like age, weight, and height to offer tailored recommendations.
3. *Gamified Space Journey:* Think of it as a story-driven game where the user is the protagonist. They'll start with prepping for space travel and go on to simulate the actual journey. It's like a training program, but way more immersive and fun.
4. *Social Features & Cohorts:* We can have a feature where users connect with others in their region or globally, sharing their journey, and maybe even joining cohort groups. They can invite friends, ensuring that they embark on this adventure together.
5. *Progress Tracking & Gamification:* As users progress, they can earn ranks or badges, motivating them to explore more.
6. *Fitness Integration:* Given the physical demands of space travel, why not integrate with fitness apps? This way, users can track and ensure they're in the right shape for space travel. *Knowledge Sharing & Updates:* We could even host sessions with space experts, astronauts, or space agencies, ensuring users are always updated and enriched.
7. *Sharing & Engagement Boosters:* Users can share their progress and achievements on other platforms, creating a buzz. Earning badges or ranks could even be reflected on platforms like Facebook or Instagram.
8. *Collaboration with Space Companies:* The data and insights we gather could be shared with space travel companies, helping them understand potential space tourists better.
9. *Reservation Features:* Once users complete their training, they might earn a "space-ready" badge, which could potentially be used as a preference when actual space travel bookings begin.
10. *Physical Space Centres by Meta:* This might be a long-term vision, but having physical centres where users can gather, purchase space-related merchandise, or experience advanced simulations could be a thought.

Interviewer: Those are some good features; can you provide a prioritization of these features?

Candidate: Features We Should Start With (Essential, AR/VR-centric):

1. *App Introduction & Personalized Experience:* Once users get on the headset, we'll need a smooth setup. Their personal avatar, and basic info - are all set in a user-friendly interface.



2. *Gamified Space Journey*: This is core. A simulated space travel experience that's interactive and engaging, letting users dive into the space adventure right away.
3. *Social Features & Cohorts*: Within our VR environment, it's essential to connect users. Let them interact, maybe collaborate on space missions, or simply share experiences.

Further, we can focus on building the following features:

1. *Progress Tracking & Gamification*: As users engage more, introduce milestones. Badges for completing tasks, maybe titles for reaching certain points.
2. *Knowledge Sharing & Updates*: Integrate immersive sessions with space experts, maybe even astronauts. This will provide value and deepen the space understanding. *Fitness Integration*: Space travel demands physical prep. While full integration with fitness apps might come later, basic AR/VR modules on space travel's physical aspects can be added.
3. *Sharing & Engagement Boosters*: Users should be able to share snippets or achievements from their journeys on other platforms. This can enhance engagement and also serve as a promotional tool.
4. *Collaboration with Space Companies*: Special VR journeys or modules in partnership with space giants can be a unique selling point, giving users a more authentic feel.
5. *Physical Space Centres by Meta (Long term goals)*: Down the line, once our platform has a solid user base, we can consider real-world centres enhancing the AR/VR experience. *Reservation Features*: As space tourism becomes a closer reality, adding a feature for users to express interest or even pre-book within our environment might be worth exploring.

While I'm optimistic about the potential of "Meta Explore," there are some pitfalls we should consider:

One major concern is the accessibility of VR headsets. They can be expensive, and not everyone might have one. This could limit our user base initially. We could potentially introduce experiences at physical Meta centres, enticing more people to invest in VR headsets after sampling the experience.

Also, setting up physical space centres, as mentioned, would be a huge investment. I wouldn't recommend jumping into this right away. Once we've established a solid user base and interest, we can look into it further, perhaps starting with a pilot location.

Interviewer: I think we can conclude our interview here, thank you.



7. Design a product for drivers driving in rush hour (Difficult Level: Hard)

Interviewer: Design a Google product to increase engagement with American commuters during rush hour.

Candidate: can you help me understand what do you mean by rush hour?

Interviewer: The rush hour is generally the hours leading up to the workday, from 8-10 am, and after the workday, from 5-7 pm. We're focusing on American commuters, specifically private drivers going to and from work. Our goal is to increase engagement with its services.

Candidate: Thank you, that was helpful. First, we will look at the user roadmap

Roadmap: *User --> Pain Points --> Solution --> Vision --> Features --> Trade-offs*

Interviewer: That sounds good to me

Candidate:

- ✓ **Users:** American commuters, and private drivers going to and from work. They can't be too distracted even during rush hour, and some may have passengers who might be children.

I'll break this down into segments: professionals commuting to and from work,
parents commuting to and from their child's school,
and drivers running errands at the wrong time of day.

Candidate: Is there any particular segment you want me to target?

Interviewer: You can focus on professionals commuting to and from work for now

Pain Points:

1. Productivity: Drivers want to be productive during their commute—reading emails, creating to-do lists, and finding alternative routes.
2. Entertainment: The commute can be boring; drivers want to be entertained with news, music, etc.



3. Logistics/travel: Drivers want information about the commute, such as the fastest lane, the cause of traffic, and alternative routes.

Interviewer: Can you prioritize one of the pain points for now?

Candidate: Sure, my choice is to make the commute as productive as possible for the professional heading to work. And I am thinking of the following solutions:

Context-aware AI as a solution: Google Assistant integration that allows drivers to access Google Assistant features, perform searches, create to-do lists, and check email.

Smart suggestions: Context-aware AI that integrates the driver's email and suggests tasks based on estimated time in traffic and time to complete a task.

Safe Augmented Reality: Google visualizes relevant data (tasks, messages, news) to the windshield of the driver's car.

Interviewer: Can you give me one feature that we can look into

Candidate: My choice is context-aware AI, providing rush hour-aware Google integration to suggest ways to take advantage of time spent in traffic.

The vision is to allow the driver to access Google with their hands behind the wheel, aligning with Google's mission to organize the world's information and make it easily available.

It will have the following features

Features:

Google Assistant (via Google Maps) suggests emails to listen to based on projected time in traffic.

Google suggests changes to the calendar based on traffic.

It can have certain pitfalls as it may need to provide a broader feature set to make the product compelling.

Interviewer: Can you give me a GTM strategy for launching the product

Candidate:



Go-To-Market Strategy (GTM):

1. Pre-Launch:

- Software Development: Launch the product as a feature for Google Maps or Android for cars.
- Hardware Development: Release car-friendly versions of Google Car.
- Partnership + Software Development: Release the product as a new Google-integrated car in partnership with an attractive car brand.

2. During Launch:

- Partnerships
- Marketing to target drivers through billboards, radio ads, etc.

3. Post-Launch:

- Track time spent interacting with the feature (engagement).
- If the product doesn't increase engagement, provide more social/fun features.

This approach aligns with Google's mission while addressing the specific needs of American commuters during rush hour.

Interviewer: Are there any metrics We should look for the looking at the success of the product?

Candidate: We can look for # of users that use the feature, the average time spent on the feature, # of times users use the features over a period of time

Interviewer: Thank you for walking through your approach



8. Telemedicine for Pets (Difficult Level: Hard)

Interviewer: Hello, thank you for joining us today. As part of this product management case, let's delve into the scenario of developing a telemedicine platform specifically for pets. Before we dive in, do you have any initial questions or clarifications about the scenario?

Candidate: Certainly. Could you provide more details about the target users? Are we focusing on domestic pets like cats and dogs, or does this include a broader range of animals?

Interviewer: Great question. Let's focus on domestic pets, primarily cats and dogs, for this scenario. These are the most common pets that owners might seek telemedicine consultations for. Any other clarifying questions before we move forward?

Candidate: Yes, one more. Are we considering both general veterinary consultations and specialty consultations, such as for behavioral issues or dermatology?

Interviewer: Excellent point. For the purpose of this scenario, let's consider both general veterinary consultations for routine check-ups and vaccinations, as well as specialty consultations for issues like behavioral problems or specific health conditions. Now, with that clarification, what features would you consider essential for this telemedicine platform for pets?

Candidate: Considering both general and specialty consultations, I would suggest the following features. Firstly, a user-friendly mobile app allowing pet owners to schedule virtual appointments, share pet information, and connect with veterinarians. Secondly, a secure video conferencing feature for real-time consultations. Thirdly, a virtual prescription system for medications and follow-up care. Fourthly, an integrated chat functionality for continuous communication, especially for follow-up queries. Lastly, an extensive database of pet health records is accessible to both pet owners and veterinarians for a comprehensive understanding of the pet's medical history.

Interviewer: Good initial set of features. Now, considering the challenges, what potential obstacles do you foresee in implementing this telemedicine platform?

Candidate: One challenge could be the limited ability of veterinarians to conduct hands-on examinations, which may impact accurate diagnosis. Ensuring the security and privacy of pet health data is another concern. Also, getting pet owners comfortable with virtual consultations might be a hurdle initially. Moreover, addressing the varying technical proficiency of pet owners in using the app and the potential for misinterpretation of pet behaviors during virtual consultations are additional challenges.



Interviewer: Those are valid concerns. Now, let's explore alternative solutions to address the hands-on examination challenge. What other features or partnerships could mitigate this limitation?

Candidate: One solution could be integrating IoT (Internet of Things) devices for at-home health monitoring, allowing veterinarians to remotely assess vital signs. These devices could include wearables for tracking activity levels, smart scales for monitoring weight, and even smart collars for real-time location tracking. Additionally, partnering with local pet clinics for basic examinations, where pet owners can bring their pets for physical check-ups as needed. Moreover, incorporating AI-assisted diagnostics to aid veterinarians in the absence of physical exams, such as image recognition for skin conditions or behavioral pattern analysis for mental health assessments.

Interviewer: Interesting alternatives. Now, considering all the features and challenges, which solution do you think should be prioritized to maximize the platform's effectiveness?

Candidate: Considering the hands-on examination challenge, I would prioritize the integration of IoT devices for at-home health monitoring. This not only addresses the limitation but also enhances the overall value of the platform by providing continuous health data. This can contribute to a more holistic understanding of the pet's health, aiding in both general check-ups and specialized consultations.

Interviewer: Great choice. To wrap up, can you briefly discuss the market potential for this telemedicine platform for pets? What factors would you consider when assessing the market demand?

Candidate: The market potential is substantial, given the growing pet ownership and the increasing trend of pet humanization. Factors such as convenience for pet owners, especially in rural areas with limited access to veterinary clinics, and the potential cost savings compared to in-person consultations, would contribute to the market demand. Additionally, the platform's ability to cater to both routine and specialized needs, along with the seamless integration of IoT devices, could position it as a comprehensive solution for pet healthcare.

Interviewer: Excellent analysis. Thank you for your insights. This concludes our discussion on the telemedicine platform for pets. If you have any final thoughts or questions, feel free to share.

Candidate: Thank you. I believe a well-designed telemedicine platform could significantly benefit both pet owners and veterinarians, and I appreciate the opportunity to discuss this scenario.



9. Mindfulness Gaming App for Children (Difficult Level: Hard)

Interviewer: Hello, and thank you for joining us today. We'll be discussing the design of a mindfulness gaming app for children. Before we dive into the details, do you have any initial questions or need clarifications about the scenario?

Candidate: Certainly. Could you provide more insight into the age group we're targeting? Are we focusing on younger children, like preschoolers, or are we considering a broader age range?

Interviewer: That's a crucial point. Let's consider a broader age range, spanning from early childhood to pre-adolescence. The app should be designed to cater to varying cognitive and emotional development stages within this spectrum. Any other clarifying questions before we proceed?

Candidate: Yes, one more. Are we aiming for a standalone app, or should we explore potential integrations with existing gaming platforms or educational apps for children?

Interviewer: Excellent question. For this scenario, let's focus on designing a standalone app. While potential integrations could be explored in the future, our primary goal is to create a dedicated space that seamlessly combines gaming elements with mindfulness activities. Now, with that clarification, what features do you envision as essential for this mindfulness gaming app?

Candidate: Considering the age range, I would suggest a few key features. Firstly, an engaging game interface that includes visually appealing characters and interactive elements. Secondly, a variety of mindfulness activities such as guided breathing exercises, short meditation sessions, and positive affirmation exercises. Thirdly, a progress tracker or rewards system to motivate children to engage consistently. Fourthly, a parent dashboard that provides insights into the child's usage and progress, ensuring a balance between entertainment and mindfulness.

Interviewer: Good initial set of features. Now, let's explore the challenges. What potential obstacles do you foresee in creating a mindfulness gaming app for children?

Candidate: One challenge could be maintaining a balance between engagement and educational content, ensuring that the mindfulness activities don't feel forced or interrupt the gaming experience. Another challenge might be addressing concerns related to screen time and ensuring that the app promotes healthy usage habits. Additionally, catering to the diverse cognitive and emotional needs of children within the chosen age range poses a design challenge. Lastly, ensuring the safety and privacy of young users is a critical consideration.



Interviewer: Those are valid concerns. Now, let's consider alternative solutions to address the challenge of maintaining a balance between engagement and educational content. What features or strategies could help strike the right balance?

Candidate: One solution could be to incorporate mindfulness activities organically within the game narrative, making them integral to the overall gaming experience. This ensures that mindfulness feels like a natural part of the gameplay rather than a separate feature. Another approach could involve creating different game modes, allowing parents to customize the level of mindfulness content based on the child's age and preferences. Additionally, implementing a time limit feature that encourages short, frequent mindfulness breaks during gameplay, promotes healthy screen time habits.

Interviewer: Interesting alternatives. Now, considering all the features and challenges, which solution do you think should be prioritized to strike the right balance between entertainment and promoting mental well-being?

Candidate: Given the need for seamless integration of mindfulness into the gaming experience, I would prioritize the first solution—incorporating mindfulness activities organically within the game narrative. This ensures that the app feels cohesive and prevents mindfulness activities from being perceived as interruptions, fostering a more enjoyable and effective experience for children.

Interviewer: Great choice. To conclude, can you briefly discuss the market potential for this mindfulness gaming app for children? What factors would you consider when assessing the market demand?

Candidate: The market potential is significant, considering the increasing awareness of the importance of mindfulness for children's mental well-being. Factors such as parental concerns about screen time, the appeal of combining entertainment with educational content, and the potential for the app to serve as a positive influence on children's behavior would contribute to the market demand. Additionally, collaborations with schools or educational institutions could enhance the app's reach and impact.

Interviewer: Excellent analysis. Thank you for your insights. This concludes our discussion on the mindfulness gaming app for children. If you have any final thoughts or questions, feel free to share.

Candidate: Thank you. I believe a well-designed app can make a positive impact on children's mental well-being, and I appreciate the opportunity to discuss this scenario.



Product Improvement

1. How will you improve Airbnb? (Difficult Level: Easy)

Interviewer: Assume that you are a PM at Airbnb. You are given the task to improve Airbnb. How would you go about this?

Candidate: To get a better understanding of the problem, I would like to ask a few clarifying questions.

Interviewer: Please go ahead.

Candidate: Firstly, I would like to clarify my understanding of Airbnb. It started its services with room renting and soon adopted a marketplace model where hosts can list their properties and guests can book the properties. Airbnb earns commissions for each of the bookings made in exchange for the value provided to both hosts and guests. Airbnb operates on an asset-light model and does not own any of the properties listed on its platform. Airbnb has also started virtual tourism by providing online experiences or a new way of travel where people can tour a place virtually.

Interviewer: Yes, that is well-defined.

Candidate: I would like to understand what the goal of the improvement is.

Interviewer: The idea of improvement is to increase the revenue for our company, and we can think of expanding to new business verticals.

Candidate: Covid-19 had taken a toll on the hospitality industry, and tourism was really down. Airbnb also faced severe losses and now with tourism going back to normality, Airbnb has started recovering but having new use cases will definitely give our company room to grow further.

Interviewer: That is true.

Candidate: Since we are targeting to increase the market penetration for Airbnb globally by introducing new business verticals let us try to understand potential use cases. As work from home had become a norm during the pandemic, a lot of companies had sold their office spaces which they had leased/rented. With employees returning to work, companies need office spaces. However, a lot



of companies do not ask employees to come to work every day and are looking for more flexible options. This can be a potentially powerful use case that Airbnb can explore.

Interviewer: Sounds interesting

Candidate: I wanted to understand are we planning to design a separate app or use the existing Airbnb app? In my opinion, we should integrate new use cases in the existing app as we can leverage the existing user base.

Interviewer: We can continue with the existing app.

Candidate: Is there any specific geography where we are planning to expand our new business vertical?

Interviewer: We can focus on global expansion.

Candidate: Is there any time/resource constraint that I should consider? This will help me in prioritizing our features later.

Interviewer: Yes, we want to have the features rolled out in the next 6 months

Candidate: Just to recap what we have discussed till now; we would like to increase the market penetration for Airbnb globally by introducing new business verticals. We identified it to be office space renting as it is in a related industry as that of Airbnb. We plan to integrate the use case into the existing Airbnb app in the next 6 months.

Interviewer: That is well-summarized.

Candidate: Okay, the way I would like to structure this is, we will discuss the different user segments and then focus on a specific one. We will discuss the pain points they face. Then we will find out ways in which Airbnb can address those pain points and have a better positioning. Post that, we will talk about the metrics to track whether our goal is being achieved or not. Are we aligned on this?

Interviewer: Yes

Candidate: For defining the user segment, since Airbnb has a marketplace model with both hosts and guests so we should look at both perspectives:

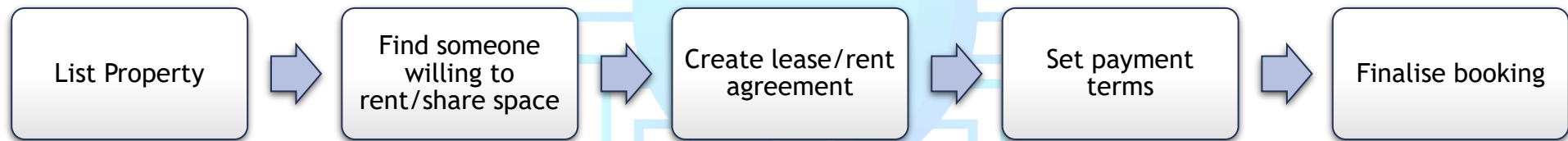


1. Owners: who may have extra space available for renting or these could be companies whose office space is underutilized as they have not shifted back to a full-fledged work from office model, or they work from the office only on specific days. This can also be an additional source of money for them.
2. Office who would rent the space: These could be any small-sized companies like start-ups or freelancers who want to work along with their colleagues and have some in-person interaction.

Prioritization of User Segment:

While we need both user segments for our model to work, it makes more sense to start onboarding the owners on the platform first and thereby build a strong supply. Then we can launch marketing campaigns for our new features to attract the companies who need to rent office space.

I will use the user journey of the owner to understand the pain points:



Pain Points of Owners:

1. It is difficult to find people who are willing to rent the extra office space and showcase them the space that I have.
2. It is difficult to earn a fair price for my property after all the negotiations and bargaining.
3. I find it cumbersome to manage documentation or an agreement for my rented property.
4. I am worried about the security of the place.

Prioritization of Pain Points:

Now, let's prioritize among the different pain points. Here I would like to analyse on the basis of intensity and frequency of a pain point. Pain points #3 and #4 don't occur daily, while pain points #1 and #2 have a high frequency. So, I want to prioritize pain points #1 and #2.

Are we aligned on this?



Interviewer: Yes, we are aligned.

Solutions:

[Solution to pain point 1]

- Inbuilt Video calling: We can provide owners with a video calling feature through which they can display videos of the office property and give other details.
- 3-D Virtual tour: As an owner, it is convenient if I can put a 3-D virtual tour of my space so that people can watch the video and get an idea of how the place looks like. People can gauge whether the space suffices their requirements or not and check out the amenities as well.
- Chatbot assistant: There can be a chatbot assistant which can answer basic questions related to the property like locality, no. of rooms, conference rooms, seating capacity, amenities, etc. The owner can input all this information and rather than the owner himself answering every query the chatbot can handle them.

