XLRI
Xavier School of Management
For the greater good

PM CASEBOOK 2025

PREPARED BY

PROMETHEUS
PRODUCT, TECH & UI

PROMETHEUS
PRODUCT, TECH & UI

OUR TEAM

JAMSHEDPUR TEAM

Mallika Konkar
Editor

Sagar Pandey
Editor

Shreyansh Thakur
Editor

Sasha Makkar
Co-editor / Designer

Deesha Mitra
Co-editor

Garima Monga
Designer

Nischal Garg
Co-editor

Rama Raman
Co-editor

Shivangi Tripathi
Co-editor

Gaurav Mandhane
Co-editor

Yadnyi Deshpande
Co-editor

Yash Shroff
Co-editor

DELHI TEAM

Kushagra Agarwal
Editor

Arpita Singh Indoliya
Co-editor

Himanshu Goenka
Co-editor

Shivam Kankal
Co-editor

Kuldeep Samal
Co-editor

Soumya Das
Co-editor

ABOUT US

We are Prometheus, the Product Management and Tech Committee at XLRI, and we are here to ignite the fire of innovation and excellence in product management. Just like the Greek mythological figure who brought fire to humanity, we strive to bring cutting-edge knowledge and industry exposure to aspiring product managers of XLRI and beyond.
As part of XLRI's vibrant student community, Prometheus provides a platform for students passionate about pursuing careers in product management. Knowledge should go hand in hand with practical application, which is why we organise many activities, events, and workshops throughout the year, attracting a footfall of 6000+ students from top colleges across India.

Our goal is to bridge the gap between theory and practice, equipping students with the skills and insights they need to excel in the dynamic world of product management. We bring industry experts, professionals, and alumni to share their experiences through guest lectures and panel discussions, fostering networking opportunities and deepening students' understanding of the challenges and opportunities in this field.

ABOUT THE POCKETBOOK

Prometheus, the Product, Tech & UX Committee at XLRI, is proud to launch this pocketbook for the year 2025-26!

The purpose of curating this Product Management (PM) pocketbook is to help aspirants understand the landscape at various firms and provide them with talking points, especially on topics commonly asked in PM interviews. To aid students' preparation and their general understanding of the PM field, we have included vital concepts associated with the field, as well as a few critical product design frameworks, in addition to covering essential aspects of popular products through teardowns.

PM as a discipline has caught up in India only in the last decade; thus, there is a lack of quality material on product management in the Indian context. The inspiration for this compendium came from a lack of such relevant material. You can consider this a cheat sheet, which will help you quickly refresh your knowledge on various topics and then dive deeper into the subjects that interest you. We would request you to go through it if you are preparing for PM roles this placement season, or if you like reading and exploring PM as a field.

We do not claim this book to be a comprehensive, one-stop shop for anything PM-related & would urge aspirants to keep using all resources available to them, using this pocketbook as a guiding light. We wish all our readers the very best in their future endeavours and welcome any suggestions to improve the book.

Thank you & good luck!

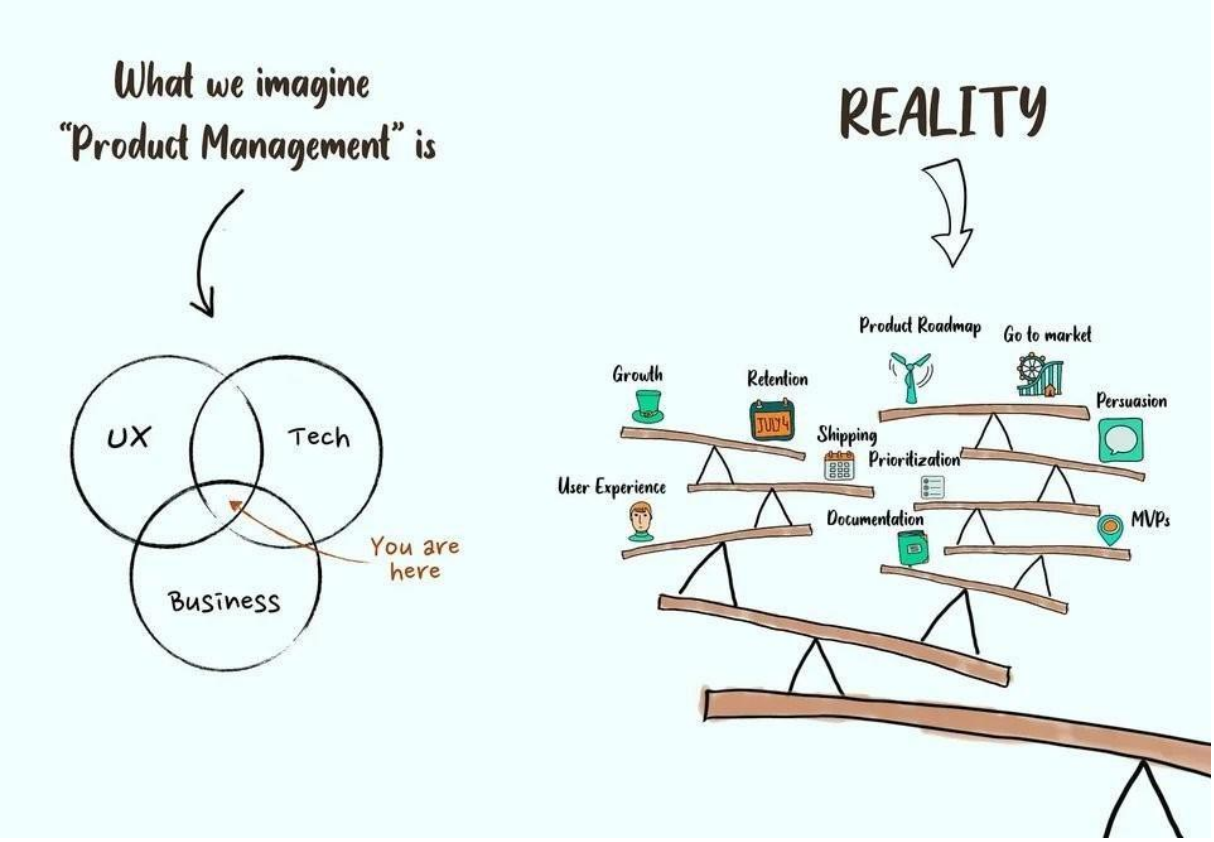
Table of Contents

Introduction to Product Management

The Product Management (PM) role

While the role of a PM in the software field has assumed massive significance since the advent of the Internet & subsequent web-based services, in hindsight, this field has existed since man conceptualized ideas to solve problems. It is gratifying that the PM role, at its core, has remained the same – solving problems.

Simply put, product management is a cross-functional role that lies at the confluence of technology, sales & marketing, and business, making it an appealing career option. A PM wholly owns the product and works directly with the C-suite and the customers. PMs set the strategy & vision for a product, define what constitutes success, and make value-oriented decisions. They identify customer pain points, convert requirements to cohesive problem statements & ideate solutions to improve customer satisfaction while delivering business value.



What, exactly, is a product manager?

Getting Started in Product Management for Interviews

Entering the realm of Product Management (PM) can feel daunting, especially if you're new to the field. The good news is, your willingness to learn and grow is what matters. The journey begins with understanding the fundamental frameworks and daily responsibilities that define the role.

Understanding the PM Role

Product Management revolves around shaping the development and lifecycle of a product. Your primary focus will be on understanding user needs, prioritizing features, and driving the product roadmap. Here's a glimpse into what you'll be doing on a daily basis:

- **Customer and Market Research:** Dive deep into understanding your target audience and market trends.
- **Feature Prioritization:** Use frameworks like CIRCLES, RICE, or AARRR to prioritize what features to build next.
- **Metrics and Analytics:** Analyse key metrics to track product performance and user engagement.
- **Problem Solving:** Tackle challenges through structured approaches like Root Cause Analysis (RCA).
- **Cross-functional Alignment:** Work closely with engineering, design, marketing, and sales teams to ensure alignment and successful product launches.
- **Iterative Improvement:** Continuously iterate on the product based on user feedback and data insights.

During the product-building exercise, you will have to talk to customers to find out their pain points. This phase requires strong communication skills. Using your understanding of technology, you will try to solve the customer's pain. Sometimes the customers might not even know they need the product, so you might have to market it to them.

Additionally, you will operate under constraints, either cost-related, time-related, or resource-related ones. Clear and highly-structured logical and decisive thinking while operating under several constraints is a critical skill for any PM.

Preparing for Product Management Interviews

Every company seeking PM candidates values clear, highly structured, logical, and decisive thinking amidst various constraints. While companies may articulate this requirement in broad terms, focusing on key foundational skills can significantly enhance your chances in PM interviews:

- **Enhancing Problem-Solving Abilities**: Sharpening your approach to thinking and decision-making methodologies.
- **Cultivating User-Centricity:** Developing a deep understanding of user needs and preferences to drive product decisions.
- **Refining Communication Skills:** Strengthening your ability to convey ideas effectively to diverse stakeholders, both internally and externally.
- **Deepening Technological Insight:** Improving your grasp of technology to propose and evaluate viable solutions for product challenges.

Get started with perfecting your CV. Try to include product and technical aspects of your work experience, if any. Also, mention any product-related live projects or case competitions done. It usually begins with company presentations, followed by a CV call and then after the CV shortlist, the company process begins.

While almost all companies have interview rounds, some companies also take submissions in the form of documents or presentation decks before the interviews. It is important to learn not just to convey your thoughts in an interview setting where time is of the essence but also on paper, where you will not be present to explain your thought process. Clarity and structure of thought in your submission, in that case, becomes extremely important.

Don't feel overwhelmed—each step forward in these skill areas will solidify your candidacy and prepare you for the demands of product management.

To excel in PM interviews, you'll encounter various types of questions that test your problem-solving abilities and strategic thinking:

- **Product Design:** Craft solutions for hypothetical product scenarios.
- **Product Improvement:** Identify and propose enhancements to existing products.
- **Root Cause Analysis (RCA):** Investigate and solve underlying issues affecting product performance.
- **Guesstimates:** Structure and map out the reach and impact of your product or feature.
- **Metrics and KPIs:** Interpret data and metrics to make informed decisions.

Developing Your Skills

Here's a structured approach and some additional tips on preparing for PM interviews:

1. **Learn the Concepts:** Familiarize yourself with frameworks like CIRCLES for a structured approach to product design and improvement, RICE (Reach, Impact, Confidence, Effort) for prioritization and to find trade-offs, and AARRR (Acquisition, Activation, Retention, Referral, Revenue) to let strategy and a goal guide your product journey and Guesstimates.
2. **Practice Case Solving:** Attempt sample problem cases independently. Focus on structuring your approach, analysing the problem, and sequencing your steps logically.
3. **Reflect and Improve:** Review your process critically. Note any mistakes in your thought process and areas for improvement.
4. **Create Your Framework:** Develop a personal framework or checklist (hygiene checks) to ensure thorough problem analysis and solution structuring.
5. **Learn Collaboratively:** Partner with peers or mentors to learn together. Seek feedback from experts, seniors or experienced PMs to refine your approach.
6. **Iterate and Improve**: Continuously cycle through practice, reflection, and feedback until you notice a significant improvement in your problem-solving and interview skills.

Starting out in Product Management requires dedication and a systematic approach to learning and practising essential skills. Remember, every mistake is a learning opportunity, and consistent effort will pave the way for your success in PM interviews and beyond. Embrace the journey of growth and enjoy the challenges that come with shaping innovative products that meet user needs effectively.

Technical and Work Experience

Almost all of the people who get a PM internship have some technical background, either a technical degree and/or a technical job. Taking candidates with a technical background makes sense for companies because the products that these companies require you to manage will involve technology of some sort.

Having relevant work experience does help because there is a chance that in your previous work, you would have faced technical issues that you found solutions to. The assumption is that past experience will help in solving problems in the future. However, there are always exceptions. If you come from a non-technical background, like being a CA, you can still get into PM. You will have to prepare harder than those with a technical background, but it is possible.

Functions of a PM

The day-to-day functioning of a product manager varies according to the product, at what stage of its lifecycle the product is in (more on this later) and the firm. However, here are a few functions a PM is expected to carry out:

Research & Planning

It is usually the first step in product design, with the PM identifying the problem to solve. The motivation for this could arise from multiple sources – customer requests, competitor benchmarking, new technology, market research or a long-term vision for the product.

Once the problem statement is set, the next critical step is to create a roadmap for the product & get it approved. A roadmap is a long-term plan for the team, describing what needs to be completed when & by whom, at least in a rough way. It is created through exhaustive market research and an understanding of the team's level of expertise. It is crucial to identify the right features and scenarios.

This is also the stage where the PM starts defining the success metrics for the product. Intense collaboration with the engineering & S&M teams is essential to understand limitations and set actionable, measurable goals.

Design

Product design involves deep-diving into the identified features and refine them according to the success metrics. The expected functionality of the product starts to take shape. UI/UX design and drawing up how exactly the product will look is also part of this stage.

The design stage is also a stage where the PM role varies significantly across firms. Some firms require PMs to develop functional specification documents that include details like goals, use cases, requirements, wireframes, and security. This document is refined over time through iterative discussions with developers, testers, and other PMs. Other firms follow much looser specs and a faster design process. PMs conduct regular face-to-face talks with stakeholders & brainstorm on whiteboards with designers. Some ownership is transferred to engineers who make easier decisions and ask the PM for clarifications whenever needed.

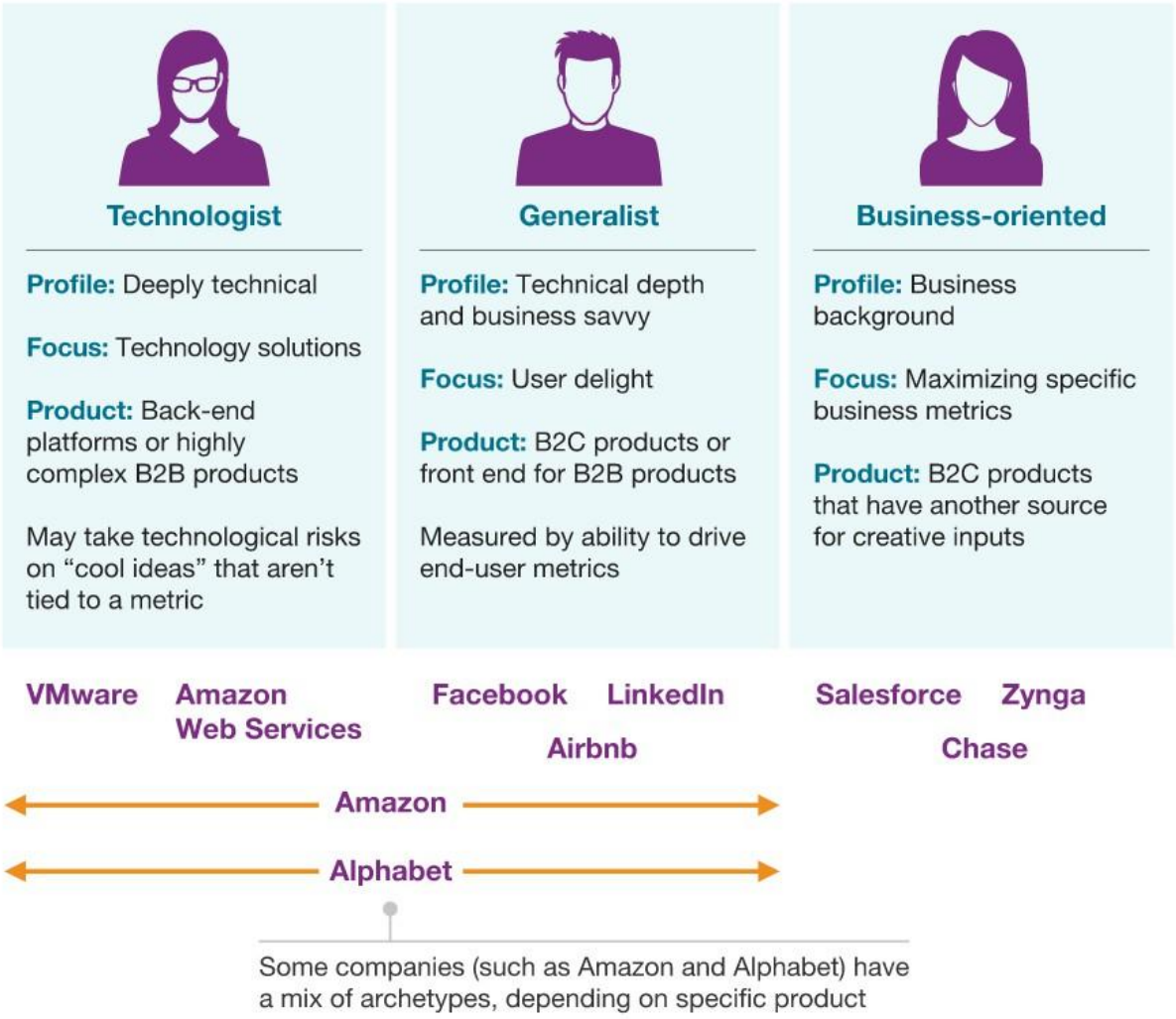
Implementation & Testing

During the implementation stage, the engineering team starts developing/coding work for the product. The primary function of the PM at this stage is prioritizing, keeping track of the work, and adjusting as necessary. These include changing features, making them easier to implement & modifying work schedules to improve efficiency.

Another crucial expectation from a PM is to gather feedback about the product and identify bugs in the product's early stages. They often do this via usability studies, running experiments and using the product themselves. In usability studies, participants are provided with a goal, and they try out the prototype versions of the product to reach that goal. Carrying out experiments is an excellent way of obtaining quantitative feedback from users. The acquired data is compared with expected success metrics to identify further areas of improvement required.

Release

Upon culmination of the development process, the PM gets ready to launch the product. This phase involves steps like running through a launch checklist (final approvals, legal matters, etc.) and ensuring teams' readiness to support the product in the future. Depending on the firm, the PM may hand over the product to other teams or keep supporting the product.



Understanding the Different Types of Product Managers

The role of a Product Manager (PM), is diverse and multifaceted, tailored to the specific needs of the industry, product, and organization. Here, we delve into the various types of Product Managers, each bringing a unique skill set and focus to the table.

1. Technical Product Manager (TPM)

Technical Product Managers focus on the technical aspects of product development. They collaborate closely with engineering teams to ensure that the product's technical specifications align with its vision and goals. TPMs often have a background in software development or engineering, making them adept at bridging the gap between technical capabilities and business objectives.

2. Growth Product Manager

Growth Product Managers are dedicated to scaling the product. Their main goal is to increase user acquisition, retention, and revenue through data-driven strategies. They work closely with marketing and sales teams, employing techniques such as A/B testing, user segmentation, and funnel analysis to drive growth.

3. Data Product Manager

Data Product Managers specialize in products that rely heavily on data and analytics. They ensure data integrity, accessibility, and usability, working with data scientists and analysts to derive insights that inform product decisions. Their expertise lies in understanding and leveraging data to enhance product features and performance.

4. UX/Product Design Manager

UX/Product Design Managers prioritize the user experience and design aspects of the product. They collaborate with UX/UI designers to create intuitive and engaging interfaces. Their focus is on user-centered design principles, ensuring that the product is both functional and aesthetically pleasing.

5. Platform Product Manager

Platform Product Managers oversee the development and maintenance of the underlying platforms and infrastructure that support multiple products. They work with technical teams to ensure scalability, reliability, and performance, making sure that the platform can support future growth and product enhancements.

6. AI/ML Product Manager

AI/ML Product Managers specialize in products that incorporate artificial intelligence and machine learning. They have a deep understanding of algorithms, model training, and data pipelines, and they collaborate with data scientists and ML engineers to integrate advanced technologies into the product.

7. Mobile Product Manager

Mobile Product Managers focus on mobile applications and their ecosystems. They ensure a seamless user experience across different mobile platforms, working with mobile developers and designers to optimize the app's performance and usability on various devices.

8. Enterprise Product Manager

Enterprise Product Managers handle products designed for business-to-business (B2B) markets. They navigate complex sales cycles and manage relationships with enterprise clients. Their expertise often includes a deep understanding of enterprise software and solutions, ensuring that the product meets the specific needs of large organizations.

9. Consumer Product Manager

Consumer Product Managers are dedicated to products aimed at the general public or consumer markets. They focus on features, usability, and engagement to appeal to a broad audience. Collaborating with marketing teams, they strive to understand consumer needs and trends to deliver a compelling product.

10. Hardware Product Manager

Hardware Product Managers oversee the development and lifecycle of physical products. They work with manufacturing, supply chain, and engineering teams to ensure product quality and reliability. Their role is crucial in industries where the product involves tangible goods, requiring a meticulous approach to design and production.

11. Innovation/Product Strategy Manager

Innovation/Product Strategy Managers focus on future product development and strategic direction. They identify new market opportunities and emerging technologies, working closely with senior leadership to align the product vision with the overall business goals. Their role is

pivotal in driving the company's long-term success and innovation.

12. Financial Product Manager

Financial Product Managers manage financial products such as payment solutions, banking apps, or investment platforms. They have a keen understanding of financial regulations and compliance, collaborating with finance and regulatory teams to ensure that the product adheres to industry standards and delivers value to users.

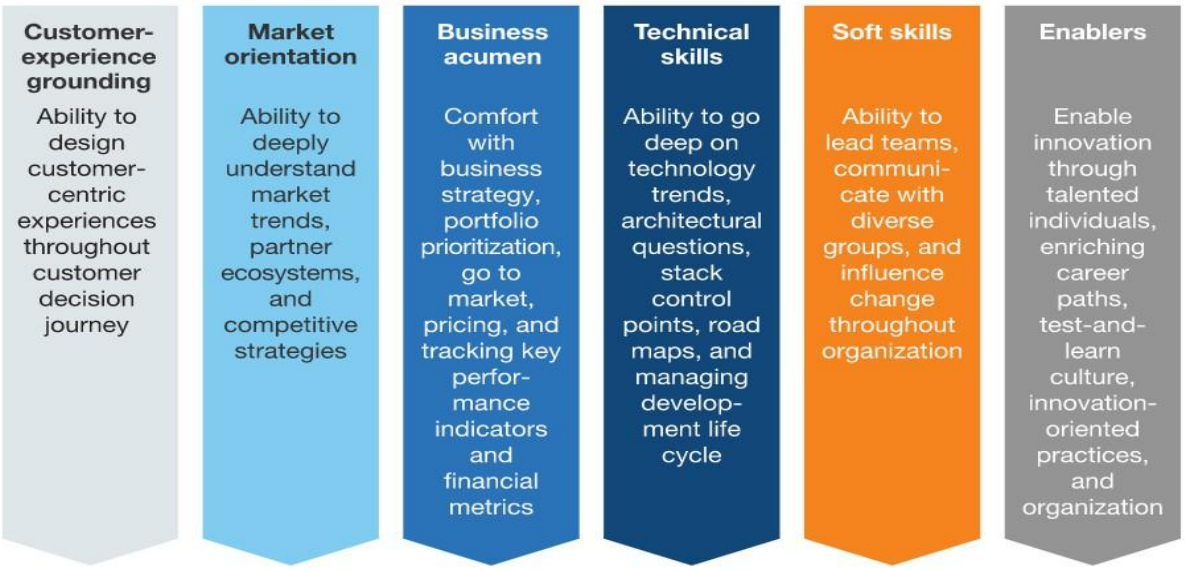
In summary, the role of a Product Manager is varied and dynamic, with each type bringing a distinct set of skills and focus areas. Whether it's through technical expertise, growth strategies, user experience design, or innovation, Product Managers play a crucial role in shaping the success of their products and driving their organizations forward.

What companies look for – the PM of the future

The role of a PM is here to stay as a vital cog connecting customer requirements with business value. With rapid technological improvements and consumers becoming more aware, the PM role is expected to change with a deeper focus on using the data generated. A PM will likely imbibe technological trends in-depth and have soft skills to strike meaningful conversations with customers and the C-suite. They will probably spend more than 30% of their time on external activities like customer engagement. Anticipating future requirements, many major universities have now started formally identifying product management as a specialization

.

Organizations of the future will assess a candidate's fit & product management capabilities in six significant areas – customer experience, market orientation, business acumen, technical skills, soft skills, and presence of organizational enablers.

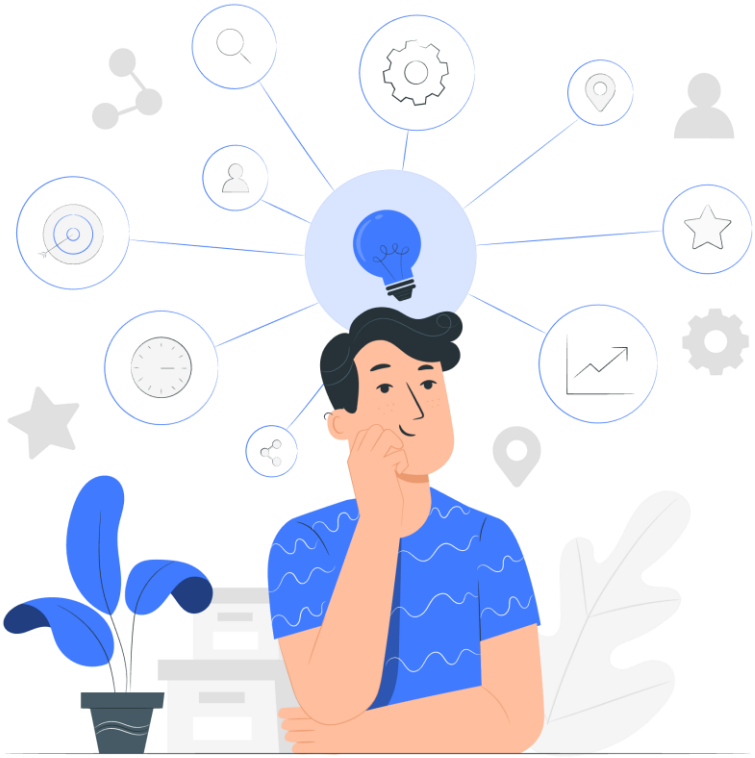


References

[1] https://www.mindtheproduct.com/what-exactly-is-a-product-manager/

[2] https://www.mckinsey.com/industries/technology-media-and-telecommunications/our-insights/product-managers-for-the-digital-world

[3] McDowell, G. L., & Bavaro, J. (2014). Cracking the PM Interview: How to Land a Product Manager Job (p. 364).



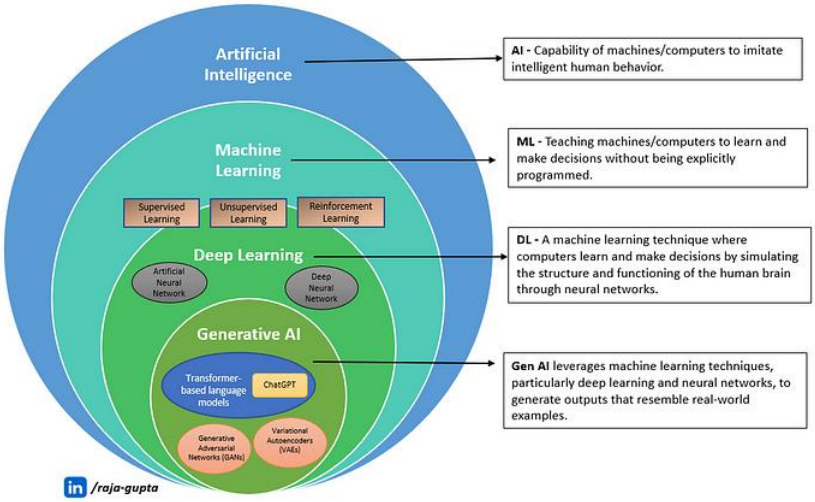
Product Management - Key Concepts and Terminologies

Generative AI

Generative AI is a type of artificial intelligence that creates new content based on what it has learned from existing content. This learning process, called training, builds a statistical model.

Most common generative models are:

- Variational Autoencoders (VAEs),
- Generative Adversarial Networks (GANs)
- Limited Boltzmann Machines (RBMs)
- Transformer-based Language Models



What are Transformers?

Generative AI is powerful because it uses Transformers. The introduction of the transformer model in 2017 by Ashish Vaswani and his team at Google (Attention is All you Need) further transformed the landscape of natural language processing (NLP). The transformer architecture relies solely on **self-attention** mechanisms, allowing models to process entire sequences simultaneously rather than sequentially, significantly improving efficiency and scalability. It has two main parts, the Encoder and the Decoder. The Encoder processes the input data and sends it to the Decoder, which then learns how to turn that data into useful output for a specific task.

What are LLMs?

Large language models (LLMs) are one type of generative AI, built on a Transformer architecture which allows them to process and analyse vast amounts of text data, enabling them to perform various tasks, including text generation, summarization, translation, and semantic search. The most unique and powerful point about LLMs is their ability to generate human-like text, summarize, and predict content based on vast amounts of data.
LLMs have evolved significantly over time, and their capabilities have expanded beyond simple text generation to encompass specialized applications in fields such as finance, healthcare, and customer support. For example, GPT-4 by OpenAI or Gemini by Google serves general-purpose applications, while BloombergGPT is tailored for financial modelling, and Med-PaLM is designed for healthcare.

What is a Prompt?

When given a prompt, Generative AI uses this model to predict and create new content. A prompt is a short piece of text given to a language model as input. It can be used in various

ways to guide and control the model's output. The generative AI program uses the prompt to understand what kind of content you want it to create, and then it generates new content based on that starting point.

What is Retrieval-Augmented Generation (RAG)?

Retrieval-Augmented Generation (RAG) is a framework that augments the general knowledge of a generative LLM by providing it with additional data relevant to the task at hand retrieved from an external data source. External data sources can include internal databases, files, and repositories, as well as publicly available data such as news articles, websites, or other online content. Access to this data empowers the model to respond more factually, cite its sources in its responses, and avoid "**hallucinations**" when prompted about information not found in the model's original training dataset.

Common use cases for RAG include retrieving up-to-date information, accessing specialized domain knowledge, and answering complex, data-driven queries.

How does RAG work?

RAGs operate with a few main steps to help enhance generative AI outputs:

- **Retrieval and pre-processing:** RAGs leverage powerful search algorithms to query external data, such as web pages, knowledge bases, and databases. Once retrieved, the relevant information undergoes pre-processing, including tokenization, stemming, and removal of stop words.
- **Grounded generation:** The pre-processed retrieved information is then seamlessly incorporated into the pre-trained LLM. This integration enhances the LLM's context, providing it with a more comprehensive understanding of the topic. This augmented context enables the LLM to generate more precise, informative, and engaging responses.

What is an AI Agent?

Agents are systems that **independently** accomplish tasks on your behalf. While conventional software enables users to streamline and automate workflows, agents are able to perform the same workflows on the users' behalf with a high degree of independence. These agents demonstrate reasoning, planning, and memory capabilities, and they possess a certain level of autonomy that enables them to make decisions, learn, and adapt over time.

AI agents can be classified into various categories based on their capabilities, roles, and interaction styles:

1. **Reactive Agents**: These basic agents operate on predefined rules and lack memory or adaptability. They react to stimuli without learning from past actions.
2. **Proactive Agents**: More advanced than reactive agents, these use predictive algorithms to identify patterns and forecast outcomes, allowing for more nuanced decision-making.
3. **Hybrid Agents**: These combine the features of reactive and proactive agents, efficiently responding to routine scenarios while also adapting to more complex situations.
4. **Utility-Based Agents**: These agents utilize complex reasoning algorithms to help users maximize desired outcomes by evaluating various scenarios.
5. **Learning Agents**: These agents possess capabilities for learning from their environments and experiences, making them highly adaptable and efficient in various contexts.

AI Assistants vs. AI Agents

AI assistants, a subset of AI agents, are designed to work closely with users, responding to their requests and assisting with tasks. Unlike broader AI agents, which may operate

independently, AI assistants typically require user supervision to make decisions. They are embedded within applications and interact with users throughout the task process, providing information and recommendations while leaving the final decision-making to the use.

Resources:

- AI Agents Use cases – Google
- What are AI agents and why do they matter? – GitHub

Agentic AI

Agentic AI refers to a class of artificial intelligence systems designed to operate autonomously, adapt in real time, and tackle multi-step problems with limited human oversight. These systems consist of AI agents that can make decisions and perform tasks independently, based on their programming and the data available to them.

The defining features of Agentic AI include:

- **Autonomy**: The ability to function independently within set boundaries without requiring constant human direction.
- **Goal Orientation**: AI agents pursue specific outcomes, evaluating their actions based on effectiveness in achieving these goals.
- **Adaptability**: These systems can adjust their decisions in response to real-time inputs and changing contexts.
- **Reasoning and Learning**: Many Agentic AI systems possess the capability to assess trade-offs, apply logical rules, and refine their behavior through experience and feedback.

Real-World Applications

Agentic AI is already making an impact across various industries.

- **Customer Service**: Platforms such as **Salesforce Agentforce** utilize autonomous AI agents to handle complex customer inquiries and make decisions without human intervention.
- **Autonomous Vehicles**: Technologies like **Waymo's autonomous driving system** make thousands of decisions per minute regarding speed adjustments and navigation choices. These applications demonstrate the potential of Agentic AI to enhance efficiency and productivity in different sectors.

Prompt Engineering

Prompt engineering is a critical technique in the field of generative AI. It includes designing and optimizing prompts in a strategic manner to generate more accurate and desired response from AI systems.

There are 3 important concepts in prompt engineering — Specificity, Contextualization and Fine-tuning.

1. Specificity

Specificity in prompt engineering means **being clear in the instructions** given to the AI. Instead of asking a broad question, give specific details about what you want the AI to do. Being specific helps the AI understand exactly what you're asking for, so it can give you a better answer. For example:

Non-specific Prompt: *"Tell me about cars."*

Specific Prompt: *"Can you describe the features of electric cars compared to traditional gasoline cars?"*

2. Contextualization

Contextualization in prompt engineering means giving the AI model clear details and **information about the situation or task** it's being asked to do. It's similar to providing a background story or setting the scene for the AI. This helps the AI system understand what it's supposed to do and who it's supposed to do it for. For example:

Non-contextualized Prompt: "Write a review of this product."

Contextualized Prompt: "Write a review of this product focusing on its performance for outdoor activities."

The contextualized prompt ensures that the generated review is tailored to the specific use case and audience, improving its relevance and usefulness.

3. Fine-tuning

Fine-tuning in prompt engineering involves **iteratively adjusting and refining the prompt** based on the AI system's output. It is an ongoing process to optimize the prompts and guide AI system to generate desired outcomes. For example: Imagine you're asking ChatGPT to write a short story about a dog.

Initial prompt: *"Write a story about a dog."*

Fine-tuned prompt: "Write a heartwarming story about a golden retriever named Max who helps a little girl overcome her fear of swimming."

How to Write Effective Prompts?

Here are some important points to keep in mind to write a clear and effective prompt.

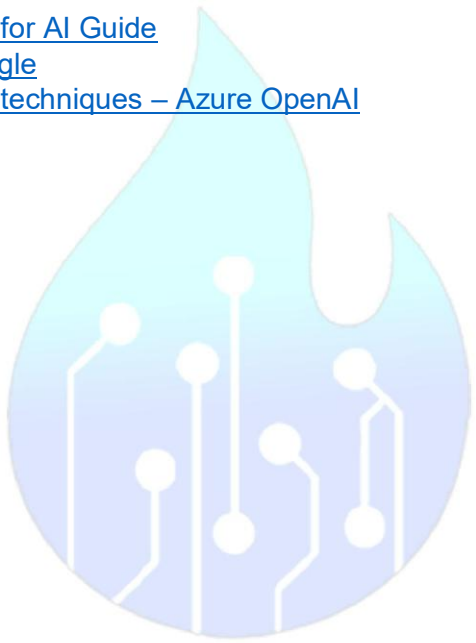
- **Be Clear and Specific:** Ensure that your prompt clearly communicates the task or question you want the AI system to address. Avoid ambiguity or overly complex language that could confuse the AI. Instead of vague prompts, ask specific questions that guide the AI system toward the desired outcome.
- **Provide Context:** Give enough context for the AI system to understand the problem or topic it's addressing. This helps the AI system generate more relevant and useful

responses.

- **Use Examples:** If applicable, provide examples to illustrate what you're asking for. Examples can help the AI system understand the desired output and provide more accurate responses.
- **Include Constraints:** If there are any constraints or requirements for the response (e.g., word count limits, specific formats), make sure to include them in the prompt. This helps the AI system generate responses that meet your criteria.
- **Test and Iterate:** Experiment with different prompts and observe how the AI system responds. Adjust your prompts based on the results to improve their effectiveness over time.
- **Focus on Clarity Over Creativity:** While creativity can be beneficial in some cases, prioritize clarity and effectiveness in your prompts. Clear and straightforward prompts are more likely to produce the desired outcomes.

Various prompt engineering techniques, such as Zero prompting, Few Shot Prompting, Chain of Thought, and more, have been developed to guide LLMs towards producing better outcomes for complex queries. For more information on techniques, refer to following resources:

- Prompt Engineering for AI Guide
- Handbook from Google
- Prompt Engineering techniques – Azure OpenAI
- OpenAI Academy



Cloud Computing

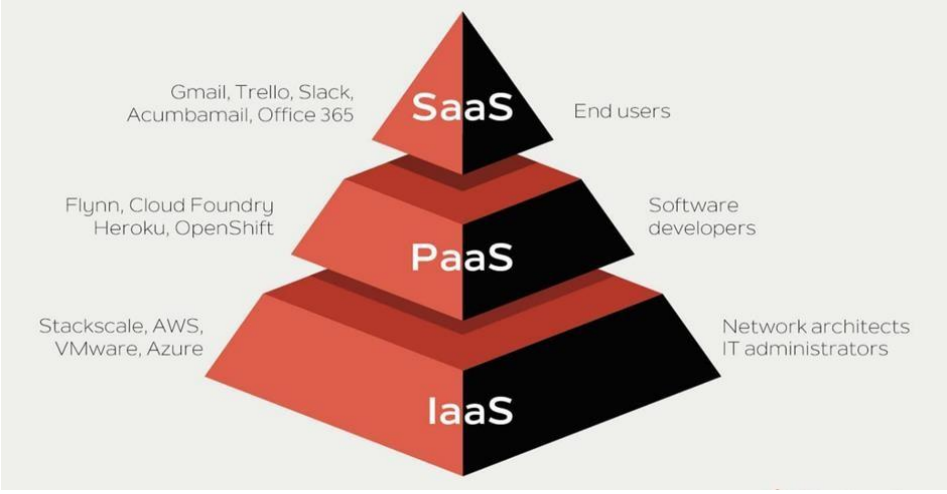
On-demand delivery of computing resources (data storage, servers, software, analytics & intelligence) over the Internet to offer faster innovation, flexible resources, and economies of scale.

Benefits of cloud computing:

- **Lower costs** – eliminate the need for capital investment in hardware, data centers.
- **Higher speed** – services provided on-demand offer flexibility to businesses through faster access to relevant data.
- **Global scale** – access stored resources from anywhere across the globe
- **Enhanced performance** – regular updates to existing software, improving speed and efficiency of hardware.
- **Security & reliability** – Easy data backup and disaster recovery making continuity in work easier.

Types of cloud computing:

- **Infrastructure as a Service (IaaS) –** basic IT building blocks that typically provide hardware and data storage space access. IaaS gives the highest flexibility and management control over IT resources.
- **Platform as a Service (PaaS)** – eliminates the need to manage infrastructure & lets users focus on developing and deploying applications. This helps increase efficiency as much of the heavy lifting required to maintain hardware and OS is removed.
- **Software as a Service (SaaS)** – focuses on the product's usability without looking at the underlying infrastructure or software.



More resources:

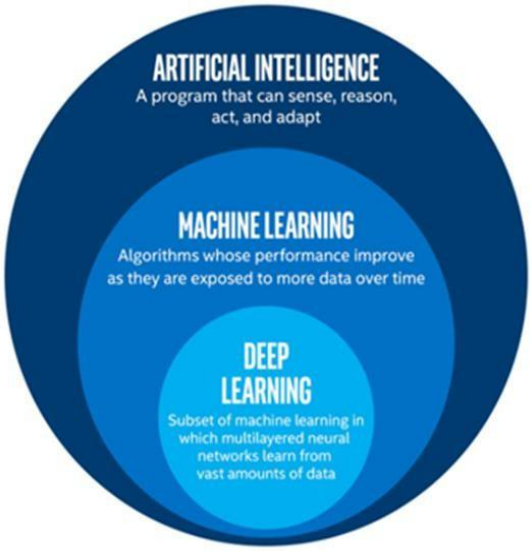
- Basic terminologies - IBM, Microsoft Azure
- Use cases & success stories
- Brush-up videos – Basics, AWS

Artificial Intelligence & Machine Learning·

Artificial Intelligence (AI) – simulation of human intelligence in machines programmed to think like humans and mimic their actions. The term may also be applied to any machine that exhibits traits associated with a human mind, such as learning and problem-solving.

Machine Learning (ML) – method of data analysis that automates analytical model building. It is a branch of artificial intelligence based on the idea that systems can learn from data, identify patterns, and make decisions with minimal human intervention.

Deep Learning – a class of machine learning algorithms that uses multiple layers to extract higher-level features from the raw input progressively.



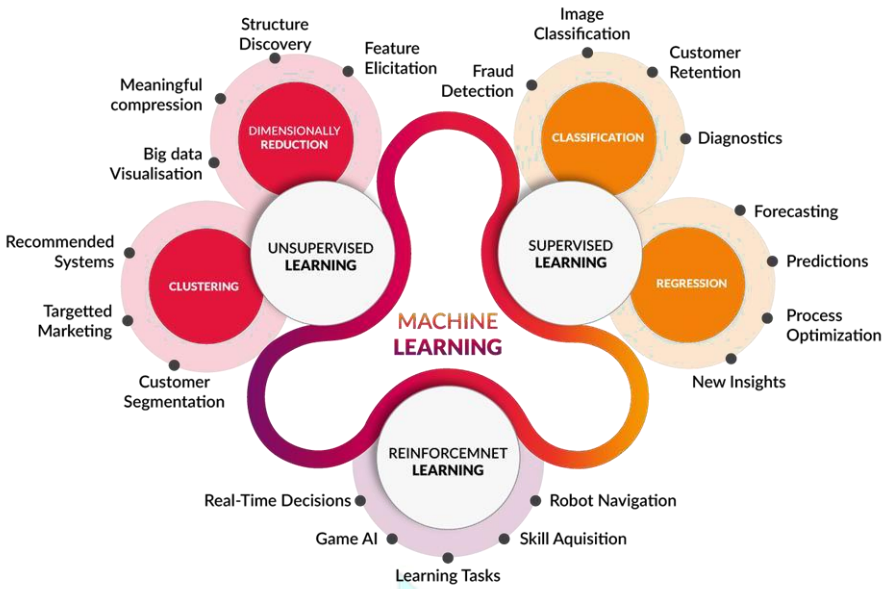
ML and DL as subsets of AI [2]

Types of machine learning algorithms

Supervised Learning: The task of learning a function that maps an input to an output based on example input-output pairs. It infers a function from labelled training data consisting of a set of training examples. For instance, you want to train a machine to help predict how long it will take you to drive home from your workplace. Here, you start by creating a set of labelled data. This data includes Weather conditions, Time of the day, Holidays, etc. All these details are your inputs in this Supervised learning example. The output is the amount of time it took to drive back home on that specific day.

Unsupervised Learning: It is a type of algorithm that learns patterns from untagged data. The hope is that, through mimicry, the machine is forced to build a compact internal representation of its world and generate imaginative content. For example, customer segmentation or understanding different customer groups to create marketing or other business strategies.

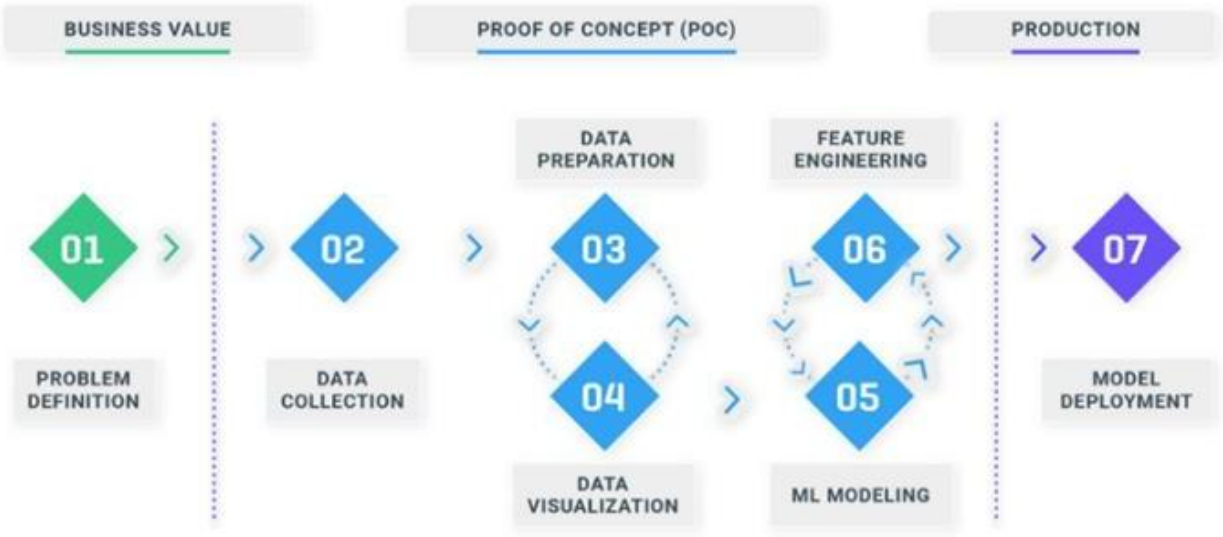
Reinforcement Learning: It is an area of machine learning concerned with how intelligent agents should act in an environment to maximize the notion of cumulative reward. Unlike supervised learning, where feedback provided to the agent is the right set of activities for performing a task, reinforcement learning uses rewards and punishment as signals for positive and negative behavior. For example: In robotics and industrial automation, RL is used to enable the robot to create an efficient adaptive control system that learns from its own experience and behavior.



The branches of Machine Learning [3]

Stages of machine learning model development:

1. **Problem Definition** – Understand the reason behind developing the model and conducting the study. Ask the right questions and set measurable goals for the study.
2. **Data Collection** – Once the goal is finalized, collect data from various sources. One can use focus groups, surveys, and interviews to generate data. Additionally, there is publicly available data as well, which is generally accessible.
3. **Data Preparation** – This stage is often the most time-taking step & involves cleaning the data for missing and poor values. This stage is highly crucial since the accuracy and quality of data obtained go a long way in making the ML model credible.
4. **Data visualization** – As a first step in analyzing the data, EDA (Exploratory Data Analysis) is carried out by plotting the relevant data. This is done to analyze the existing relationship between multiple variables if any & any other patterns/trends.
5. **ML modelling** – Perform supervised/unsupervised learning to generate models to predict scenarios based on input data. The primary tasks in this step include regression, classification, forecasting and clustering. ML algorithms also help identify features with high predictive value.
6. **Feature Engineering** – Involves identifying the optimal set of inputs to the ML algorithm to achieve a set of features that can enhance the simplicity of models. A good feature represents data unambiguously, captures linear and non-linear relationships among data points and captures contextual details.
7. **Model deployment** – Transfer the model to a production environment to automate decision-making. The scalability and robustness of the model are tested thoroughly. The model is also iteratively optimized based on the availability of further data points as well.



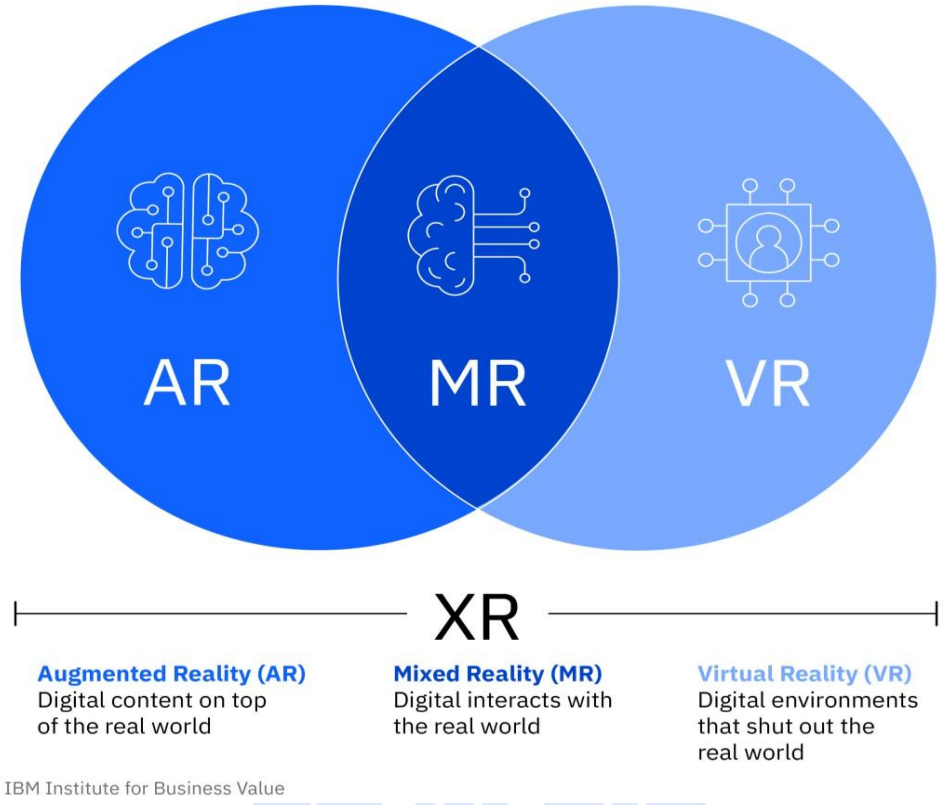
The stages of Machine Learning [3]

More resources:

- Basics
- Business value of ML/AI
- Use cases
- Brush-up videos – Basics 1, Basics 2, Stages of ML

AR & VR

Augmented Reality - Layers computer-generated enhancement on top of an existing reality. Used to display score overlay on telecast sports games and pop out 3D mail, photos, or text messages. Developed into applications and used on mobile devices to blend digital components into the real world.



Virtual Reality - Artificial, computer-generated simulation or recreation of a real-life situation or environment. Possible through a language called VRML (Virtual reality modelling language) used to create a series of images and specify their interactions. Immerses the user by making them feel like they are experiencing simulated reality first-hand by simulating vision and hearing.

Potential applications of AR & VR

- **Digital Services –** interactive experiences for users to walk them through application processes. Technology also helps in the reduction of errors.
- **Culture and Tourism –** Additional imagery helps transform user experience at tourist hotspots.
- **Education –** more engaging and meaningful experience for students, increased ease of explaining concepts for teachers as well.
- **City Planning** – Helps in obtaining a better sense of how new work would fit into the existing urban landscape and increase visitor interest.

More resources:

- Video on basics of AR and VR
- TED talk on Augmented Reality

Internet of Things (IoT)

IoT is essentially a bunch of devices that are connected over any network. Widely regarded as the 4th stage of the industrial revolution, its significance grows with the rise in AI, ML, and big data analytics.

The IoT tech stack

- **Device hardware** – Consists of sensors and processors. Sensors collect the raw data, which is processed into the form of an output that works on another system.
- **Device software** – Primarily the operating system and the group of applications that connect with upper layers of the tech stack.
- **Communication layer** – Connects the different devices that form the IoT system. It can be based on Bluetooth, radio, wi-fi, cellular or satellite technologies. These differ mainly in the frequency and range supported by them.
- **Data and Analytics** – From the information from sensors, relevant data needs to be identified and structured before being processed.

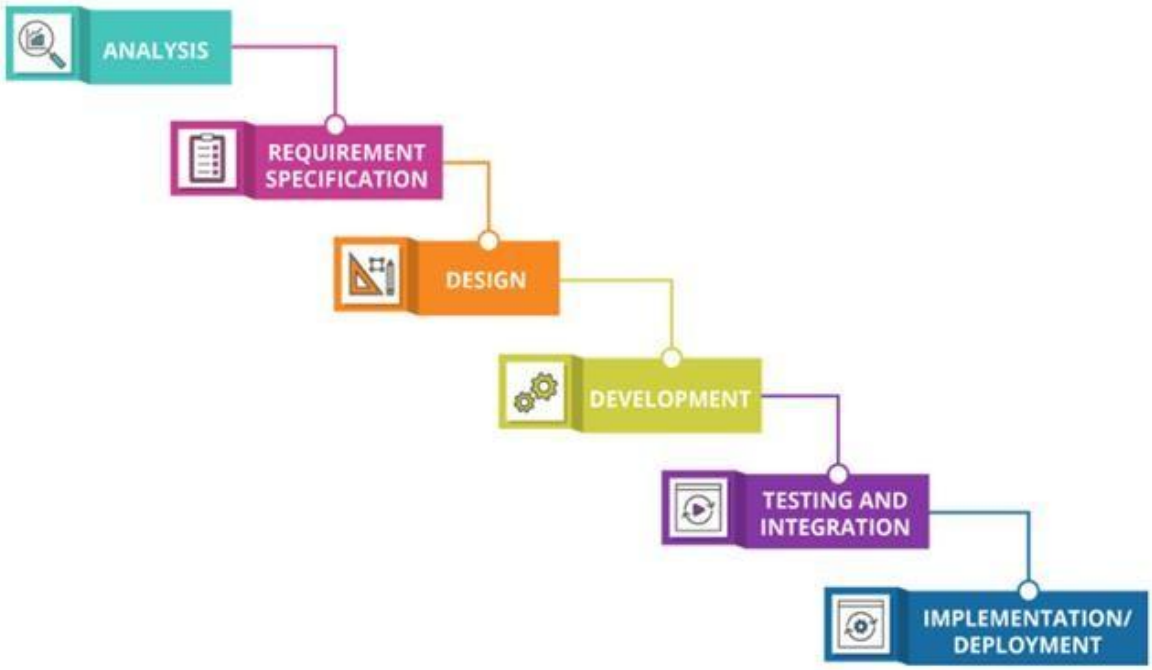
Important applications

- Smart cities
- Healthcare – trackers and wearables
- Industry 4.0
- Autonomous vehicles
- Digital Twin

Digital Twin technology

It refers to a virtual representation or digital replica of a physical object, process, or system. It utilizes various technologies such as Internet of Things (IoT), artificial intelligence (AI), and data analytics to create a real-time digital counterpart of a physical entity.

Agile Methodology



Waterfall model (Software development lifecycle)

Linear sequential flow of activities in the development of a software

a. No overlap between phases; the next phase begins after the last one is over.
b. Best suited for small-scale projects with less complexity & not much cross-functional activity is involved.
c. Biggest Drawback - inability to adapt to changes. E.g., A bug found in the testing phase can derail the entire design process.

Agile Methodology – designed as an iterative process with incremental addition to design at every stage, through close collaboration with cross-functional teams. It is easy to modify throughout the process and helps quicken customer response.

Critical properties of agile methodology:

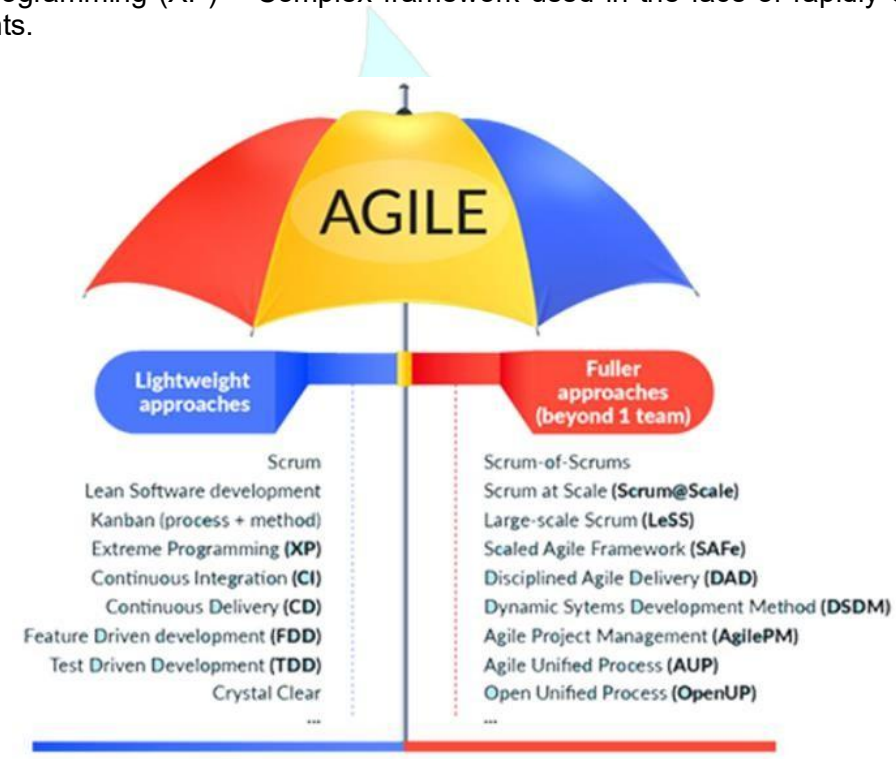
a. Individuals & interactions over processes and tools
b. Working software is more important than documentation.
c. Close collaboration with the customer over contract negotiation

Agile principles

a. The highest priority is to satisfy the customer through early, fast, and continuous delivery of valuable software.
b. Changes are welcome till late in the development process.
c. Businesses and developers must work hand-in-glove throughout the project.
d. Invest in motivated individuals & build the product around them .
e. Employ face-to-face conversations as the most effective way of interaction.
f. Working software is the primary yardstick of progress .
g. Promote sustainable development by maintaining a constant pace of progress throughout
h. Improve agility by a consistent focus on technical excellence and good design practices.
i. Focus on simplicity.
j. Internal reflection within the team is crucial for constant development.

Best practices

a. Iterative processes
b. Customer-centricity
c. Product backlog – list of product features and technical work prepared as per priority from the roadmap.
d. User Stories – Description of the problem from a user's perspective, acceptance criteria & expected time to completion
e. Value stream analysis
f. Timeboxing – Allocate time for each activity rather than tasks & try to keep up with the set schedule.
g. Continuous integration of code based on results from testing.
h. Test-driven development
i. Popular agile frameworks:
j. Scrum – a lightweight, easy-to-understand framework used to drive complex problems. Based on values of courage, focus, commitment, respect, and openness.
k. Kanban – employs the Kanban board with tasks marked as 'to do', 'in progress' and 'completed'. Focuses on avoiding bottlenecks and easy progress tracking.
l. Extreme programming (XP) – Complex framework used in the face of rapidly changing requirements.



Agile frameworks [7]

Edge Computing

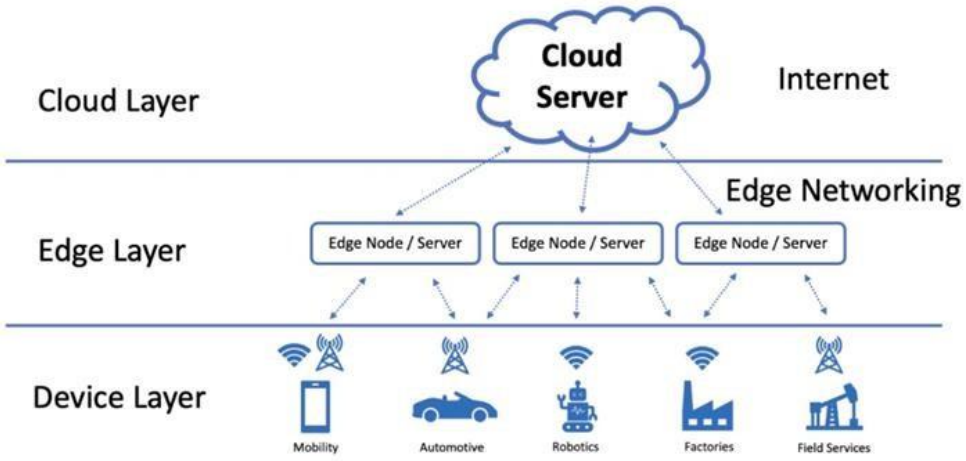
Edge computing is a decentralized computing architecture that brings computational power and data storage closer to the source of data generation or consumption. Instead of relying solely on centralized cloud infrastructure, edge computing leverages a network of distributed edge devices, such as routers, gateways, and IoT devices, to process and analyze data locally.

Advantages of Edge Computing

Reduced Latency - By processing data closer to the source, the time taken for data to travel to the cloud and back is significantly reduced. This is especially critical for applications that require real-time responsiveness, such as autonomous vehicles, industrial automation, and augmented reality.
Enhanced Security - Minimized exposure of sensitive data by keeping it within the local network, reducing the risk of data breaches or unauthorized access.
Bandwidth Optimization - Edge computing offloads some of the processing tasks to local devices, optimizing bandwidth usage and reducing network congestion.
Offline Functionality - Uninterrupted service delivery even when connectivity to the cloud is limited or lost entirely, making it suitable for remote locations or areas with unstable network connectivity.