[Solution to pain point 2]

- Rent estimator AI tool: Airbnb already has a rich set of data on properties along with their prices. It can build a price estimator ML (Machine Learning) model that can define the rent an owner can set for their property based on parameters like amenities, floor area, locality, dimensions, etc. It can consider factors like seasonality also and suggest fluctuation in prices accordingly.

[Solution to pain point 3]

- Easy documentation: Airbnb can partner with third-parties like Adobe sign or DocuSign through which it can help the owners handle the lease agreement with ease. This will ensure that all the agreements are documented on time in a hassle-free manner without both parties meeting physically. The cost can be borne by the owners or renters, but it will make the process of rental agreement hassle-free for them. In the long run, Airbnb can develop an in-house tool to support easy rental agreements which can be an additional source of income for the company.

[Solution to pain point 4]

- Insurance: Owners can sign up for insurance against any damage done to the property. Airbnb can partner with insurance companies and provide insurance to owners. While this might be an existing feature for Airbnb, we will have to integrate this for the office space renting LOB also.



Metrics:

To gauge the success of our features, we can track the following metrics:

1. Percentage increase/decrease in revenue.
2. No. of new owners onboarded on the platform
3. Month-on-month (MoM) growth in properties listed on the platform.
4. Percentage of owners using the rent-estimator tool.

Are we aligned on the above solutions and the metrics?

Interviewer: Yes, this looks fine.

Candidate: To summarize, we narrowed down our problem statement by saying we will focus on creating a new business vertical - office rental space and established how it is a beneficial use case in the post-pandemic world. We prioritized owners who have extra office space to rent. We discussed the user journey of the owners and identified problems faced by them and found potential solutions. Lastly, we identified metrics that will help us track whether we accomplish our goal or not as well as increase the adoption of our features.

Interviewer: I really liked the features you defined, and it is well-summarized. Thank you.



2. How would you acquire more users for Uber? (Difficulty Level: Easy)

Interviewer: How will you acquire more users for Uber?

Candidate: Is there a particular segment or geography that we are targeting?

Interviewer: No particular geography, but we want to target the younger, tech-savvy audience.

Candidate: College students present a perfect opportunity for Uber for several reasons. They're tech-savvy, price-sensitive, time-sensitive, and largely concentrated in specific locations like their campuses. They're early adopters and value convenience, making them ideal to target for expansion.

Interviewer: Excellent point. Now, what are some key pain points students face regarding transportation that Uber could address?

Candidate: Several issues arise, both safety and efficiency concerns. Late-night walks can be a worry, especially for female students. Existing options like campus trams or shuttles might not reach their off-campus housing or desired destinations, and taxis can be expensive. Public transportation schedules might be inconvenient, further adding to the frustration.

Interviewer: I agree with you completely. So, what would you propose?

Candidate: I propose a three-pronged approach:

1. Strategic Partnerships:
 - a. Partner with universities: Offer campuses an "Uber-as-a-service" package, providing subsidized rides within a 2-mile radius. This replaces their costly transportation systems and caters specifically to student needs.
 - b. Sell discounted ride packages: During freshman orientation, offer pre-paid bundles of rides specifically for campus use. This incentivizes early adoption and builds brand loyalty.
2. Tailored Incentives:
 - a. Campus-specific discounts: Offer lower fares for rides within campus grounds, making Uber the most cost-effective option.
 - b. Driver bonuses: Incentivize drivers to accept short campus trips through higher fares or bonus programs.
3. Promotional Blitz:
 - a. On-campus marketing campaigns: Collaborate with student organizations and clubs to spread awareness through events, social media, and flyers.



b. Referral programs: Offer students rewards for referring their peers, creating a viral marketing effect.

Interviewer: These are great ideas! Don't you think these are very short term yet cost-intensive initiatives?

Candidate: The cost of these features will be used to acquire customers which in the long term will bring more revenue.

Interviewer: How would you measure the success of this initiative?

Candidate: We can track key metrics like:

1. Number of new student users acquired.
2. Rides taken during and after the school year.
3. Long-term engagement and retention of student users.

Interviewer: What about the potential challenges that you could face? How would you address them?

Candidate: A few challenges that I can think of are:

1. Driver availability for short trips.
2. Ensuring financial feasibility while offering discounts.

Addressing driver incentives and analysing cost-benefit ratios through pilot programs are crucial.

Interviewer: I appreciate your comprehensive analysis and proactive approach to overcoming challenges. Can you also give me some key metrics to evaluate the success?

Candidate:

For acquisition:

1. Number of new student users acquired.
2. Conversion rate of student outreach programs: Measures effectiveness of marketing campaigns and partnerships.
3. Percentage of students switching from existing campus transportation to Uber.

For Engagement and Retention:

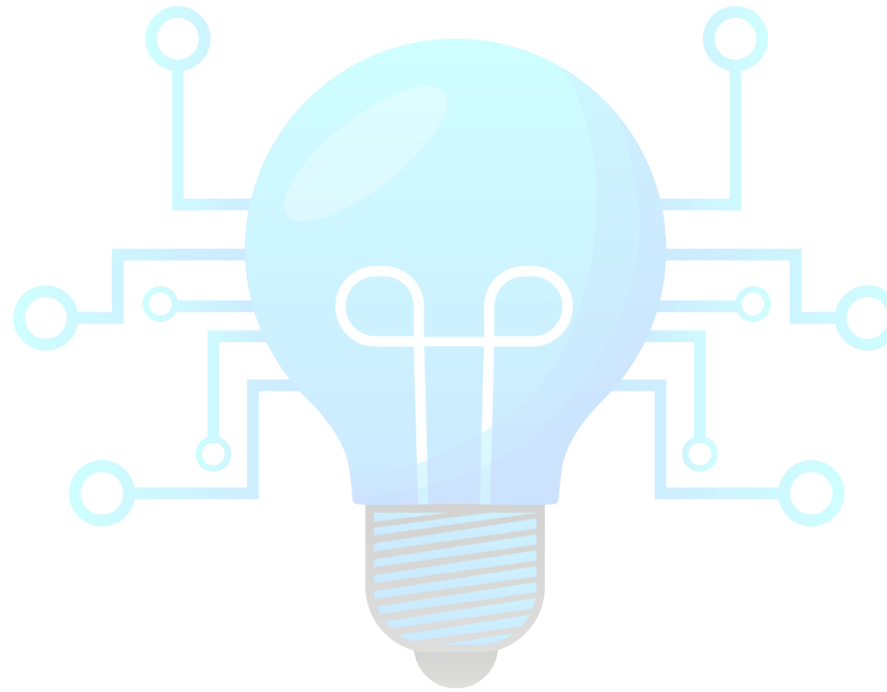
1. Number of rides taken by student users: Indicates overall utilization and adoption.



2. Frequency of rides per student: Shows how deeply integrated Uber has become in their transportation habits.
3. LTV (Lifetime Value) of student users: Analyses long-term profitability and user loyalty.
4. Retention rate of student users: Measures how effectively you're keeping students engaged after initial acquisition.

Does this look alright?

Interviewer: Yes, thank you.



3. How will you improve birthday feature on Facebook? (Difficulty Level: Medium)

Interviewer: How will you improve the birthday feature of Facebook?

Candidate: Facebook birthday is a feature that reminds users of their friends' birthdays: Every day presents users with a reminder of the day's birthday and prompts them to send birthday messages, either as a post on their timeline or as a direct message and lets users see all upcoming birthdays by month. Is it correct?

Interviewer: Right.

Candidate: What do we mean by improving?

Interviewer: We want to improve engagement with the feature.

Candidate: What is the goal of the feature to begin with?

Interviewer: Encourage connections amongst users on the platform, a personal reminder helps users to keep in touch. Ultimately it provides some utility and keeps users engaged with the platform.

Interviewer: True, you are correct.

Candidate: Okay. So, let me begin by describing the User groups first.

There are three main categories of users:

1. Super Users: Users who wish others in their network often (more than once a week).
2. Casual Users: Users who wish others in their network sometimes (at least once a week).
3. Passive Users: Users who wish others almost never (less than once a week).

From the frequency of use of this feature, I am able to observe a difference in motivations and user habits here. So, I will like to focus on User Groups 1 and 2.

Do the user categories look exhaustive?

Interviewer: Yes, we can proceed.

Candidate: Coming over to the pain points.



Sl. No.	User Need	Impact on user engagement
1	How to remember a birthday?	Low
2	How to filter important birthdays from others?	High
3	How to wish friends in advance?	High
4	How to plan for friends' birthdays/organise events?	Medium
5	How to send a birthday gift?	High
6	How to wish friends in a way that stands out?	High

Are you aligned with the pain points?

Interviewer: Yes. I do not understand the 1st pain point, which is, how to remember a birthday. The motive of the birthday feature is to remind you of the birthdays, so how is this a pain point?



Candidate: The birthday feature is a consolidation of the birthdays of all my friends. But to be better prepared for a birthday well in advance, I want to be notified about it.

Interviewer: Okay, so you are eyeing at some kind of notification settings.

Candidate: Yes.

Coming over to their solutions, I will focus on needs that have a high Impact on Engagement.

Sl. No.	User Need	Solution	Priority
1	How to filter important birthdays from others?	Push notification of important birthdays. Notification settings to configure certain birthdays as more important than others.	1
2	How to wish friends in advance?	Pre-scheduling of birthday wishes, cards and gifts	2
3	How to send a birthday gift?	Option to send gifts using FB marketplace	3
		Options to send gifts using third-party integrations	4
4	How to wish friends in a way that stands out?	Auto-create a collage of pictures and let the user customize it by adding a message and a song	5

I will define the important birthdays of those users with whom we have engaged often on Facebook. They will be a priority for birthday wishes as they matter to the user in real life too.

Interviewer: I liked your thought process in the solutions. One of the solutions is to create options to send gifts using third-party integrations: don't you think this will send the user off the application and not increase the time they spend on Facebook?



Candidate: You are right. We want the user to spend the maximum time on our application. But if we don't provide an integration with gifts, then the user will go to another application to avail of that service. Upon integration, we have an assurance that the user will come back to Facebook. Also, establishing a marketplace might not be possible in every area where the user resides, so at these places, third-party integration will be useful as well as cost-effective.

Interviewer: Great. Can you define some metrics to measure the success?

Candidate: With these features, I will track Pre and Post behaviour of the below metrics:

1. No. of Birthday posts
2. No. of Users posting birthday posts
3. No. of users using Reminders, Marketplace, third party, etc.
4. Revenue from birthdays

Does this look alright?

Interviewer: Yes.

Candidate: To summarise, for enhancing Facebook Birthdays, we focused on frequent wishers. Proposed solutions include push notifications and in-app alerts for important birthdays. Success metrics involve increased birthday posts and engagement with reminders and the marketplace.

Interviewer: Thank you.



4. How will you improve Licious? (Difficulty Level: Medium)

Interviewer: How will you Improve Licious?

Candidate: Can you please elaborate on Licious's operations?

Interviewer: Licious is an e-commerce platform for fresh meat and seafood. It buys the produce directly from the fisherman and farmers keeping the cold chain intact. It is based in Bangalore and has a presence in over 16 cities.

Candidate: To re-iterate, Licious is an e-commerce platform where users can order produce from a mobile application and get the products at their doorstep. Basically, it is like BigBasket for fresh meat and seafood.

Interviewer: Yes, that's right.

Candidate: Are all the services like instant, one-day delivery also offered by Licious?

Interviewer: Currently, we offer delivery slots according to our logistic times. Apart from that, both products are almost analogous.

Candidate: Thanks for this information. So is it fair to assume that the user journey looks like below:



Interviewer: Yes, that is correct.

Candidate: That's great. What are we targeting for improvement? Is it increasing revenue or acquiring new customers or reducing operational costs?

Interviewer: You can focus on increasing the revenue.

Candidate: The customer segment can be divided into 2 major segments:

1. People who want fresh, hygienic, chemical-free produce.



2. People who want on-time doorstep delivery, because they do not have time to go to the wet markets. Further segmentation can be done on the basis of purchase frequency - Regular/Frequent, Infrequent.

Is there any particular segment that we want to focus on?

Interviewer: We want to focus on the on-time doorstep delivery as it is the top growing segment in the market.

Candidate: Okay, I will proceed toward creating user personas to further understand the improvement segments.

Interviewer: Sure, move ahead.

Candidate:

Persona 1: Urban Single Professionals: These individuals lead a fast-paced city life, often juggling work and social commitments. Health-conscious yet time-strapped, they look for quick, nutritious food solutions. Freshness and convenience are non-negotiable for them. They prefer services that deliver quality meat and seafood right to their doorstep.

Persona 2: Elderly Couple: Elderly couple staying without help. They cook regularly at home and manage kitchen inventory. Going out to purchase food is inconvenient or less accessible to them. They like to plan their meals in advance.

Persona 2: The Environmental Advocate: A person deeply invested in sustainability and ethical consumption. They demand transparency about the sourcing of their food, emphasizing eco-friendly practices and animal welfare. This persona is likely to support businesses that align with their values, showing a preference for responsibly sourced and environmentally conscious products.

Persona 3: The Digital Native Family: A modern family that is tech-savvy and values quality and convenience. Parents, busy with both work and childcare, seek efficient ways to provide nutritious meals. They are drawn to platforms offering diverse, quality products with the flexibility of scheduling deliveries around their busy lifestyles.

Do the user personas look exhaustive?

Interviewer: Yes, we can move ahead to identifying their pain points.

Candidate: Sure. The users will face the following pain points:

As a user,

1. I am not able to sync my meal plans with the required meat and produce.



2. I find the process of re-ordering my fixed set of items repetitive and time-consuming.
3. I do not know how my food is sourced so I have doubts about the quality of food.
4. The deliveries are not instant and I am unable to schedule the date-time at which I want my deliveries.
5. I waste a lot of time enquiring and reporting about either order delivery or the quality of items.

Do you think the pain points are relevant and genuine?

Interviewer: Yes, we can move ahead.

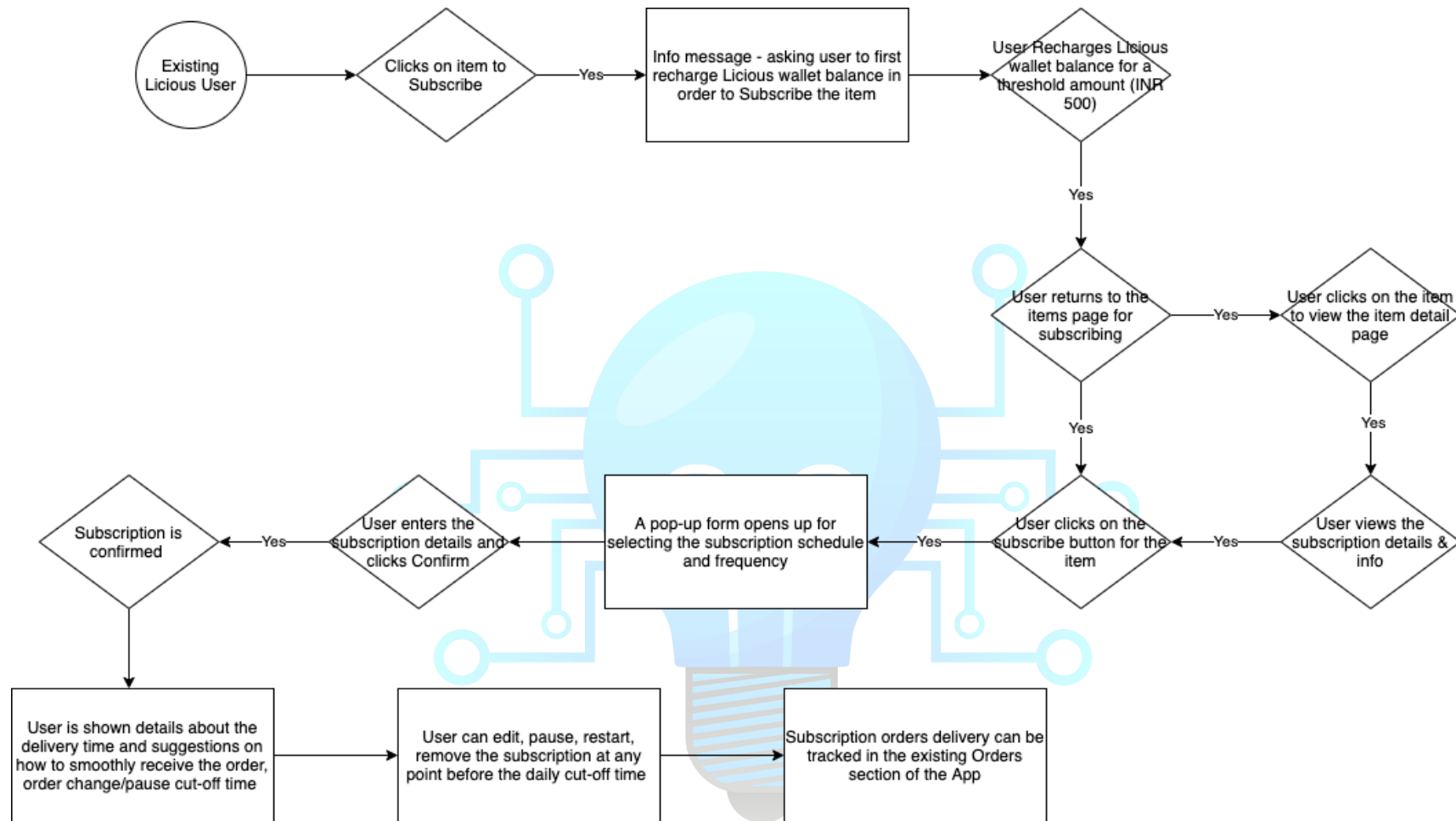
Candidate: If we focus on solving the pain points about ordering and increasing the convenience of placing orders, it will contribute towards increasing the revenue.

Let's address the solutions of pain points in the same order as the user journey (mentioned earlier):

1. Convenient Ordering: "Smart Reorder" feature for frequently purchased items with one-click or voice ordering.
 - Separate section for frequently added items to directly purchase them.
 - Recipe-based shopping lists with integrated meat and seafood ordering.
 - Batch ordering options for recurring weekly or monthly needs.
2. Flexible Delivery:
 - Dynamic delivery slots that can be adjusted based on user needs and location.
 - Express delivery options for urgent orders at a premium pricing.
 - Partner with local restaurants for integrated meal delivery with meat/seafood options.
3. Prepaid subscription feature: Users will be able to subscribe to items according to their meal plan schedule.
 - The subscription can be paused and restarted at any point in time. The subscription amount will be prepaid using the app wallet. Low-balance alerts and notifications will be sent, designed to ensure continuous service.
 - Reward programs for long-term subscribers.
 - Tiered plans catering to different frequencies and quantities.
 - Customization options for specific meat and seafood selections.

(Diagram to understand the flow. If time permits, it can be shown to the interviewer)





4. Enhanced Support:

- AI-powered chatbots for immediate query resolution and order tracking.
- Proactive notifications for potential delivery delays or quality concerns.
- Loyalty programs with priority support channels for dedicated customers.



Interviewer: Can you tell me how you will check if the features are successful or not?