Use Cases for Edge Computing

Internet of Things (IoT) - By leveraging edge devices, IoT systems can quickly analyze data locally, enabling faster response times and reducing reliance on cloud infrastructure.
Autonomous Vehicles - By processing sensor data locally, vehicles can respond rapidly to changing road conditions, improving safety and reliability.
Retail and E-commerce - Processing customer data at the edge allows for real-time recommendations, inventory management, and streamlined checkout processes.
Smart Cities - Real-time data analysis at the edge enhances efficiency and improves citizen services, by enabling local data processing for applications like traffic management, waste management, and energy optimization.



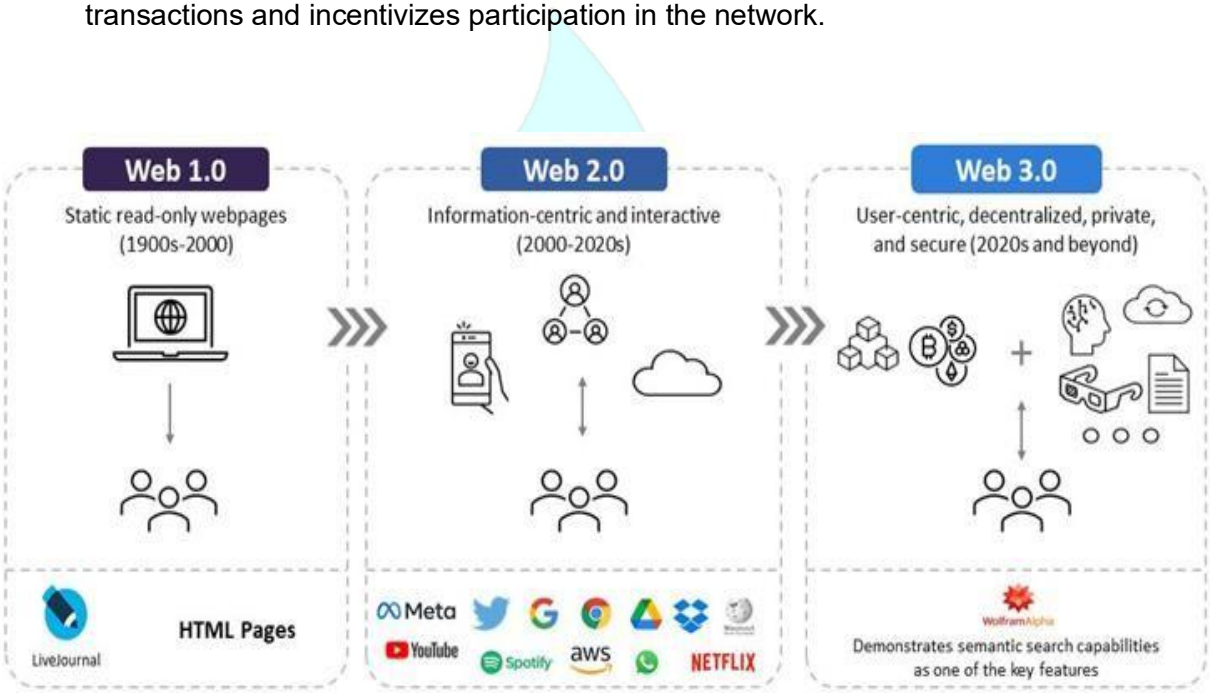
Simplified Edge Computing Architecture [8]

Web 3.0

Web3, also known as the decentralized web, is a vision of the Internet that aims to empower individuals, foster user autonomy, and remove centralized intermediaries. It leverages blockchain technology and decentralized networks to create a more open, transparent, and inclusive digital ecosystem.

Key Components of Web 3.0

- **Blockchain Technology** - At the core of Web3 is blockchain, a distributed ledger technology that enables transparent and tamper-proof record-keeping.
- **Smart Contracts** - Web3 relies on smart contracts enabling decentralized applications (DApps) to operate autonomously, without the need for intermediaries.
- **Decentralized Applications (DApps)** - DApps are applications built on top of decentralized networks. These aim to eliminate single points of failure, censorship, and data control by centralized authorities.
- **Cryptocurrencies and Tokens** - Web3 embraces digital currencies and tokens as a means of value exchange within decentralized ecosystems. This facilitates transactions and incentivizes participation in the network.



Evolution of Web from 1.0 to 3.0 [9]

Data Analytics

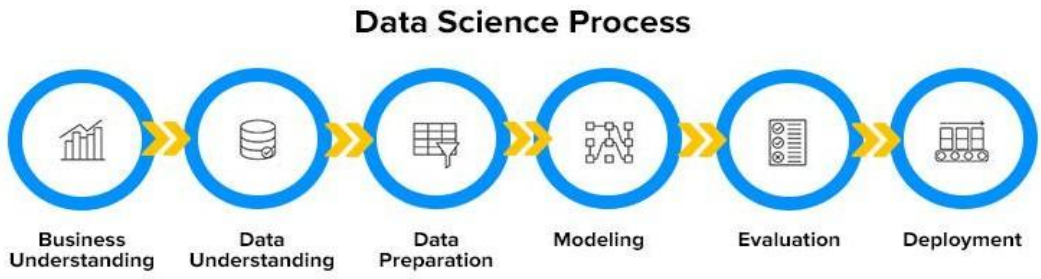
Data analytics is the practice of extracting insights and patterns from raw data to make informed business decisions. It involves the process of collecting, cleaning, transforming, and analyzing data to uncover valuable information that can drive strategic actions. Data analytics empowers product managers to make data-driven decisions, understand user behavior, identify market trends, and optimize product performance.

Key Components of Data Analytics:

Data Collection - Data analytics begins with the collection of relevant data from various sources, including databases, spreadsheets, APIs, sensors, social media, and more.
Data Cleaning and Preprocessing - Handling missing values, removing duplicates, correcting errors from raw data and transforming data into a consistent format suitable for analysis.
Exploratory Data Analysis (EDA) - Summarizing and visualizing data to gain initial insights using techniques like descriptive statistics, data visualization, and correlation analysis.
Statistical Analysis - Statistical techniques like hypothesis testing, ANOVA, and regression analysis are used to analyze data and draw meaningful conclusions, understand relationships, and make predictions.
Machine Learning - Machine learning algorithms are used for tasks such as classification, regression, clustering, and recommendation systems. Understanding different algorithms and their applications is crucial for effective data analysis.
Data Visualization - Visualizing data through charts, graphs, and interactive dashboards enhances the understanding of complex patterns and trends. Tools like Tableau, Power BI are used.

Data analytics empowers product managers in several ways

User Insights - Analyzing user data helps PMs understand customer behavior, preferences, and pain points. This knowledge informs product development, feature prioritization, and personalized experiences that cater to user needs.
Market Analysis - Enables PMs to monitor market trends, identify competitors, and uncover new opportunities. By analyzing market data, they can make informed decisions about product positioning, pricing strategies, and market expansion.
Performance Optimization - Analyzing product usage and performance metrics allows PMs to identify areas for improvement. By using data analytics, they can optimize features, enhance user experience, and increase product adoption and retention rates.
Decision-Making - Data-driven decision-making is a cornerstone of effective product management. Leveraging data analytics, product managers can weigh options, assess risks, and align product strategies with business goals, resulting in more informed and successful decision-making.



Generative AI

Generative AI refers to a subset of AI techniques that involve the creation of new, original content rather than relying solely on existing data. Unlike traditional AI models that are designed for specific tasks, Generative AI models are trained to generate new outputs based on patterns and knowledge extracted from large datasets.

Key Concepts in Generative AI

- **Generative Adversarial Networks (GANs) -** GANs are a prominent technique within Generative AI. GANs consist of two neural networks—an artificial generator and a discriminator. The generator generates new content, such as images or text, while the discriminator evaluates the generated content for authenticity. Through an iterative process, both networks improve their performance, resulting in increasingly realistic and high-quality outputs.
- **Variational Autoencoders (VAEs)** - VAEs are another approach in Generative AI. VAEs leverage deep learning to encode input data into a lower-dimensional latent space, and then decode it to generate new data points. VAEs enable the generation of diverse and novel outputs by sampling from the latent space.
- **Natural Language Processing (NLP) Models** - Generative AI is also applicable to language generation tasks. Models like OpenAI's GPT (Generative Pre-trained Transformer) use deep learning techniques to generate coherent and contextually relevant text based on given prompts.

Use Cases of Generative AI

a. Creative Content Generation - Artists and musicians can leverage these techniques to explore new possibilities, generate unique pieces, and find inspiration for their creative endeavors.
b. Virtual Reality and Gaming - Enhanced virtual reality experiences by generating realistic environments, characters, and narratives. In gaming, Generative AI enables the creation of dynamic and adaptive game worlds, generating diverse levels, quests, and characters.
c. Data Augmentation - Generative AI can be used to augment datasets for training machine learning models. By generating additional synthetic data, it helps overcome limitations posed by limited or biased training datasets, leading to improved model performance and generalization.
d. Personalized Recommendations - Generative AI can power recommendation systems by generating personalized suggestions for users. By analyzing user behavior and preferences, it can generate tailored recommendations in various domains, including entertainment, e-commerce, and content streaming platforms.
e. Natural Language Generation - With advancements in NLP models, Generative AI can generate coherent and contextually relevant text. This has implications for automated content creation, chatbot interactions, and personalized messaging systems.

More Resources

- How it works?
- Miscellaneous Buzzwords

Miscellaneous Buzzwords

NFTs

NFT is a digital asset representing real-world objects like art, music, in-game items and videos. They are bought and sold online, frequently with cryptocurrency, and are generally encoded with the same underlying software as many cryptos. Although they've been around since 2014, NFTs are gaining notoriety now because they are becoming an increasingly popular way to buy and sell digital artwork. A staggering $174 million has been spent on NFTs since November 2017.

NFTs are also generally one of a kind, or at least one of a very limited run, and have unique identifying codes. "Essentially, NFTs create digital scarcity," says Arry Yu, chair of the Washington Technology Industry Association Cascadia Blockchain Council and managing director of Yellow Umbrella Ventures. This starkly contrasts with most digital creations, which are almost always infinite in supply. Hypothetically, cutting off the supply should raise the value of a given asset, assuming it's in demand.

But many NFTs, at least in these early days, have been digital creations that already exist in some form elsewhere, like iconic video clips from NBA games or securitized versions of digital art that are already floating around on Instagram. For instance, famous digital artist Mike Winklemann, better known as "Beeple", crafted a composite of 5,000 daily drawings to create perhaps the most renowned NFT of the moment, "EVERYDAYS: The First 5000 Days," which sold at Christie's for a record-breaking $69.3 million.

Anyone can view the individual images—or even the entire collage of images online for free. So why are people willing to spend millions on something they could easily screenshot or download?

Because an NFT allows the buyer to own the original item, not only, it contains built-in authentication, which serves as proof of ownership. Collectors value those "digital bragging rights" almost more than the item itself.

Read more here: https://www.theverge.com/22310188/nft-explainer-what-is-blockchain-crypto-art-faq

Metaverse

The metaverse has recently been a hot topic of conversation, with Facebook and Microsoft both staking claims. But what is the metaverse? And when will it get here?
Author Neal Stephenson is credited with coining the term "metaverse" in his 1992 science fiction novel "Snow Crash," in which he envisioned lifelike avatars who met in realistic 3D buildings and other virtual reality environments. Since then, various developments have made mileposts on the way toward a real metaverse, an online virtual world which incorporates augmented reality, virtual reality, 3D holographic avatars, video and other means of communication. As the metaverse expands, it will offer a hyper-real alternative world for you to coexist in.

Inklings of the metaverse already exist in online game universes such as Fortnite, Minecraft and Roblox. And the companies behind those games have ambitions to be part of the evolution of the metaverse.

Read more here:

- https://www.usatoday.com/story/tech/2021/11/10/metaverse-what-is-it-explained-facebook-microsoft-meta-vr/6337635001/
- https://www.livemint.com/companies/news/what-is-metaverse-why-facebook-is-investing- billions-in-this-new-project-11635218124731.html

References

[1] https://www.stackscale.com/blog/cloud-service-models/
[2] https://towardsdatascience.com/cousins-of-artificial-intelligence-dda4edc27b55
[3] https://www.cognub.com/index.php/cognitive-platform/
[4] https://medium.com/@datadrivenscience/7-stages-of-machine-learning-a-framework-33d39065e2c9
[5] https://datasmart.ash.harvard.edu/news/article/9-potential-applications-ar-and-vr-technology
[6] https://medium.com/@joneswaddell/the-cascading-costs-of-waterfall-5c3b1b8beaec
[7] https://www.aleph-technologies.com/why-framework/
[8] https://www.wipro.com/infrastructure/edge-computing-understanding-the-user-experience/
[9] https://www.civilsdaily.com/news/what-is-web3/

Product Design Frameworks

CIRCLES

The CIRCLES framework allows product managers to develop thoughtful and customer-oriented product designs. This framework is primarily used to identify user needs and accordingly design a new product, but it can also be adapted to create new features in an existing product.

Abbreviation	Meaning	Description
C	**Comprehend the situation**	Understand the requirements of the customer by asking the right questions. You can use the 5Ws and H method: **What, Why, Where, When, Who and How.** If the interviewer refuses to answer your clarifying questions, make an assumption based on what you know. Then, allow the interviewer to correct you if he thinks differently about whom it is for or how the product works.
I	**Identify the Customer**	Create a list of user persona you think would have needs parallel to the situation understood in the above step. For each persona, elaborate on the following headers: Behaviours, Demographics and Needs & Goals.

R	**Reporting the Customer's Needs**	Translate the customer's needs into user requirements or use cases using the following format: **As a <role>, I want <goal/desire> so that <benefit>** E.g., As a travelling reader, I want to write 500 words a day so that I can publish my memoir
C	**Cut, Through Prioritization**	The prioritization step mimics the real-world development process. You'll have a significant backlog of use cases, but you're limited by time, money, and labour. You have to decide what you want to do first. This showcases your ability to assess trade-offs, prioritize, and make the most optimal decisions. This can be done by ranking each use case in terms of Revenue, Customer Satisfaction and Ease of Implementation. These ranks can be added to create an overall ranking, through which the cut can be made.
L	**List Solutions**	This step lists solutions against each of the chosen use cases. A method to come up with solutions is the "Reversal Method", wherein you reverse the situation, and it helps uncover new possibilities. E.g.: Question: Create a new car buying experience. Need: Buyers don't have time to travel to the car dealership. Solution based on reversal: Dealership should deliver test drives to the buyer's home.
E	**Evaluate Trade offs**	The first part of this step is to define your trade-off criteria. Criteria could include customer satisfaction, implementation difficulty, and revenue potential. It's not necessary, but it'll keep your response organized and easier to follow. The next part is analysing the solution. A pro and cons list is an excellent way to do this. Evaluating each solution's trade-offs, you come across as thoughtful and analytical. You'll also be perceived as objective.
S	**Summarize your recommendations**	Summarize with this three-step approach: Tell the interviewer which product or feature you'd recommend. Recap what it is and why it benefits the user and company. Explain why you preferred this solution vs others.

Example

Problem Statement: *Design a bicycle renting app for tourists.*
Here I will be using the CIRCLES Framework to design the application.

1. Comprehending the situation:

What is it?

It is clear to me that the application should be tourist friendly and should accommodate the simple feature of renting bicycles.

Candidate: What kind of cycles are we renting? E-bikes or Cycles for long-distance travel or bicycles that would be used inside, say, a tourist spot or a park where people would need to walk long distances?
Interviewer: The cycles are intended for tourist spots and parks.

Where is it available?

Candidate: Is there any geographical location we are targeting? India/Abroad?
Interviewer: You can consider the app is made for tourist spots in India.

Who is it for?

Candidate: Is this app designed for local or foreign tourists or both?
Interviewer: The app majorly targets foreign customers.
Why do they need it? (Already clarified)
When is it available?

Candidate: Can it be assumed that the service is available only when the tourist spot/park is operational?
Interviewer: Yes.

How does it work?

Candidate: How is the monetization strategy? Do we take online payments via cards/wallets, or do we also have COD options?
Interviewer: Just online payment.

Candidate: Are we collecting any caution deposits?
Interviewer: No

Candidate: So, I am assuming that there would be multiple bicycle points from where the tourists can take the cycle upon payment confirmation and use it for a specified time. After the usage, the tourist can park it at one of the points and update a return on the app. Is this the expected modus operandi?
Interviewer: Yes.

2. Identifying the customer

Candidate: Let us identify the main stakeholders.

1. The foreign tourists (as a group/family/or solo) who would be using the app.
2. The local tourist guide who would design packages for groups.
3. The bicycle renting company.

Do you think I have covered all stakeholders?
Interviewer: Yes. Proceed.

Candidate: Let us look at a few user personas:

1. Simon Jones is a solo traveler from England who has come to India's Taj Mahal. He uses international cards, which make payments in dollars and not INR.
2. Andrea Belloti, an Italian tourist in India with his friends, is about to explore the Akshardham temple in New Delhi. He does not understand English and needs help with language in using the app.
3. Balbir Singh works as a local tour guide and helps tourist groups from various foreign countries. Since he deals with several customers daily, he will not be able to book bicycles for them individually.

3. Report the Customer Needs

Simon Jones: I want some facility that would enable me to make payments in my local currency since I have just liquid Indian money. He is also not aware of the routes to be followed to get the best experience.
Andrea Belloti: (In Italian) My friends and I are visiting the Akshardham temple. We do not know the local language. Hence, we don't know how to find a cycle, pay money, or use bicycles.
Balbir Singh: I deal with 10-15 groups of foreign tourists every day. It would be very tedious for me to book cycles individually for each person and make payments for them since they come in a prepaid holiday package.

Basic Needs of the customer:

1) Native Language for Tourists
2) Locate Bicycles easily.
3) Get cost Information.
4) Make payment via different currency options.
5) Navigation of the tourist place.
6) Make group bookings.
7) Have a wallet feature.
8) Get good suggestions of nearby places to visit.

4. Cut through Prioritization

Candidate: The problems identified have been prioritized based on Customer satisfaction, revenue, and ease of usage.

1) Native Language of Tourists: High CSAT, Improves Revenue, Increases ease of usage.
   High Priority

2) Locate Bicycles quickly: Improves Revenue by helping with location, Increases ease of usage.
   High Priority

3) Get cost Information: Basic Feature. Must-Have feature. Complexity Low.
   High Priority

4) Make payment via different currency options: Greatly improves CSAT, Increases Revenue.
   High Priority
5) Navigation of the tourist place: Helps tourists navigate the area better. Increases

CSAT. Not much impact on revenue. Increases ease of usage.
Medium Priority

6) Make group bookings: Makes it easier for a tourist guide. Revenue increases and Ease of usage also increases.
Medium Priority

7) Have a wallet feature: Easy for tourist guides to make payments. They would anticipate demand and add money in advance. Revenue and Ease of usage increase.
Low Priority

8) Get good suggestions of nearby places to visit: Increases CSAT. No impact on revenue or ease of usage. Complexity Low.
Low Priority

5. List Down Solutions:

The following features may be added to the app:

1) Language selector box during signup
2) Show the location of bicycle stands on integrated maps.
3) A help feature to understand how to use the app, retrieve bicycles and return them.
4) Cost catalogue display option on an hourly basis
5) Inclusion of multiple payment options. International aggregators like PayPal can be included for payment services.
6) Map of the tourist place with live location feature
7) Add an option for family/group bookings.
8) For tourist guides, provide the option of wallets which can be topped up as per requirement.
9) Add a Menu option for listing nearby Tourist Locations.

6. Evaluate Tradeoffs

1) Language Selector Box During Signup

   Complexity: High as it must support all major foreign languages
   Priority: High
   Must have feature.

2) Show location of bicycle stands on integrated maps.

   Complexity: Moderate if integrated with Google maps.
   Priority: High
   Must have feature.

3) A help feature to understand how to use the app, retrieve bicycles and return them.

   Complexity: Low
   Priority: High
   Must have feature.

4) Retrieve cycle using a QR code scanner.

   Complexity: Medium
   Priority: High
   Must have feature.

5) Cost catalogue display option on an hourly basis

   Complexity: Low
   Priority: High
   Must have feature.

6) Inclusion of multiple payment options. International aggregators like Paypal can be included for payment services.

   Complexity: Medium
   Priority: Medium
   Should have feature.

7) Map of the tourist place with live location feature

   Complexity: Medium
   Priority: Low
   Could have feature.

8) Add an option for family/group bookings.

   Complexity: Low
   Priority: High
   Should have feature.

9) For tourist guides, provide the option of wallets which can be topped up as per requirement.

   Complexity: High
   Priority: Low
   Could have feature.

10) Add a menu option for listing nearby tourist locations.

    Complexity: Low
    Priority: Low
    Could have feature.

Minimum Viable Product:

These include the basic important features that help us achieve our business goals:

1) Language selector box during signup.
2) Show the location of bicycle stands on integrated Google maps.
3) A help feature to understand how to use the app, retrieve bicycles and return them.
4) Retrieve the cycle using a QR code scanner.
5) Cost catalogue display option on an hourly basis.
6) Inclusion of multiple payment options. International aggregators like Paypal can be included for payment services.
7) Add an option for family/group bookings.

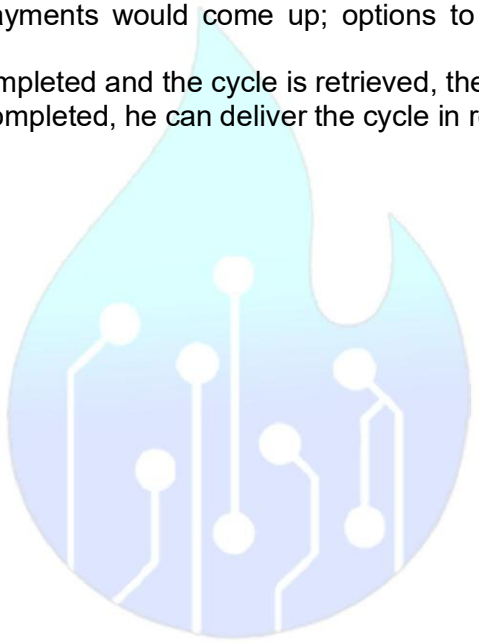
Plans for later improvements:

1) Map of the tourist place with live location feature.
2) For tourist guides provide the option of wallets which can be topped up as per requirement.
3) Add a Menu option for listing nearby tourist locations.

7. Summarize your recommendation:

The basic functioning of the app would be as follows:

1) The tourist/tourist guide at the location would download the app at the tourist location.
2) They would turn on location permission, and the app world spot the location.
3) Sign up.
4) Select language.
5) There would be a help option on the menu bar which would show steps of how to operate the app and retrieve and return cycle.
6) The user would be shown locations of cycle stands on the spot.
7) Then the user can go there and scan the QR code
8) Options to make payments would come up; options to pay in different currencies enabled.
9) Once payment is completed and the cycle is retrieved, the user may use it.
10) Once his usage is completed, he can deliver the cycle in returning stands and click on end usage.



User Journey

For a product manager it is important to understand how users interact with our products/services. The steps or actions users will go through, and the experience users get while using the product should be known to the product manager.

How to think of User Journey: As the name suggests, to get an idea of the user journey forget that you are a product manager (for some time) and put on the hat of user. For each application the user journey will be different based on the intention of the user. A user journey map is a tool that will help you to understand and document the user touch points and pain points.

The user journey starts even before the user interacts with our application or product. And it also extends after the user needs are met. So, the total experience can be divided into **Before use, During use, After use.** For each phase list the specific actions and steps taken by the user.

In Before use there will be the trigger to use our app, and other alternate application that users consider using.

During use each way user interacts will our application is a touch point. In this phase it is important to access these touchpoints. Then understand the emotions the user goes through while interacting with these touchpoints. This will give us the areas of improvements or pain points.

Finally, after use is important, for example, if you have food-delivery app the experience does not end with user completing the payment, it extends next how we are providing the notifications, the summary of the orders, the invoice generation, how are addressing the concerns and feedback collection.

HEART

This framework is used to find valuable and user-centric metrics to assess User Experience. These metrics, which form the acronym, are:

- **Happiness**
- **Engagement**
- **Adoption**
- **Retention**
- **Task Success**

You now must identify **Goals, Signals and Metrics** against each of the above categories.

	Goals	Signals	Metrics
Happiness			
Engagement			
Adoption			
Retention			
Task Success			

Goals: These are broad objectives. For example, under Happiness, increasing user satisfaction could be a goal.
Signals: Indicators that may indicate progress towards achieving the goals. For example, increased screen time on the app may be a signal of Engagement.
Metrics: These are quantifiable measures that indicate success or failure. For example, for Retention, a reduced churn rate is a metric.

Example

Problem Statement: *Imagine that you are a PM at Meta and working on WhatsApp. You are about to roll out a feature which allows users to react to messages with emojis. How would you evaluate the change in user experience?*

Since we want to understand how user experience was enhanced post introduction of a feature, we can use the HEART framework, which expands to Happiness, Engagement, Adoption, Retention and Task Success.

This can be applied as follows:

In each of the above parameters, we set a Goal; we identify the signals indicating success and define success metrics for each parameter.

	Goals	Signals	Metrics
Happiness	Add more fun elements to WhatsApp, make it easier for them to react to messages by reducing message reacts	Increasing number of 5-star ratings on Play Store/Apple Store	NPS (Net Promoter Score)
Engagement	Users enjoy using WhatsApp more and spend more sessions and time on the app	1. Time spent on the app per day increases 2. People come back to the app more times than before	Time spent per session Total sessions/ User/Day
Adoption	To bring in more new users to the application	1. More users signing up on the app. 2. More people download the app	App Install Rate Daily Active Users No of downloads
Retention	To prevent existing users, move to a competitor app like Signal, Telegram	1. Active users (Number of people who use the app for, say, more than 2 hours a day) increases 2. No of uninstalls is less than that of installs	DAU (Daily Active Users), WAU (Weekly Active Users), MAU (Monthly Active Users)
Task success	Users must be able to use the new feature without any issues.	Number of users using the feature goes up over a week/month.	Error Rate % Feature Drop-off rate %

RICE

Rice is a prioritization framework to help determine which features or products to focus upon. There are four factors on which all the ideated features are scored. The acronym is made up of:

Reach: How many people do you estimate your new feature has the potential to reach?

Impact: How many new conversions (quantitative) can be gained when users encounter it? Or how much will it increase customer delight (qualitative) when users use it?

Confidence: How confident are you about the potential Reach and Impact of your feature/product?

Effort: How long or how much effort will it take to implement the solution or initiative thought by you?

Interview Use Case: Use this framework to understand the feasibility and importance of various features from your proposed list.

Example

Problem Statement: *Design and ideate a marketplace for lawyers and clients to avail legal services.*

Initially, you can use CIRCLES to analyze the problem statement, work on the pain points and come up with various solutions.

Let's assume you defined four customer personas and defined the problems they face:

User	As a/an <Type of User>	I am	I want to	I find
1	**Inexperienced Complainant**	A tenant/owner living in a metro city, and I am currently stressed due to a dispute with the flat owner/tenant on a serious issue.	Being my first-time landing in such a situation, I don't know how the process works, whom to contact and how to move ahead	It is difficult to understand which lawyer is good and who will be able to help me.
2	**Experienced Complainant**	Somewhat experienced and have been involved in a few such cases and know what kind of lawyer to search for	Make it easy for me to reach lawyers and, if possible, make better connections with some for an extended period of consultation	It is challenging to contact lawyers, and I would like to know what lawyers are charging for their services
3	**Experienced Lawyer**	Well qualified and have years of experience in handling legal situations	Reach out to people who require sound legal advice	It isn't easy to manage my previous case files, and this slows me down

4	**Inexperienced Lawyer**	New to this profession and have only worked on a few cases	Want to grow professionally and find suitable cases to start with	It is challenging to convince clients to take my services due to my inexperience

Now, to address these pain points, you came up with multiple solutions and listed them as such:

Feature	Description
Lawyer description and area of expertise (client-side marketplace App)	Provide lawyer details and what kinds of cases they work on, how much experience they have etc.
Pricing quotation (Client-side marketplace App)	It indicates how much this lawyer charges. No fixed pricing can be done as charges depend upon multiple factors (complexity of the case, number of court visits required)
Requirement Posts (Client-side marketplace App)	Clients Post their legal requirements
See interested clients (lawyer side App) Clients interact with lawyers to understand each other and set up meetings	Only visible to the lawyers so that they can check if they will be able to help and connect with clients
Contact point (Calls, chat)	Clients interact with lawyers to understand each other and set up meetings
Lawyer case management portal (lawyer side App)	Lawyer side application portal to check active cases they are working on, case files, history, schedule dates and set reminders

After listing the solutions, the RICE framework helps you prioritize the solutions that should be implemented first. To use the framework, rank each solution on the four parameters (Reach, Impact, Confidence and Effort).

For ranking, you can use “High-Med-Low” or Quantified ranks (scale of 1-10).

Feature	Reach	Impact	Confidence	Effort
Lawyer description and area of expertise (Client side)	High	High	Med-High	Low
Pricing quotation (Client side)	High	Med-High	Med	Med

Requirement Posts (Client side)	High	High	High	Low-Med
Lawyer case management portal (Lawyer side)	Med	Med	High	High
See interested clients	High	Med	Med	Low-Med
Contact point	High	High	Med-High	Med

In the case of quantified rankings, you can reach a RICE score for each solution and choose the ones with the best RICE score.

$$\frac{\textbf{Reach} \times \textbf{Impact} \times \textbf{Confidence}}{\textbf{Effort}} = \textbf{RICE Score}$$

The final prioritized feature list:

1) *Lawyer description and area of expertise (client side)*
2) *Requirement Posts (client side)*
3) *Pricing quotation (client side)*
4) *Contact point (calling and chat*

Product Cases

Product Improvement Case

Product improvement questions are widely asked during PM interviews. These questions are aimed at evaluating a candidate's structured thinking process, ability to identify customer problems and the ability to brainstorm solutions that could help address the pain points.

The following example illustrates how a product improvement question can be answered during an interview.

Example

Problem Statement: *How would you improve LinkedIn?*

Step #1: Comprehend the situation - Define the product and clarify the meaning of improvement.

Candidate: LinkedIn is a platform for professional networking that enables users to discover jobs, connect with others to expand their professional network, attract clients, and gain skills for career progress.

(In case you are not familiar with the product, ask the interviewer to define the product for you.)
Once the product has been defined, ask clarifying questions to completely comprehend the situation:

Candidate: What do you mean by improvement here? Is it user acquisition, engagement, revenue, or something else entirely?
Interviewer: Feel free to choose any

Candidate: Is the focus on any platform like desktop or app?
Interviewer: Focus on the mobile application

Candidate: Should we focus on any OS like Android or iOS?
Interviewer: Focus on both

Candidate: Should we focus on any region?
Interviewer: Feel free to decide

Candidate: Based on the clarifications provided, I would like to go ahead with focusing on improving user engagement. Since LinkedIn already has a good amount of user base, focusing on improving user engagement would also allow LinkedIn to improve user retention and revenue.

Step #2: Identify the users.

Candidate: The user base for LinkedIn could be divided as follows:

1. **Job Seekers** - They use LinkedIn to find jobs and connect with employment opportunities.
2. **Recruiters** - They use LinkedIn to search and connect with top talents on LinkedIn.
3. **Salespeople** – Looking for potential leads for their businesses.
4. **Casual users** - One who just reads the news feed and updates their profile.

Candidate: I would like to go ahead with the job seekers user segment. The reason behind

this is that this base of users would be using LinkedIn actively and would allow us to focus on a larger set of user base.

Step #3: Report the customer needs - Identity pain points.

Candidate: A job seeker could have the following pain points:

1. Job searchers don't know for sure where their applications stand.
2. They are unsure about the structure and format of their resumes to get shortlists.
3. They are unaware of the flaws in their profile that cause most of their job applications to be turned down.
4. When looking through job advertisements, job seekers find it challenging to tell a startup from a large firm.
5. They have trouble locating ratings and comments on the businesses and their work cultures on LinkedIn.

Step #4: Cut through prioritization

Candidate: The problems can be prioritized based on the impact that they would have on job seekers and how relevant is each problem to this user segment.

Pain Point #1 - Impact: Medium
Pain Point #2 - Impact: High
Pain Point #3 - Impact: High
Pain Point #4 - Impact: Medium
Pain Point #5 - Impact: Medium

Candidate: Since pain points 2 and 3 are high impact pain points, we can prioritize the

Step #5: List down the solutions

Candidate: For paint point #2, i.e., Job seekers are unsure about the structure and format of their resume, the following two solutions should help address the pain point:

1. *Resume Reviewer:* A resume reviewer is an automated system that receives the user's resume and the job category (finance, product, tech roles, etc.) for which they are applying as inputs and outputs the necessary corrections (spelling, grammar, etc.) and suggestions (word choice, format, structure, best practices based on job profile, etc.) to the user. Users can rapidly verify their resumes using this service, boosting their chances of being shortlisted.
   Every time their CV changes or they apply for jobs that don't fit their profile, this feature will keep bringing them back to the platform which would improve stickiness and user session duration.

2. *Mock interview*: This feature will allow users to schedule a 1-on-1 mock interview with one of the coaches who has been verified by LinkedIn and is knowledgeable and experienced enough in that field. Users will be able to use this function for a fee (maximum once per month) and it may be covered by LinkedIn premium at a higher cost.
   Users will receive coaching and feedback from coaches to help them perform better during the actual 1-on-1 interview phase.

Candidate: For paint point #3, i.e., Job Seekers are unaware of the flaws in their profile that cause most of their job applications to be turned down, the following solution should help address the pain point:

1. *Profile strengthening recommendation*: If a user's profile is turned down for a job, we'll provide him or her a summary of the profiles that made the shortlist as well as the quantitative and qualitative differences between their applications. (Example: Industry, Certifications, Education, Skills, Experience, and Matching Keywords).

This would help users identify the key shortcoming of their profile on which they can work and improve.

Step #6: Evaluate tradeoffs - Prioritize the solutions

Candidate: The solutions can be judged based on the potential impact that they would have and the effort it would require to build them:

Solution #1 (Resume Reviewer) - Impact: High, Effort: Medium
Solution #2 (Mock Interviews) - Impact: High, Effort: High
Solution #3 (Profile Strengthening Recommendations) - Impact: Medium, Effort: Medium

Step #7: Success Metrics

1) Resume Reviewer

- Number of resumes reviewed on a MoM basis
- Number of corrections suggested on a daily/weekly basis.
- Percentage change in profile shortlists of users before and after using the feature.

2) Mock Interviews

- The ratio of the number of Mock Interviews Taken vs Requested.
- Revenue generated from subscription post-launch.
- Number of repeat interviews requested.

3) Profile Strengthening Recommendations

- Number of recommendations viewed in MoM.
- Number of jobs application submitted (total & average per user)
- DAU of the jobs listing page.

Step #8: Summarize your answer

Candidate: To summarize the discussion, the focus was on improving user engagement for Job Seekers on LinkedIn. There were 5 pain points presented out of which two were prioritized. The first pain point was concerned with Job Seekers being unsure about their resume format and structure. The second paint point was concerned with Job seekers being unaware of the flaws in their applications. To address these pain points, 3 solutions were proposed which were resume reviewer, mock interviews and profile strengthening recommendations.

Root Cause Analysis Approach

The following approach can be used to solve most Root Cause Analysis questions. It is also flexible enough to adapt to different problem statements, and the method may be modified accordingly. Questions may be of the form: **"The number of cart drops has increased over the past month. Analyse why."**

Scope out the problem

Determine how widespread the problem is in terms of the following aspects:

- Geographic distribution
- Temporal
- Quality of metric
- Platform error
- Any new changes to the app or product

Internal and External factors

Analysing External Factors:

- Competitive Analysis
- Change in promotional activities in the industry amongst competitors
- Influence of any external stakeholders

Analysing Internal Factors:

- User journey
  - Create a single linear journey for a user (no branch-offs).
  - Find the point at which the drop-off happens
  - Has any part of the layout changed?
- Business aspects affecting product
  - Cost, time taken, operational aspects
- User Behaviour (differences observed)
  - Change in operations
  - Change in marketing activities
  - Change in demographic aspects
- Technical Factors
  - Downtime, Latency, Errors in the app/product

Let's look at an example where the above framework may come in handy. Consider this case statement: *"Order cancellation on Amazon us up by 10%; identify the root cause."*

It is clear that various aspects of the problem are not stated explicitly in the statement. Hence, the first step is to scope out the issue by clarifying questions. Here are a few questions that will help shed more light on the problem:

- How long has this issue been prevalent? Any trends observed?
- Is this issue specific to Amazon, or do competitors also suffer from the same? (Helps decide to focus on internal/external factors going forward)
- Is this issue concentrated on any particular service offered by Amazon (AWS/E-commerce, etc.)?
- Within a particular service, is this seen mainly around a specific type of order/product (groceries, furniture, etc.)?
- Is this seen across the world or specific to any geographical location?

- Have orders been cancelled across channels (mobile application, desktop)?

With sufficient context about the problem, we now move to analyse external factors that might be affecting cancellation rates. Let's try to list down a few of them:

- Government regulations/policy changes
- Any new direct substitutes in the market
- General sentiments on public platforms (social media, product reviews, press conferences, etc.)

In understanding the reason for increased cancellations, following the user's experience while exploring Amazon would help us analyse internal factors & zero in on any particular feature that might have disincentivized them from going ahead with the purchase:

- Channels – Google search ads, organic searches, emails, mobile apps, shareable links, etc. These can be clubbed according to your preference.
- Key actions in the app/web page – Here are a few queries as a general idea:
    - Search bar – Are we facing cancellations on products discovered through the search bar?
    - Cross-selling section – Any recent changes to the recommendation algorithm?
    - Product category tabs – Any new additions? Any evidence of cannibalization?
- Product selection – Any recent changes to the product listing page, how items are added to the cart, address selection, discounts/offers, Wishlist design, etc
- Payments – any particular payment mode that is seeing increased failures/recently removed any heavily preferred payment modes?

Order confirmation and tracking – delays in confirmation/delivery, any specific routes/pin codes that are seeing increased cancellations?

References for the RCA framework:

- https://youtu.be/DSV-vuvmIro
- https://ashwinomishri.medium.com/root-cause-analysis-6702f7d76f0d

Example

Problem Statement: *There have been increasing uninstalls of a mobile banking application of a private bank. Identify the root cause.*

1. Scope out the problem

Candidate: Okay, I will just try to understand the problem better. Can you shed more light on the kind of bank it is? Is it a global or a regional bank, and what services does it offer?
Interviewer: It's not a global bank, but it has been in India for 15 years, so it's like a legacy privatized bank. They are now venturing out into a possible digital shift to the mobile world.

Candidate: Okay, in India, has this problem been across all the regions or specific to some?
Interviewer: It has been observed across India.

Candidate: Okay, great. So, I am trying to understand the services the app provides. Are they standard services like transferring money and UPI transactions?
Interviewer: Yes, they are standard services. They do have separate services for businesses and individuals.

Candidate: And has the increase in uninstalls been seen for specific businesses or individuals, or is it seen for particular platforms like android or iOS?
Interviewer: It is seen for individual customers, and it has been seen across both android and iOS.

Candidate: Okay. Just to get a bit more context, have the uninstalls increased suddenly like an increase in a day or has it been gradually rising over the last week?
Interviewer: It started last weekend, but the increase has been gradual, which is alarming for us.

Candidate: Okay, let me just take a moment to collect my thoughts
Interviewer: Sure.

Candidate: So, I will be first investigating any internal reasons due to which the problem might have occurred, and then I will move to external factors, not in the control of the bank.
Interviewer: Yes, that sounds fine.

2. Internal Factors

Candidate: Okay, so the first factor I want to consider is whether there has been a change in the definition of uninstalls or how we measure that number.
Interviewer: No, we haven't changed it, we track it when the push notifications are sent to the user, and they bounce back. That hasn't changed.

Candidate: Okay, were there any new updates to the app?
Interviewer: Yes, we released an update about 8-9 days ago, but we didn't receive any direct complaints about the app update from the user.

Candidate: Were there any server-side issues like the app being unresponsive when opened, or does it contain any bugs?
Interviewer: Not really, we conducted a bug check, but no significant issues were found.

Candidate: Okay. And what was the update about? Were there any feature deletions or additions that might have led to uninstalls? I am asking since if a person used to come to the app for a particular feature and that has been removed, it could be a problem.
Interviewer: Great question, but no, there were no significant additions or deletions. The update had more to do with more minor UI tweaks, nothing else.

3. External Factors

Candidate: Okay, I had all these internal factors in mind for now. I will go through some external factors I thought about and return to internal ones if need be.
Interviewer: Okay, sure.

Candidate: So, firstly, were there any data leaks in the previous week that might have affected the bank's reputation?
Interviewer: No, there were no issues concerning the app's security.

Candidate: Okay, and were there any PR issues concerned with senior management or people associated with the bank?
Interviewer: No, even that wasn't the case.

Candidate: Alright then, were there any recent government regulations about banking that might have discouraged the consumers from using mobile banking apps?

Interviewer: No, nothing from the government's side.

Candidate: Okay, great, I will move competitors now. Were there any new app launches or marketing campaigns by existing or new players that might have led to users switching platforms?
Interviewer: Yes, an upcoming start-up or neo-bank is targeting students and young professionals. They have exciting features like lending some money to the user at the start of the month as part of their campaign.

Candidate: Okay. While it is worthwhile to note this, I wouldn't say this is the root cause since it is a new bank, and loyal banking consumers don't make such a drastic shift to a new bank by uninstalling their previous banking app.
Interviewer: Yes, that's a great point. So, what do you think happened?

Candidate: So, this reminds me that I missed out on one aspect in the internal factors part, were there any campaigns run by our bank in the preceding weeks or so?
Interviewer: Yes, there was one campaign run by our bank where we offered a particular amount of credit to users who installed our app.

Candidate: Okay, that's a great piece of information. I think this might have been the issue, users would have installed our app to avail the free credit, and as soon as that got over, they might have uninstalled the app. Was this the issue?
Interviewer: Yes, that is what happened. The users were acquired through a campaign, and that section of users was uninstalling the app. What do you think should be done to address this problem?

Candidate: I think we can divide our users into cohorts based on their usage patterns across features and see their engagement. There might be users we have acquired, but they aren't using the app's features. For them, we can provide better activation touchpoints right from when they open the app. And if someone who has been acquired and activated uninstalls the app, it is a more significant concern for us. So, we can dig deeper into these users and maybe analyse a specific set of features for which there has been a drop in usage.

Interviewer: Great, that is a logical thing to do in this situation. Would you like to summarize the discussion?
Candidate: Yes, sure. So, we started by understanding the bank and its services and reach. We tried to look into different user segments as well as platforms. Once we clarified these aspects, we investigated internal and external factors. For internal factors, we looked into any change in metrics, app updates, changes in services etc. Among external factors, we looked at any data leaks, government policy changes, and competitors' new steps. We finally concluded that uninstalls were happening because users acquired during the promotional campaign were leaving the app after using the free credit. And lastly, we discussed how to address this problem by tracking usage patterns across different cohorts.

Guesstimates

The premise of guesstimates is to estimate a number (often a large one, e.g., market size, revenue, etc.) with access to limited information – simply put, an educated guess reached through strong logical assumptions and a structured thought process. Hence, it is essential to note that the key is NOT to get the correct answer but use the right approach. The candidate's ability to think on their feet and come up with an appropriate strategy is what is tested in interviews. The key to acing any guesstimate lies in taking valid assumptions and getting buy-in from the interviewer before proceeding. It is crucial to think loudly & walk the interviewer through all the steps in your guesstimate to ensure that both of you are on the same page.

Scoping

- The objective of scoping is not to attack the guesstimate directly but to try and set a context for the problem. This would help to concentrate on the specific requirements of the interviewer.
- As the name suggests, define the scope – what to include & what to exclude from your computation. E.g., Suppose a guesstimate is to estimate the number of buildings in an engineering college. It is worthwhile to check if the interviewer needs explicitly academic buildings, residential buildings or all included.
- Ensure to form a basic idea of methodology to be followed through the scoping. E.g., To estimate the total annual wheat production in India, you can approach from the supply side (area of wheat production * yield) or the demand side (yearly average use in a household * number of households).
- For guesstimates, scoping is not mandatory. If the problem statement is clear enough, you may skip scoping & jump directly to the guesstimate.

Segmentation

- Based on the scope, the candidate is expected to correctly identify the starting point of the guesstimate based closely on the problem statement. Common starting topics include the population of a country, area of a region, etc.
- Most guesstimates would need you to segment your starting point into various classes, as appropriate. E.g., If you start from the population of India, you can segment it in multiple ways – based on age, gender, income, region, etc.
- Choosing the suitable class & the correct segmentation is important because the effect of your estimate varies across different classes. E.g., For solving the estimate of annual wheat production in India from the demand side, it may be easier to follow an income-based segmentation rather than, say, gender-based.
- You may have to use multiple segmentations in the same guesstimate.
- It is always advisable to have a certain idea of some thumb rules for estimating various numbers. A few of the most used values are given below:

	Numerals
1 lakh	10^5
1 million	10 lakhs = 10^6
1 crore	100 lakhs = 10^7
1 billion	1000 million = 10^9
1 trillion	1000 billion = 10^{12}

	Approx. Population*
Earth	800 crores = 8 billion
India	141 crores = 1.4 billion
China	141 crores = 1.4 billion
USA	33 crores = 330 million
Mumbai, Delhi	2 crores
Bangalore, Chennai, Kolkata	1 crore
Lucknow, Jaipur	30-40 lakhs
Jamshedpur	10 lakhs

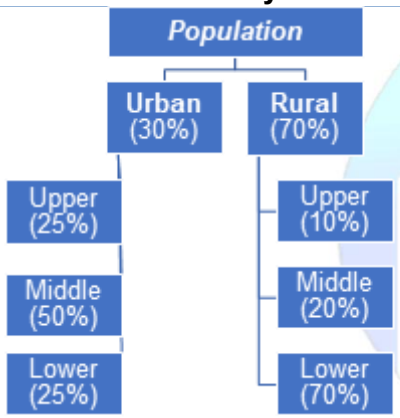
*Not exhaustive. Make sure you know the **approx. population of your hometown**

Segmentation

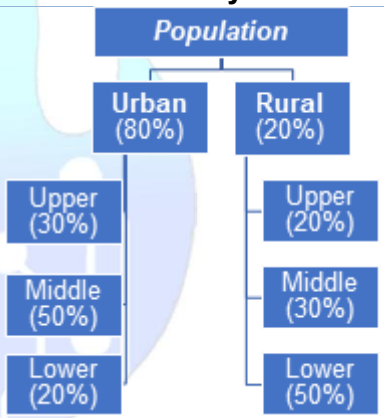
India – by Age

USA – by Age

Income – by Income



USA – by Income



Miscellaneous

Parameter	India	USA
Land area	3 million sq. km.	10 million sq. km.
Avg. literacy rate	80%	99%
Avg. life expectancy	70 years	80 years
Avg. household size	4	3

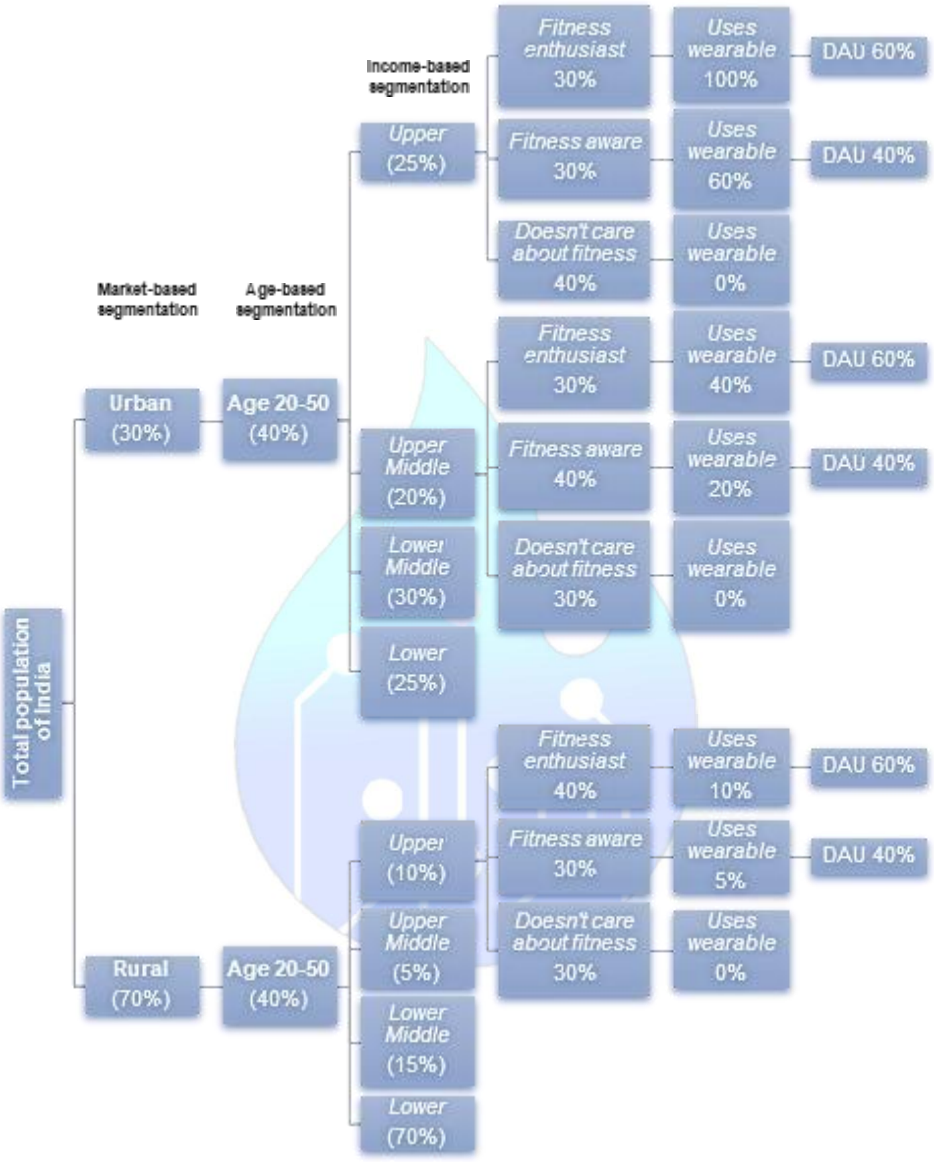
Example 1

Problem Statement: *An estimate of the DAU of the app of all fitness-tracking wearables in India*

From scoping, make clear what wearables need to be included in computation (mostly smartwatches). Also, clarify if we can proceed to assume everyone who has a wearable uses the application.

One of the ways of solving this guesstimate is in 2 steps – estimate the number of wearables

for fitness-tracking (which is equal to the app users), and then multiply this number with DAU for each class. For ease of computation, only one age class is assumed to use wearables. It is crucial to clarify every assumption with the interviewer at each juncture. Detailed structuring is provided below.



Above computation provides total number of wearables in India ~ 20 mn & average DAU ~ 10 mn. This answer may not be exactly correct, but it's always the approach that fetches brownie points.

Example 2

Problem Statement: *Calculate the number of queries answered by Google per second*

1. Clarification and Scope:

We have clarified that we are estimating the total number of queries answered by Google for every location present on earth, without geographical constraints.

2. Brainstorming and Structure:

We've chosen a top-down approach, estimating the number of Google Users and then translating this into the number of queries asked per second.
We can segment them according to their frequency of usage.
We can assume 3 types of searchers: **Aggressive**, **Active** and **Passive**

3. Creating an Equation:

The total number of Google Searches on Earth is derived from the total of Google Searches by **Aggressive**, **Active** and **Passive** searchers. The equation can be outlined as follows:

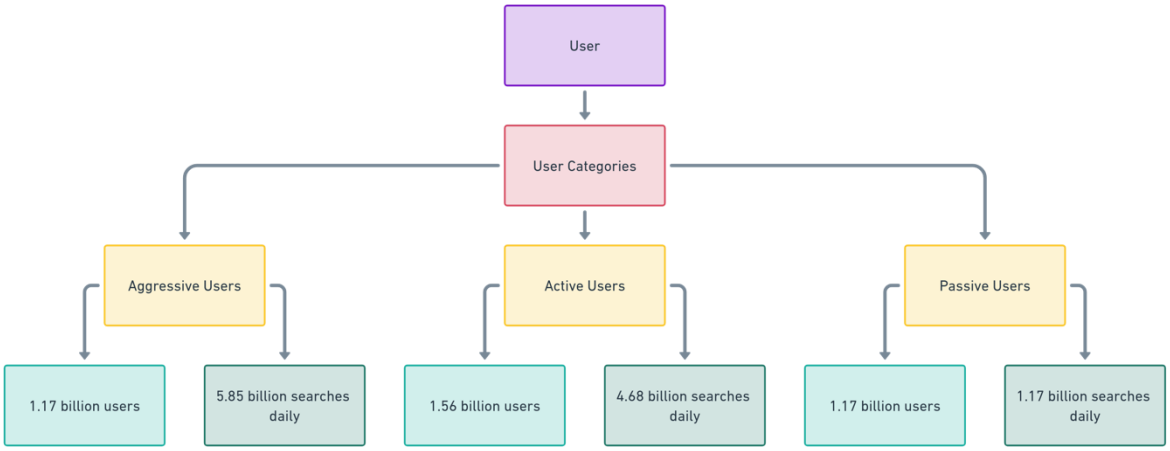
Total Google Search Queries = Google Searches by Aggressive Users + Google Searches by Active Users + Google Searches by Passive Users

4. Map out Calculations and Keep Your Numbers Easy:

Earth's population is around 8 billion people.
Since Google isn't available in China, we subtract about 1.5 billion from that, leaving us with roughly 6.5 billion potential users.
About 75% of the world has internet access, meaning around 4.875 billion people can go online.
Google dominates the search engine market with about 80% share.
So, we estimate around 3.9 billion people worldwide use Google for their searches.
Further we can segment these users according to their frequency of usage
Aggressive – Assuming 30% of the users are active users and they make 5 Searches daily on an average
Active – Assuming 40% of the users are active users and they make 5 Searches daily on an average
Passive – Assuming 30% of the users are active users and they make 1 Search daily on an average

5. Round Numbers and Calculate:

Number of **Aggressive** users – 1.17 billion
Number of **Active** users – 1.56 billion
Number of **Passive** users – 1.17 billion
Searches made by **Aggressive** users daily – 1.17 x 5 = 5.85 billion
Searches made by **Active** users daily – 1.56 x 3 = 4.68 billion
Searches made by **Passive** users daily – 1.17 x 1 = 1.17 billion



Total Searches in a day = 5.85 billion + 4.68 billion + 1.17 billion = 11.7 billion

Number of Seconds in a day = 24 x 60 x 60 = 86400

Total Searches per Second = 11.7 billion / 86400 = **135417**

Example 3

Problem Statement: Estimate the Number of ATMs in India

1. Clarification and Scope:

We have clarified that we are estimating the total number of active ATMs for all banks across India, without geographical constraints.

2. Brainstorming and Structure:

We've chosen a top-down approach, estimating the number of ATM users and then translating this into the number of ATMs needed.
This method allows us to systematically address the problem by focusing on key variables: population, urban-rural split, household size, and assumptions on ATM usage.

3. Creating an Equation:

The total number of ATMs in India is derived from the ATM users in both urban and rural areas. The equation can be outlined as follows:

Total ATMs = ATMs in Urban India + ATMs in Rural India

4. Map out Calculations and Keep Your Numbers Easy:

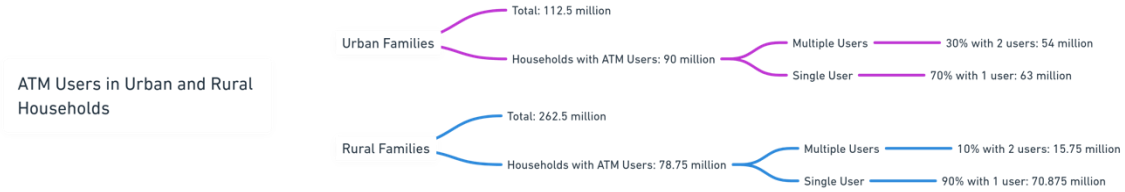
Total Population: 1.5 billion
Urban Population: 30% (450 million)
Rural Population: 70% (1.05 billion)

With an average household size of 4:
Round Numbers and Calculate:
Urban Families: 112.5 million
Rural Families: 262.5 million

Assuming 80% of urban households and 30% of rural households have ATM users:

Urban Households with ATM Users: 90 million
Rural Households with ATM Users: 78.75 million

Adjusting for Multiple Users per Household:
10% of households have 2 users: 78.75 million * 10% * 2 = 15.75 million
90% have 1 user: 78.75 million * 90% = 70.875 million
Total Rural ATM Users = 15.75 million + 70.875 million = 86.625 million
30% of households have 2 users: 90 million * 30% * 2 = 54 million
70% have 1 user: 90 million * 70% = 63 million
Total Urban ATM Users = 54 million + 63 million = 117 million



Assuming one ATM/5000 users in Rural India, and one ATM/500 users in Urban India

5. Calculating ATMs Needed:

Rural ATMs = 86.625 million / 5000 = 17,325 ATMs
Urban ATMs = 117 million / 500 = 234,000 ATMs
Total ATMs in India:
Total ATMs = Rural ATMs + Urban ATMs = 17,325 + 234,000 = **251,325 ATMs**
According to Statista the actual number of estimated ATM's in India is ~266000 which is ~95% close to our estimate

Example 4

Problem Statement: Estimate the Number of iPhone Users in India

1. Clarification and Scope:

We have clarified that we are estimating the total number of iPhone users in India, considering all models of the iPhone.

2. Brainstorming and Structure:

We've chosen a top-down approach, estimating the number of potential iPhone users based on population demographics and market share. This method allows us to systematically address the problem by focusing on key variables: population, age distribution, socio-economic class, and market share of the iPhone.

3. Creating an Equation:

The total number of iPhone users in India is derived from the population after excluding children and senior citizens, and considering the market share of iPhones. The equation can be outlined as follows:

Total iPhone Users=Potential iPhone Owners × iPhone Market Share

4. Map out Calculations and Keep Your Numbers Easy:

Total Population: 1.40 billion

Excluding Children & Senior Citizens (40%):1.40 billion×(1−0.40)
=0.60×1.40 billion=840 million

Excluding Lower Middle Class (14%): 840 million×(1−0.14)
=0.86×840 million=722.4 million

5. Round Numbers and Calculate:

Potential iPhone Owners: 722 million

Assuming iPhone Market Share is 6%: 722 million×0.06=43.32 million

6. Conclusion:

Total Estimated iPhone Users in India: Approximately 43 million iPhone users

Example 5

Problem Statement: Estimate the Number of WhatsApp Chats Occurring in India

1. Clarification and Scope:

We are estimating the total number of WhatsApp chats occurring in India on a daily basis.

2. Brainstorming and Structure:

We've chosen a top-down approach, estimating the number of WhatsApp users and then translating this into the number of chats based on age groups and usage levels.

This method allows us to systematically address the problem by focusing on key variables: population, internet penetration, smartphone usage, WhatsApp penetration, and chat activity.

3. Creating an Equation:

The total number of WhatsApp chats in India is derived from the WhatsApp users across different age groups and their respective usage levels. The equation can be outlined as follows:

Total WhatsApp Messages per Day=∑(Messages sent by each age group and usage level)

4. Map out Calculations and Keep Your Numbers Easy:

- Total Population: 1.3 billion
- Internet Penetration: 50%
  1300 millionx0.5 =650 million
- Percentage of Smartphone Users: 60%
  650 million×0.6=390 million

Percentage of Users Using WhatsApp: 80% 390 million×0.8=312 million (approx.)

5. Round Numbers and Calculate:

Age Group 10-24 years old:

Heavy Usage (70% of 150 million):
0.7×150 million=105 million

Medium Usage (20% of 150 million):
0.2×150 million=30 million

Low Usage (10% of 150 million):
0.1×150 million=15 million

Total Messages Sent by Age Group 10-24 years:
105 million+30 million+15 million=150 million

Age Group 25-35 years old:

Heavy Usage (60% of 100 million):
0.6×100 million=60 million

Medium Usage (30% of 100 million):
0.3×100 million=30 million

Low Usage (10% of 100 million):
0.1×100 million=10 million

Total Messages Sent by Age Group 25-35 years:
60 million+30 million+10 million=100 million

Age Group 36-50 years old:

Heavy Usage (50% of 50 million):
0.5×50 million=25 million

Medium Usage (30% of 50 million):
0.3×50 million=15 million

Low Usage (20% of 50 million):
0.2×50 million=10 million

Total Messages Sent by Age Group 36-50 years:
25 million+15 million+10 million=50 million

Age Group 51-65 years old:

Heavy Usage (40% of 12 million):
0.4×12 million=4.8 million

Medium Usage (30% of 12 million):
0.3×12 million=3.6 million

Low Usage (30% of 12 million):

0.3×12 million=3.6 million

Total Messages Sent by Age Group 51-65 years:
4.8 million+3.6 million+3.6 million=12 million

6. Conclusion:

Total Estimated WhatsApp Messages Sent per Day in India:
150 million+100 million+50 million+12 million=312 million
The total number of WhatsApp messages sent per day in India is approximately 312 million.