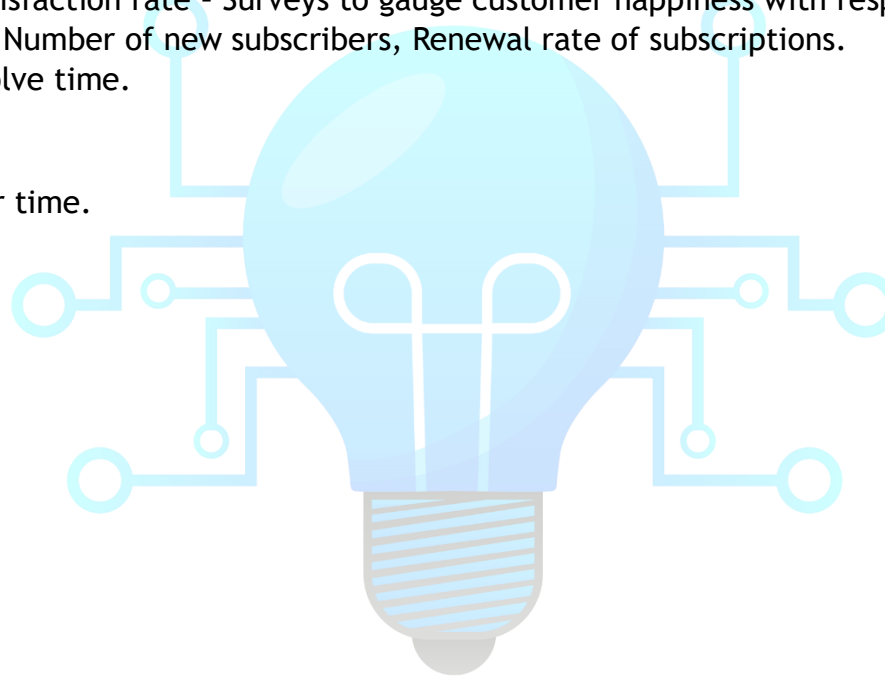
Candidate:

Some of the metrics for evaluating the success of the feature would be:

1. Convenient Ordering: Adoption rate of smart reorder, Time to Order - How long it takes to make a purchase with the new system.
2. Flexible Delivery: Delivery satisfaction rate - Surveys to gauge customer happiness with respect to delivery times.
3. Prepaid Subscription Feature: Number of new subscribers, Renewal rate of subscriptions.
4. Enhanced Support: Query resolve time.

Do these metrics make sense?

Interviewer: Yes, Thank you for your time.



5. How will you improve Naukri.com (Difficulty Level: Medium)

Interviewer: How will you improve Naukri.com?

Candidate: Before proceeding, I want to reiterate what Naukri.com is. So, it is a platform where recruiters can connect with applicants for employment purposes. This works through the means of job openings. There is also a subscription-based model followed. Is that right?

Interviewer: Yes, that's correct.

Candidate: So, which particular area are we targeting - user engagement, acquisition, retention, revenue?

Interviewer: We are facing consistent low retention rates and want to work on increasing that.

Candidate: Okay sure. Is there any particular user segment that we know is causing this?

Interviewer: No, we are not aware of that.

Candidate: Do we have any specific budget or technical constraints?

Interviewer: No, there is no such constraint.

Candidate: To effectively improve Naukri.com, I propose a data-driven approach focused on key user segments and their pain points. There are 2 user segments:

1. Recruiters: Recruiters are the most likely user segment to be retained because they are always on the lookout for candidates and will stay on the platform for a longer time. Higher chances of them getting resurrected as well as filling in vacancies is a periodical job for them.
2. Applicants: Candidates who have been able to convert to a job from the platform are also likely to come back the next time around. This user segment will also have a high attrition rate.

Are we okay with the personas?

Interviewer: Yes, it makes sense, go ahead.

Candidate: I will be identifying the pain points of both segments.



Interviewer: Yes. Which segment will you be picking?

Candidate: As recruiters are likely to have less attrition rate, I will be prioritising the recruiters on the hunt.

Interviewer: Sure, go ahead.

Candidate: Pain points of recruiters:

1. Recruiters are not able to verify whether a profile is genuine or not.
2. Recruiters are not able to do any screening of skills apart from manual resume screening.
3. The candidate-to-job matching algorithm does not produce accurate results.
4. Recruiters don't hear back from candidates.
5. Recruiters have too many options to choose from/overwhelmed.

Interviewer: Are you aligned with the pain points?

Candidate:

Features to solve the pain points:

1. Screening candidates on the basis of tests:
Creating/Partnering with third-party tools where recruiters can create screening rounds like tests of the candidates that they have shortlisted to further fine-tune the list of candidates. We can partner with other apps like Loom, Hackerank, Hackerearth, Leetcode, etc. or we can also invest in creating our screening platform.
2. Credibility building features where the applicants can link their Naukri Profile:
 - Users will get an option to showcase their rank/ performance in other competitions/coding rounds/case study rounds on their Naukri Profile. They can link these certificates/accounts to Naukri so that recruiters can reach out to these profiles.
 - Profile ranking should be done on the basis of the credibility, and achievements of the profiles so that recruiters can look at top-ranked profiles fit for a role and reach out to these candidates.
3. Adding indicators to signal a profile's history to see if a user is active or not and track hibernating accounts. This can be done basis data on:
 - last active timestamp
 - last job activity



- last engagement activity.

The inactive marked profiles identified by this algorithm can be sent reminders and be hidden from recruiters.

- For startups specifically, who struggle to source good candidates: Many times, users don't apply for roles where they don't know the company, we can give recruiters an option to showcase their company profile along with the job description so as to build company trust:
 - They can upload introduction decks/ pitch videos.
 - They can build credibility by adding details like awards, no. of employees, certificates, and funding received. etc.
- Mentoring candidates who are on the lookout for roles: Platform where successful applicants can be onboarded as a mentor (this can or cannot be monetized) where they coach other candidates as to how can they convert roles. Services which can be included here are:
 - Interview prep
 - Resume guidance
 - Career counseling

Based on the Impact and Effort analysis to prioritise the solutions:

Sl. No.	Feature	Impact	Effort
1	Screening of candidates	High	Low
2	Credibility building for profiles	High	Medium
3	Sort hibernating, active profiles	Medium	Medium
4	Help startups source candidates	High	High
5	Mentoring candidate	Medium	High

According to the above, the 1st feature should be prioritised. The 2nd and 3rd features can be picked up in Phase 2 of the improvement process.



Are you aligned with the proposed solutions?

Interviewer: Yes, can you tell me which metrics will you use to evaluate the success?

Candidate: Metrics to evaluate the success:

1. D 30, D90, D180 retention rate (North Star Metric)
2. DAU of screening platform
3. No. of users who have integrated third-party apps/products
4. No. of users with these badges who convert into a role
5. No. of profiles who are hibernating

Does it sound fine?

Interviewer: Sounds good.

Candidate: To boost Naukri.com retention, we target recruiters, prioritizing pain points such as profile verification and limited screening. Our key features include candidate screening tools, credibility-building features, profile activity tracking, startup solutions, and a mentoring platform. Prioritizing screening tools for impact and feasibility, success metrics include retention rates, platform engagement, and feature adoption. This strategy aims to empower recruiters for more effective hiring and improve overall retention.

Interviewer: Sure, thank you.



Product Pricing

1. How will you price Apple Watch? (Difficulty Level: Easy)

Interviewer: Hello, thank you for joining us today. As part of this product management case, let's explore the pricing strategy for the Apple Watch. Can you begin by sharing your thoughts on the business goal and the current market conditions?

Candidate: Certainly. The business goal for pricing the Apple Watch would be aligned with a defensive strategy, given that a cheaper price might not fit well within Apple's premium product portfolio. In terms of market conditions, the smartwatch market is in a growing stage.

Interviewer: Great. Given that the Apple Watch is a differentiated product with better features and unique integration with iOS, do you believe Apple can charge a premium for it?

Candidate: Yes, I believe Apple can charge a premium for the Apple Watch. Its advanced features and seamless integration with iOS set it apart from competitors, justifying a higher price point.

Interviewer: What risks do you see associated with pricing the Apple Watch at a premium?

Candidate: One significant risk is related to Apple's brand perception of offering premium and high-quality products. While a premium price aligns with the brand, there is a risk that competitors may catch up in terms of quality and features. If Fitbit, Samsung, and others price their watches between 20,000 and 35,000, Apple may price the Apple Watch between 40,000 and 50,000. However, the risk is that this pricing strategy may limit the target market to the upper class.

Interviewer: Can you elaborate on the risk associated with targeting only the upper-class market?

Candidate: Certainly. By pricing the Apple Watch in the 40,000-50,000 range, Apple would be targeting the higher end of the market. This may limit the overall market share and potential customer base.

Interviewer: How would you address the risk of competitors catching up with the quality of features?



Candidate: To mitigate this risk, Apple needs to continue innovating and maintaining a technological edge. Regular updates, new features, and improvements in sensor technology can help sustain the differentiation that justifies the premium pricing. Additionally, monitoring the market closely and being agile in adjusting pricing or introducing new models can be key strategies.

Interviewer: Thank you for your insights. Is there anything else you would like to add regarding the pricing strategy for the Apple Watch?

Candidate: One additional consideration is the importance of communicating the value proposition to customers. Clear messaging about the unique features, integration with iOS, and overall benefits of the Apple Watch can help justify the premium pricing to consumers.

Interviewer: Can you tell me how you would align the pricing strategy with the overall target of the company?

Candidate: Certainly. It's essential to align the pricing strategy with the company's broader objectives. If the company aims for market leadership, the pricing strategy should consider both market share and profitability. If the goal is to position Apple Watch as a premium product, then pricing should reflect exclusivity and high quality.

Interviewer: Good point. Now, considering the competitive landscape, can you elaborate on how Apple Watch compares to competitors like Fossil, Samsung, and Fitbit?

Candidate: Absolutely. When comparing Apple Watch to competitors, it's crucial to highlight the unique features and advantages. Apple Watch boasts advanced health sensors, a comprehensive ecosystem with seamless integration with iOS devices, and a sleek design. While competitors may offer similar functionalities, the level of integration and user experience is often superior to Apple Watch.

Interviewer: That's insightful. Could you provide some specific examples of features that differentiate the Apple Watch from its competitors?

Candidate: Certainly. The Apple Watch provides in-depth health-tracking features, including an ECG app, blood oxygen monitoring, and advanced fitness tracking. Its app ecosystem is extensive, thanks to the integration with the App Store, providing users with a wide range of applications tailored for the watch. The user interface is intuitive, and the build quality is typically considered top-notch.

Interviewer: Great overview. Lastly, how would you factor in customer perceptions of value when determining the pricing strategy for the Apple Watch?



Candidate: Customer perception is crucial, and it's important to ensure that the pricing aligns with the perceived value of the product. Clear communication about the unique features and benefits, along with emphasizing the premium quality and brand reputation, will help customers understand why the Apple Watch is priced at a premium. This communication should resonate with the target market's preferences and expectations.

Interviewer: That's an interesting approach. Could you provide more details on how this tiered pricing strategy would be structured?

Candidate: Certainly. I suggest creating multiple models of the Apple Watch, each offering a distinct set of features. The base model could serve as an entry point for a broader audience. Meanwhile, the premium models, equipped with advanced health sensors and exclusive features, could be positioned at the higher end of the price spectrum.

Interviewer: How would you implement this tiered pricing strategy?

Candidate: Implementation would involve careful market segmentation and targeting. The base model can target a wider audience, capturing market share and introducing users to the Apple Watch ecosystem. Simultaneously, the premium models can cater to the upper-class segment, leveraging the brand's premium image. Marketing campaigns should emphasize the unique features of each variant, ensuring clear communication of the value proposition.

Interviewer: That sounds like a comprehensive approach. Can you suggest a specific price range for each tier?

Candidate: Certainly. For the base model, I recommend a price range of 25,000 to 30,000, making it competitive in the mid-range market. The premium models, with advanced features and exclusive capabilities, could be priced in the range of 40,000 to 60,000, targeting the upper-class consumers willing to invest in cutting-edge technology and design.

Interviewer: Thank you for providing a detailed recommendation. Is there anything else you would like to add?

Candidate: One additional point to consider is the introduction of financing options or trade-in programs to make the Apple Watch more accessible to a broader audience. This can help mitigate the risk of limiting the market to the upper class while maintaining the premium image of the brand.

Interviewer: That's a thoughtful addition. Thank you for your comprehensive recommendation. This concludes our discussion on the pricing strategy for the Apple Watch. Your insights have been valuable, and we appreciate your thorough analysis.

Candidate: Thank you. I appreciate the opportunity to discuss this case, and I look forward to the next challenge.



Framework Ideation:

Step 1: Understand Business Goals and Market Conditions

The interviewee acknowledges the defensive pricing strategy aligning with Apple's premium product portfolio.

Identifies the smartwatch market's growing stage and mentions key competitors like Fossil, Samsung, and Fitbit.

Step 2: Assess Product Differentiation

Acknowledges the Apple Watch's unique features and seamless integration with iOS.

Asserts that Apple can charge a premium for these differentiators.

Step 3: Identify Risks

Recognizes the risk associated with a premium price, especially concerning competitors catching up and potential market limitation to the upper class.

Identifies the risk of competitors matching quality at a lower price point.

Step 4: Mitigate Risks

Suggests continuous innovation, technological edge, and agility in adjusting pricing as strategies to mitigate the risk of competition.

Step 5: Communicate Value Proposition

Emphasizes the importance of clear communication about the Apple Watch's unique features, integration with iOS, and overall benefits to justify the premium pricing.

Step 6: Align Pricing with Company Objectives

Highlights the need to align pricing with broader company objectives, whether it's market leadership or positioning as a premium product.

Step 7: Analyse Competitive Landscape

Compares Apple Watch to competitors, emphasizing advanced health sensors, ecosystem integration, and sleek design.



Step 8: Consider Customer Perceptions of Value

Recognizes the significance of ensuring pricing aligns with perceived customer value.

Suggests clear communication about unique features, premium quality, and brand reputation.

Step 9: Propose a Tiered Pricing Strategy

Proposes creating multiple models of the Apple Watch, each offering distinct features.

Recommends a base model priced competitively and premium models at a higher range.

Step 10: Discuss Implementation

Discusses market segmentation, targeting, and marketing campaigns for the implementation of the tiered pricing strategy.

Step 11: Suggest Price Range for Each Tier

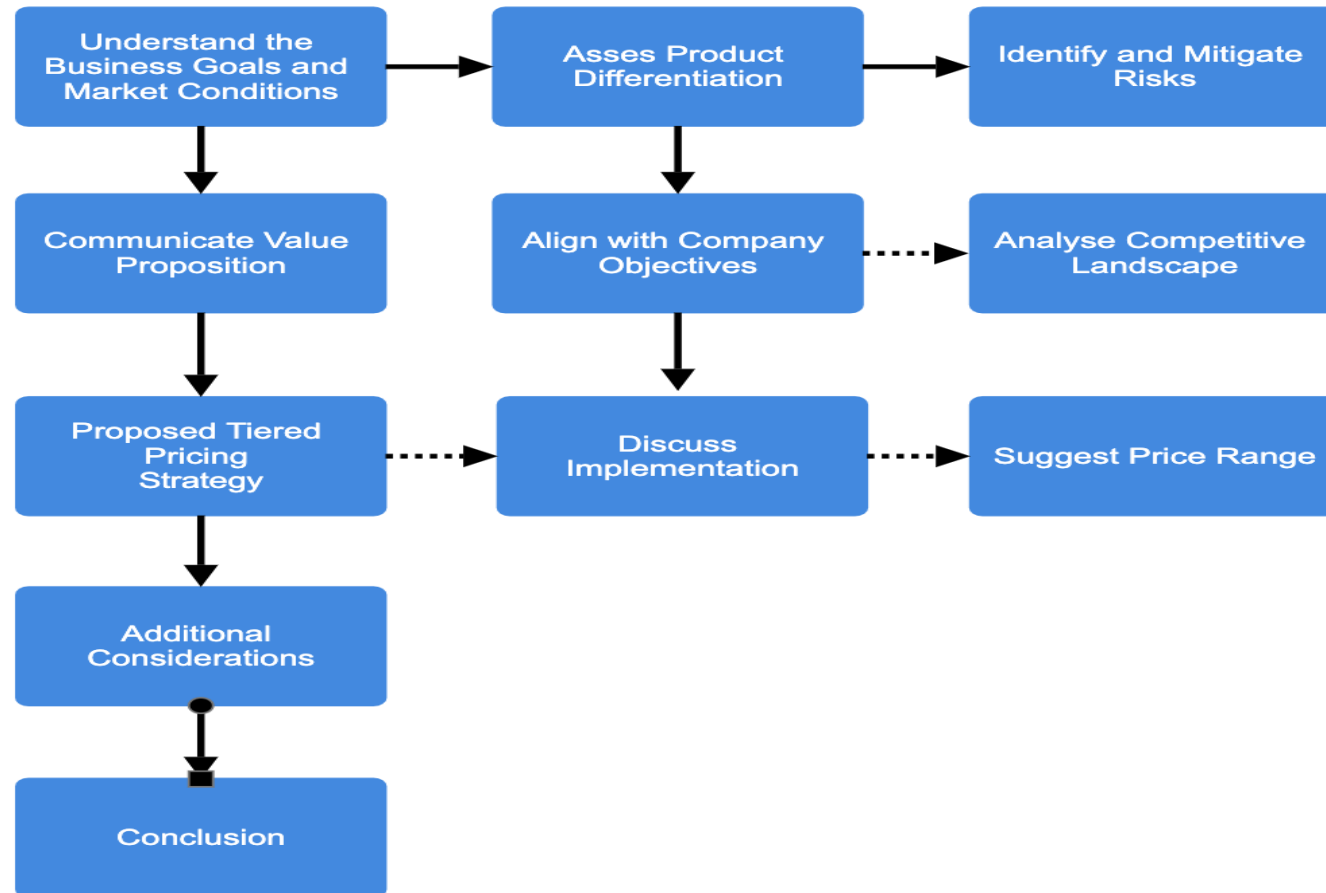
Recommends a price range of 25,000 to 30,000 for the base model and 40,000 to 60,000 for premium models.

Step 12: Additional Considerations

Adds the consideration of financing options or trade-in programs to make the Apple Watch more accessible.



Flow Chart:



2. How would you price Jio Cinema? (Difficulty Level: Easy)

Interviewer: Hello, thank you for joining us today. As part of this product management case, let's shift our focus to Jio Cinema. Recently, Disney and Reliance have merged, which has significant implications for the streaming landscape in India. As a product manager at Jio Cinema, your task is to formulate a competitive response in terms of pricing and product strategy in light of this merger.

Candidate: I understand. So, the primary objective is to maintain and grow Jio Cinema's user base in the evolving streaming market. Is that correct?

Interviewer: Yes, that's the goal. Please proceed.

Candidate: Alright, let's analyze the situation and develop a strategy. Given the recent merger between Disney and Reliance, it's evident that Hotstar and Jio Cinema are no longer direct competitors. However, it's essential to adapt to the changing landscape and capitalize on new opportunities. Since current pricing details are not available, I'll focus on broader strategic recommendations.

- To begin with, Jio Cinema should leverage the synergies resulting from the Disney-Reliance merger. This could involve integrating Disney's extensive content library into Jio Cinema's offerings, providing users with a diverse range of entertainment options.
- Moreover, Jio Cinema should explore innovative pricing models that align with the evolving market dynamics. While I can't provide specific pricing details without current information, I recommend conducting market research to understand consumer preferences and willingness to pay. Based on this insight, Jio Cinema can develop pricing strategies that offer value to users while remaining competitive in the market.
- In terms of product strategy, Jio Cinema should continue to focus on enhancing the user experience and differentiating itself from other streaming platforms. This could involve investing in exclusive content, improving content discovery features, and optimizing the platform for various devices and screen sizes.
- Additionally, Jio Cinema should prioritize customer engagement and retention initiatives. This could include personalized recommendations, loyalty programs, and interactive features that encourage user interaction and loyalty to the platform.