Example 6

Problem Statement: Estimate the Daily revenue of a McDonald's store in India

1. Clarification and Scope:

Where is the store located?
- Delhi, CP

A day means weekday, weekend or on average?
- Average Day

Post Covid or Pre Covid Scenario?
- Pre Covid

Dine In + Takeaways or Deliveries also included?
- Dine In + Takeaways only

2. Brainstorming and Structure:

We will adopt a bottom-up approach, dividing the day into different slots and estimating demand based on the day of the week and the time.

This method will allow us to calculate the average revenue for both weekdays and weekends, thereby helping us determine the average revenue of any given day.

3. Creating an Equation:

No.of hours the store is open x No.of customer groups per hour x Average bill per customer

4. Map out Calculations and Keep Your Numbers Easy:

We have segmented our weekdays and weekends into Peak Hours and Non-Peak Hours, based on which we will further calculate the number of customer groups visiting during peak and non-peak hours.

Weekdays	Peak Hours	2PM – 4PM/8PM – 10PM	4 hours
	Non Peak Hours	10AM – 2PM/4PM – 8PM	8 hours
Weekend	Peak Hours	1PM – 4PM/7PM – 10PM	6 hours

	Non Peak Hours	10AM – 1PM/4PM – 7PM	6 hours

5. Round Numbers and Calculate:

Assuming that on an average a store has a capacity to serve 150 customers at a given time and turn-around time is 60 minutes.
During weekday peak hours, there is an occupancy rate of 80%, which equates to 120 customers.
During weekday off-peak hours, the occupancy rate drops to 60%, corresponding to 90 customers.
Over the weekend, peak hours see a full occupancy rate of 100%, or 150 customers.
During weekend off-peak hours, the occupancy rate is at 80%, equivalent to 120 customers.

Day	Peak / Non - Peak	Time Slots	Hours	Occupancy Rate	Customers served per hour	Total Customers Served
Weekdays	Peak Hours	2PM – 4PM 8PM – 10PM	4 hours	80%	120	120 x 4 = 480
	Non Peak Hours	10AM – 2PM 4PM – 8PM	8 hours	60%	90	90 x 8 = 720
Weekend	Peak Hours	1PM – 4PM 7PM – 10PM	6 hours	100%	150	150 x 6 = 900
	Non Peak Hours	10AM – 1PM 4PM – 7PM	6 hours	80%	120	120 x 6 = 720

Average order value per customer

Weekday Peak Hours – Rs 150
Weekday Non Peak Hours – Rs 100
Weekend Peak Hours – Rs 180
Weekend Non Peak Hours – Rs 120

Day	Peak/ Non-Peak	Time Slots	Hours	Occupancy Rate	Customers served per hour	Total Customers Served	Average order value per customer	Total Revenue
Weekdays	Peak Hours	2PM – 4PM/ 8PM – 10PM	4 hours	80%	120	120 x 4 = 480	150	480 x 150 = 72000
	Non Peak Hours	10AM – 2PM/ 4PM – 8PM	8 hours	60%	90	90 x 8 = 720	100	720 x 100 = 72000
Weekend	Peak Hours	1PM – 4PM/	6 hours	100%	150	150 x 6 = 900	180	900 x 180 = 108000

		7PM – 10PM						
	Non Peak Hours	10AM – 1PM/ 4PM – 7PM	6 hours	80%	120	120 x 6 = 720	120	720 x 120 = 86400

Average Revenue = [(Weekday Revenue x 5) +(Weekend Revenue x 2)] / 7

Average Revenue = [(144000 x 5) + (194400 x 2)]/7

Average Revenue = 158,400

Pricing

In the dynamic world of product management, the importance of pricing cannot be overstated. A well-planned pricing strategy is crucial in determining a product's profitability, market positioning, and perceived value. Therefore, mastering an array of pricing strategies can empower product managers to optimize their financial performance and remain competitive. In this casebook, we'll explore 11 pivotal pricing strategies with real-world examples, guiding you on when and how to implement each.

Cost-plus pricing

This is a method of setting prices where the selling price is determined by adding a specific amount or percentage to your total cost. This strategy is commonly used in physical products with tangible costs, retail, and manufacturing industries. The low marginal cost of digital products makes cost-plus pricing less relevant.

Competitive pricing

It’s a strategy considering what competitors charge for similar products. For digital products, given their lower marginal cost, there might be more flexibility to adjust prices based on competition. At the same time, competing with price in a digital space is often a terrible idea. It ultimately causes all the competitors to operate on extremely low margins, which is often referred to as the “red ocean.” A better approach is competing to be unique, for example, by solving specific customers’ problems way better than anyone else, providing superior user experience, or ensuring frictionless onboarding.

Netflix Plans

Basic with ads	Basic	Standard	Premium
✓ Watch on 1 supported device at a time	✓ Watch on 1 supported device at a time	✓ Watch on 2 supported devices at a time	✓ Watch on 4 supported devices at a time
Some movies and TV shows unavailable (learn more), unlimited mobile games	✓ Unlimited movies, TV shows, and mobile games	✓ Unlimited movies, TV shows, and mobile games	✓ Unlimited movies, TV shows, and mobile games
✓ Watch in HD	✓ Watch in HD	✓ Watch in Full HD	✓ Watch in Ultra HD
	✓ Ad-free TV shows and movies	✓ Ad-free TV shows and movies	✓ Ad-free TV shows and movies
	✓ Download on 1 supported device at a time	✓ Download on 2 supported devices at a time	✓ Download on 4 supported devices at a time

Pricing (US Dollar)

- Basic with ads*: $6.99/month
- **Basic**: $9.99/month
- **Standard**: $15.49/month
- **Premium**: $19.99/month

Penetration Pricing

Penetration pricing is strategy businesses use to attract customers when they enter a market with a new product. The company initially sets a low price to attract customers away from competitors and to gain market share quickly. Once the product is established in the market and customer loyalty is built, the price typically gradually increases.
Good examples are:

- **Netflix**: When Netflix initially launched its streaming service, it offered a low price to attract new subscribers. Once they had established a substantial user base, they gradually increased their prices.
- **Uber**: When Uber first entered various markets worldwide, it offered significant discounts to attract users away from competitors like taxi corporations. Over time, the promotional offers were reduced.

Dynamic Pricing

Also known as surge pricing or demand pricing, it's a strategy where businesses set flexible prices for products or services based on current market demands. It's commonly used, for example, in the travel, entertainment, and conferencing industries due to the limited "inventory" that companies want to sell at the highest possible price. Most people experience it when booking flights or hotels. For example, **Booking.com** and **American Airlines.**
Digital products typically don't have similar constraints, so the Dynamic Pricing strategy is less relevant.

Price Discrimination

Price discrimination allows businesses to charge different prices to different customers for the same product or service. Movie theaters often employ this strategy by offering varying ticket prices based on factors like age and show timing. Adults pay the standard price, while discounts are given to children, students, and seniors. Matinee shows are usually cheaper than prime-time or weekend screenings. Despite everyone having the same movie-watching experience, segmenting the audience, and pricing accordingly helps optimize revenue for the theater.

Economy Pricing

Economy pricing involves setting low prices for products with minimal marketing expenses to target price-sensitive customers. Examples include ***Walmart, known for its "Everyday Low Prices"*** approach achieved through efficient supply chain management, and ***IKEA, which utilizes efficient production and customer self-service***. Southwest Airlines has become successful by employing an economy pricing strategy, focusing on ***efficient operations and direct ticket sales***. However, economy pricing may not be suitable for digital products as achieving product differentiation is easier in that realm.

Premium Pricing

This is the opposite of Economy Pricing. It's used when a company deliberately sets the price of its product higher than the competition to cultivate a perception of superior quality.

Luxury brands like **Apple**, **Rolex**, and **Gucci** often use this approach.

While premium pricing can improve profitability, it must be justified by delivering exceptional value, quality, customer service, and brand prestige.

Loss Leader Strategy

This strategy involves selling a product at a price that is not profitable, but it can help attract new customers or sell additional products and services.

Examples:

- **Amazon**: It has been known to sell Kindle devices at a loss, with the expectation that it will make up for the loss through digital sales (like eBooks, movies, and music) and prime memberships.
- **Gillette**: They sell razors at a low price but set high prices for replacement blades, which customers must repeatedly purchase to continue using the razor.

Value-Based Pricing

Value-Based Pricing is a strategy where prices are based on the perceived value of a product. It has several advantages:

- **Focuses on Customer Value:** Value-Based Pricing is all about charging what customers

are willing to pay. It shifts the focus from the cost of production or market to the actual benefits your product provides.

- **Maximizes Profitability:** In this model, companies can capture a larger portion of the value they create. This can lead to higher profitability, especially for software products where the marginal cost (cost of producing an additional unit) is virtually zero.
- **Flexibility:** Value-Based Pricing allows for a lot of flexibility. Prices can be set differently for different market segments based on the value they perceive. A good example is Microsoft's' offering for educational institutions.
- **Customer-Centricity:** Value-Based Pricing requires a deep understanding of the customer, their needs, and how they perceive value. This encourages companies to be customer-centric, which leads to better products, better customer experience, and higher intrinsic motivation of your employees.

Examples:

- **Apple:** It combines Premium Pricing and Value-Based Pricing. Apple has successfully created a strong brand and a perceived value around the quality, design, and user experience of its products.
- **Tesla:** Tesla's electric vehicles are priced based on their perceived value. Customers who buy a Tesla are not just buying a vehicle; they're buying a high-end, environmentally friendly lifestyle and a future vision. There are some nuances, as the brand is perceived as premium and, at the same time, uses Penetration Pricing to expand the EV market and make electric vehicles more affordable.

Price Skimming

Price skimming is a strategy used during a product's introduction phase. Initially, the price is set high to target customers willing to pay a premium for early access. As the market saturates, the price gradually decreases to attract more price-sensitive segments. This approach maximizes profits over time. Consumer electronics like smartphones and gaming consoles often employ this strategy. For example, new PlayStation consoles are initially priced high for hardcore gamers, and later reduced to appeal to a wider customer base. ***Price skimming is also useful for quickly recovering development costs in industries with high research and development expenses***.

Bundle Pricing

Bundle pricing involves selling a group of products or services together at a discounted price compared to buying them individually. This strategy encourages customers to purchase more, increasing sales volume and helping to sell slow-moving items alongside popular ones. A prime example is fast-food chains like McDonald's, offering burger, fries, and a drink as a discounted meal. In the software industry, Microsoft Office bundles programs like Word, Excel, and PowerPoint at a lower price than buying them individually. Bundle pricing provides convenience and perceived savings for customers while boosting overall revenue and product exposure for companies.

Cost of Bundle

Cost if Purchased Individually

Product	Price
McChicken	$2.99
Filet O Fish	$5.69
Medium Fries	$1.39
Small Coke	$1.00
Total	$5.38 - $8.08

If you want to understand on how to go about pricing a SaaS product, here is an excerpt from Lenny's Newsletter and SaaS Pricing guide by Paddle

Case Study: Pricing a Software Service (Short & limited to pricing only)

Interviewer: As a product manager candidate, I would like you to analyze and recommend a pricing strategy for our new cloud-based project management software service. The software aims to help teams collaborate, track tasks, and manage projects effectively.
Candidate: Thank you for the opportunity. To begin, I would conduct a thorough analysis of the market, target customer segments, and competitive landscape for project management software services. This will provide valuable insights for establishing an effective pricing strategy.

Interviewer: Great. Please walk me through your approach and recommendations.

Candidate: Firstly, I would segment the target customers based on their organization size and project management needs. This would allow us to create pricing tiers tailored to small businesses, mid-sized enterprises, and large corporations. Secondly, I would conduct competitive analysis to understand how our software service compares to existing solutions. By evaluating features, ease of use, and customer reviews, we can position our service competitively in terms of pricing. Based on customer feedback and value-based pricing, I would propose a subscription-based pricing model for our software service. The pricing tiers would include different features, storage capacities, and collaboration capabilities, ensuring customers can choose a plan that aligns with their requirements. To establish initial pricing, I would consider factors such as the number of users, storage limits, and project size. For example, the basic tier could be priced at $15 per user per month, offering essential project management features and limited storage, while the premium tier could be priced at $30 per user per month, providing advanced features, unlimited storage, and premium customer support.

Additionally, I would recommend offering a free trial or a freemium version of our software service. This would allow potential customers to experience its value firsthand and potentially convert them into paying customers.

Interviewer: That sounds like a comprehensive pricing strategy.

Go-To-Market Strategy

A go-to-market (GTM) strategy is a plan that helps you define your ideal customers, coordinate your messaging, and position your product for launch. A GTM strategy also keeps key business units aligned on the same plan, allowing you to meet a market need and effectively iterate on your product. This product management interview question tests whether you can think strategically about a product launch and implement one.

Who needs a go-to-market strategy?

Anyone who finds themselves in the following 3 situations needs a GTM strategy:

- Launching a new product in an existing market
- Launching an existing product in a new market
- Testing a new product's market for growth

This is relevant for individuals and companies in the B2B space.

Why do you need a go-to-market strategy?

GTM strategies provide the information companies need to effectively position themselves against competitors, create scalable inbound and outbound models, and leverage appropriate tactics to achieve their goals. Launches usually fail when businesses assume a market need for a product and invest in its development without gathering this information.

Structure:

- **Clarify.** Ask clarifying questions if you are not sure about something.
- **Analysis.** Go through an analysis of the product, customers, competition, and market before talking about how you would design a product launch. This analysis will help you determine what the goals and launch activities should be.
- **Product.** What does the product do? Which problems does it solve for users/customers?
- **Customers.** Who are they? What do they want to achieve by using your product?
- **Competition.** Who are the main competitors? How do their offerings compete with yours? What are their strengths and weaknesses?
- **Environment.** Are there any regulations and trends that may affect a successful launch?
- **Product Launch Design**
- **Wrap up.** Summarize what the product launch goal is, what your strategy is, which launch activities you recommend, and how you will measure success.

Product Launch Design

Goals — What should the launch goal be?
E.g. -

1. The validation of market fit?
2. To be profitable ASAP?
3. Ensure positive reaction at the expense of slower growth?

Strategy — The following questions will help you think about a plan that will achieve the goals:

- Which market will you choose to launch the product in?
- Will you control growth through invitation or make a huge announcement?
- Will you roll out a limited version to launch earlier or a full product?
- Are there risks you are worried about?

Implementation — Break down the implementation into three phases: pre-launch, during-launch, and post-launch.

Pre-launch:

- **Marketing** — which inbound and outbound marketing activities will you use to reach your target market? (e.g., inbound: social marketing, content marketing, SEO; outbound: online advertising, PR, offline advertising, events, trade shows, etc.)
- **Partnerships** — will there be any co-branding, co-sales, or mutually beneficial partnerships?

During-launch:

- **Marketing** — what inbound/outbound activities will you implement?
- **Distribution** — which distribution channels will you use? (e.g., online website, retail stores, distributors, resellers)
- **Partnerships** — will you partner with a company for co-branding for example?
- **Pricing** — what pricing strategy will you use? (e.g., pricing-leader, penetration pricing, value-based pricing, etc.)

Post-launch:

- How will you measure the success of the launch?
- If it was successful, what would you do next?
- If the launch was not successful, what will you do next?

Example

Problem Statement: *How would you launch Google's driverless car service?*

- Before starting, try to ponder on, and clarify the launch objectives and implementation.
- Next reasonable step can be to understand the underlying technology of Google, or something that makes it unique (focus on USP of Google's product)
- Think of major features/parameters which can be important for a user to make him/her buy the product.
- Try to list down on a few major competitors, and how Google perform on major comparison parameters, and focus majorly on the advantages of Google over its competitors (as this can be utilized to acquire the mind share of the potential customers).
- In this case, Google's connected ecosystem can also be leveraged (try to forge relations with Google Home + Driverless), which opens the possibility of community driven contributions and upgrades in the services (due to most things being easily adjustable in google scheme of products & technology).
- Try to gauge the market potential, and if there have been any developments (which might be from a credible news source, or data point, regulations, policy framework), and propose the launch plan, for which the detailed leading idea is segmented below:

Pre-launch Activities

Pilot Programs

To compete with Uber, which has already launched pilots in the user and commerce markets, Google should follow suit with two pilots targeting these markets too. A user service could be a Chauffeur service for families to drive their loved ones to everyday activities, such as classes, shopping, doctor appointments and others. A commercial service could be a package delivery service.

The Chauffeur service should be tried in a cosmopolitan and technology-aware city like San Francisco or Manhattan to maximize visibility and buzz among their population, who are likely to be first adopters. It is crucial to avoid any kind of negative PR, like in the case of Tesla for example, where one fatality occurred during a pilot.

So, a safety driver should be present in case there is a need for manual override. The technology is still being developed, so there is always a chance of an unexpected situation that the software has not been tested against yet. In the pilots, the driverless-car service will be used to pick up and drop off the family during their weekly routine. To generate buzz, a lottery to select two families in a city from a list of interested families could be advertised. The pilot could last a week which is enough time to collect user data about user satisfaction with the service.

The pilot for the package delivery application could be applied to Google's own Express service, but I think partnering with a world-renowned brand like FedEx or UPS would give the pilot greater visibility.

Marketing Campaign

After the pilots take place, I would launch a marketing campaign using short videos to illustrate how the two driverless services will change people's lives. For example, the video for the Chauffeur service could enact a situation in which a teenager is going to a party while mom and dad are watching TV.

The teenager uses the driverless Chauffeur car and while enroute, the parents ask Google Home to monitor where the car is going and display its route on a Google map that is displayed on the TV or a smartphone. They could also press a button on Google map and talk to the teenager. As the teenager arrives at the destination, the Google Chauffeur sends a message to the parents, confirming the safe arrival and a photo of their child entering the destination.

The video for the package delivery use case could enact a familiar situation. A driverless van arrives at a house. When the van door opens, an android drone flies out with the package and delivers it at the doorstep of a house. Inside the house, Google Home announces that a package has been delivered and a notification is sent to the recipient's phone.

These videos would emphasize the use of Google's AI technology and its ecosystem of devices and apps to create services that provide an end-to-end customer experience beyond just picking up or dropping off. They are key in supporting emotional needs such as knowing if your child has arrived safely or efficiency in knowing when a package has arrived and waiting at the door.

The videos should be distributed to all social channels and major technology news sources where the target demographic will likely visit, such as Facebook, Reddit, LinkedIn, Snap Chat, YouTube, and others.

Learning From Data

As I mentioned before, to help build their software, carmakers have started new shared-ride services to collect data about user behavior. Google should do the same by using its driverless technology, with a safety driver, to deliver packages in the Google Express service.

Developers

Google's network of developers is one of its greatest assets. The driverless-car platform Google is creating will be further differentiated and enriched, when there are more applications running on top of it. Thus, Google needs to open their platform and partner with developers, so that Devs can begin creating new ideas for future services that will attract more customers.

Public Relations

I would also start public relations campaigns to promote the chauffeur and packaging services. The campaign for the Chauffeur service would include video interviews that feature families talking about their experiences with the Chauffeur service. The video for the package delivery service would feature the Director of Logistics explaining how the new service will improve the efficiencies in the delivery process.

Product Launch Activities

At launch time, I would focus on the following activities:

- Start with a press event and invite all major technology publications for a Q&A session.
- Use billboards along major highways to advertise the driverless-car services with catchy taglines like "Google Chauffeur at your service."
- By launch time, develop more partnerships with several carmakers so the service can offer multiple car choices to customers.
- To grow market share quickly and make it easier for customers to try the driverless service, I would price the introductory Chauffeur service just a bit above cost. The cost of using an on-demand driverless car service has been estimated to be 50 cents a mile. So, let's say on average a family drives 200 miles a month. At 50 cents per mile, that results in $100 a month and $1,200 a year. Therefore, I recommend an introductory price of $100 a month as a subscription service or $90 a month if they sign a year contract.
- As demand for the service starts to increase, additional features can be introduced to expand into higher-priced services.
- I would use promotional discounts to entice customers to try pricier services too.

There are risks involved when introducing new technology, especially technology that makes decisions for people. Accidents are bound to happen and having a strong PR strategy to respond to such events will help keep the brand name safe.

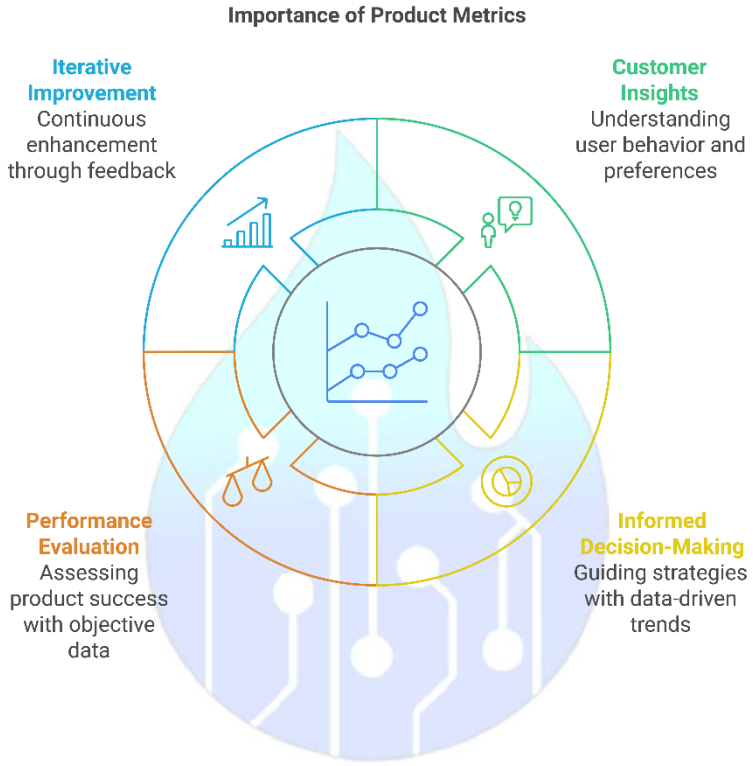
Summary

To summarize, Google's product launch goal is to establish itself as the top player in the driverless technology market and differentiate its offering. Pre-launch activities include marketing campaigns, pilot programs targeting user and commercial markets, media events, and partnerships with carmakers. Exploiting its AI technology, device ecosystem, and developer network will set Google apart. While a real driverless service is not feasible yet, Google should act swiftly to strengthen its position in the market and catch up to perceived leader Uber. Legislative changes are needed before a full-fledged driverless service can be launched.

Product Metrics

Product metrics are measurable data points that businesses use to evaluate the performance, effectiveness, and impact of their products. These metrics empower teams to make data-driven decisions, align efforts with organizational goals, and foster continuous product improvement. For product managers, mastering the use of metrics is critical for defining product-market fit, identifying user pain points, and enhancing stakeholder communication.

Why Are Product Metrics Important?



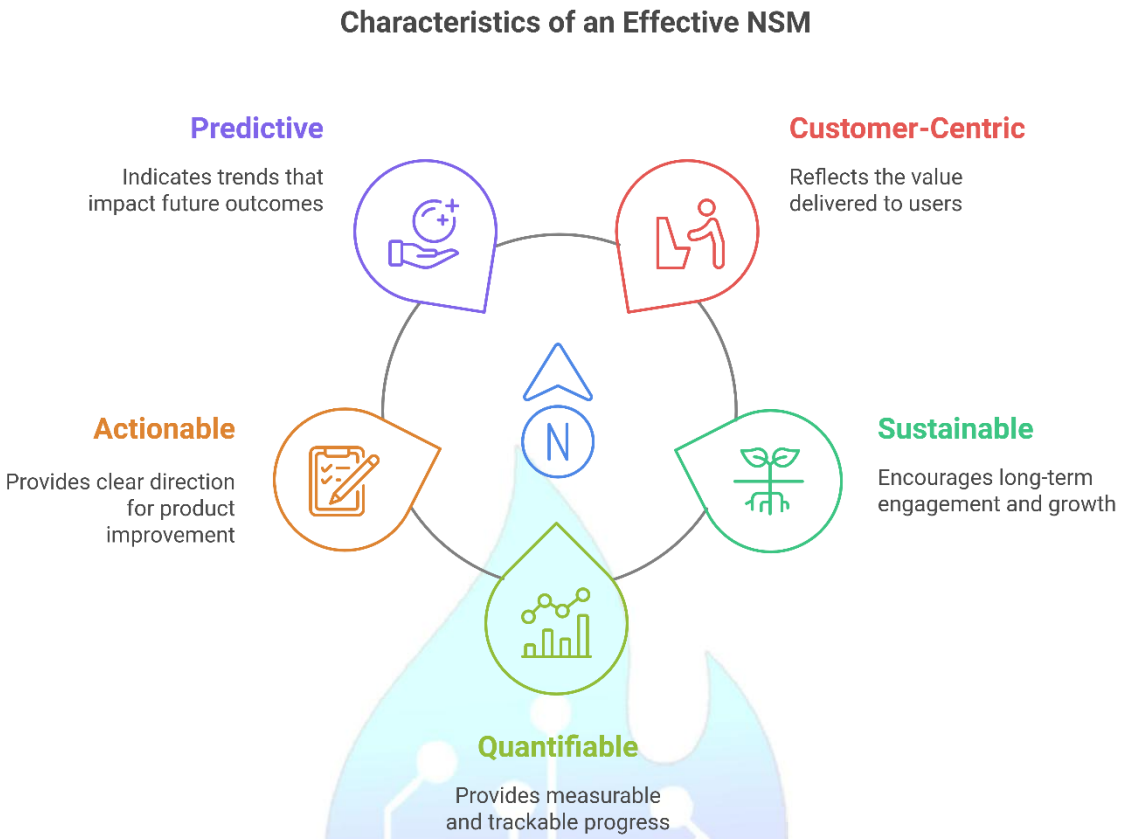
Metrics can be grouped into three broad categories to streamline their application and analysis:

1. **North Star Metric (NSM):** A single guiding metric reflecting the product's core value.
2. **Success Metrics:** Key performance indicators measuring specific objectives. Success metrics are typically specific, measurable, attainable, relevant, and time-bound (SMART) to provide clarity and focus in evaluating performance.
3. **Guardrail Metrics:** Supporting metrics that help monitor unintended consequences.

A Deep Dive into North Star Metric:

The NSM is the cornerstone of a product's strategy. It represents the core value that the product delivers to its users and acts as a compass for all teams. Unlike vanity metrics (e.g., app downloads or social media likes), an NSM is actionable, customer-centric, and predictive

of long-term success. A North Star metric must fulfill three criteria: lead to revenue, reflect customer value, and measure progress.



NSM can be confusing at times, while metrics like “Daily Active Users,” “Registered Users,” "Monthly Revenue," or "Number of Installs" seem attractive but are not really effective because they don’t necessarily reflect what customers value the product and lack a direct correlation with customer satisfaction and long-term value.

- DAU measures the number of unique users engaging with an app daily, but it doesn't account for the depth or quality of that engagement. A user might log in briefly without meaningful interaction, yet still be counted as active.
- Monthly Revenue can be misleading, as it doesn't necessarily indicate customer satisfaction or long-term loyalty; revenue might be high due to short-term promotions rather than sustained value delivery.
- Number of Installs reflects initial interest but not ongoing engagement or retention. Users may download the app but stop using it soon after, making this metric unreliable for long-term impact.
- Registered Users show sign-ups but don’t measure active participation. Many registrations may never translate into meaningful engagement.

Let's dive into some examples of good North Star metrics:

1. **Spotify**: **"Time spent listening to music"**
    - Reflects user engagement and satisfaction with the product, directly tying to the core value that Spotify provides—seamless access to music.

2. **Airbnb**: **"Nights booked"**
    - Ties directly to customer value and business revenue, indicating successful accommodations and customer satisfaction.

3. **Uber**: **"Number of rides per week"**
    - Measures active engagement and directly correlates to the company's success in delivering its core service.

4. **Dropbox**: **"Files saved"**
    - Reflects the core purpose of the service—providing secure file storage and accessibility, which directly impacts user productivity.

5. **Fitbit**: **"Steps made"**
    - Captures customer value by emphasizing health and fitness goals rather than focusing on hardware sales.

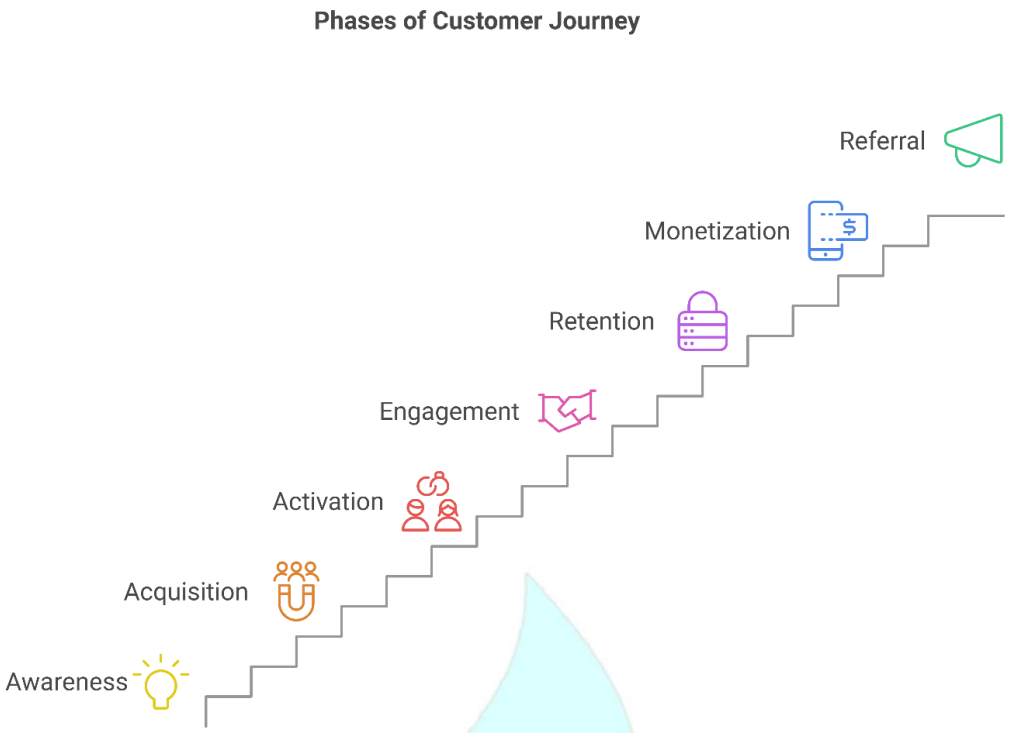
Few more examples:

Company	Category	Bad NSM	Actual NSM	Focus
Amazon	E-commerce	Monthly revenue	The number of orders per month	Transaction
Tinder	Dating app	The number of swipes right	Matches made	Transaction
WhatsApp	Messaging	The number of accounts	Messages sent	Productivity
Quora	Q&A knowledge sharing	Time spent in the app	The number of answers	Productivity
Canva	Graphic design	The number of projects created	Happy, active users	Productivity
Netflix	SaaS, video streaming	The number of subscribers	Weekly viewing hours	Attention
YouTube	Video	The number of videos uploaded	Time spent watching videos	Attention

Deep Dive: Success Metrics:

Product success metrics are best analyzed by examining the different phases of a customer's journey and identifying which metrics align with each phase.