Interviewer: Those are insightful recommendations, considering the recent developments in the industry. How do you propose Jio Cinema should leverage the Disney-Reliance merger further?

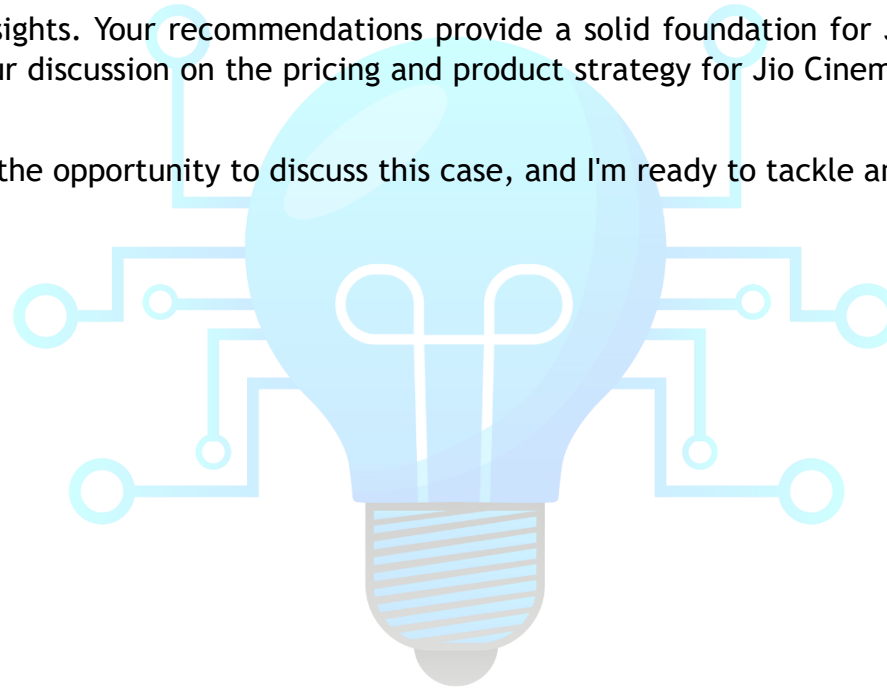


Candidate: Building upon the integration of Disney's content, Jio Cinema can explore strategic partnerships and collaborations with other entities within the Reliance conglomerate. This could involve cross-promotions, bundled offerings, or synergies with other Reliance-owned platforms and services, such as JioTV or JioFiber.

Furthermore, Jio Cinema should focus on expanding its reach beyond traditional streaming platforms. This could involve partnerships with telecom operators, smart TV manufacturers, or other digital ecosystem players to increase accessibility and convenience for users.

Interviewer: Thank you for your insights. Your recommendations provide a solid foundation for Jio Cinema's strategy in the post-merger landscape. This concludes our discussion on the pricing and product strategy for Jio Cinema. Your adaptability and strategic thinking are appreciated.

Candidate: Thank you. I appreciate the opportunity to discuss this case, and I'm ready to tackle any future challenges.



3. Tax Based SaaS Software Case (Difficulty Level: Moderate)

Interviewer: Hello, thank you for joining us today. As part of this case, let's discuss a scenario related to a SaaS product. The product is a tax-cut software designed for corporate use. To start, please feel free to ask any clarifying questions about the product.

Candidate: Thank you. Could you provide more details about the key features and functionalities of the tax-cut software?

Interviewer: Certainly. The software includes features such as automated tax calculations, real-time compliance monitoring, customizable reporting, and integration with accounting systems. It aims to streamline the tax preparation process for corporate clients.

Candidate: Great, that provides a clearer picture. To assess the competitive landscape, could you share information about other similar SaaS products in the market? Are there any direct competitors offering tax-cut software for corporate clients?

Interviewer: Yes, there are a few notable competitors in the market. Competitor A offers a similar solution with a per-user pricing model, while Competitor B uses a tiered pricing model based on the number of features accessed. Competitor C, a recent entrant, uses a usage-based pricing model where clients pay based on the volume of transactions processed.

Candidate: Thank you for providing that insight. Based on the features mentioned, I see that real-time compliance monitoring and integration with accounting systems could serve as Unique Selling Propositions (USPs).

Interviewer: Now, considering the implications of transitioning from a per-user pricing model to a usage-based pricing model, let's look at some sample data on the number of users and their usage patterns over the past year.

Interviewer: Certainly. Over the past year, our client base has grown to 500 companies, with an average of 50 users per company. The usage patterns vary, with some clients using the software heavily during tax season and others maintaining a consistent usage level throughout the year.

Candidate: Thank you. Now, considering the implications, transitioning to a usage-based pricing model could align better with varying usage patterns across clients. It would incentivize wider adoption and provide flexibility during lower usage periods.

Candidate: To implement this change, I would suggest the following steps:

Data Analysis: Analyze historical usage data to determine an appropriate pricing structure based on usage metrics.



Pricing Tiers: Establish clear pricing tiers based on metrics like the number of transactions processed or complexity of tax calculations.

Communication Strategy: Develop a comprehensive communication plan to inform existing clients about the upcoming pricing model change. Highlight benefits and flexibility.

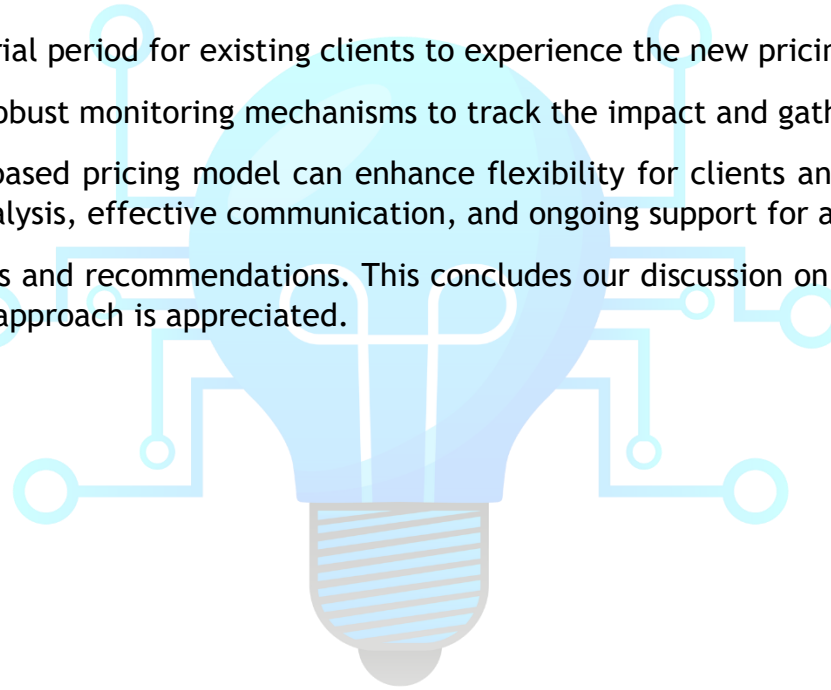
Customer Support and Education: Enhance customer support services and provide educational resources to guide users through the transition.

Trial Period: Consider implementing a trial period for existing clients to experience the new pricing model.

Monitoring and Feedback: Implement robust monitoring mechanisms to track the impact and gather feedback for adjustments.

In conclusion, transitioning to a usage-based pricing model can enhance flexibility for clients and better align pricing with actual usage patterns. This requires careful analysis, effective communication, and ongoing support for a smooth transition.

Interviewer: Thank you for your analysis and recommendations. This concludes our discussion on the SaaS pricing model transition for the tax-cut software. Your strategic approach is appreciated.



4. Improve Product Hunt's pricing model (Difficulty Level: Moderate)

Interviewer: Hello, thank you for joining us today. As part of this case, we'd like to discuss Product Hunt's current pricing model and explore ways to improve it. Before diving into the details, could you please share your understanding of what Product Hunt is and what the product does?

Candidate: Certainly. Product Hunt is a platform that allows users to discover and share new products. It's particularly known for showcasing innovative and up-and-coming products across various categories. Users can submit, upvote, and discuss products, creating a community-driven environment for product enthusiasts.

Interviewer: Great overview. Now, let's discuss the current pricing strategy. Product Hunt currently has two pricing plans, Starter and Pro. The Starter plan is free, while the Pro plan costs \$49 per month. What are your initial thoughts on this pricing structure?

Candidate: The current pricing structure seems to offer a basic free plan with essential features and a Pro plan with additional benefits at a monthly cost. It's a straightforward model, but I'd be interested in understanding more about the specific features included in each plan and how they align with the needs of Product Hunt's user base.

Interviewer: That's a valid point. The Starter plan includes basic features like product submission and upvoting, while the Pro plan offers advanced features such as exclusive product access, advanced analytics, and custom landing pages. Now, shifting gears a bit, could you ask any clarifying questions about Product Hunt, such as its competitive landscape or its target market?

Candidate: Absolutely. I'd like to delve into the competitive landscape. Can you provide insights into who Product Hunt's main competitors are, and how does Product Hunt differentiate itself in the market?

Interviewer: Good question. Product Hunt faces competition from platforms like Awwwards and BetaList. However, Product Hunt distinguishes itself through its engaged and diverse community, which actively curates and discusses new products. Now, considering this competitive context, let's discuss ways to improve Product Hunt's pricing strategy. One suggestion is to offer a tiered pricing plan. How do you think this could benefit Product Hunt and its users?

Candidate: Before we move forward, could you provide more details on the user demographics of Product Hunt? Understanding the user base and their preferences would help in tailoring the pricing strategy more effectively.

Interviewer: Certainly. Product Hunt's user base consists of tech enthusiasts, early adopters, and product makers. They actively engage in discovering, discussing, and promoting new products across various industries.



Candidate: Thank you for that information. Now, regarding the tiered pricing plan, introducing different levels of features and pricing could cater to a broader audience with varied needs and budgets. It aligns with the diverse user base and allows businesses to choose plans that suit their specific requirements.

Interviewer: Excellent. Moving on, another suggestion is to offer a free trial for the Pro plan. How would you assess the impact of providing a free trial on Product Hunt's user acquisition and conversion rates?

Candidate: Before I provide an answer, could you share insights into the user acquisition and conversion rates that Product Hunt currently experiences? This information would help in gauging the potential impact more accurately.

Interviewer: Certainly. Product Hunt has seen consistent growth in user acquisition, with a conversion rate of around 15% from free to Pro subscriptions.

Candidate: Thank you for providing that context. Offering a free trial for the Pro plan could potentially lower the barrier for businesses to try out advanced features. It provides a risk-free experience, and if the conversion rate remains favorable, it could significantly boost the number of paying customers.

Interviewer: Your insights are valuable. Lastly, considering the unique user base of Product Hunt, how would you tailor the pricing strategy to address the needs of different types of businesses, such as startups or those in specific industries?

Candidate: That's an interesting point. Before I respond, could you elaborate on the specific industries that Product Hunt's user base spans? Understanding the industry landscape would help in customizing pricing plans more effectively.

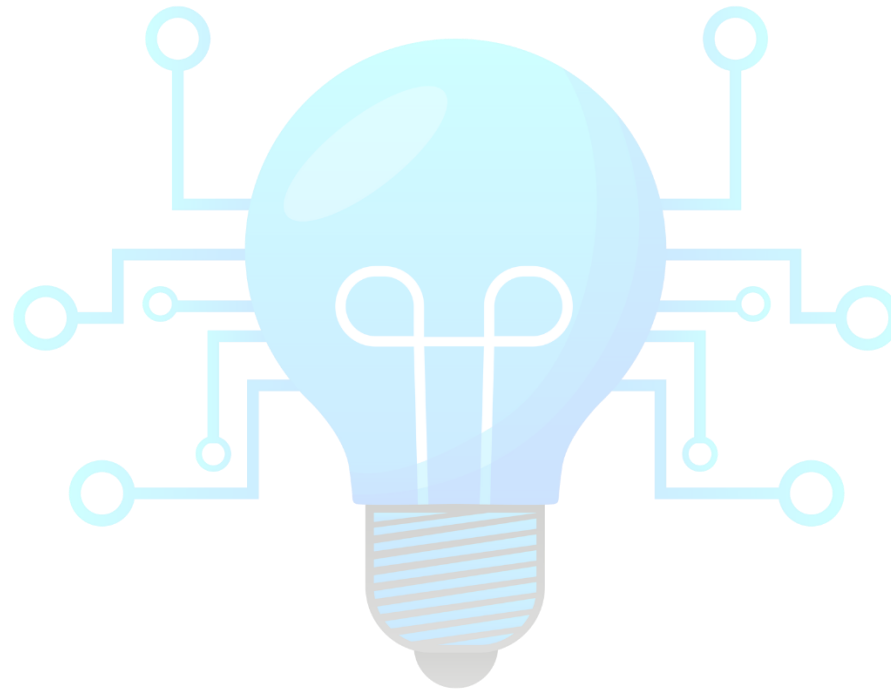
Interviewer: Product Hunt's user base spans various industries, including tech, design, and consumer goods. The platform attracts a diverse audience interested in discovering and discussing innovative products across different sectors.

Candidate: Thank you for that information. Tailoring pricing plans for different types of businesses, such as startups or those in specific industries, can enhance the product's appeal. For instance, startups may benefit from a more budget-friendly plan, while businesses in certain industries might require specialized features. This customization can potentially attract a more targeted customer base.

Interviewer: Your considerations align well with Product Hunt's user demographics. Thank you for your thoughtful responses. This concludes our discussion on improving Product Hunt's pricing strategy.



Candidate: Thank you for the opportunity. If there are no further questions, I appreciate the discussion, and I look forward to the next case.



Root Cause Analysis (RCA)

1. 25% decrease in cart additions on our grocery e-commerce app (Difficulty Level: Easy)

Interviewer: Thank you for joining us today. We've observed a 25% decrease in cart additions on our grocery e-commerce app over the past week. Can you help us understand why this might be happening?

Candidate: Certainly. Before I delve into possible reasons, could you clarify whether this pertains to the Indian market?

Interviewer: Yes, you can assume it's the Indian market.

Candidate: Great. Since when have you been noticing this issue?

Interviewer: It started last week.

Candidate: May I take a moment to gather my thoughts?

Interviewer: Of course, take your time.

Candidate: Thank you. To begin, there could be external or internal factors contributing to this problem. Let me start by exploring external factors.

Interviewer: Go ahead.

Candidate: Have any new competitors entered the market recently?

Interviewer: No major new entrants.

Candidate: Have there been any significant sales or discounts by competitors in the last week?

Interviewer: No, there were no promotions or offers.



Candidate: Have there been any external factors affecting the overall grocery supply chain, like strikes or disruptions?

Interviewer: None that we're aware of.

Candidate: Was the reduction in cart additions observed in specific regions, demographics, or product segments?

Interviewer: No specific pattern.

Candidate: Are there any other external factors I might have missed, or can I assume external factors didn't impact the problem?

Interviewer: For now, proceed with analysing internal factors. We can revisit external factors later.

Candidate: Alright. Moving on to internal factors, is there a data-collecting tool issue that might affect the accuracy of the data?

Interviewer: The data collection tool is fine; no issues there.

Candidate: Is this decrease observed in the mobile app, web app, or both?

Interviewer: It's specific to the mobile app.

Candidate: Did you notice an increase in app uninstallations on Android?

Interviewer: Nothing alarming.

Candidate: Was there an app update released last week?

Interviewer: Yes, there was an update for the Android app.

Candidate: Was the update specific to Android or applied to both Android and iOS?

Interviewer: It was only for the Android app.

Candidate: Did the update involve changes to the cart addition process?

Interviewer: We made some adjustments to the user flow. Any specific aspect you'd like to inquire about?

Candidate: There's a case study about the "300 million Dollar button," where a change in the registration process impacted sales. Did the update introduce any changes related to the add-to-cart button?



Interviewer: No, there's no registration-related change after adding to the cart.

Candidate: How about the functionality of the add-to-cart button? Any reported issues?

Interviewer: No problems with the add-to-cart button; it's working fine.

Candidate: When users click on the cart button, do they see the added products? Is the cart button functioning correctly?

Interviewer: Yes, users can see the products in their cart, and the cart button is working properly.

Candidate: Are there any bug reports related to payment and checkout?

Interviewer: We did receive bug reports concerning payment issues.

Candidate: Is it related to digital payment methods like credit cards, debit cards, wallets, UPI, etc.?

Interviewer: No issues with digital payments.

Candidate: What about the Cash on Delivery option?

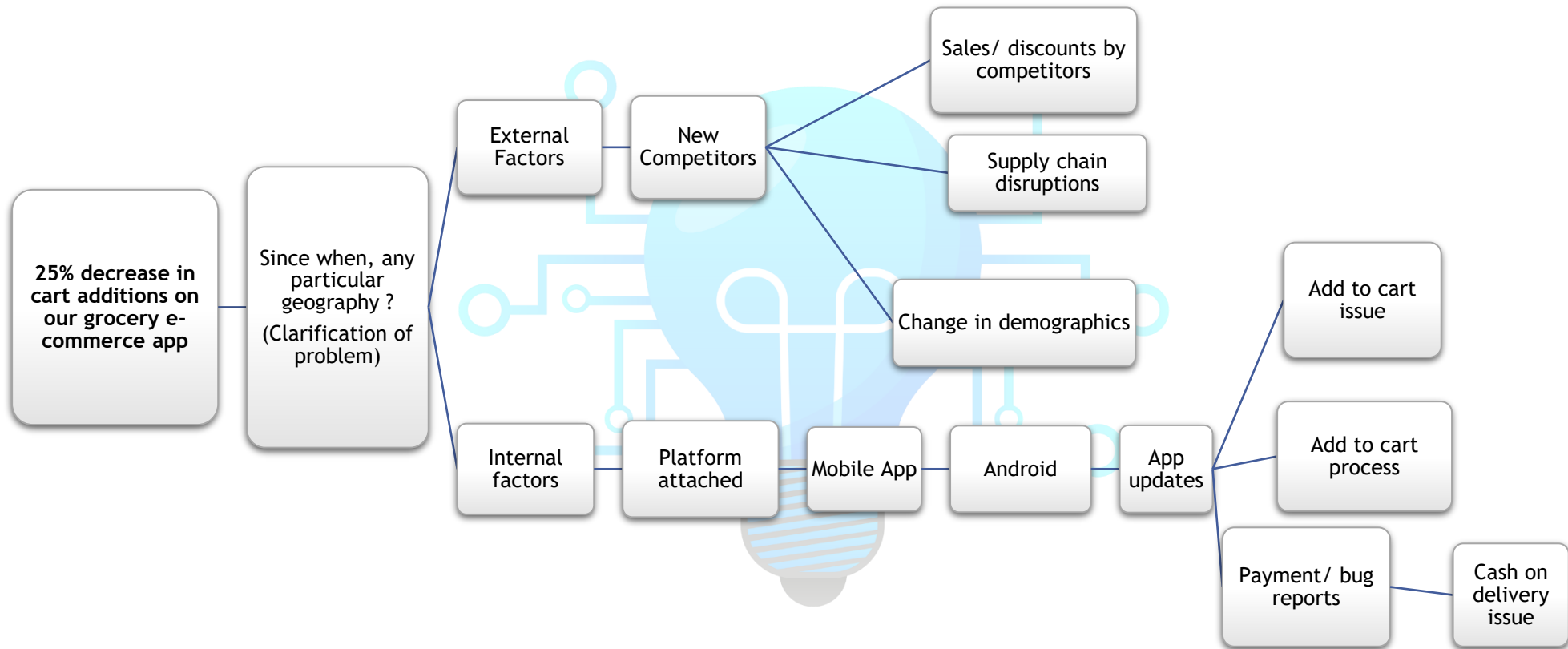
Interviewer: Yes, there were reported bugs related to Cash on Delivery.

Interviewer: I think we have figured out the reason. Can you conclude our discussion?

Candidate: Absolutely! based on the information gathered, I suspect that the majority of the 25% decrease in cart additions is linked to issues with the Cash on Delivery option in the payment section of the Android mobile app.



Approach and Summary



2. Facefriend Friend Requests are Down 10% (Difficulty Level: Easy)

Interviewer: Let's say you're a PM at Facefriend, and friend requests are down by 10%. What can be the potential problem?

Candidate: Yeah, okay, sounds good. Just to kind of get a little feel for the problem, are we looking at a certain time period or time frame that we're seeing friend requests down by 10% or kind of just across the board?

Interviewer: Great question. Let's say that normally it's at some level, and you walk in overnight, and it just dropped 10%.

Candidate: Okay, cool. So, some level happened overnight. Sounds good then. No specific time period or any information on that outside of that, right?

Interviewer: Yeah, let's just say it was just an overnight drop.

Candidate: How I kind of approach these questions is I like to ask some follow-ups to kind of get a little bit deeper on segmentation and where we're seeing the problem. And then I've got it bucketed by potential root causes—contextual, internal, external. Does that sound good?

Interviewer: Sounds good.

Candidate: Okay, great. So, we know that it happened overnight. There's no other time period.

Do we have any information about what segmentation in the world geographically is experiencing this issue and any type of platform information? Like, are we seeing this on iOS, Android, or mobile web?

Interviewer: Let's say that this is in the US, and it's across both mobile and web.

Candidate: Across both mobile and web platforms, we are observing a decrease. Specifically, this decline is evident across all platforms, and it appears to be limited to friend requests, correct?

Interviewer: Right.

Candidate: So, we've got this 10% drop in friend requests in the United States across all platforms. So, are we seeing this on any type of seasonal basis? Does this happen on a weekend, or is it repetitive on a holiday, or is this kind of just a one-time thing?



Interviewer: Yeah, so zooming out, we don't see any sort of seasonality. There's no sort of variance that we're concerned about here. It's totally unexpected when we just look at the broader trends and historical trends.

Candidate: Okay, great. So then, I guess that would kind of lead me to if I'm walking in and I'm seeing this as a PM, my first gut check would be to check our internal systems and make sure nothing broke overnight on our side before digging externally to see a little bit more and just check that internal box off. So, in terms of that, are we seeing any information about a degrading product or reprioritization of product needs?

Interviewer: What do you mean by degrading products?

Candidate: Yeah, are we seeing that maybe our product became unstable overnight due to a build that was just pushed, or did somebody's code maybe affect what our project is and our feature and what we're seeing in friend requests?

Interviewer: We're always deploying things. There's always bugs and code somewhere, but I don't think there's anything large that's standing out. But if there's any specific areas you want me to dive into, I can definitely take a look for you.

Candidate: Yeah, are we seeing anything internally about any logging reports that are coming from users?

Interviewer: What do you mean by logging?

Candidate: Sorry, so like internal, any external reporting like our users reporting to us that there's a certain problem and we're seeing a spike in all of our bug volume that we're seeing on our back end.

Interviewer: I see. No, it doesn't look like there's any sort of concerns from users.

Candidate: Okay. So, we have nothing major on the code side impacting us and nothing, it seems, in terms of user reporting and nothing causing major concern. Have we reprioritized product needs? Say maybe we went to focus completely on something else, and we missed the ball on what we were supposed to do for friend requests, and maybe something didn't get completed on that side.

Interviewer: Priorities are always shifting. Facefriend is a huge company. The friend request feature is still very prominent on the Facefriend page. So, in terms of UI, no, there haven't been any large priority shifts around how we're servicing friend requests.

Candidate: Okay, great. And then do the data scientists seem to be aligned with the data that's coming in? Like, is our data quality usually up to par, and where it is, have we seen any changes with our data quality specifically?

Interviewer: Data quality-wise, like we can trust this data. It doesn't look like there's any problems with data quality here.



Candidate: So, it sounds like on the internal side of things, we're a little bit buttoned up there. And now we can kind of shift and transition to looking at maybe some external factors that could be causing this problem.

Interviewer: Sure.

Candidate: Have we seen any major changes in user behaviour?

Interviewer: What are some examples of areas that you'd look at?

Candidate: Particularly maybe people who have just stopped requesting friends or people who used to be daily active users have now converted to monthly active users, and we're kind of seeing lower usership that could be causing this.

Interviewer: No, I mean, there isn't anything around user behaviour that has caused a sudden overnight drop.

Candidate: Okay, cool. And then has anything changed with the market landscape or competitor behaviour? I know we just mentioned that nothing around user behaviour caused a sudden drop, but I know our big competition right now is Tiksocial (hypothetical). So maybe did they launch a better feature in terms of connecting with your friends and the newest update of their app or maybe something kind of similar to that?

Interviewer: So, how would I help you determine if something happened with a competitor? Like, is there any area that you would look at? Any place you would look at?

Candidate: I was just thinking maybe general news. Like, have we heard anything or any updates maybe from TechCrunch that would suggest we should be looking out for competition at the moment?

Interviewer: Got it. Looking at TechCrunch, looking at maybe the press releases on some of the Tiksocial (hypothetical) websites. It does look like they themselves are shifting towards being more of a social app rather than just being a content app. So maybe there's something there.

Candidate: Okay, cool. That's good to know. So Tiksocial (hypothetical) is shifting to be more social and less content-driven.

Interviewer: Okay. We can put a pin in that for right now and potentially come back to it since it's a really good lead. In terms of regulation and marketing, you know, we've been in the news a lot. Has anything new happened that I should know about from maybe the government or any new laws that have changed and kind of changed the way we're allowed to operate?

Candidate: What are some examples of changes and regulations that you'd want me to look for?



Interviewer: Yeah, particularly data privacy. I know that there's been a lot of talk and conversation about how we should be implementing data privacy as a nation at the moment, in the United States specifically. And that's a pretty taboo topic, so I'm not quite sure. Maybe a new law came out or a new set of guidelines maybe from the FTC that we now have to adhere to.

Candidate: Let's say that overnight, some country in Europe passed a law around data privacy, and suddenly we're no longer able to operate in that area. So even though it's in Europe, it's affecting the United States across all platforms.

Interviewer: Okay, great. So, just to make sure I have that right: a country in Europe passed a law that changes user privacy execution for our platform, and it's preventing us from being able to operate in that country. Okay, which is preventing operability in that specific country.

Candidate: Okay. I think I kind of have enough here to make a well-informed conclusion on what the problem might be. So, I'm thinking that it's a combination of two things: competitors and then also regulation.

Candidate: Actually, I did have one more question about regulation. The law that passed in Europe, did this apply also to Tiksocial (hypothetical) or all social media, or was it just kind of targeted towards Facefriend specifically?

Interviewer: Let's say that it was targeted towards both Tiksocial (hypothetical) and Facefriend and any other tech companies that were operating in this country in Europe.

Candidate: Okay. Generally, maybe any social media that's operating in Europe. Okay. And then, one more question: have we seen anything major regarding marketing campaign efforts on Tiksocial (hypothetical) or any competitors, or have we ourselves decreased our marketing budget?

Interviewer: Yeah. Let's say due to budget changes, we did decrease some marketing.

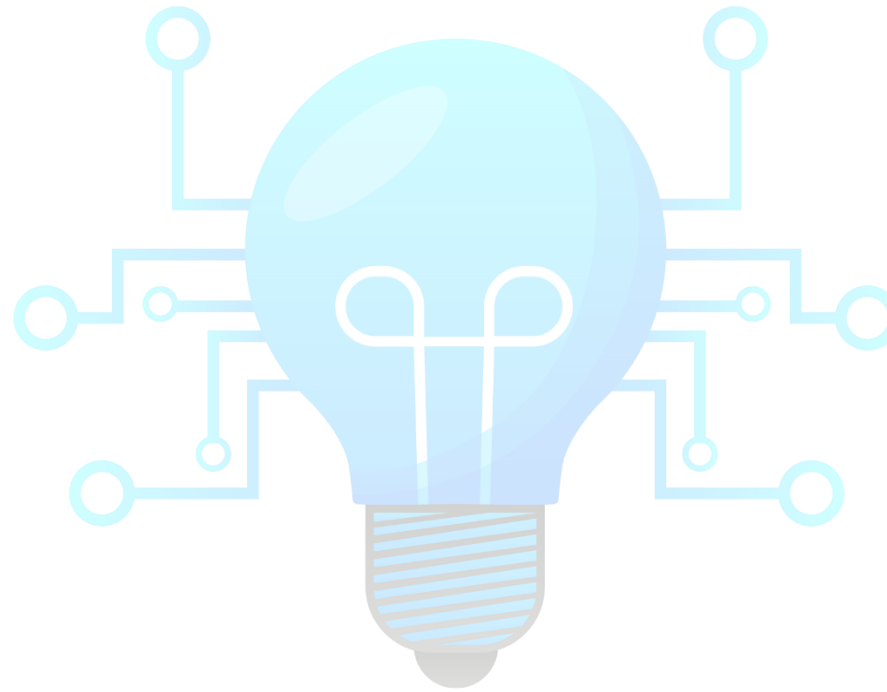
Candidate: Okay. So then, kind of back to the conclusion that I was attempting to draw earlier, I think that because of this law, it obviously makes it tough for people in Europe to friend Americans or people in America to find their friends that might be over in this specific country in Europe. So, generally, that law that new law that just passed is going to decrease friend requests anyway, simply because of the sheer amount of volume that just simply can't execute because of this new law.

And then I think that, in combination with Tiksocial (hypothetical)'s new aim to try to shift to be more social and less content-driven, that definitely plays a big role because of just the grip and the hold that Tiksocial (hypothetical) has on society right now and users. They are the number one social media platform at the moment, and with current trends, it seems that it's going to stay that way.



And then we also kind of shot ourselves in the foot by decreasing our own marketing budget because now that we've got this new law, we'll probably need to revamp that up in order to make users feel secure or find a solution to this new law that's been passed in Europe. Does that sound about right?

Interviewer: Yeah. I think these root causes sound like there are directions that we can go towards. I thought you handled it very nicely. In the end, I loved how we were able to have a discussion around identifying the problem. So, all in all, I really like the answer.



3. Figma is losing customers at 6-7% weekly (Difficulty Level: Moderate)

Interviewer: Hi there, thanks for joining me today. Let's say you are a PM in Figma and the product is losing customers at 6-7% weekly. What can be the potential problem?

Candidate: Before I move ahead with the problem, I want to make things clear about the product. So, Figma is a cloud-based design and prototyping tool used by designers, developers, and teams to collaborate on user interface (UI) and user experience (UX) design projects which allows to create, edit, and share design files in real-time, making it particularly well-suited for collaborative and remote work. Is that correct?

Interviewer: Correct

Candidate: I have a few clarifying questions I would like to ask

Interviewer: Sure

Candidate: Since when did we see the users leaving our platform?

Interviewer: We got an update recently. Compared to the last month, DAU & Subscriptions have gone down by 6-7% every week. New users coming to our platform have also slowed down.

Candidate: Did we check if our analytics tool was working fine when we got this data?

Interviewer: Yes, it is fine.

Candidate: We have Web & On-prem software. Are we seeing a downfall on both or just either of them?

Interviewer: The numbers are falling on both platforms. Especially the web.

Candidate: Are the majority users dropping from Mac or Windows?

Interviewer: Both of them.

Candidate: Were there any last-minute updates or UI/UX changes done from our end?

Interviewer: Not really, Just our routine updates to both our Web & App platform.



Candidate: Were there any bugs in the update that might be causing trouble for the users to use our platform?

Interviewer: We did a thorough QA to understand this but everything is working just fine.

Candidate: Is this happening with any particular segment of users?

Interviewer: Actually, happening across the board. We have three major users. Freelancers, Paid Individuals & teams, and enterprises.

Candidate: Any location constraints?

Interviewer: Nope. This data is from across the globe. We started losing customers first in the US, then in Europe & now slowly in the Middle-east & APAC region.

Candidate: Have we experienced something like this in the past?

Interviewer: Not really. We have grown our market share YoY since 2016 and captured enough market to become the market leader since 2019 & growing.

Candidate: Did we check with the marketing team if our competitors have run a sale or anything to do with bad PR for us?

Interviewer: Our top competitors have not run any sales and marketing did not find any bad PR for Figma.

Candidate: Are our competitors losing market share as well?

Interviewer: Yes!

Candidate: Is there a new competitor in the market?

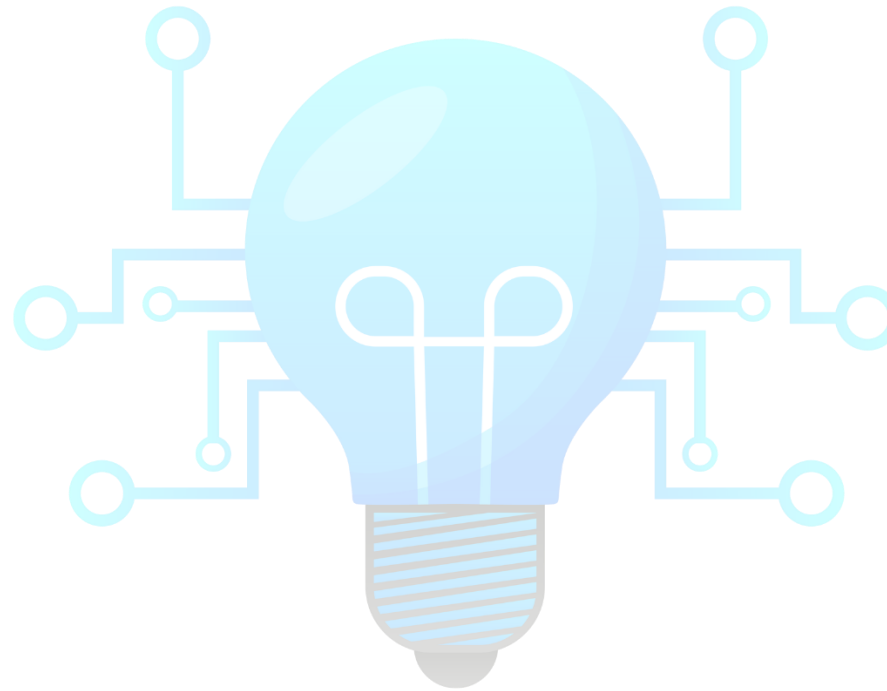
Interviewer: There is a new company called (A hypothetical competitor company) Etcetera. But we haven't gotten enough data on the company.

Interviewer: I think we can conclude this interview, would you like to give a brief summary of the interview

Candidate: Based on the information gathered, it appears that there are no internal or technical issues causing the decline. Therefore, it is likely related to the emergence of a new competitor in the market, Etcetera. To address this challenge effectively, we can do



1. **Competitor Analysis:** Conduct a comprehensive analysis of Etcetera and other competitors to identify their strengths, weaknesses, market positioning, and strategies.
2. **Customer Feedback:** Gather feedback from existing customers to understand their concerns, preferences, and reasons for leaving the platform.
3. **Product Enhancement:** Prioritize features and improvements based on customer feedback and market research to enhance Figma's value proposition and competitiveness.



Miscellaneous

1. Monetizing Social Connections: Crafting a Revenue Strategy for a Fictitious Social Media App (Difficulty Level: Moderate)

Interviewer: Greetings! Today, we aim to delve into devising a monetization strategy for your company's complimentary application, which boasts a sizable user base. To commence our discussion, would you kindly offer a concise synopsis of the application along with its key functionalities?

Candidate: Thank you. Before we proceed, could you clarify the nature of the app? For example, is it a social media platform, a productivity tool, or something else? Understanding the app's purpose would help in tailoring the monetization strategy.

Interviewer: Excellent question. Let's say it's a fictitious social media platform where users can share photos, connect with friends, and discover content. Now, with that context, what considerations would you keep in mind when exploring potential monetization strategies?

Candidate: Given that it's a social media platform, user engagement and experience are paramount. I'd consider options that seamlessly integrate with the app's social nature. Additionally, understanding the user demographics, such as age groups and preferences, would influence the choice of a suitable strategy.

Interviewer: Agreed. Now, let's dive into the monetization options. What are your thoughts on implementing a subscription model for premium features, introducing in-app purchases, or incorporating ads within the app?

Candidate: Each option has its merits. A subscription model could offer exclusive features like advanced filters, customization options, or an ad-free experience for a monthly fee. In-app purchases might include virtual goods or enhancements for users to personalize their profiles. Ads, if implemented thoughtfully, could provide a non-intrusive revenue stream without compromising user experience.



Interviewer: Well-stated. Considering the social media context, how would you balance the desire for increased revenue with maintaining a positive user experience? And are there specific features or enhancements you'd consider for premium subscriptions or in-app purchases?

Candidate: Striking a balance is crucial. For premium subscriptions, personalized themes, additional storage for photos, or advanced analytics on post-engagement could be enticing. In-app purchases might include unique stickers, filters, or profile badges for users to express themselves creatively. The key is offering value without creating a divide between free and paying users.

Interviewer: Insightful suggestions. Now, let's touch on user acquisition and retention. How might the chosen monetization strategy impact these aspects? And are there strategies to mitigate potential challenges?

Candidate: The impact on user acquisition and retention would depend on the chosen strategy. Introducing ads should be done cautiously to avoid user frustration. With subscriptions, offering a free trial period or exclusive perks for early subscribers could attract new users. To mitigate challenges, frequent communication with users about the benefits of the chosen strategy and gathering feedback for continuous improvement is crucial.

Interviewer: Great considerations. Lastly, if you had to recommend one specific monetization strategy for this social media platform, which one would it be, and why?

Candidate: Considering the social nature of the app and the desire to balance revenue and user experience, I would recommend exploring a subscription model. It allows for a steady revenue stream, provides users with valuable and exclusive features, and, if implemented well, can enhance overall user satisfaction.

Interviewer: A well-reasoned choice. Thank you for your insights into this fictitious app's monetization strategy. Is there anything else you'd like to add or discuss?

Candidate: Thank you. I believe a subscription model aligns with the app's social dynamics, and open communication with users about the benefits will be key to its success.



Non-Tech Cases

1. Design an umbrella for kids (Difficulty Level: Easy)

Interviewer: As a product designer for our children's umbrella line, you're tasked with addressing specific challenges related to the younger users. Let's discuss how you would approach this design considering the business objectives and potential user problems.

Candidate: Certainly. To begin, our target customers are children aged 5-12 years, with parents, schools, and summer camps being our primary customer base.

Interviewer: Good. Now, what are some potential problems a child might face with a traditional umbrella?

Candidate: Well, some issues could include difficulty holding the umbrella due to its weight and the size of the handle, risk of pinching fingers with buttons and opening mechanisms, trouble with opening and closing it using small hands, and the umbrella getting easily confused with others in group settings like schools or field trips.

Interviewer: How would you address the challenge of difficulty holding the umbrella?

Candidate: I would design a smaller, ergonomic handle with grip patterns that fit comfortably into small hands. Additionally, I'd offer handle sizes corresponding to different age groups.

Interviewer: What about the risk of pinching fingers during opening and closing?

Candidate: I would implement an easy push-button mechanism for opening and closing the umbrella, eliminating the risk of pinched fingers.

Interviewer: How do you plan to make the umbrella easy to use for children?

Candidate: Ensuring the opening and closing process is smooth and effortless, specifically tailored to small hands, and using lightweight materials for easy handling.