NOTE: The order of customer journey may vary depending upon the specific application or context. However, the key elements shall remain the same, and so would the indicative metrics under each component.



1. Awareness

Awareness focuses on ensuring that users are informed about the existence of a feature. It involves analyzing metrics that help assess the product's reach and visibility.

Key Awareness Metrics:

1. **Impressions:** Number of times content is displayed to users ***Example*:** Facebook analyzes impressions to evaluate ad campaign effectiveness

2. **Click-Through Rate (CTR):** Percentage of users clicking on an ad ***Example*:** Google Ads optimizes performance by tracking CTR

3. **Total Visits:** The number of times users access a page or platform
   Example: Amazon tracks visits to new product pages to assess traffic and promotional success.

4. **Traffic Source Distribution:** Breakdown of user traffic by sources (e.g., organic search, referrals, paid ads).
   Example: Google Analytics provides insights into traffic sources to optimize marketing efforts

2. Acquisition

Acquisition focuses on gauging user interest and capturing leads. It involves analyzing metrics that assess how effectively a product attracts new users.

Key Acquisition Metrics:

1. **Customer Acquisition Cost (CAC):** Cost incurred to acquire a new customer via marketing/sales efforts.
   Example**:** Uber tracks CAC to assess the efficiency of its customer acquisition strategy.

2. **User Growth Rate:** Percentage increase in users over time.
   Example: Duolingo tracks growth post-marketing campaigns.

3. **Conversion Rate:** Percentage of users completing a desired action, such as signing up for a newsletter.
   Example: Mailchimp monitors conversion rates to optimize email marketing campaigns.

3. Activation:

Activation focuses on transforming interested users into active participants. It involves measuring the effectiveness of user onboarding processes and assessing how well users experience the product's core value.

Key Activation Metrics:

1. **Time to Value (TTV):** The duration it takes for users to experience the core value of a product
   Example*:* Slack measures the time it takes for teams to send their first 50 messages

2. **First-Time User Activation Rate:** The percentage of first-time users who complete a key milestone or desired action, such as creating an account or making a purchase
   Example: Dropbox tracks the percentage of new users who complete the tutorial and upload their first file

4. Engagement:

Engagement focuses on driving meaningful interactions with the product and measuring the depth and frequency of user involvement.

Key Engagement Metrics:

1. **Daily/Monthly Active Users (DAU/MAU):** Tracks unique active users on a daily or monthly basis.
   Example: Instagram uses DAU to measure user activity.

2. **Session Duration:** The average time spent by users per session.
   Example: YouTube monitors session duration to optimize recommendations.

3. **Scroll Depth:** Measures how far users scroll down a page or content.
   Example*:* News websites track scroll depth to gauge content engagement.

4. **Engagement Rate:** Tracks the level of user interaction with specific product features.
   Formula: Engagement Rate = (Users interacting with a feature / Total users) * 100
   Example*:* Canva tracks engagement with its design tools.

5. **Stickiness Ratio:** Measures engagement frequency

Formula*:* Stickiness = DAU / MAU
Example*:* A stickiness ratio of 0.4 means 40% of monthly users engage daily.

5. Retention:

Retention focuses on maintaining user loyalty and minimizing churn. It involves analyzing metrics that measure the effectiveness of user engagement and the ability to retain customers over time.

Key Retention Metrics:

1. **Customer Retention Rate:** Percentage of users who continue using the product after a specific time
   Example**:** Spotify tracks retention post-free trials to evaluate long-term engagement

2. **User Renewal Rate:** Percentage of users renewing subscriptions or continuing usage post-initial contract
   Example**:** Adobe monitors user renewal rates for Creative Cloud to gauge the success of retention efforts

3. **Churn Rate:** Percentage of users who discontinue using the product within a specific period
   Example**:** Netflix reduces churn through personalized recommendations

4. **Customer Lifetime:** Average time a user stays with the product
   Formula**:** Customer Lifetime = 1 / Churn Rate
   Example**:** A churn rate of 20% means the average customer lifetime is 5 years.

6. Monetization:

Monetization focuses on evaluating revenue generation and value capture. It involves analyzing metrics that measure the financial performance and ability to generate consistent revenue from users.

Key Monetization Metrics:

1. **Monthly Recurring Revenue (MRR):** Tracks consistent subscription revenue
   Example**:** Shopify evaluates MRR to assess the stability of its subscription-based model

2. **Average Revenue Per User/Contract (ARPU):** Measures revenue per user, reflecting product profitability
   Example**:** Spotify tracks ARPU from premium subscribers to evaluate monetization efficiency

3. **Customer Lifetime Value (CLTV):** Total revenue generated by a user over their lifetime
   Example**:** Starbucks uses CLTV to design loyalty programs that encourage repeat purchases

4. **Revenue Growth Rate:** The percentage increase in revenue over a specific period
   Example**:** Netflix tracks revenue growth to evaluate the impact of new subscription plans and international expansion

5. **Net Revenue Churn:** Tracks revenue lost due to cancellations or downgrades

Example**:** A SaaS company monitors net revenue churn to identify areas where retention efforts need improvement

6. **Expansion Revenue:** Additional revenue from upselling, cross-selling, or add-ons
   Example**:** Salesforce tracks expansion revenue from cross-selling its products to existing customers

7. **Customer Profitability:** Difference between lifetime value (LTV) and customer acquisition cost (CAC)
   Example**:** Amazon compares LTV and CAC to ensure that customer acquisition efforts are profitable over the long term

7. Referral:

Referral focuses on leveraging satisfied users to drive organic growth. It involves analyzing metrics that measure the effectiveness of user-driven promotions and recommendations in acquiring new users.

Key Referral Metrics:

1. **Virality Coefficient:** Measures how effectively users bring in new users. A higher coefficient indicates stronger growth.
   Example***:*** Virality coefficient of 1.2 means each user refers 1.2 new users.

2. **Customer Referral Rate:** The percentage of customers who refer others.
   Example***:*** Airbnb tracks the percentage of users sharing referral links to invite new hosts or guests.

3. **Referral Conversion Rate:** The percentage of referred users who convert into active customers.
   Example***:*** Uber monitors the percentage of referred users who complete their first ride and become regular users.

Guardrail Metrics: Balancing Optimization

Guardrail metrics are used to ensure that the optimization of primary metrics, such as the North Star Metric (NSM), does not result in unintended adverse effects. While primary metrics focus on advancing a product's core value, guardrail metrics help maintain the overall health and sustainability of the product and business by providing a balanced view of performance.

Why Are Guardrail Metrics Important?

1. **Prevention of Trade-off Pitfalls:** They help identify when improvements in one area negatively affect another. For example, driving aggressive customer acquisition might increase churn if the onboarding experience is subpar.
2. **Sustained Business Health:** Tracks areas like operational costs, system reliability, and customer satisfaction, ensuring long-term growth without overburdening resources.
3. **Customer-Centric Approach:** Keeps user experience and satisfaction at the forefront, ensuring that short-term optimizations do not alienate users or reduce product value.

Key Characteristics of Guardrail Metrics

1. **Complementary to Primary Metrics:** They provide additional context and help monitor the broader impact of optimizations of primary metrics
2. **Proactive Monitoring:** Identify early signs of potential negative impacts, allowing teams to act before issues escalate.
3. **Broad Impact:** Guardrail metrics often address areas with cross-functional importance, ensuring alignment across teams.

Examples of Guardrail Metrics

Metric	Purpose	Example
Net Promoter Score (NPS)	Measures customer satisfaction and loyalty	Prevents over-prioritization of acquisition at the cost of user experience.
Operational Costs	Tracks efficiency to ensure cost-effectiveness	Helps avoid unsustainable spending during high-growth phases.
System Uptime	Monitors reliability and performance of the system	AWS uses uptime as a guardrail to maintain trust among clients.
Churn Rate	Tracks the percentage of users discontinuing the product	Ensures growth-focused initiatives do not lead to higher churn rates.
Employee Engagement Score	Measures team morale and productivity	Prevents burnout from an overemphasis on rapid feature rollouts.
Feature Adoption Rate	Tracks how well new features are received by users	Ensures resources are not wasted on underperforming initiatives.

Case Study: Guardrail Metrics in Action

Scenario: A subscription-based SaaS company aggressively optimizes its conversion rates for new users.

- **Primary Metric Focus:** Increase in free-to-paid conversion rates.
- **Guardrail Metrics Monitored:**
  - **Churn Rate:** Tracks if new users remain engaged after their first subscription cycle.
  - **Net Promoter Score:** Tracks user satisfaction during the onboarding process.
  - **Operational Costs:** Tracks marketing and onboarding initiative costs.

Outcome: The company increased conversion rates by 15% while maintaining stable churn and operational costs, resulting in sustainable growth without compromising long-term customer relationships or profitability.

How to Implement Guardrail Metrics Effectively

1. **Define Clear Thresholds:** Set specific limits for guardrail metrics to identify when intervention is needed (e.g., churn > 5%, uptime < 99.9%).
2. **Use Real-Time Dashboards:** Leverage tools to track both primary and guardrail metrics in real time, enabling quick decision-making.
3. **Collaborate Across Teams:** Ensure cross-department collaboration (product, marketing, operations) to address issues identified by guardrail metrics.
4. **Iterate Based on Insights:** Continuously refine product strategies using feedback from guardrail metrics to align with user and business goals.

Practical Examples of Balanced Metrics

- **E-commerce:** While optimizing revenue per user, monitor the cart abandonment rate to ensure checkout flows are not overly complicated.
- **Streaming Platforms:** Focus on increasing viewing hours but track churn and NPS to ensure the content remains engaging.
- **Ride-Sharing Services:** Improve ride frequency per user while monitoring driver satisfaction scores to maintain service quality.

Product Strategy Case

A product strategy case is a comprehensive analysis that defines the vision and direction for a product to achieve specific business objectives. It guides decision-making and prioritizes actions for successful product development and market positioning.

The following example illustrates how a product strategy question can be answered during an interview.

Example 1

Problem Statement: *You're the CEO of a startup that figured out how to build a teleportation machine. You can use this machine by simply entering the coordinates of the place you wish to be and get teleported there. The cost for building this machine is $10M and the cost to use it is $100K each time. As a CEO, what's the target market you'll go after and what are some of the use cases for this technology?*

Step 1: Start with a set of clarifying questions to comprehend the problem statement better

Candidate: Do we require a second machine at the point we're teleporting to?
Interviewer: That's a good question! No, just one machine is enough to take you there but the machine doesn't travel there along with you.

Candidate: How large is the machine?
Interviewer: It's the size of a phone booth, so it can fit one person at a time.

Candidate: Does it work for both people as well as objects?
Interviewer: Yes, it works for both living as well as inanimate objects. Whatever you put in the machine, appears exactly like that on the other side.

Candidate: How long does it take before the machine requires maintenance or servicing?
Interviewer: For simplicity, let's assume that if you use the machine once a year, it works fine.

Candidate: Do we have it patented?
Interviewer: Yes, it's incredibly difficult to create a replica and we have complete IP protection.

Candidate: Can the machine be hacked?
Interviewer: No, and to add to it the way this machine works is that you've invented some special technology that can restrict access to whoever you want to give access to using biometric data and it's a DNA based solution.

Candidate: How many machines can we produce?
Interviewer: There's a limit of 10 machines that can be produced every single year.

Step 2: Ideation

Take some time (about a minute or two) to analyse the responses you've gotten to the preliminary questions and think of some ideas. Don't rush into giving solutions straight away as it's really important to have a good flow of thoughts instead of simply listing out solutions. Also, if you make any assumptions, check with the interviewer about the validity of the same.

Step 3: Discuss on Use Cases

Talk about the use cases for the machine. Since the cost of procuring one as well as running it is pretty high, it's necessary to understand the product's requirement amongst the users.

Candidate: Assuming that a user can pay the $10M upfront cost, I'll think of some use cases where the cost of each trip which is a $100K is justified. Before heading on to the use cases, I'll just talk about some of the benefits of using this:

- It's much faster than any other form of transportation known to us.
- It's probably the most secure way of transporting goods as well as people as no one can intercept the path.

So, for the use cases I think instances where both speed and safety are of utmost importance, the machine will come in handy.

We can break down the use cases to a couple of buckets:

- **Personal Use** – Most billionaires would be interested ins something like this given that in a lot of instances their time is more important than money. But the problem with this is that the transportation is one way and you'll need to have a set of 2 machines to complete a journey back.
- **Businesses** – Companies like the ones in Fortune 100 would want to get their CXOs in places instantly and a private jet might just have a higher running cost than our machine and with the added convenience and security, it would make the price of $100K/trip economically worth it.
- **Politics** – I know that the budget for Air Force One would be billions of dollars a year and given that we have the most secure as well as the fastest way of transportation, every head of state would want this but the complexity would arise when a machine would be required at every place that the president travels to as it'll increase the cost manifolds.
- **Industrial** – Let's the US Federal Reserve wants to send something extremely important or someone wants to transport gems worth a lot, the machine would be useful since it's extremely dangerous and costly to transport such goods in armoured trucks and with security forces. It can be used in mining as well for precious stones and metals since that's anyway a one=way transportation and you wouldn't need anything to come back.

I was also thinking about some perishable goods like frozen chicken but it wouldn't make sense for that since there's only so many of them that you can fit inside a machine the size of a phonebooth. Similarly, for transporting groceries to remote locations this would be a good machine but the cost won't work out.

(Note how the candidate buckets the use cases by using a breadth first approach which is a much better way than just randomly listing out different use cases that come to mind.)

Step 4: Discuss on business models.

Candidate: Now, let's focus on the business models.
First is where we simply sell the machine and the user can use the machine all they want.
Next, we can rent out the machine for some time for let's say a few million dollars.
Third is where we have a subscription model where you don't buy the machine but pay for each use.

Since the machine basically works forever, we'll lose out on a lot of money if simply sell it at an upfront price. Especially if we're just making 10 machines a year, it's really hard to scale the business with this model. I believe between all, 23 can use subscription or the pay per use model. Since we'll have different frequency use cases like CEOs using it a few times a month vs let's say the Fed or mines using it multiple times a day, it's difficult to have a one size fits all solution with the subscription model so I'll want to go ahead with the pay per use model.

Next, let's see how much we can sell this machine for and how much we can charge per use. In the first year since not a lot of people would trust this or even know about it completely, I would propose to sell the machine at cost to build that initial set of user base and we can increase the price afterwords.

Next, we need to think about how much we can charge per use which we'll of course have more than $100K/use since that's how much it costs us. Since we have important value propositions in speed and security, having at least a 50% margin (the price being min. $150K/use) won't be too high as long as it's in the vicinity of alternative options.

Taking the example of a company like De Beers, let's assume that it costs them $2M/shipment with all the armored trucks and security forces for a shipment of 6 times the size of a phone booth.

(Note that the candidate has made a simple assumption of $2M, over here it's not the most important thing to be spot on with the exact cost but to show the interviewer that you can account for everything and come up with a logical flow)

To start with, we can have $300K as price per use which will bring the total cost for De Beers to $1.8M for the same amount of diamonds that they can ship using the conventional method. Since the price is still cheaper with a better value proposition, we can later on increase the price to something like $500K/use.

A caveat that we can add in this model is a minimum of 50 trips/year or 1 per week.
In the first year, I would want to sell only 8/10 machines that we produce and keep the remaining 2 for demonstrations. We can have one in New York and the other in Shanghai, this way we can cover both the western as well as the eastern countries.

Step 5: Revenue calculations

Candidate: In the first year, by selling the 8 machines we first get $80M. Assuming that the average user uses this machine about 200 times/year, we further get 200 (# uses) x 300K (price/use) x 8 (# machines) = $480M totalling to 480 + 80 = $560M.

In the future years, we can sell all 10 machines at a price of $15/20M and charge around $500K/use and get close to a billion dollars in revenue. Along with the revenue from the new 10 machines that we sell each year, we'll also have recurring usage revenue from the ones we sold in previous years.

Along with this, we can also sell insurance for cases where the machine might get damaged

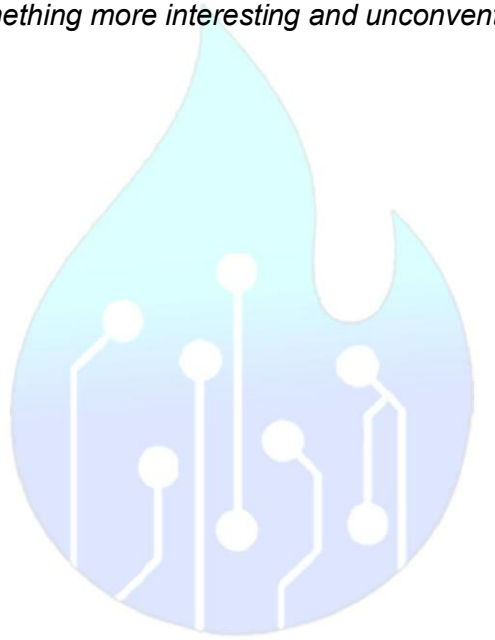
due to natural events like an earthquake or a tsunami assuming that people would want to protect something of such high value.

We can also sell consulting services by explaining detailed use cases and building whole projects like where to place the machine, build a secure environment around it, etc.
I think that's about it from my side and I'll stop there.

Interviewer: Awesome, thank you so much! If you were to revisit the case, would you have done something differently?

Candidate: Yes, probably I would revisit the pricing numbers. Given that we've just invented teleportation, after building awareness and proving the machines usage, we can charge a premium as high as 5x per use compared to conventional solutions because of the value propositions we're providing. Also, I think we can explore more on the use case for Presidents given how much they spend on security, they might be willing to spend a lot more on this safe and fast solution.

(This solution works well for a ~30 min interview however if you have close to an hour for this round, you can explore something more interesting and unconventional like space travel)



Hardware Case

Problem Statement: Design a computer keyboard.

Clarification Questions / Assumptions

1. Why do we need to build this product when we already have many different types of keyboards in the market?
   This is going to be a smart keyboard that can perform various advanced functions which are not available in the present keyboards available in the market.
2. Do we need to integrate it with the related products like mouse?
   As per your convenience you can integrate or disintegrate with mouse.
3. Should it support laptop, desktop, cell phone, tablets? All
4. What kind of product should it be? A hardware product.
5. Who are the users?
   - All individual users who use tablets, systems, even cell phones for their daily use
   - Schools, hospitals, government offices which has been computerized recently.
   - Courts
   - Visually impaired people

Goal

Assuming the exiting market is already well acquitted with the conventional keyboards, we would like to increase the revenue with new SMART keyboards.

Pain Points

- Considering the initial target market is India where multiple states follows different regional languages. It is difficult for a person to type in the desired language when the conventional keyboards are available in English language. The user only understands the native language.
- Too big in size and bulky to carry.
- I have multiple devices, but it is difficult to manage different keyboards for different type of gadgets.
- It needs skillset to learn the typing and to type accurately at the same time when other person speaks. Hence, the user often does typo errors.
- Finding out a pen is always a pain staining job when we are on call and want to write some quick notes.
- The user may not be a literate person and hence finds it difficult to type using the keyboard.

Solutions

1. Smart keyboard can be foldable device that can be easily accommodated in a purse or pocket.
2. The user can use one uniform device to connect on cell phone, laptop, even smart watch, tablets.
3. The smart keyboard should be wireless and chargeable using solar energy and battery driven.
4. It should have an indicator to notify the user when the recharge is needed and how much percentage of battery is filled.
5. Keyboard can be voice controlled where instead of typing thru finger the voice command

can be converted to text.

6. The smart keyboard should have the functionality to offer the typing content in any regional language. A language converter/ translator will be helpful to convert the content in the desired language.
7. Features like auto suggestion and correction dictionary can help to type the content accurately in less time.
8. The keyboard should also have a section where quick notes can be taken like a small notebook either by typing thru fingers or thru voice command and can be erased as needed.

Prioritization

Prioritizing the above features based on the business value/ number of users impacted, cost, complexity to build as P1, P2 and P3.

P1

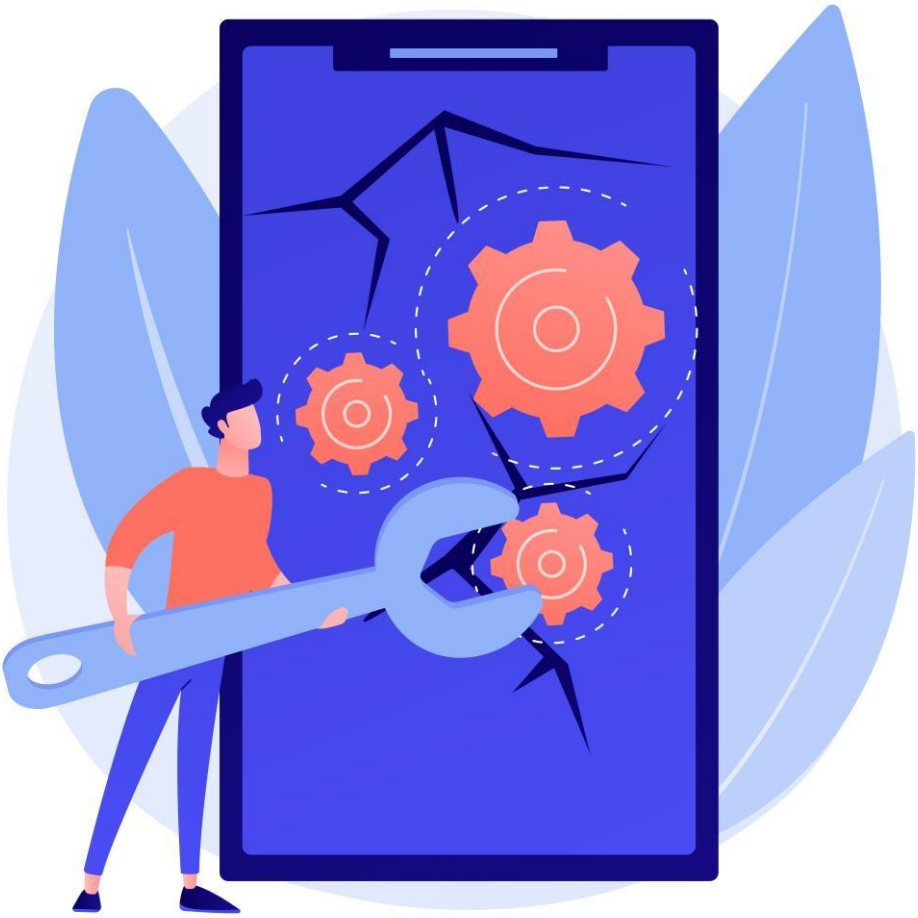
- Smart keyboard can be foldable device that can be easily accommodated in a purse or pocket.
- The user can use one uniform device to connect on cell phone, laptop, even smart watch, tablets.
- Keyboard can be voice controlled where instead of typing thru finger the voice command can be converted to text.

P2

- The smart keyboard should be wireless and chargeable using solar energy and battery driven.
- The smart keyboard should have the functionality to offer the typing content in any regional language. A language converter/ translator will be helpful to convert the content in the desired language.
- Features like auto suggestion and correction dictionary can help to type the content accurately in less time.

P3

- It should have an indicator to notify the user when the recharge is needed and how much percentage of battery is filled.
- The keyboard should also have a section where quick notes can be taken like a small notebook either by typing thru fingers or thru voice command and can be erased as needed.



Product Teardowns

How to do a Product Teardown

1. Understand the problem statement:

Spend some time understanding the problem statement and goal of the teardown. The understanding of goal is super important, as it will help set the direction, prioritization, and metrics right later on. Some common goals are Revenue, Engagement, Retention, User Growth etc. (Pirate or AARRR framework)

For self-practice, use this template to create problem statement: "How would you improve {Revenue, Engagement, Retention, Growth} for {X} Product?"

2. Find the stakeholders (users) in the system:

Who are the people who use the product or going to use the product? For Airbnb - we have hosts, guests, and AirBNB (company) as users. For Spotify - we can further divide users into personas like Travellers, Fitness freaks, etc.

Include the following details for important users: Pain Points, Goals, Context/Background and Use Cases.

3. Find the gaps/problems:

Find problems (pain points) in the life of the users which need to be solved through the chosen product. Use jobs to be done, and 5 Why to get into the details of the problem. Create a user journey to find gaps in the product offerings and user needs.

4. Prioritize problems:

Pick the problems that are most important for the users and also align with the goals of the teardown (step 1). Decide on the prioritization framework based on the product's lifecycle stage.

5. Brainstorm solutions:

Brainstorm solutions, through analogies, and first principle thinking to find solutions Make sure you find multiple solutions for the problems. Consider trade-offs of one solution over another.

6. Prioritize:

Use the simple Impact v/s Effort framework here. The impact should align with the goals from Step 1. If the effort is high, consider breaking the feature into experiments/MVP.

7. Decide success metrics:

North Star metric: Generally, this is your main goal from step 1. Awareness metric: Are people aware of this feature? [If not - you might have a discovery problem]. Adoption: Are people using the feature often? [If not - you might have a usability problem]

Do not disturb metrics: Metrics that shouldn't be disturbed by this feature. E.g. Onboarding more hosts on Airbnb shouldn't disturb the average ratings of properties.

8. Summarize

What's the solution, how did you get here, why this is better? Summarize your imp steps in one slide. Ability to be concise yet clear would get you extra marks here.