Interviewer: How would you make the umbrella stand out in a crowd and avoid confusion?

Candidate: I'd create a visually unique and customizable design, incorporating vibrant colours, fun patterns, or character illustrations. Additionally, I'd provide an option for parents to print their child's name in a visible spot on the umbrella.

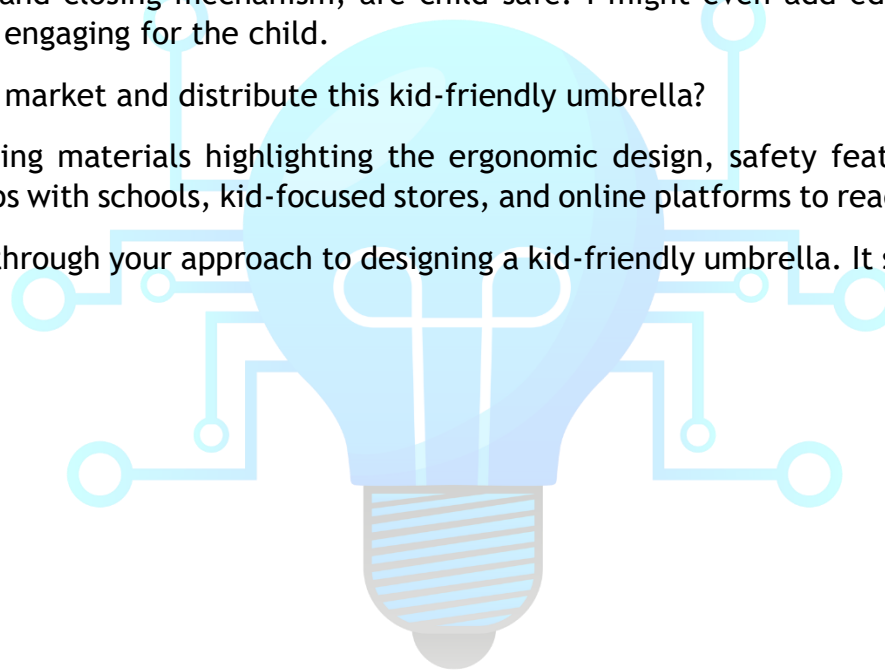
Interviewer: What other considerations should be taken into account for this design?

Candidate: Durability is crucial, so I would use robust and child-friendly materials. Safety features are also a priority, ensuring all components, including the opening and closing mechanism, are child-safe. I might even add educational elements or interactive features to make the umbrella more engaging for the child.

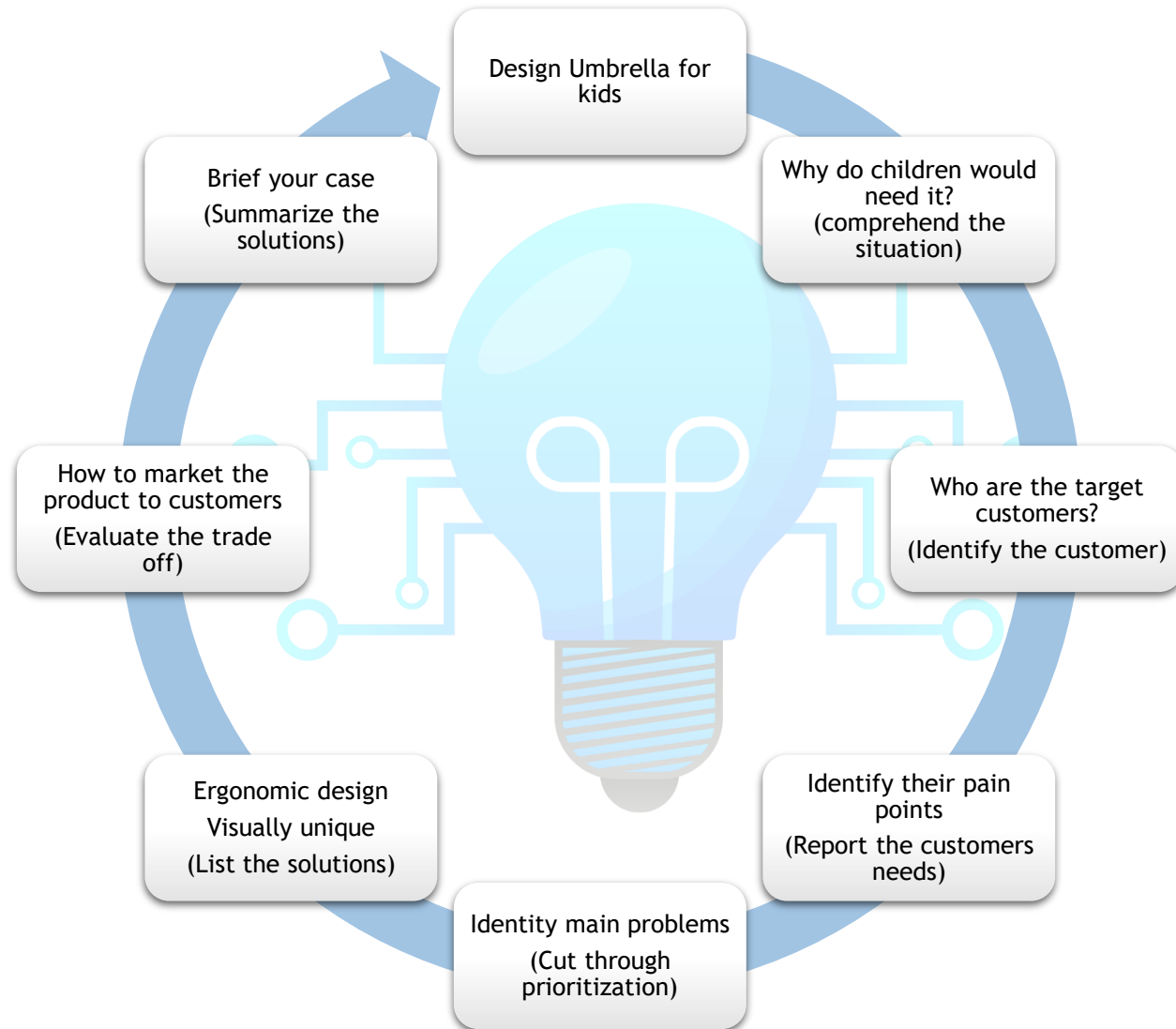
Interviewer: Finally, how would you market and distribute this kid-friendly umbrella?

Candidate: I would develop marketing materials highlighting the ergonomic design, safety features, and customization options. Distribution could involve partnerships with schools, kid-focused stores, and online platforms to reach our target audience effectively.

Interviewer: Thank you for walking through your approach to designing a kid-friendly umbrella. It sounds like you've considered both the practical and playful aspects.



Summary and Approach



2. Design an alarm clock for blind people (Difficulty Level: Easy)

Interviewer: Design an alarm clock for blind people.

Candidate: Sure, let's dive into this. To clarify, are we considering a physical product or a software solution?

Interviewer: Your call.

Candidate: Great. For the sake of this discussion, I'll consider both physical and software aspects.

Interviewer: can you define the user groups and their pain points?

Candidate: sure, but before that I would like to have certain assumptions:

✓ User can read Braille.	✓ User can hear
✓ User can touch & feel.	✓ User groups & Pain points

Primary user group: A blind person (visually impaired - VIP)

- *Elderly:* As a blind person, I am unable to keep track of time, and hence, I keep messing up meals.
- *Adult:* As a blind person, I am unable to wake up early since my spouse does night shifts or sleeps late and gets bothered by the alarm & loud noises.
- *Kid:* As a blind kid, I don't know when it is time for my parents to come pick me up from the daycare.

Caregivers: They are the primary customers, who are helping VIPs (relative/ family). We want the caregivers to be able to use this device as well since they won't have to buy multiple products for some function.

Interviewer: That's great, I would like you to prioritize only on adults for now

Candidate: We want to create a reliable alarm clock, easy to use for the visually impaired and mindful of your loved ones.



Features

- | | |
|--|---|
| ✓ Have a basic function that can cater to both blind persons & caregivers. | ✓ The alarm clock should also have silent/voice-enabled/haptic functions. |
| ✓ The alarm clock should have a way to turn on and off the alarm. | ✓ The alarm clock should be wireless. |
| ✓ The alarm clock should also have a time display for caregivers. | ✓ The alarm clock should have the ability to snooze. |
| ✓ The alarm clock should have the ability to set up time (hours/mins). | |

Features:

The alarm clock should be voice-activated, allowing users to set an alarm, turn off an alarm, or snooze an alarm.

The alarm clock should make a confirmation sound so the user understands the alarm is set successfully.

Backup on the hardware - if the voice-activated alarm is not working as expected, there should be a Braille for users to set up an alarm and turn off the alarm.

Interviewer: Can you tell what are the metrics to keep in mind?

Candidate: We can look into the following success metrics

- Number of times users are using voice assistance to set alarms.
- Number of times users are using the snooze capability.
- Number of times users are using haptic mode.

Interviewer: Thank you for your insights, we can stop the interview now



3. Design a refrigerator for visually impaired (Difficulty Level: Medium)

Interviewer: Thank you for joining us today. Let's start with the product design question. How would you approach designing a refrigerator tailored for users with visual impairment?

Candidate: First, I'd like to establish some assumptions to guide my solution. I'm assuming the primary function of this refrigerator is to maintain the right temperature for food storage, excluding ice-making or water dispensing. Also, the user's sole disability is blindness.

Interviewer: Interesting assumptions. How would you proceed from there?

Candidate: I identified two main user flows for maintaining food in the refrigerator: putting food into the fridge and taking food out. Each flow has unique pain points for visually impaired users.

Interviewer: Could you elaborate on these pain points?

Candidate: Certainly. When putting food into the fridge, users might struggle with knowing where to place items, whether there's enough space, how to organize them, and determining food's edibility. For taking food out, locating the desired item is a major challenge.

Interviewer: And how would you address these pain points?

Candidate: I propose a few solutions. For putting food into the fridge, voice commands could guide the user on where to place items, and the fridge could automatically set the right temperature and arrange food. Voice notifications could alert users about food nearing expiration or lack of space.

Interviewer: What about retrieving items from the fridge?

Candidate: A similar voice command system could assist users in locating and removing items from the fridge.

Interviewer: If you had to choose one solution to prioritize, which one would it be?

Candidate: I'd focus on the voice command solution as it addresses both flows. Users can inform the fridge about the food they're storing, and the fridge can guide them on placement, and temperature settings, and alert them about food conditions. For retrieval, users can simply ask for the item, and the fridge will direct them to its location.



Interviewer: That sounds comprehensive. How would you measure the success of this feature?

Candidate: Key metrics would include the usage rate of the voice command feature, the occupancy levels of the refrigerator, and the rotation of food items, indicating effective use.

Interviewer: Are there any potential trade-offs or challenges with this solution?

Candidate: Yes, the accuracy of voice commands could be a concern, as they might not be understood correctly on the first try. But overall, this solution significantly enhances accessibility for visually impaired users.

Interviewer: Excellent, thank you for your thoughtful approach to this design challenge.



4. Design a smart shoe (Difficulty Level: Moderate)

Interviewer: Today's task is to design a smart shoe. Before we begin, do you have any specific thoughts on what this shoe should do?

Candidate: To clarify, are we focusing on a specific function or technology for this smart shoe?

Interviewer: It's open to assumption.

Candidate: Understood. And regarding the target user group, are we looking at a specific demographic or user segment?

Interviewer: It's open to assumption.

Candidate: Okay, that's helpful. Also, are we considering this product for a particular geography, or is it a global product?

Interviewer: It's open to assumption.

Candidate: Great, one last thing. Are we solving any specific user pain points, or are we looking at general improvements in shoe technology?

Interviewer: It's open to assumption.

Candidate: Thank you for clarifying. I'll structure my response with these points in mind.

Interviewer: Sure

Candidate: The design is open to interpretation. I'd like to start by establishing some assumptions for clarity.

Interviewer: Please go ahead.

Candidate: We'll focus on the Indian market in a COVID or post-COVID world. The target user segment will be the upper middle class or higher, aged 25 and above, catering to both males and females across India.

Interviewer: Interesting. Can you identify any user pain points?

Candidate: Certainly. During and post-COVID, people are working more from home and are less active. They struggle to monitor body functions like calorie burn or weight fluctuations. Current solutions require multiple devices, increasing costs. There's also a challenge in self-training without accurate guidance.



Interviewer: How do you propose to address these pain points?

Candidate: The solution is a multifunctional sports shoe with built-in trackers. It syncs with an app for comprehensive monitoring and advice. Features include a pedometer, BMI and body fat index tracking, temperature sensing, and skeletal muscle analysis. The app offers tailored exercise recommendations. The shoe also offers reflexology for relaxation and has replaceable soles for indoor and outdoor use.

Interviewer: That's quite a feature list. What about further developments?

Candidate: In Phase 2, we'll improve the shoe's aesthetics for corporate and travel use and incorporate solar power for charging. We'll also explore customization options.

Interviewer: Are there any primary user concerns?

Candidate: Key concerns would be ensuring the shoe's battery lasts for 16 hours and keeping the weight light for user comfort.

Interviewer: How would you measure the success of this product?

Candidate: Success metrics include sales numbers broken down by user segments, age groups, professions, etc., the number of returns, product reviews, and the level of app engagement.

Interviewer: Thank you for your comprehensive approach to designing this smart shoe. It's a well-thought-out concept addressing key user needs in the current context



5. Design an ATM for London's Heathrow Airport (Difficulty Level: Moderate)

Interviewer: Welcome. Today, we're looking at designing an ATM specifically for London's Heathrow Airport. Can you confirm your understanding of the task?

Candidate: Just to confirm, we're designing a traditional ATM machine for dispensing cash, correct? Also, is there any specific location within the airport where this ATM should be situated?

Interviewer: Yes, that's correct. And no, there are no specific location restrictions within the airport.

Candidate: Great, I'll start by identifying the target customer segments, the problems we aim to solve, and the value proposition of this ATM. Is there any immediate feedback or constraints I should be aware of?

Interviewer: None at the moment. Please go ahead with your approach.

Candidate: My approach involves segmenting customers, understanding their pain points, and then mapping out a user journey with potential features and solutions. The key segments I see are consumer travelers, business travelers, airport workers, users needing accessibility solutions, and the ATM owner. Does that segmentation align with your expectations?

Interviewer: Yes, it does. Please continue.

Candidate: Each segment has unique needs. For instance, travelers require cash in local and foreign currencies, and there's a need for accessibility features for users with disabilities. Airport workers might need local currency for daily transactions. The ATM owner's concerns would revolve around security and global compatibility. I'm considering scoping out features like balance deposits and bill pay, focusing primarily on cash dispensing and potentially currency exchange. Does this direction seem appropriate?

Interviewer: Yes, that sounds reasonable. Proceed with that.

Candidate: For the user journey, I'll consider factors like

- Finding the ATM
- The transaction processes
- Including withdrawals in local and foreign currencies
- Balance checks and
- Security measures



Interviewer: That sounds great, what are the features you are thinking for solving these problems

Candidate: Features could include standard ATM design with multilingual signage, a card reader with language detection, and accessible options for the visually or hearing impaired. We could explore currency conversion but might limit it to major currencies to reduce complexity.

Interviewer: That seems comprehensive. What about prioritizing these features?

Candidate: I suggest a simple framework of reach versus level of effort.

Features like basic cash withdrawal and multilingual support would have high reach and relatively low effort.

More complex features like AI support or currency conversion could be a lower priority, especially if they don't significantly enhance the user experience in an airport setting.

Interviewer: How would you measure the success of this ATM design?

Candidate: Key metrics would include Daily Active Users (DAU), total daily withdrawal value per user, and the DAU as a percentage of the total number of passengers at Heathrow. Consistent or increasing figures in these areas would indicate a successful design.

Interviewer: Thank you for your detailed approach. Your segmentation and prioritization seem well-thought-out, and the focus on user experience and accessibility is commendable.



Case based GD

Some topics can be

1. **Agile vs. Waterfall:** Compare and contrast Agile and Waterfall methodologies in product development.
2. **Minimum Viable Product (MVP):** Discuss the importance and challenges of implementing MVPs for product-market fit.
3. **User-Centric Design:** Explore strategies for effective user-centric design in product development.
4. **Product Road mapping:** Debate best practices for creating and maintaining product roadmaps aligned with business goals.
5. **Feature Prioritization:** Discuss methods for prioritizing product features, considering value and effort.
6. **Cross-Functional Collaboration:** Explore strategies for fostering collaboration among product, engineering, design, and marketing teams.
7. **Market Analysis and Validation:** Debate the significance of market research and validation in product management.
8. **Product Launch Strategies:** Discuss effective strategies for launching new products or features to market.
9. **Managing Product Lifecycle:** Explore challenges and strategies for managing the entire product lifecycle.
10. **Ethical Considerations:** Debate ethical dilemmas and strategies for incorporating ethics into product development.

For further reference you can look into this discussion: [Case Based GD Discussion](#)



Guesstimates

1. Estimate daily Uber rides in Delhi NCR (Difficulty Level: Easy)

Candidate: Should I consider all types of rides - Uber Go, Sedan, premier, auto, bike, share, etc and food delivery rides?

Interviewer: You can ignore food delivery rides.

Equation: Number of Uber rides in Delhi NCR per day = # of Uber users * average number of rides.

Calculating the number of uber users in the Delhi NCR region:

The total population of Delhi NCR = 20M.

Internet and smartphone users = ~50% so the remaining number is 10M.

Assuming the target audience which might use an online cab, services is 60% which makes it 6M.

Assuming Uber and OLA being 2 major players in the NCR region with equal market share, so Uber's market share is approximately 50% which implies 3M users of UBER in Delhi NCR.

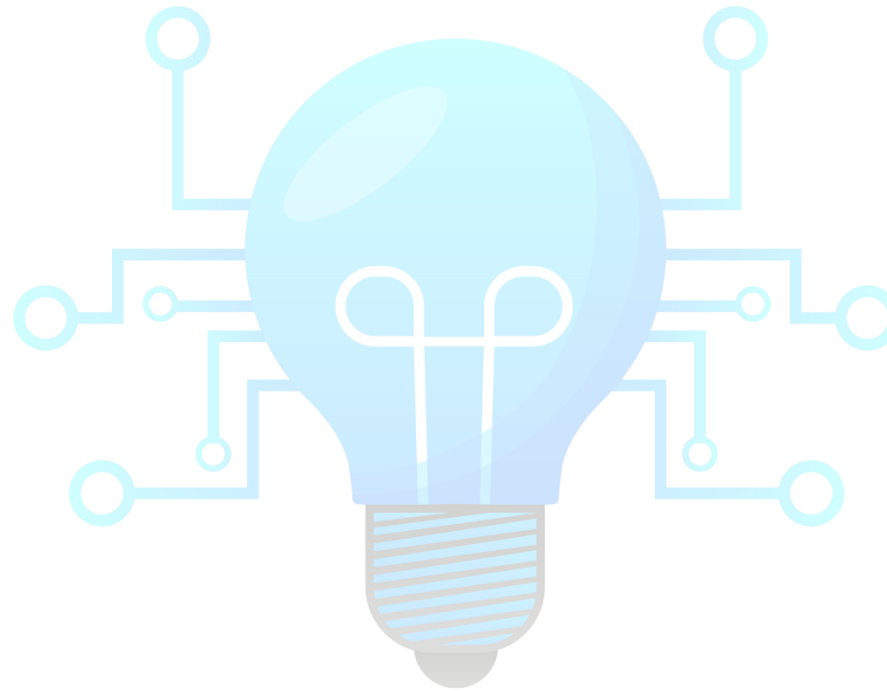
Now to calculate the average no. of rides per day breaking into Uber users into the following segments:

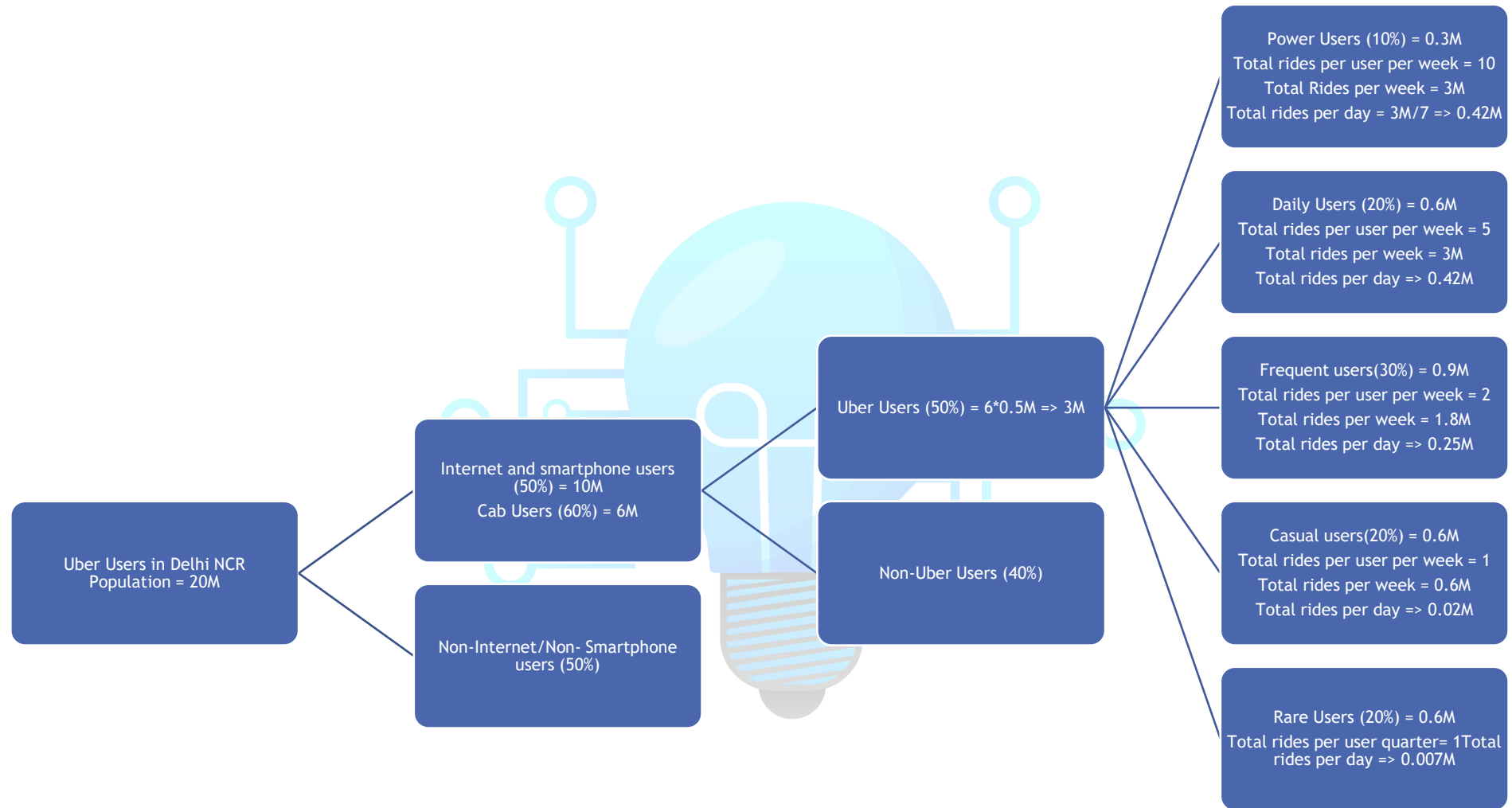
1. Power users = 10% of 3M = 0.3M and takes 10 rides per week making ~0.42 M rides per day
2. Daily users = 20% of 3M = 0.6M and takes 5 rides per week making ~0.42 M rides per day
3. Frequent users = 30% of 3M = 0.9M and takes 2 rides per week making ~0.25 M rides per day
4. Casual users = 20% of 3M = 0.6M and takes 1 ride per month making ~0.02 M rides per day
5. Rare users = 20% of 3M = 0.6M and takes 1 ride per quarter making ~0.007 M rides per day



Total Uber rides per day = Total no of rides by all different types of users.

Total Uber rides in Delhi NCR per day is around **1.1 M rides**.





2. Estimate the number of golf balls required to circle the earth at the equator (Difficulty Level: Easy)

Candidate: Is it okay to consider the circle at the equator covering the earth is mostly flat and free of mountains and volcanoes?

Interviewer: Yes.

Candidate: I am assuming the standard diameter of a golf ball to be 2 inches. Is that fine?

Interviewer: Yes, you can.

The approach is to find the circumference of the earth at the equator and then divide it by the diameter of a standard golf ball.

Part 1: Find the diameter of the earth at the equator.

Candidate: I am assuming the standard diameter of earth to be 20,000 km. Is that fine?

Interviewer: Yes, you can.

The diameter of the earth is 20,000 km, which is $2r$, hence r is 10,000 km.

As we know, the circumference can be calculated by the formula $2 \times 3.14 \times r$

Using the formula, we get the circumference to be covered by the golf ball is equal to $20000 \times 3.14 = 62,800$ km.

Converting it to cm, we get $62,800 \times 1000 = 6280$ million cm.

The standard diameter of a golf ball is assumed to be 2 inches which is equal to 5 cm.

Dividing it by the diameter of the golf ball, we get $628/5 = 1256$ million golf balls.

Estimated number of golf balls needed to circle the earth: **1256 million.**



3. Estimate the market size of cars in India (Difficulty Level: Easy)

Candidate: Are commercial cars (Cabs) also to be considered?

Interviewer: No. Only Private vehicles are to be considered.

Candidate: Any specific segments within the car market.

Interviewer: No.

Candidate:

Market size = Number of new cars sold X Avg. price of a car

Number of New Cars sold = Number of new cars bought (A) + Number of old cars replaced by new ones (B)

A = Total no. of cars X Growth rate of car Industry

B = Total no. of cars / Avg life cycle of a car

Total number of existing Cars = $3.6 + 5.4 + 7.2 + 0.9 + 4.2 + 6.3 + 0.52 = 28.12$ million

Number of New Cars bought = 28.12×0.03 (We know that the growth rate of Automobile Industry in India is 3% and is expected to be the same till 2025.) = 0.84 million new Cars (A)

Considering the average life of cars = 10 years. Every 10 year a car would be replaced by a new one.

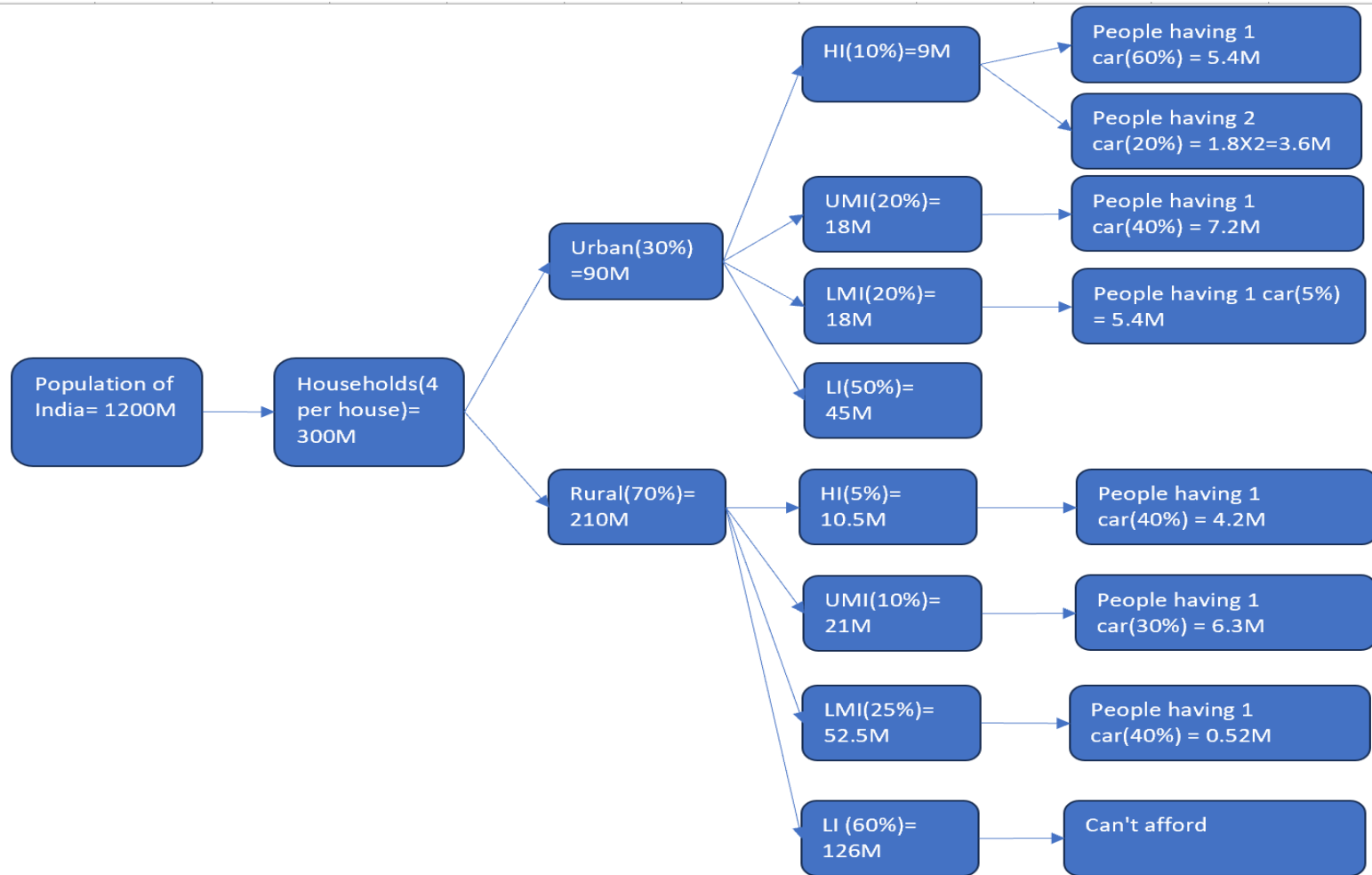
Hence, $28.12 / 10 = 2.81$ million Cars are replaced every year (B)

Total no of new cars = $A + B = 0.84 \text{ M} + 2.81 \text{ M} = 3.65$ million new cars sold per year /

Market Size = $3.65 \text{ M} \times 500000 = 1.85$ trillion INR.

Number of new cars sold in 2016 = 3.3 million





Note: HI = High Income, UMI = Upper Middle Income, LMI = Lower Middle Income, LI = Lower Income.



4. Estimate the market size of Surf Excel detergent in India (Difficulty level: Medium)

Assuming the population of India to be 130 Crores. After applying the urban rural split of 30:70, we have Urban population ~ 40 Crores and Rural population ~ 90 Crores.

Usage of Surf Excel detergent is drastically different for the urban and the rural population.

Hence, we will be approaching this case based on this split.

For the rural population,

Applying the Socio-Economic classification we have,

High-income group (10%) = 9 Crores

Middle-income group (50%) = 45 Crores

Low-income group (40%) = 36 Crores

Assuming the Surf Excel share in the market to be 5% in Rural India (because it's an expensive brand).

a. High-income group (Rural)

Total number of households assuming an avg. family size of 5 ~ 2 Crores.

Detergent usage per month (ask/assume) = 500 grams per month (INR 90)

Total detergent market share = 90×2 Crores = 180 Crores INR

Surf Excel market share = 5% of 180 Crores INR = 9 Crores INR

b. Middle-income group (Rural)

Total number of households assuming an avg. family size of 5 ~ 9 Crores.

Detergent usage per month (ask/assume) = 250 grams per month (INR 50)

Total detergent market share = 50×9 Crores = 450 Crores INR

Surf Excel market share = 5% of 450 Crores INR = 22.5 Crores INR



c. Low-income group (Rural)

Total number of households assuming an avg. family size of 6 ~ 6 Crores.

Detergent usage per month -

This section of the rural population mostly uses sachets. Averaging to usage of 2 sachets (of INR 3) every week (ask/assume). Therefore, approximately INR 25 per month.

Total detergent market share = $25 \times 2 \text{ Crores} = 50 \text{ Crores INR}$

Surf Excel market share = 5% of 50 Crores INR = 2.5 Crores INR

For the urban population,

Applying the Socio-Economic classification we have,

High-income group (20%) = 8 Crores

Middle-income group (40%) = 16 Crores

Low-income group (40%) = 16 Crores

Assuming the Surf Excel share in the market to be 15% in Urban India (owing to the presence of multiple options in the market).

a. High-income group (Urban)

Total number of households assuming an avg. family size of 4 ~ 2 Crores.

Detergent usage per month (ask/assume) = 1 Kg per month (INR 200)

Total detergent market share = $200 \times 2 \text{ Crores} = 400 \text{ Crores INR}$

Surf Excel market share = 15% of 400 Crores INR = 60 Crores INR

b. Middle-income group (Urban)

Total number of households assuming an avg. family size of 5 ~ 3.2 Crores.

Detergent usage per month (ask/assume) = 500 grams per month (INR 90)

Total detergent market share = $90 \times 3.2 \text{ Crores} = 288 \text{ Crores INR}$

Surf Excel market share = 15% of 288 Crores INR = 43.2 Crores INR

c. Low-income group (Urban)

Total number of households assuming an avg. family size of 6 ~ 2.6 Crores.



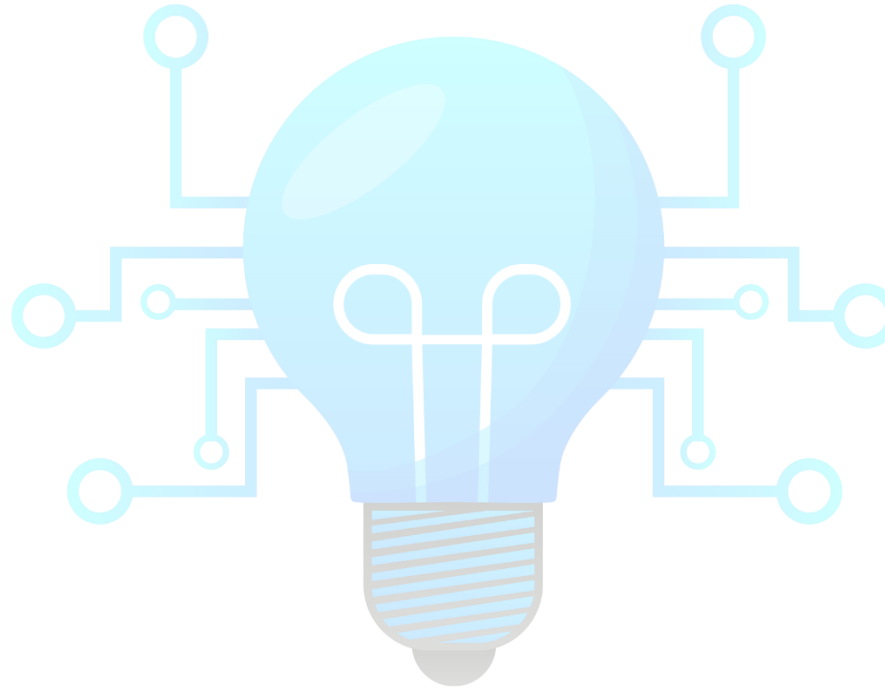
Detergent usage per month -

This section of the urban population mostly uses sachets. Averaging to usage of 3 sachets (of INR 3) every week (ask/assume). Therefore, approximately INR 35 per month.

Total detergent market share = 35×2.6 Crores = 91 Crores INR

Surf Excel market share = 15% of 91 Crores INR = 13.65 Crores INR

Therefore, total market size of Surf Excel in India = $9 + 22.5 + 2.5 + 60 + 43.2 + 13.65 = 150.85$ Crores per month



5. Estimate the number of queries handled by Google per second (Difficulty Level: Medium)

Candidate: Global population = 7 billion

Google search engine doesn't work in China (~1B population), therefore remaining = $7B - 1.4B = 5.6B$

Internet penetration = 60% of 5.6 billion = 3.36 B

Dividing this 3.36B into different user segments on the basis of age:

1. Age group <15 and >40: This is around 30% of total internet users (30% of 3.36B = 1.08B)
2. Age group 15 to 40 years old: This is around 40% of total internet users (40% of 3.36B = 1.34B)
3. Age group 40 to 60 years old: This is around 30% of total internet users (40% of 3.36B = 1.08B)

Each segment can further be broken down into on the basis of frequency of search:

1. Frequent Users: Assuming that these users make 5 searches per day
2. Regular Users: Assuming that these users make 2 searches per day
3. Irregular Users: Assuming that these users rarely make searches. So these have been eliminated from consideration.

Further calculating the searches of each frequency in each user segment:

1. Age group <15 and >40 :
 - a. Frequent Users:
Since this age group is not tech-savvy, we will assume 20% of users in this segment to be frequent. (20% of 1.08B = 0.216M). Each user does 5 searches a day. So total searches will be $\Rightarrow 0.216B * 5 \text{ searches} = 1.08B$.
 - b. Regular Users:
Assuming that almost 40% of users in this segment will be regular users with an average of 2 searches per day, total searches will be $\Rightarrow 40\% \text{ of } 1.08B * 2 \text{ searches} = 0.864M$
 - c. Irregular Users:
The rest 40% are irregular users and can be ignored.