UBER

About the Company

Name: Uber Technologies Inc.
Founded: 2009 by Garrett Camp
India Launch: August 2013
Mission: *"To provide transportation as reliable as running water, everywhere, for everyone."*
Vision: *"To ignite opportunity by setting the world in motion."*
Domain: Ride-hailing and transportation logistics

Problem It Solves: Provides affordable, on-demand, multi-modal transportation options (cars, autos, bikes, EVs) via a seamless mobile experience.
Market Opportunity:

- India taxi market: $20.61B (2024) → Expected to grow to $38.9B by 2029
- CAGR: 13.55% - signals strong growth potential
- 1M+ drivers, 21% EV rides in FY23, 20% growth in gross bookings YoY

Competitive Analysis

FEATURE / COMPETITOR	UBER	OLA	RAPIDO	INDRIVE
SERVICES	Trip, Intercity, Rentals, Reserve, Package	Daily, Outstation, Rentals, Parcel	Intracity Services, Parcel	Intracity Services, City to City, Freight
VEHICLE OPTIONS	Moto, Uber Auto, Uber XS, Uber Go, Go Sedan, Uber Premier, Uber XL, Uber XL Plus, Uber Shuttle, Uber Green	Bike, eBike, Auto, Micro, Mini, Prime Sedan, Prime SUV, Book Any, Prime Plus	Bike. Auto, Cab Economy, Cab Premium	Auto, Ride A/C (There are no specific categories to choose from in the cars)
MAPPING TECH	Google Maps	Ola Maps	Google Maps	Google Maps
PRICING MODEL	Surge Pricing Model / Demand Pricing	Surge Pricing Model / Demand Pricing	Surge Pricing Model / Demand Pricing	Fare based on driver and passenger negotiation
SAFETY FEATURES	GPS, emergency assistance, audio record, RideCheck	Real-time ride tracking, ride-sharing details, Guardian AI tool for monitoring ride experience	Real-time ride tracking, live location sharing, emergency contacts	Real-time ride tracking, emergency contacts

PAYMENT OPTIONS	Cash, Uber Cash, Credit/debit cards, UPI	Cash, Ola Money, credit/debit cards, UPI	Cash, Rapido Wallet, UPI app	Cash or QR Code payment

User Personas

1. Rohit – CPO, Airport Commuter

- **Goals:** On-time, clean rides; premium experience
- **Behavior:** Books 1x/week, expects professionalism, values premium, punctuality
- **Pain Points:** Cancellations, dirty cars, driver requesting offline payments

2. Priya – Engineer, Daily Commuter

- **Goals:** Peaceful rides, no wait, intuitive booking
- **Behavior:** 4x/week, hates traffic & surprises
- **Pain Points:** Route issues, rude drivers, poor support, confusing pickup points

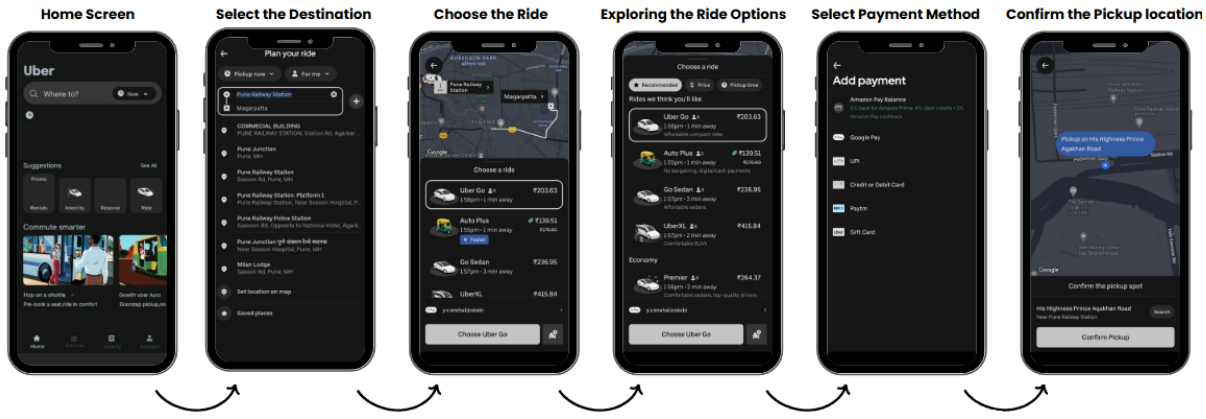
3. Suresh – Intern, Budget User

- **Goals:** Cheap, quick, reliable rides
- **Behavior:** 5x/week, uses shared rides and Moto
- **Pain Points:** Surge pricing, language issues, unhygienic helmets

User Flow

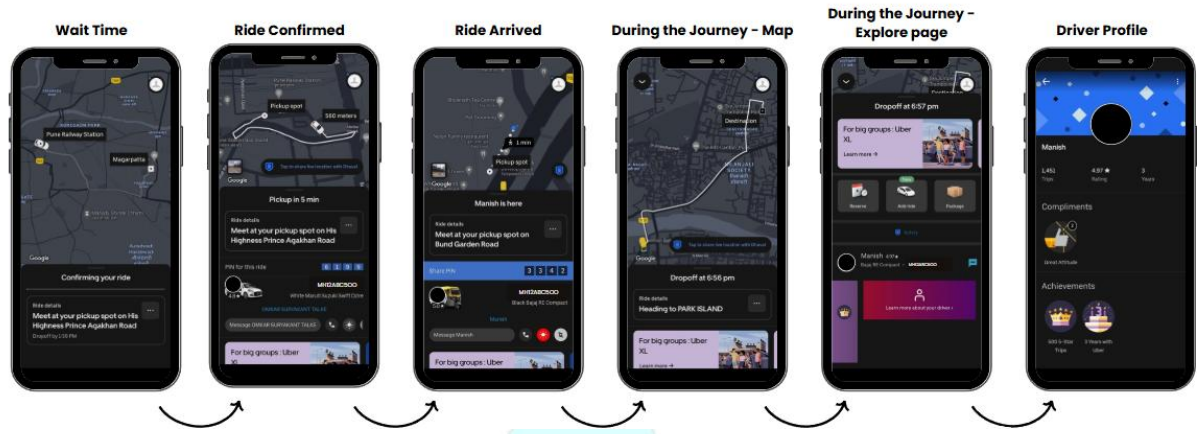
Pre-use: To Book the Ride

- Opening app → Manually entering destination → Browsing ride options → Selecting ride → Selecting payment → Confirming pickup
- **Pain points:** No personalization, redundant pickup confirmation, confusing UI for recurring rides



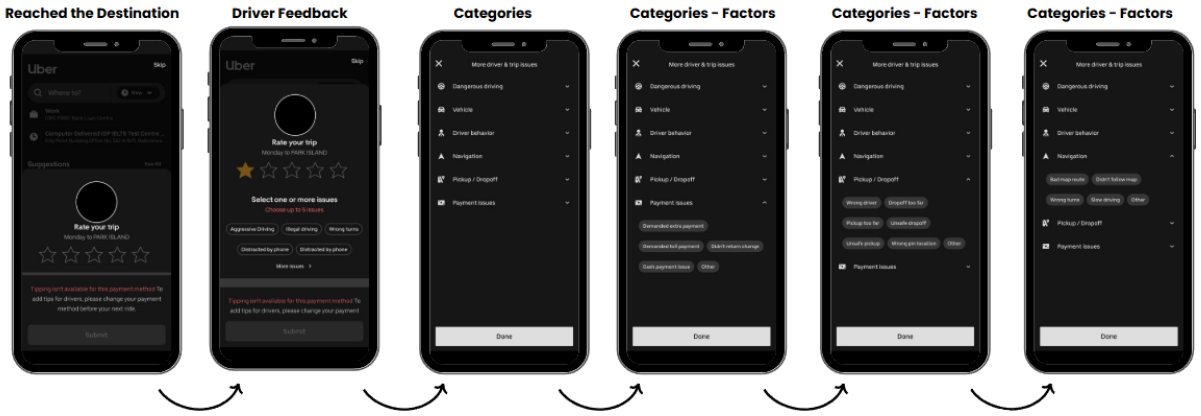
During use: Booking Confirmation to the Destination

- Waiting for driver → Ride confirmed/cancelled → Sharing OTP → Viewing ride progress & driver details
- **Pain points:** Inconsistent ETAs, driver cancellations, no car condition preview, traffic delay misestimation



Post-use: After Reaching the Destination

- Rating driver → Providing feedback → Navigating customer support
- **Pain points:** Feedback options too narrow, reporting process complex, no clarity on resolution, poor CSAT



Suggested Solution Features

Feature	Pain Point Solved	Prioritization - MoSCoW	Reason to Solve
Uber Assistant	No personalization	Must	Personalizing the homepage and saving user preferences improves convenience and speeds up the booking process
Recurring Rides	Manual booking daily	Should	Automating daily ride bookings saves time and effort

Live Traffic & ETA	Inaccurate ETA	Must	Providing real-time traffic updates allows users to make informed decisions and choose the best routes
Vehicle Rating System	No information on car condition	Should	Increases transparency and trust, improving the overall experience
Simplified Feedback	Complicated support	Could	Leads to faster resolutions and improved service quality
No-Cancellation Policy	High cancellations	Must	Implementing the zero-cancellation service motivates the user to use the app more
Uber Coins	No rewards for active users	Could	Implementing a gamification system to improve the user retention.

Assessment Metrics

North Star Metric: Rides completed (daily/weekly/monthly)

Feature	Metric	How it's Calculated
Ride Suggestions Usage	Usage Rate	(No. of user using ride suggestion / Total users) * 100
Recurring Rides Adoption	Adoption Rate	(Number of users setting up recurring rides / Total active users) * 100
Vehicle Rating System	CSAT	(Number of rides with submitted ratings / Total rides) * 100
Premium/Subscription Conversion	Conversion Rate	(Number of premium users / Number of active users) * 100
No Cancellation Policy	Adoption rate	(Number of rides opted for No cancellation feature/ Number of rides) * 100
Uber Coins	Retention Rate	(Number of users redeemed uber coins/ Number of active users) * 100

Summary

Uber faces classic product maturity challenges: increased acquisition but declining retention and satisfaction. Key user issues include cancellations, poor support, inconsistent ETAs, and lack of personalization. The recommended solutions, such as personal ride suggestions, subscription-based priority, and gamification aims to reduce friction, enhance trust, and boost repeat usage.

Google Pay

About the Company

Name: Google Pay
Origin: Started as Google Wallet (2011) → Android Pay (2015) → Tez (2018) → Google Pay (India launch: Sep 2017)
Domain of Operation: Digital payments, FinTech
Mission: *To simplify and secure financial transactions for everyone, everywhere*.
Vision: *To become the most convenient, secure, and trusted digital payment solution in the global financial ecosystem*.

Market Analysis

Monthly Active Users (India): ~67 million
Annual Transaction Volume: >2.5 billion
Annual GMV: $110B+
Revenue Streams:

- $4.1B from **transaction fees** (banks/merchants)
- $0.4B via **ads & promotions**
- Commissions on **recharges/bill payments**

India Context: Operates primarily on UPI (free P2P for users) — high frequency, low-friction

Competitive Analysis

Feature	Google Pay	PhonePe	PayTM	Apple Pay	Amazon Pay
UPI Integration	Excellent	Excellent	Strong	India support lacking	Good
Charges to Users	✗	✗	✗	✗	✗
Merchant Charges	✗	Minimal	Minimal	Fees (globally)	Minimal
Rewards / Gamification	Cashbacks + Reminders	Cashback - heavy	Vouchers	None	Offers
UX & Simplicity	Top-tier	Great	Cluttered	Premium	Moderate

Edge Over Competitors: Google Pay wins on UX, zero-friction transactions, and wide adoption thanks to its clean integration with Android and the Google ecosystem.

User Persona Analysis

1. **Consumers (Mass Users)**
   - **Behavior:** Bill payments, recharges, P2P UPI transfers
   - **Goals:** Fast, zero-cost, secure, seamless payments
   - **Pain Points:** Failed/stuck payments, no feedback, low trust in resolution
   - **Needs:** Speed, reliability, transparency

2. **Merchants (Small/Mid-size Businesses/Kirana Owners)**
   - **Behavior:** Use GPay QR codes to accept payments
   - **Goals:** Zero-fee transactions, seamless accounting
   - **Pain Points:** Delayed settlement, limited customer support, Language barriers sometimes
   - **Needs:** Instant confirmation, trustable recordkeeping

3. **Financial Institutions (Banks, NBFCs)**
   - **Behavior:** Backend infrastructure partners
   - **Goals:** Customer retention via digital payment facilitation
   - **Pain Points:** Downtimes impact trust, High transaction loads need robust infra
   - **Needs:** High uptime, data analytics access, regulatory alignment

User Flow

Pre-Use: Linking Bank Account

- App download → Phone/OTP verification → Bank linking via UPI
- **UX Note:** Extremely low barrier to entry, frictionless KYC via SIM and UPI

During Use: Payment Service

- Select recipient or service (QR scan, contact, biller) → Enter amount or bill → Confirm via UPI PIN → Receive confirmation → Track in history tab
- **Key Features:**
  - Instant transfers
  - Payment reminders
  - Rewards/cashback

Post-Use: Transaction follow-up

- Transaction history → Track failed/stuck payments → In-app customer support/chat → Promotional messages, rewards, and coupons

Suggested Solution Features

Pain Point	Feature	Solution
Transaction failures	Instant Transfers	Real-time, seamless P2P payment via UPI
Payment stuck/delay	History & Live Tracking	Allows users to monitor and confirm delivery

Poor support	In-app Customer Support	Live issue resolution through bot + human agents
Unawareness of capabilities	Feature Campaigns & Reminders	Educates users about recharges, EMI, loans, etc.
Security fears	Tokenization & Encryption	No card info shared with merchants

Assessment Metrics

North Star Metric: Total successful transactions per user per month

Metric	Measurement
Active User Growth	Weekly active users, 30-day retention
Transaction Success Rate	% of successful vs. initiated transactions
Support CSAT Score	In-app support feedback rating
Feature Engagement	Bill payments, QR scan, P2P, recharge, etc.
Rewards Redemption	Users claiming scratch cards, offers

Summary

Google Pay is a frictionless, trusted digital payment platform that's tightly integrated into the Google ecosystem. It stands out for:

- High trust and reach (via Android + Google services)
- Zero-fee UPI strategy creating immense user adoption
- Smart use of rewards & gamification to drive engagement
- Consistently solving top pain points: failed payments, delays, and support access

From a product side, its future growth could come from:

- Expansion into personal finance (microloans, savings, insurance)
- Merchant dashboards and loyalty management
- Deeper integration with offline retail and neighbourhood commerce

Zomato

About the Company:

Name: Zomato Ltd.
Founder(s): Deepinder Goyal and Pankaj Chaddah
India Launch: Initially launched as *Foodiebay* in 2008, rebranded to *Zomato* in 2010
Headquarters: Gurugram, Haryana, India
Mission: "*Better food for more people.*"
Vision: *To become the go-to platform globally for all food-related needs.*
Domain: FoodTech (Food Delivery, Restaurant Discovery)

Problem Zomato Solves:

For Consumers (Users):

S.no	Pain Points	Zomato's Solution
1.	Lack of time to cook or eat out	Instant access to nearby food delivery options
2.	Limited knowledge of available restaurants	Discovery platform with reviews, menus, photos
3.	Inconsistent service from local restaurants	Standardized delivery through Zomato logistics
4.	Trust issues – food quality, hygiene, reliability	Verified user reviews, hygiene ratings, order tracking
5.	Lack of offers/deals	Loyalty programs (Zomato Gold), coupons, combo offers
6.	Poor delivery visibility	Real-time GPS tracking, ETA, rider details
7.	Fragmented experiences (e.g., dine-out, delivery, grocery)	One app offering food delivery, dining reservations, grocery (via Blinkit), and intercity delivery

For Restaurants (Partners):

S.no	Pain Points	Zomato's Solution
1.	Low discoverability, especially for new/local joints	Listing and promotion on Zomato's high-traffic platform
2.	Costly to maintain their own delivery/logistics	Delivery fulfillment by Zomato's fleet
3.	Difficulty managing online orders & customer feedback	Partner dashboard with analytics, ratings, order management
4.	Uncertainty in demand patterns	Demand prediction and promotional tools to boost slow periods
5.	Limited marketing budget	Sponsored listings, banner ads, festival tie-ins within Zomato app

Market Opportunities:

- India's online **food delivery market** is valued at **$26.2 billion** in **2024** and is projected to reach **$59.6 billion** by **2030**, growing at a **CAGR** of **14.2%.**
- Market penetration remains low, especially in Tier 2 and Tier 3 cities, indicating strong future growth potential.
- Zomato, with **~55% market share**, is well-positioned to scale further through food delivery, grocery (Blinkit), and intercity offerings.

Competitor Analysis:

Parameter	Zomato	Swiggy
Market Share	~55%	~42-45%
City Coverage	800+	600+
Subscription	Zomato Gold – delivery + dine-out benefits	Swiggy One – delivery + Instamart access
Quick Commerce Tie-in	Blinkit (Owned by Zomato, separate app)	Instamart (Integrated with Swiggy app)
Revenue Model	Commission + ads + Gold subscriptions	Commission + ads + Swiggy One
Daily Orders	~2 million orders/day	~1.7 million orders/day

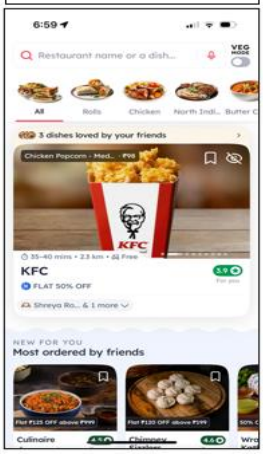
User Personas:

S.No	User Persona	User Pain Points
1.	**Riya**, 30, Marketing Manager, Lives Alone	• Relies on food delivery daily but finds options repetitive and uninspiring • Struggles to find healthy, home-style meals suitable for one person • Most healthy options are expensive or far from her location • Lack of dietary filters (e.g., low-oil, low-carb) for personalized choices
2.	**Karan**, 21 years old, College Student	• High delivery charges and minimum order values make solo ordering unaffordable • Cheap and healthy food options are rarely promoted or easy to find • Late-night availability is inconsistent in his area • Most budget meals lack nutritional value (too oily, spicy)
3.	**Priya**, 38, Homemaker, Family User	• Family combo meals are poorly structured and don't cater to mixed age groups • Delivery delays are common, especially on weekends • Prefers COD, but it's often not supported or discouraged by delivery staff • Hygiene concerns when ordering for children and elderly family members

User Journey:

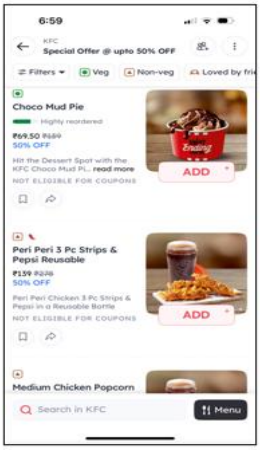
1. Home Screen

2. Discover Restaurants

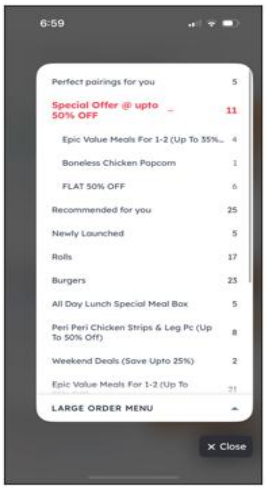


3. Enter Restaurant Page

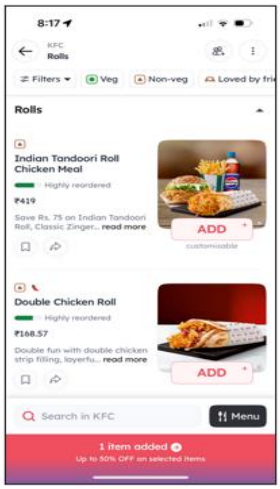
4. Explore Reviews & Offers



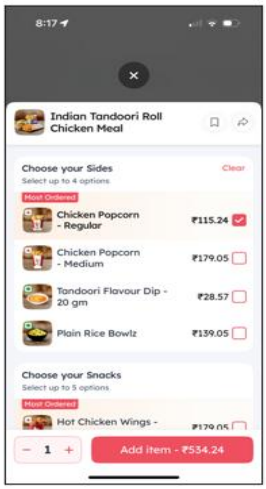
5. Discover Menu



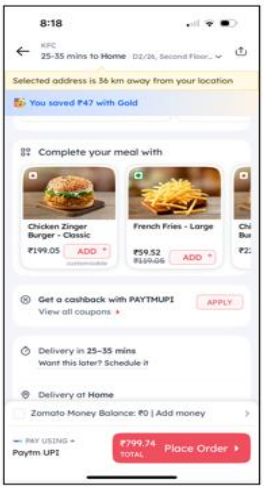
6. Explore specific food category



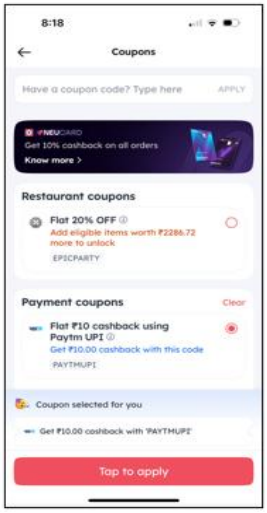
7. Customize & Place Order



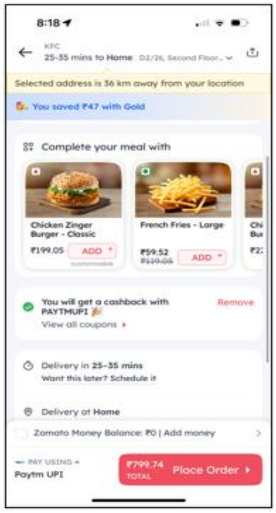
8. Enter Order Summary Page



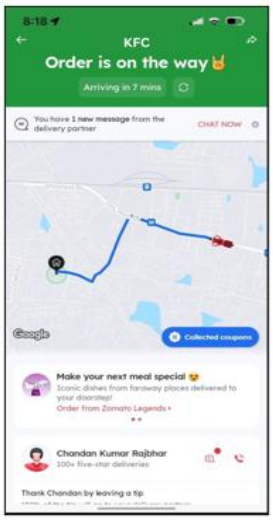
9. Apply Coupons



10. Proceeds to Payment



11. Order Tracking



Suggested Solution Features:

S.No	Feature Name	Description
1.	Personalized Meal Suggestions	AI-powered daily recommendations based on order history, time of day, and user preferences to reduce menu fatigue.
2.	“Just for One” Filter	Dedicated filter to help users discover affordable, healthy, single-serve meals across cuisines.
3.	NutriTags	Nutrition-based tags like “Less Oil”, “Fibre Rich”, and “Light Meal” displayed on dish listings
4.	Verified Homestyle Label	Badge for vendors offering clean, nutritious, home-style food with transparent ingredients.
5.	COD Verified Restaurants	Tag for restaurants that actively support Cash on Delivery without resistance from delivery partners.
6.	Hygiene Verified Labels	Visual indicator for restaurants with strong hygiene ratings based on packaging, reviews, and audits.
7.	Student Saver Combos (with ID)	Budget-friendly meal combos under ₹129, accessible only with valid student ID for authentication.

Prioritization:

S.No	Feature Name	Impact	Effort	Score (I/E)
1.	Personalized Meal Suggestions	High	Medium	High
2.	“Just for One” Filter	High	Low	High
3.	NutriTags	Medium	Low	Medium
4.	Verified Homestyle Label	Medium	Low	Medium
5.	COD Verified Restaurants	Medium	Low	Low
6.	Hygiene Verified Labels	High	Medium	High
7.	Student Saver Combos (with ID)	Medium	Medium	Medium

Metric:

North Star Metric - Number of Successful Food Items Delivered Each Week

Stage	Metric	Description
Acquisition	App Downloads	Number of new users entering the funnel

	New Signups	Users registering on the app
	Cost per Acquisition	Marketing cost per new registered user
Activation	First Order Conversion Rate	% of signed-up users who place their first order
	Time to First Order	Average time from sign-up to first successful order
	Onboarding Completion Rate	% of users who complete onboarding steps (location, preferences, etc.)
Retention	7-Day / 30-Day Repeat Rate	7-Day / 30-Day Repeat Rate
	Churn Rate	% of users inactive for a given period (e.g., 30 days)
Revenue	Average Order Value	Average amount spent per order
	Gold/Pro Subscription Conversion	% of users subscribing to premium services
Referral	Net Promoter Score (NPS)	User likelihood to recommend Zomato to others

Summary:

This product teardown focuses on enhancing Zomato's core food delivery experience by addressing the needs of high-value user segments. These features aim to improve relevance, affordability, trust, and convenience across user journeys. The North Star Metric chosen is the Number of Successful Food Items Delivered Each Week**,** which reflects both operational success and consistent user value. Supporting metrics have been structured using the AARRR framework to track performance across acquisition, activation, retention, revenue, and referral. Together, this approach offers a clear roadmap for improving user satisfaction, boosting repeat orders, and driving sustainable growth for Zomato.

Netflix

About the Company:

- **Name:** Netflix, Inc.
- **Founder(s):** Reed Hastings and Marc Randolph
- **Global Launch:** Started as a DVD rental service in 1997; streaming launched in 2007
- **Headquarters:** Los Gatos, California, USA
- **Mission:** "*To entertain the world*."
- **Vision:** *To become the world's best global entertainment distribution service.*
- **Domain:** OTT Streaming (Subscription Video-on-Demand, Original Content Production)

Problem Netflix Solves:

For Consumers (Users):

S.no	Pain Points	Netflix's Solution
1.	Limited access to quality entertainment across languages and regions	On-demand access to a vast global + regional content library in multiple languages
2.	Rigid schedules of traditional TV and cinema	Anytime, anywhere viewing on mobile, web, and smart TVs
3.	Decision fatigue due to too many options	Personalized recommendations using AI/ML based on user preferences
4.	Interruptions due to ads and poor viewing experiences	Ad-free streaming with offline download and seamless cross-device sync
5.	Poor streaming experience on slow or unstable networks	Adaptive video quality based on bandwidth; downloadable content for offline use
6.	Inconvenient experience for group or family viewing	Multiple user profiles, parental controls, and shared watchlists for families
7.	Difficulty discovering niche or regional content	Curated carousels, trending lists, and regional genre filters

For Content Producers:

S.no	Pain Points	Netflix's Solution
1.	Limited access to global audiences beyond local TV/cinema networks	Global streaming platform with multi-language support (subtitles, dubbing)
2.	Revenue uncertainty from box office performance	Licensing deals, predictable revenue models, and exposure to long-tail viewing
3.	Lack of actionable data on audience behaviour	Viewer insights and performance metrics (selectively shared) to guide content strategy
5.	Uncertain content lifecycle and short theatrical windows	Extended shelf life with long-term discoverability across countries and devices
6.	High production costs with limited upfront financing support	Co-production and Netflix Original models reduce risk and offer upfront investment

Market Opportunities:

1. **OTT Market Boom** – Global OTT market projected to reach $434B by 2030, driven by rising digital adoption.
2. **Tier 2 & 3 Expansion** – Growing regional demand in India fuels need for vernacular content and localized UI.
3. **Interactive & Gaming Push** – Netflix's interactive shows and mobile games open new user engagement avenues.

Competitor Analysis:

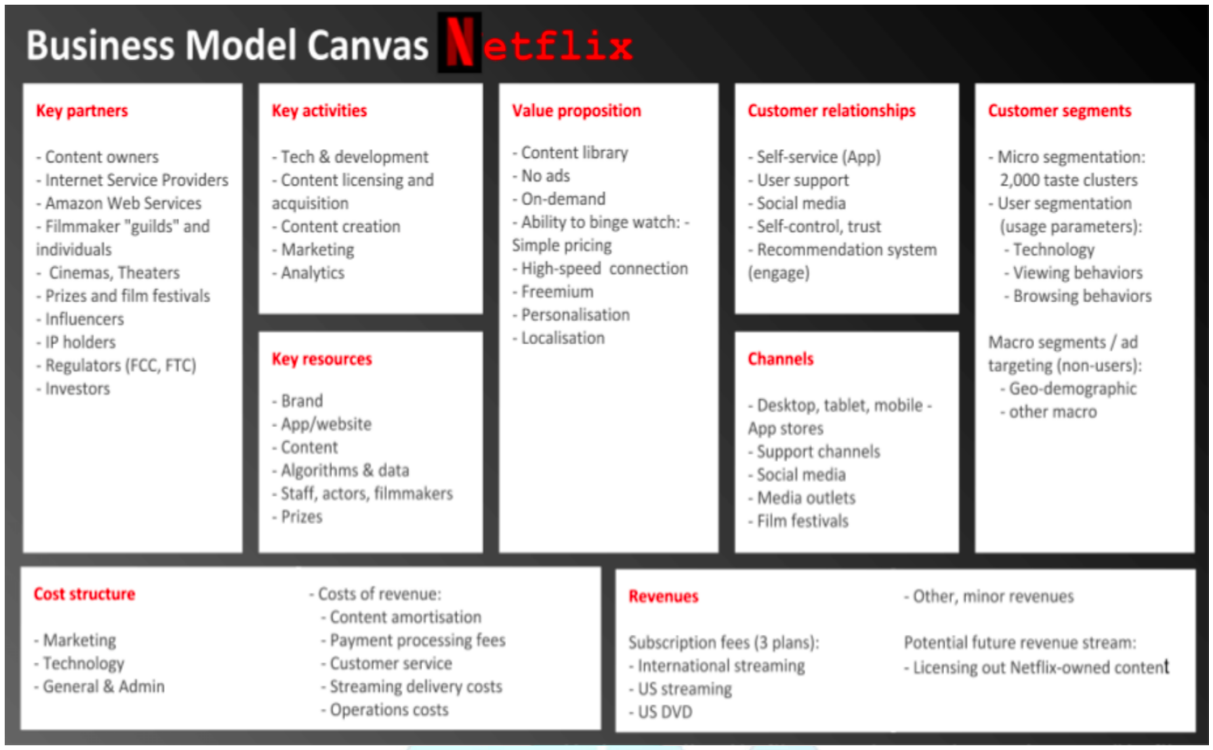
Parameter	Netflix	Amazon Prime Video	Disney + Hotstar / Jiostar
Market Share	~13% (~10 M users)	~23% (~20 M users)	~26% (~38 M paid users)
Subscription Plans	₹149–₹649/mo (mobile to premium)	Bundled with Prime: ₹299/mo or ₹1,499/yr	₹499–₹1,499/yr; includes ad-supported tier
Key Content Strength	Premium global originals; ramping regional slate	Strong Hindi originals; bundled Amazon content	Exclusive sports (IPL), Disney/Marvel/IP content
Regional Content Focus	Investing in Tamil, Telugu, Hindi originals	Moderate regional support via select originals	Strong regional content across languages + dubbed Disney films
Differentiator	Premium international IP, interactive shows (e.g., *Bandersnatch*)	Bundled with Amazon ecosystem (Prime, e-commerce, devices)	Sports-heavy offering (IPL), family-centric content, telecom bundling

User Personas:

S.No	User Persona	User Pain Points
3.	Riya, 22 – College Student (Tier 2 City, mobile-first, budget-conscious)	1. Premium plans are unaffordable for students. 2. High mobile data usage while streaming. 3. Regional/dubbed content is hard to discover. 4. No easy way to set data-saving mode by default for mobile users.
4.	Arjun, 34 – Working Professional (Metro City, binge-watcher, multi-device user)	1. Too much content causes decision fatigue. 2. Recommendations feel irrelevant or repetitive. 3. Multi-device sync isn't always seamless. 4. No alerts for new or upcoming releases.
3.	Priya & Rohit, 38 & 40 – Parents (Family viewers, concerned about kid safety, shared device users)	1. Weak parental controls; kids may access mature content. 2. Hard to find family-friendly/kids content quickly.

		3. No time limit controls for child profiles. 4. No control over kids' offline downloads.

Business Model - Netflix



Suggested Solution Features:

S.No	Feature Name	Description
1.	Smart Subscription Tiers for Students	Introduce affordable student plans or regional mobile-only pricing tied to verified student IDs or campus email addresses.
2.	AI-Personalized Home Feed	Redesign the homepage using AI that learns viewer behavior over time and clusters content based on mood, genre, time of day, and user intent (e.g., "Quick Watch," "For Commute," "Light Mood").
3.	Regional Discovery Mode	A dedicated section that curates trending regional/dubbed content based on the user's location and language preferences.
4.	Family Zone with Kids-Safe UX	Create a separate Family Zone with only child-safe and PG-rated content, equipped with stricter filters and a kid-friendly interface.
5.	Smart Sync Across Devices	Ensure last-watched position, subtitles, profiles, and watchlist sync flawlessly across mobile, laptop, and TV devices.
6.	Watchlist Notifications	Allow users to "Follow" a show/movie and receive alerts when new episodes or seasons drop.

Prioritization:

Feature Name	Impact	Effort	Score (I/E)
Smart Subscription Tiers for Students	Medium	Medium	Medium
AI-Personalized Home Feed	High	High	High
Regional Discovery Mode	High	Medium	High
Family Zone with Kids-Safe UX	Medium	Medium	Medium
Smart Sync Across Devices	Medium	High	Low
Watchlist Notifications	Medium	Low	High

Assessment Metric:

North Star Metric: Total Hours Watched per User per Month

Stage	Metric	What It Measures
Acquisition	Number of new sign-ups per week/month	Effectiveness of campaigns, partnerships, and app store conversion
Activation	% of users who watch a title within 24 hours of sign-up	Success of onboarding, personalized recommendations, and UI
Retention	Weekly/monthly active users (WAU/MAU)% of users watching >2 sessions/week	Stickiness of platform and habit formation
Referral	Social Sharing Rate	How often users share Netflix content with others — indicates content virality and potential to attract new users.
Revenue	ARPU (Average Revenue Per User), Churn Rate, Subscription Renewal Rate	Monetization health and long-term user value

Zoho

About the Company:

Name: Zoho Corporation Pvt. Ltd.
Founded: 1996 by Sridhar Vembu and Tony Thomas in Pleasanton, California.
India Expansion: Established R&D hubs in rural India, starting with Tenkasi, Tamil Nadu.
Mission: *To provide quality software at affordable prices while respecting user privacy.*
Vision: *To build a sustainable technology ecosystem through deep R&D and a long-term commitment to customers*.
Domain of Operation: SaaS (Software as a Service)
Value Proposition: Enables businesses of all sizes to manage operations, customers, and internal processes through an integrated suite of affordable, scalable, and privacy-centric tools.

Market Opportunity:

Global SaaS Market Size: Estimated at $273 billion in 2024, projected to grow to $436 billion by 2028 with increasing cloud adoption.
Indian SaaS Opportunity: India's SaaS market is valued at ~$7 billion in 2024 and expected to grow to $20–25 billion by 2030, driven by startups and digital transformation of MSMEs.