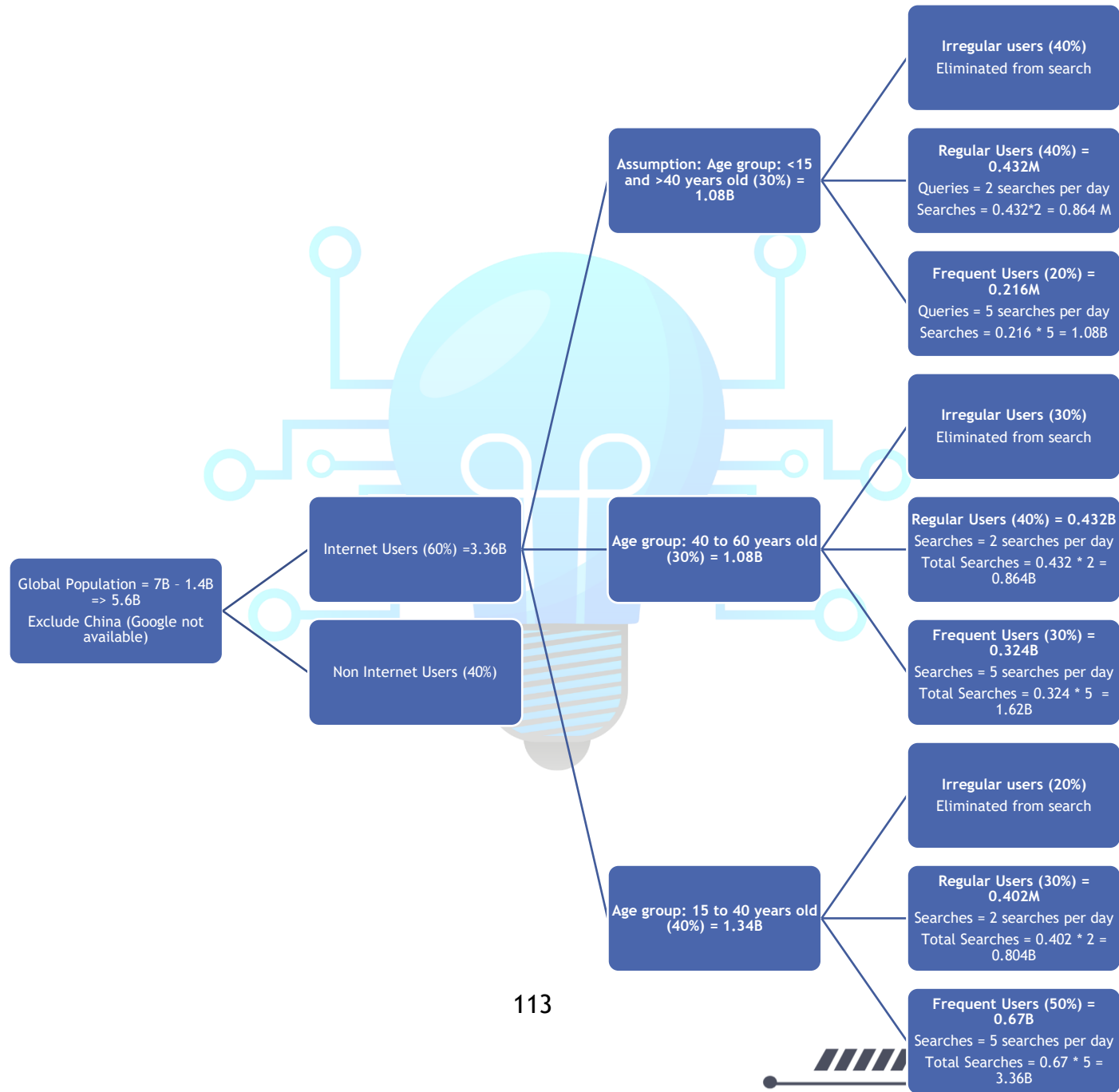


2. Age group 15 to 40 years old: This is around 40% of total internet users (40% of 3.36B = 1.34B)
 - a. Frequent Users:
Since this age group is tech-savvy, we will assume 50% of users in this segment to be frequent. (50% of 1.34B = 0.67B). Each user does 5 searches a day. So total searches will be $\Rightarrow 0.67B * 5 \text{ searches} = 3.36B \text{ searches}$.
 - b. Regular Users:
Assuming that almost 30% of users in this segment will be regular users with an average of 2 searches per day, total searches will be $\Rightarrow 30\% \text{ of } 1.34B * 2 \text{ searches} = 0.804B$
 - c. Irregular Users:
The remaining 20% are irregular users and can be ignored.
3. Age group 40 to 60 years old: This is around 30% of total internet users (40% of 3.36B = 1.08B)
 - a. Frequent Users:
Since this age group is not tech-savvy, we will assume 30% of users in this segment to be frequent. (30% of 1.08B = 0.324B). Each user does 5 searches a day. So total searches will be $\Rightarrow 0.324B * 5 \text{ searches} = 1.62B \text{ searches}$.
 - b. Regular Users:
Assuming that almost 40% of users in this segment will be regular users with an average of 2 searches per day, total searches will be $\Rightarrow 40\% \text{ of } 1.08B * 2 \text{ searches} = 0.864B$
 - c. Irregular Users:
The rest 30% are irregular users and can be ignored.

Upon adding all of them,

Total = ~8.5B search per day = ~98K searches per second





6. How much revenue did Gmail make from ads in India last year? (Difficulty Level: Medium)

We will use the Framework for Estimation as: $\text{Revenue} = \text{Number of Clicks in India per Year} * \text{Revenue per Click}$

Estimating Number of Clicks:

1. Number of Users:

$\text{Number of Gmail Users} = \text{India Population} * \text{Percentage of internet Users} * \text{Percentage of internet Users Using Gmail}$

Estimating from available data:

India Population: 1.4 billion

Percentage of internet Users: 50%

Percentage of internet Users Using Gmail: 80%

Calculation: $1.4 \text{ billion} * 50\% * 80\% = 560 \text{ million Gmail users}$

2. Number of Clicks per User per Year:

$\text{Number of Clicks per User per Year} = \text{Number of Emails Received per User per Year} * \text{Number of Ads per Email} * \text{Click-Through Rate (CTR)}$

Estimating from available data:

Number of Emails Received per User per Month: 50 (approx.)

Number of Ads per Email: 2 (approx.)

Click Through Rate: 1.5% (approx.)

Calculation: $50 \text{ emails/month} * 12 \text{ months} * 2 \text{ ads/email} * 1.5\% \text{ CTR} = 18 \text{ clicks per user per year}$

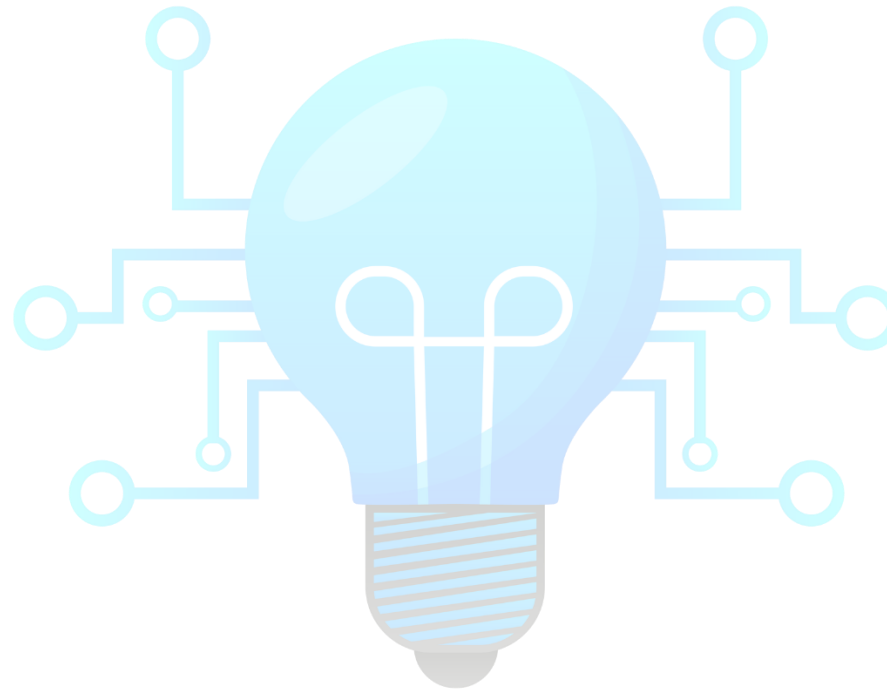
Calculating Annual Revenue:



Assuming that revenue per Click: ₹0.25(approx.)

Total Number of Clicks in India per Year: 560 million users * 18 clicks per user = 10.08 billion clicks.

Annual Revenue: 10.08 billion clicks * ₹0.25 per click = ₹2.52 billion



7. Estimate the number of WhatsApp chats happening in India (Difficulty Level: Medium)

Candidate: By chats do you mean 1-1 chats only or does it include group chats as well?

Interviewer: Consider both

Candidate: Do you want me to consider sharing images, videos, and gifs as a part of the chat?

Interviewer: No, consider text only,

Candidate: We want to analyse from a single user perspective right and not the total number of chats on both ends?

Interviewer: Yes.

Candidate: Can we consider chats that happened in the past 24 hours?

Interviewer: Fine.

Candidate: Based on these clarifications, we can estimate the number of WhatsApp chats in India through the following steps:

User Base:

Estimate the total number of WhatsApp users in India. We can do this by taking 60% of the population with internet access, then 50% of those with mobile phones, and finally, 90% of mobile users who use WhatsApp. This gives us approximately 380 million users.

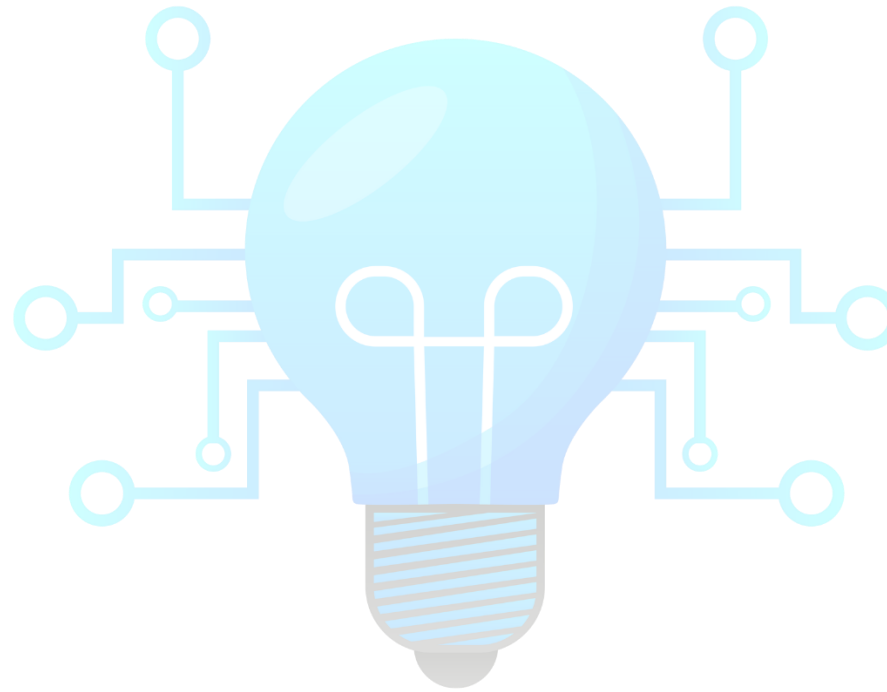
Chat Frequency:

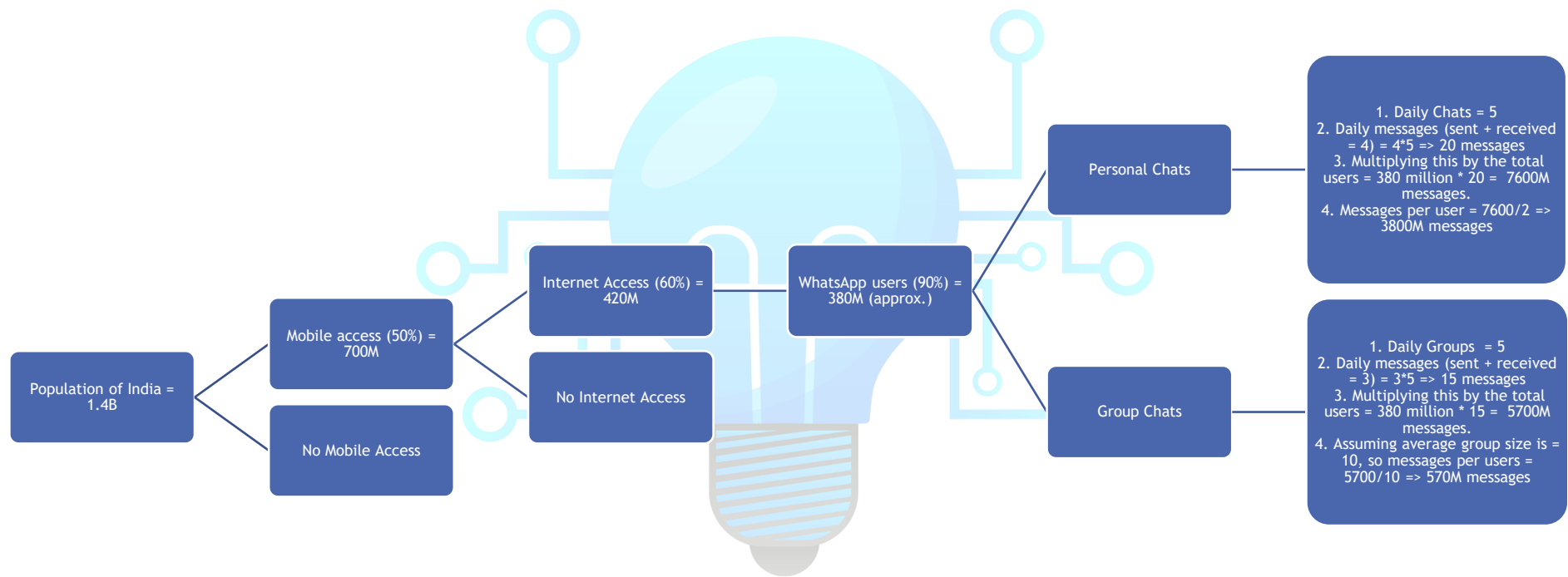
1. Personal Chats: We assume an average user has 5 daily interactions with contacts, sending and receiving 2 messages each (10 messages total). So total messages per day for the user = 4 messages * 5 chats = 20 messages. Multiplying this by the total users (380M), we get 7,600 million messages. To find individual user participation, we divide by 2, reaching 3,800 million chats.
2. Group Chats: Assuming users belong to 5 groups receiving 2 messages each (10 total), and replying with 1 message, we get 15 messages exchanged.



Multiplying this by the user base (380M) gives 5,700 million messages. We then divide by the average group size (10) to estimate individual user participation, resulting in 570 million chats.

Total Chats = Adding the estimates for personal and group chats, we get 3,800 million + 570 million = 4,370 million chats in India per day.





8. Estimate the market size of iPhone 15 in India (Difficulty Level: Expert)

Taking the population of India to be 130 Cr.

According to the socio-economic classification, we have 20% of the population falling under a high-income group, 40% of the population under middle-income group, and 40% under a low-income group (with 20% under the below poverty line)

Considering the rich-income group:

- 20% of 130Cr = 26Cr
- Firstly, assuming all the people under this income group will own a mobile phone (ask/assume)
- If 80% of the people under this income group would be brand conscious and prefer premium brands of cell phones, we have $0.8 \times 26 \sim 20\text{Cr}$
- We know that Apple's share in the premium brand cell phone market is 46%, hence we have 46% of 20cr $\sim 9\text{Cr}$ people preferring an iPhone over any other smartphone
- Considering the age group factor -
 0-15 age group: 30% of the population $\sim 3\text{Cr}$
 Assuming 5% of these people would use a mobile phone since they would be school kids below 10th standard, we have 15 lacs potential Apple customers
 16+ age group: 70% of the population $\sim 6\text{Cr}$
 Assuming everybody will have a mobile phone in this segment we have 6Cr potential Apple customers

Considering the middle-income group:

- 40% of 130Cr = 52Cr
- Assuming all the people under this income group will own a mobile phone (ask/assume)
- Assuming this class of the income group isn't much brand conscious, only 20% would be going for premium brands of mobile phones. 20% of 52Cr $\sim 10\text{Cr}$
- Also, we know that Apple's share in the premium cell phone brand market is 46%, hence we get 46% of 10Cr $\sim 5\text{Cr}$
- Considering the age group factor -
 0-15 Age group: 30% of the population, 1.5Cr Assuming 2% of these people would use a mobile phone since they would be school kids below 10th standard, we have 3 lacs potential Apple customers
 16+ age group: 70% of the population, 3.5Cr



Assuming everybody will have a mobile phone in this segment we have 3.5Cr potential Apple customers

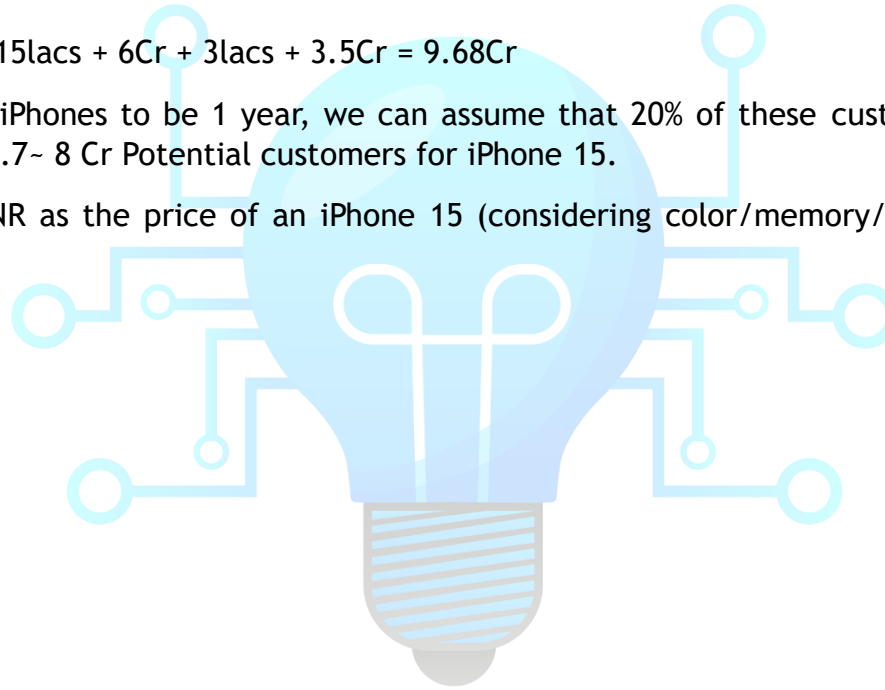
Considering the low-income group:

- This section of the population generally doesn't purchase premium phones, and buy second-hand products even if they want to go for them. Hence, we will assume the contribution of this section of the population to be negligible in estimating the iPhone 15 market in India.

Total potential apple customers are 15lacs + 6Cr + 3lacs + 3.5Cr = 9.68Cr

Considering the warranty period of iPhones to be 1 year, we can assume that 20% of these customers would not be going for an upgrade right away. Hence, we get 7.7~ 8 Cr Potential customers for iPhone 15.

Also, assuming an average of 65k INR as the price of an iPhone 15 (considering color/memory/model variants) we have, an INR **520000 Crore market.**



9. How much storage space is required to host all the images of Google Street View? (Difficulty Level: Expert)

Assumptions:

- **Image Size:** Assuming each 360-degree image occupies approximately 20 megabytes (MB) of storage, acknowledging potential variations due to resolution and compression techniques.
- **Image Frequency:** Hypothesizing capture of a new image every 10 meters along a street, recognizing this value can differ depending on location and desired detail.
- **Global Population Distribution:** Approximating the 8 billion global population as 2 billion residing in towns and 6 billion in cities, acknowledging this is a simplification for analytical clarity.

Calculations:

Stage 1: Images per Kilometer

The frequency assumption translates to 100 images per kilometer (1,000 meters) of covered streets.

Stage 2: Total Kilometers of Streets

We now embark on the intricate exercise of estimating global street length:

Towns: Based on the assumption of 2.5 kilometers of street per 2,000 residents, and scaling for the estimated 2 billion town dwellers, this translates to 2.5 million kilometers.

Cities: To refine our analysis, we further segment city dwellers:

Households: Assuming 50% reside in houses with an average 10-meter distance between them, and accounting for 800 million urban houses (3 residents per house on average) and two-sided streets, we arrive at 40 million kilometers for residential streets.

Apartments: For the remaining 50%, we hypothesize 100 occupants per apartment building and 100 meters between buildings, resulting in 12.5 million kilometers of apartment-lined streets.

Office Districts: Factoring in the estimated 20% working population, occupying 100-person office buildings spaced 100 meters apart, adds another 0.25 million kilometers.



Total: By summing our estimates, we reach a projected 55.25 million kilometers of streets traversed by Google Street View cameras worldwide.

Stage 3: Total Image Size

Finally, multiplying the total kilometers by the image-per-kilometer rate and individual image size, we obtain:

55.25 million kilometers * 100 images/kilometer * 20 MB/image = 110.5 million gigabytes (GB) or **115 thousand terabytes (TB)** of estimated storage required for Google Street View images.