Zoho's Position:

- 100 million+ global users
- Offers 55+ integrated applications
- Completely bootstrapped and profitable
- Presence in 180+ countries
- Strong footprint in rural India for cost-effective R&D

Competitor Analysis

Feature / Competitor	Zoho One	Microsoft 365	Google Workspace	Salesforce	Freshworks
Suite Coverage	CRM, Books, Projects, HR, Desk, Creator, Mail	Office Suite, Teams, Dynamics 365	Docs, Drive, Gmail, AppSheet	CRM, Service, Marketing Cloud	CRM, Helpdesk, ITSM
Pricing	Unified low-	Higher	Modular	Premium	Moderate

	cost bundle	enterprise pricing	pricing	enterprise pricing	tiered pricing
Integration	Seamless within Zoho ecosystem	Integrated via Microsoft Graph	Good G Suite integration	Robust within Salesforce Cloud	Moderate insuite integrations
Customization	Deluge, Creator platform	Limited customization	Minimal scripting support	Highly customizable via Apex	Medium customization
Deployment	Cloud + optional onprem (WorkDrive)	Cloud + limited onprem	Cloud only	Cloud only	Cloud only
Privacy	No thirdparty ads, GDPR compliant	Collects telemetry data	Used for targeted ads	Customer data hosted in cloud	Analytics used for product insights

User Personas

1. Ankita – Startup Founder (3–15 employees)
    - **Goals**: Operate efficiently on a budget using a unified toolset
    - **Behavior:** Uses CRM for lead tracking, Books for finance, and Zoho Projects
    - **Pain Points**: Integration with external tools like Slack and QuickBooks

2. Ramesh – SME Owner (50–100 employees)
    - **Goals:** Automate routine workflows like invoicing, payroll, and reporting
    - **Behavior:** Heavy user of Books, Inventory, Payroll, and People
    - **Pain Points:** Initial onboarding confusion, non-standard UI across apps

3. Fatima – Enterprise IT Admin (500+ employees)
    - **Goals:** Secure and scalable stack, governance controls, performance monitoring
    - **Behavior:** Oversees deployment and access control for Zoho One suite
    - **Pain Points:** Steep learning curve for customization using Deluge, managing updates across users

User Flow

Pre-Use (Account Setup):

- **Flow:** Visit Zoho.com → Choose Suite → Signup → Domain verification → Configure apps
- **Pain Points**: Onboarding lacks guided tutorials for non-technical users

During Use (Daily Operations):

- **Flow:** Login → Dashboard → Select App (CRM, Books, etc.) → Perform Task → Sync Data → Generate Reports
- **Pain Points:** Varied UI/UX across apps, feature discoverability issues

Post-Use (Support & Management):

- **Flow:** Upgrade Plan → Access Support → Customize Apps → Monitor Usage via Admin Panel
- **Pain Points:** Limited real-time support, scripting barrier for customization (Deluge)

Suggested Solution Features:

Feature	Pain Point Solved	Priority (MoSCoW)	Reason
Smart Onboarding Assistant	Confusing setup for new users	Must	Automated walkthroughs increase adoption and reduce drop-offs
Unified UI Across Apps	Inconsistent app interfaces	Should	Improves usability and shortens learning curve
App Suggestion Engine	Low app discovery	Could	Encourages deeper suite adoption based on user behavior
AI Support Bot	Slow issue resolution	Must	Instant response and escalation improves trust
Contextual Help Overlays	High learning curve	Should	Real-time guidance boosts productivity
Tiered Pricing Plans	Affordability & scale	Could	More flexible plans for MSMEs, startups, and enterprises

Assessment Metrics

Feature	Metric	Calculation
Smart Onboarding	Activation Rate	(Users completed onboarding / Total signups) * 100
Unified UI	Session Duration	Avg. time spent across apps per session
Suggestion Engine	Adoption Rate	(Users using new apps / Total users) * 100
AI Support Bot	CSAT Score	Post-chat feedback ratings
Help Overlays	Feature Completion	(Tasks completed using help / Total tasks) * 100
Tiered Plans	Upsell Rate	(Users upgrading tiers / Total users) * 100

YouTube

About the Company

Name: YouTube LLC (Subsidiary of Google/Alphabet Inc.)
Founded: 2005 by Steve Chen, Chad Hurley, and Jawed Karim
India Launch: Officially localized and monetized from 2008
Mission: "*To give everyone a voice and show them the world*."
Vision: "*To be the world's most comprehensive video platform for expression, information, and inspiration.*"
Domain: Video-sharing platform, entertainment

Problem It Solves:

- Democratizes content creation and consumption.
- Enables creators to earn while sharing content globally.
- Offers users an endless repository of entertainment, education, and information.

Market Opportunity:

- **Global Active Users:** 2.7B+ MAUs (2025)
- **Revenue (2024):** $45B+ (majority from ad revenue & subscriptions)
- **Key Growth Areas:** Shorts, YouTube Music, Premium, live shopping, regional content
- **India Trends:**
  - Regional creator growth
  - Mobile-first user base
  - YouTube Music seeing high traction with Gen Z

Competitive Analysis:

Feature / Competitor	YouTube	TikTok	Instagram Reels	Snapchat
Content Format	Long + Short	Short-form only	Short-form only	Short-form, AR
Monetization	Ads + Premium + SuperChat	Creator Fund	Brand Collabs	Sponsorships
Discovery Engine	Search + Algo	Algo only	Algo + IG feed	Friends first
Branding Clarity	Strong brand equity	Viral brand	Meta umbrella	Youth-centric
Differentiators	Breadth of content	Virality	Influencer-first	AR filters
Weaknesses	Ad overload, UI clutter	Limited monetization	Engagement plateau	Lacks depth

User Persona Analysis

1. Riya – Teen Student (Gen Z Shorts Consumer)

- **Behavior:** 3–4 sessions/day, mostly Shorts
- **Goals:** Quick entertainment, trends, music clips
- **Pain Points:** Too many ads, irrelevant recommendations

2. Aman – Music Enthusiast (College Student)

- **Behavior:** Listens to music videos + YouTube Music
- **Goals:** Seamless music experience, good discovery
- **Pain Points:** No clear integration between YouTube & YT Music

3. Nandini – Aspiring Creator

- **Behavior:** Uploads 2 videos/week, tracks performance
- **Goals:** Audience growth, monetization, reach
- **Pain Points:** Algorithmic dependency, unclear Shorts monetization

4. Raj – Casual Viewer (Working Professional)

- **Behavior:** 1 session/day, watches educational videos & news
- **Goals:** Quality content, minimal disruption
- **Pain Points:** Obtrusive ads, lack of user control (e.g., dislikes)

User Flow

Pre-Use (Discovery Entry Points)

- App/Web launch → Homepage/Shorts → Algo-driven recommendations or search
- **Pain Points:** Low control over recommendations, repetitive content

During Use (Core Engagement)

- Video/Short selected → Ad load (pre/mid) → View content → Like/comment/share
- **Pain Points:**
  - Ad interruptions
  - Limited simultaneous suggestions
  - Poor comments UX
  - Shorts autoplay → No control

Post-Use (After Watching)

- Exit or autoplay → Feedback (like, dislike, not interested) → Comment or Save to playlist
- **Pain Points:**
  - No dislike count
  - Low relevance of follow-up suggestions
  - Feedback system lacks transparency

Suggested Solution Features

Feature	Pain Point Solved	MoSCoW Priority	Rationale
Layout Customizer	Inefficient home layout, wide tiles	**Should**	Let users personalize how many tiles they see, improving exploration speed
Smart Ad Throttle	Ad fatigue	**Must**	Context-aware ads to avoid drop-offs; limits ad overload
Enhanced Shorts Branding	Lack of Shorts identity	**Should**	Give Shorts its own branding, like Reels; boosts creator pride
Comment Threading	Poor engagement under videos	**Could**	Structured replies and pinning to boost community discussion
YouTube–YT Music Link	Music discovery fragmented	**Must**	Clear navigation or shared playlists between apps
Bring Back Dislike Count	No negative feedback visibility	**Could**	Improves quality filtering, even if private to creator
Creator Feed Toggle	Feed dominated by algos	**Should**	Let users follow favorite creators in a dedicated tab

Assessment Metrics

North Star Metric: Total Watch Time Per User Per Week

Feature/Metric	Metric	How It's Calculated
Homepage Customization	Adoption Rate	% of users opting for layout control
Ad Throttle Effectiveness	Drop-off Rate Post-Ad	% of users exiting immediately after ad

Shorts Branding Adoption	Shorts View Growth	% increase in Shorts views post-branding revamp
Music Integration	Cross-App Usage	No. of users using both YT & YT Music monthly
Comment Engagement	Reply Threads Created	No. of comment threads/replies per video
Creator Feed Toggle	Repeat Watch Rate	% of returning viewers per followed creator
Dislike Feedback Utility	Content Quality CSAT	Viewer satisfaction vs. visible feedback controls

Summary

YouTube stands at the crossroad of mature platform monetization and user experience optimization. While Shorts drives virality and Gen Z retention, and Premium/Music push subscriptions, core friction points include ad fatigue, low personalization, and weakened user feedback tools. By focusing on:

- Layout personalization
- Ad load refinement
- Integrated music experience
- Reviving two-way community tools

YouTube can retain dominance across long-form, short-form, and music segments — and future-proof its ecosystem amid stiff competition from more focused players.

Instagram

About the Company

Name: Instagram (Meta Platforms Inc.)
Founded: 2010 by Kevin Systrom and Mike Krieger (acquired by Facebook in 2012)
Mission: "*To bring you closer to the people and things you love*."
Vision: "*To capture and share the world's moments, fostering connection through visual expression*."
Domain: Social media

What It Solves:

- Enables users to express creativity and identity visually.
- Allows users to connect with friends, creators, and brands.
- Empowers businesses and creators to reach audiences through ads, Reels, and Stories.
- Facilitates discovery through algorithmic feeds and hashtags.

Market Opportunity:

- **Global Users (2025):** ~2.35B MAUs.
- **Revenue (2024):** ~$60B globally from ads and in-app shopping.
- **India:** Rapid growth in tier-2/3 cities, Reels seeing 150% YoY growth in consumption.
- **Growth Segments:** Reels, in-app shopping, influencer monetization, Gen Z content creation.

Competitive Analysis

Feature / Competitor	Instagram	Snapchat	TikTok	Facebook	Twitter
Content Style	Visual-first, reels, stories	ephemeral content, AR filters	short-form video	mixed media, social graph	text-first
Monetization	Ads, Shopping, Branded content	Ads	Ads, creator fund	Ads	Ads, premium
Discovery Engine	Algorithm + hashtags	Friend network	Algo-heavy	Friends + algo	Trending tags
Strengths	Large creator and business base, cross-posting	Privacy, AR	Virality, trends	Large base, groups	Real-time conversations

Weaknesses	Ad clutter, algorithm dominance	Limited discoverability	Monetization for creators inconsistent	Aging user base	Limited visual engagement

User Persona Analysis

1. Normal Users

- **Behavior:** Daily Stories/Reels viewing, likes, casual uploads.
- **Goals:** Share moments, stay connected, entertain themselves.
- **Pain Points:** Pressure to post perfect content, cluttered feed.

2. Content Creators

- **Behavior:** Regular posts, reels, story updates, engagement monitoring.
- **Goals:** Grow follower base, engage audience.
- **Pain Points:** Hard to track follower activity, cluttered timeline, algorithm opacity.

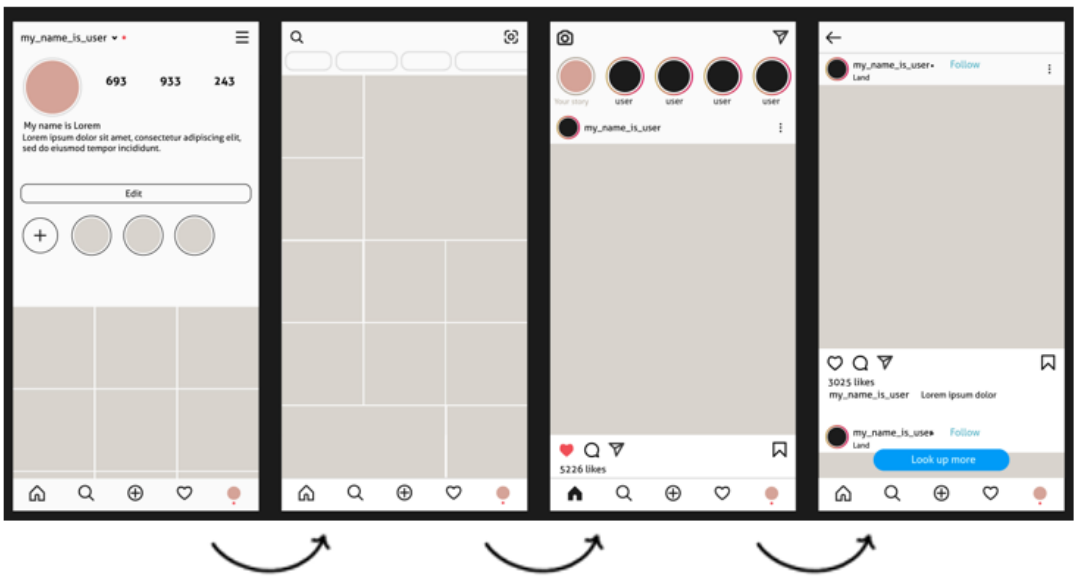
3. Influencers (Subset of Creators)

- **Behavior:** Brand collabs, reels creation, audience targeting.
- **Goals:** Monetize reach, maintain engagement.
- **Pain Points:** Platform algorithm unpredictability, managing brand deals.

4. Businesses/Advertisers

- **Behavior:** Ads, Stories/Reels promotions, shop setup.
- **Goals:** Drive conversions, engage targeted audience.
- **Pain Points:** ROI tracking, campaign optimization, ad saturation effects.

User Flow



Pre-Use (Discovery and Entry)

- App launch → Algorithm-driven feed/Stories/Reels → Explore tab/notifications for new content.
- **Pain Points:** Algorithm determines feed heavily, reduced organic discovery, repetitive content.

During Use (Core Engagement)

- Scrolling feed → Viewing Stories/Reels → Liking, commenting, saving posts → Sharing posts in DMs or Stories.
- For creators: Posting photos/videos/Reels → Adding captions, tags, location → Sharing to feed or stories.
- **Pain Points:**
  - High effort in editing/posting with hashtags.
  - Content gets lost in feed clutter.
  - Limited insights on post reach for small creators.

Post-Use (Post Engagement)

- Checking notifications, comments, likes.
- Tracking post-performance (business/creators).
- Engaging with direct messages.
- **Pain Points:**
  - Hard to track who liked vs. engaged meaningfully.
  - Feedback is quantitative, lacks qualitative insights.

Suggested Solution Features

Feature	Pain Point Solved	Priority (MoSCoW)	Rationale
Reels & Stories	Creative expression, trend leverage	**Must**	High engagement, easy creation, user retention driver
Close Friends, DMs	Privacy & selective sharing	**Must**	Helps users share selectively
Branded Content Tagging	Transparency for creator monetization	**Should**	Builds trust with audience
Product Tagging in Reels	Shop integration	**Must**	Drives business ROI, frictionless commerce
Caption & Hashtag Suggestions	Posting complexity	**Could**	AI-assisted ease of posting
Reset Explore Feed Option	Stale feed content	**Should**	Improves discovery and freshness
Display Picture Enlargement	Profile viewing friction	**Could**	Enhances profile exploration, personal connection

Assessment Metrics

North Star Metric: Time spent per user per week with active engagement (likes, comments, shares)

Metric	How It's Measured
Adoption Rate	New feature usage rates, demographics, creator/business splits
Frequency of Use	DAUs, MAUs, session lengths
Engagement Metrics	Likes, shares, saves, story views, DM shares
ROI for Business Accounts	Cost per lead, CPA, ROAS, AOV, LTV
Campaign Design Effectiveness	New vs. returning customers, conversions, brand awareness
Content Reach and Impressions	Total reach per post/story/reel
Retention on New Features	Feature stickiness post-adoption

Summary

Instagram is a mature yet evolving platform pivoting heavily towards short-form video (Reels) while maintaining its photo-sharing roots to capture and retain Gen Z and Millennial audiences. Its ads and shopping integrations position it as a strong monetization tool for businesses while catering to creators and influencers seeking reach and revenue. Key opportunities lie in:

- Reducing algorithm frustration with better content control.
- Enhancing discovery freshness (Reset Explore Feed).
- Streamlining content creation with smart tagging/caption suggestions.
- Boosting business conversions via seamless product tagging and campaign insights.

Instagram will continue to thrive by balancing user creativity, personalized experiences, and monetization for creators and businesses while mitigating user friction through UX and algorithm transparency.

Spotify

About the Company

Name: Spotify Technology S.A.
Founded: April 2006 by Daniel Ek and Martin Lorentzon
India Launch: February 2019
Headquarters: Stockholm, Sweden
Mission: *"To unlock the potential of human creativity—by giving a million creative artists the opportunity to live off their art and billions of fans the opportunity to enjoy and be inspired by it."*
Vision: *"To be the world's number one audio platform."*
Domain: Audio streaming – encompassing music, podcasts, and creator tools

Problem It Solves

Spotify addresses several core user and market problems across three key stakeholders: listeners, creators, and advertisers.

For Listeners:

- **Problem:** Discovering and accessing high-quality, on-demand music and podcasts across genres, moods, and languages.

  Solution: A massive, personalized audio library powered by advanced machine learning for recommendations (e.g., *Discover Weekly*, *Daily Mix*, *Release Radar*), smart search, and curated editorial playlists.

- **Problem:** Inconsistent listening experiences across devices.

  Solution: *Spotify Connect* enables seamless multi-device playback (smartphones, speakers, laptops, cars, TVs).

- **Problem:** Limited access to audio content due to paywalls.

  Solution: Freemium model allows unlimited access with ads; paid subscription removes ads and adds premium features like downloads and high-quality audio.

For Creators (Musicians & Podcasters):

- **Problem:** Difficulty reaching global audiences and monetizing content.

  Solution: *Spotify for Artists* and *Spotify for Podcasters* offer audience analytics, distribution, and monetization tools (e.g., Fan Insights, Ad Studio, and podcast subscriptions).

- **Problem:** Fragmented tools across platforms for podcast hosting and monetization.

  Solution: Spotify acquired Anchor and Megaphone to provide end-to-end podcast creation, hosting, distribution, and ad insertion.

For Advertisers:

- **Problem:** Traditional radio lacks targeting and analytics.

  Solution: *Spotify Ad Studio* allows highly targeted audio, video, and display ad campaigns with robust performance metrics, including reach, impressions, and completion rates.

Market Opportunity

Global Audio Streaming Market

- Global TAM (Total Addressable Market): ~$35.7B in 2024, projected to reach $73.2B by 2030
- CAGR: ~12.6% (2024–2030)
- Growth drivers: Smartphone penetration, affordable data, rise in on-demand content consumption, and creator economy expansion.

Spotify's Position:

- Global Monthly Active Users (MAUs): 615 M+ (as of Q1 2025)
- Premium Subscribers: 240 M+
- Operates in over 180 countries, covering both mature and emerging markets

Key drivers:

- Regional language music consumption
- Affordable mobile data
- Rapid growth in podcast listenership
- Increasing the creator base from Tier 2/3 cities

Revenue Streams

Stream	Description
Subscriptions (Premium)	Monthly plans for individuals, families, and students
Ad Revenue	From the freemium tier, podcasts, and video/audio ad slots
Creator Services	Tools like Anchor, Megaphone, and subscriptions for podcasters/artists
Third-party Partnerships	Telecom bundles, hardware integrations, and brand collaborations

Competitive Analysis

Feature / Competitor	Spotify	Apple Music	YouTube Music	Amazon Music	JioSaavn / Gaana (India)
Music Library	100M+ tracks	100M+ tracks	100M+ tracks	100M+ tracks	~80 M+ (regional strength)
Podcasts	Yes (Exclusive & licensed)	Limited	Integrated via YouTube	Moderate	Basic
Original Content	Exclusive podcasts, exploring music	Rare, mostly non-exclusive	None	Some podcasts	None
Personalized Playlists	Industry-leading (e.g., AI DJ, Radar)	Static	Viewing history-driven	Basic	Basic or editorial
Free Tier	Yes, ad-supported	No	Yes, limited	Limited	Yes
Offline Mode	Premium only	Premium only	Premium only	Premium only	Premium only
Cross-Device Experience	Spotify Connect, smart speakers	Deep in the Apple ecosystem	Tied to Google/YouTube	Strong with Alexa	Limited integration
Pricing (India, Individual)	₹119/month	₹99/month	₹109/month	₹99/month (Prime)	₹99–₹120/month
Ad Monetization Tools	Spotify Ad Studio	Limited	YouTube Ads (external)	Minimal targeting	Very limited
Market Share (2020)	36%	18%	5%	13%	<3%
Users (2020)	271M	60M	20M	55M	~10–15M (India)

User Personas

1. Aanya – Gen Z Music Enthusiast (Listener Persona)
Age: 21
Location: Mumbai, India
Profession: College Student
Plan: Spotify Free (occasionally tries Premium trials)
Goals: Stay updated with trending music, explore new genres, create shareable playlists
Behaviour:

- Listens 3–4 hours daily
- Uses Discover Weekly and AI DJ
- Follows K-pop, indie, and Bollywood playlists

Pain Points:

- Frequent ad interruptions
- Limited skips and offline playback
- Repetitive recommendations over time

Needs:

- Better value to convert to Premium
- Smoother mobile data usage
- Hyper-personalized discovery beyond top charts

2. Raj – Multitasking Professional (Podcast & Music User)
Age: 34
Location: Bangalore
Profession: Product Manager
Plan: Spotify Premium Individual
Goals: Listen to news and podcasts during commute, and music during work
Behaviour:

- 2–3 hours/day usage across phone, laptop, and car
- Subscribed to tech/business podcast channels
- Creates private focus/workout playlists

Pain Points:

- Poor podcast discovery & recommendations
- The app is occasionally laggy on older devices
- Lack of cross-platform playback resumption

Needs:

- Podcast experience is as good as music UX
- Smart “continue listening” feature
- Easier episode downloads for flights

3. Meera – Aspiring Indie Artist (Creator Persona)
Age: 28
Location: Delhi
Profession: Independent Singer-Songwriter
Plan: Uses Spotify for Artists
Goals: Grow monthly listeners, promote new EP, and understand audience
Behaviour:

- Uploads monthly
- Shares content via Instagram Reels, Spotify Canvas

- Analyses listener geography & drop-off rates

Pain Points:

- Limited options for content promotion
- No direct in-app messaging to fans
- Algorithm visibility is unpredictable

Needs:

- Audience segmentation tools
- Paid promotions/boosting (similar to Instagram)
- Access to collaborative playlisting

Prioritized Segments

Persona	Priority	Rationale
Aanya (Gen Z Listener)	🥇 Top Priority	Large, high-engagement, monetizable, and socially viral segment aligned with Spotify's future
Meera (Indie Creator)	Lower	Critical for long-term differentiation, but needs listener demand to grow
Raj (Professional User)	Lower	Stable revenue contributor, but low innovation or network effect potential

User Flow

Pre-Use: Onboarding & Discovery

Flow: App Download → Sign-Up/Login → Music Preference Selection → Homepage Personalization → Search/Explore Tabs

Pain Points:

- Onboarding overload for new users (too many steps or unclear value)
- New users often skip personalization prompts
- Search results can be noisy and lack semantic understanding
- Music discovery for regional/indie content can be hard without explicit search

During Use: Listening Experience

Flow: Homepage → Select Playlist/Album → Playback Screen → Like/Skip/Queue/Add to Playlist → Device Switch (Spotify Connect)

Pain Points:

- Recommendations can get repetitive (filter bubble effect)
- Podcast UX is less intuitive than music (especially playlisting episodes)
- Glitches in offline mode (downloads sometimes fail silently)
- App performance drops on low-spec Android devices

Post-Use: Feedback & Re-engagement

Flow: End of session → Notifications → Wrapped insights / Recaps → Playlist Sharing → Feedback (optional)

Pain Points:

- Minimal in-app feedback loop (no thumbs down/dislike for better ML tuning)
- Discovery fatigue: Same artists reappear
- Hard to track newly added songs or recent skips
- Artist content lacks deep interaction (no direct fan engagement)

Aanya's Pain Points Across the User Journey

User Journey Stage	Pain Point	Relevance to Aanya	Explanation
Pre-Use	Onboarding feels long or skippable	High	Aanya may skip personalization during sign-up, leading to weak initial recommendations.
	Noisy or irrelevant search results	High	Makes the discovery of new/obscure genres (like K-pop, indie) harder.
	Limited regional/local recommendations	Medium	She may want content in regional languages or culturally relevant playlists.
During Use	Repetitive recommendations/filter bubble	High	She quickly exhausts Discover Weekly or Daily Mix playlists, feels stuck in loops.
	Limited skips and ad interruptions on the free tier	High	Direct friction points in her daily experience affect engagement & retention.
	Offline playback is not available in the Free tier	High	Especially frustrating when commuting or in low-data environments.
	App performance issues on lower-end phones	Medium	Budget Gen Z users may use older or lower-spec Android devices.
Post-Use	Cannot dislike or give negative feedback to tunes	High	Limit's ability to fine-tune recommendations; contributes to frustration.

	Discovery fatigue	High	She wants freshness and surprise in playlists, but often sees the same songs/artists.
	Hard to track recently added or liked songs	Medium	A frequent playlist creator/listener may lose track of updates or new additions.
	Lack of social-listening or group playlist features	Medium	Aanya is highly social; she would enjoy live listening or collaborative experiences.

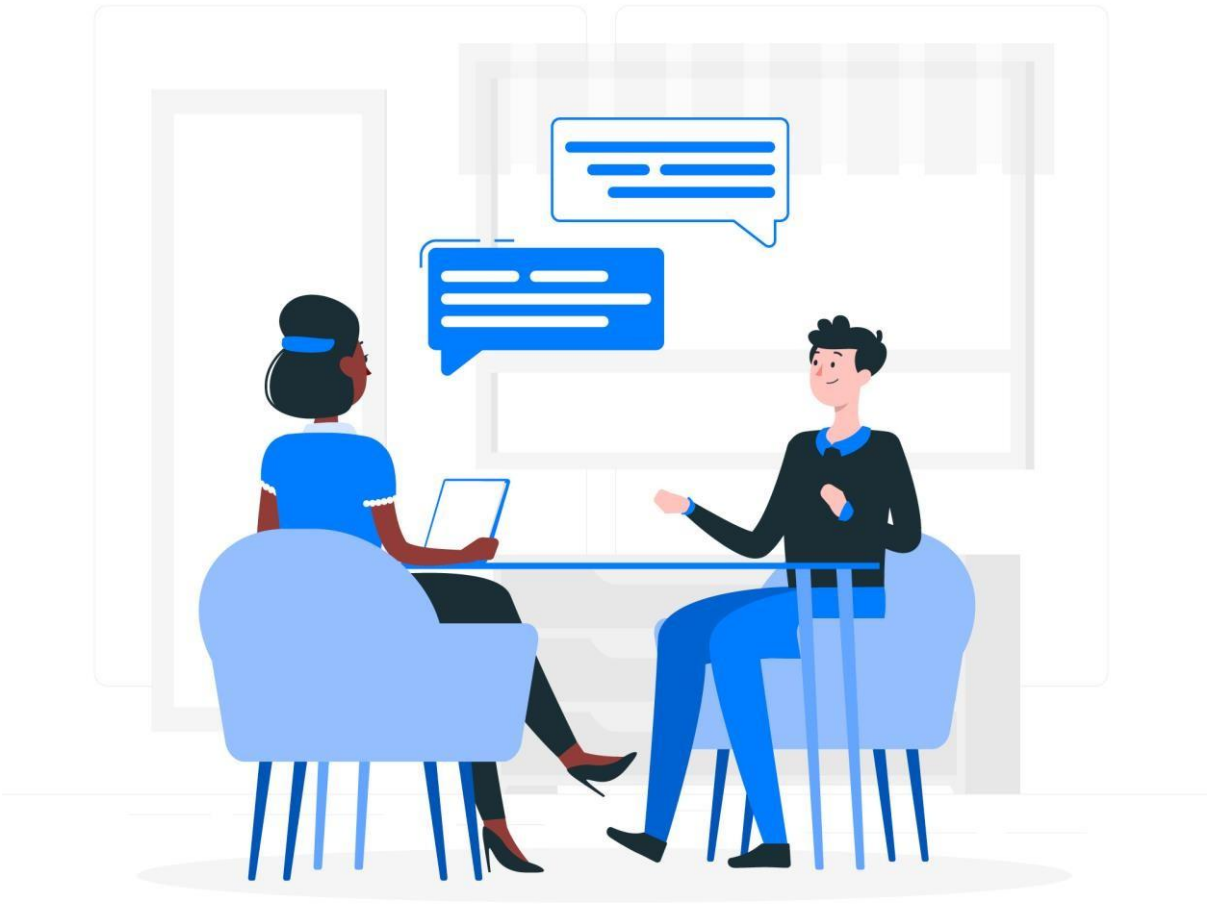
Suggested Solution Features

Feature	Pain Point Solved	MoSCoW Priority	Why It Matters for Aanya
Smart Onboarding 2.0	Skipped personalization, weak initial recos	**Must**	Helps Aanya get accurate recommendations early — boosts engagement instantly
AI-Powered Discovery Layer	Repetitive recommendations, filter fatigue	**Must**	Introduces dynamic genres, moods, and artists — keeps content fresh
Offline Mode Preview	No offline access on the Free tier	**Should**	Allow limited offline play (e.g., 30 mins/day) to nudge upgrade
Ad Experience Control	Annoying or irrelevant ads	**Could**	A playful, Gen Z-friendly setting to “skip or swap” ads if they give feedback
Feedback Loop Buttons	No thumbs down / limited input	**Must**	Simple dislike/“not interested” buttons to improve recommendation precision
"Recently Added" Tab	Can’t track liked/added songs	**Should**	Dedicated space to see and manage new adds for playlist lovers
Social Listening Rooms	Missing group listening or shared experiences	**Could**	Real-time rooms to listen with friends, react with emojis
Minimal Mode	Lag on low-end devices	**Should**	Lightweight version of the app optimized for budget Android phones

Assessment Metrics

North Star Metric: "Time Spent Listening per User per Day (Free Tier)"
A rising value indicates better discovery, reduced churn, and higher monetization surface area (ads + conversion funnel).

Feature / Theme	Metric	Formula / KPI
Smart Onboarding 2.0	Onboarding Completion Rate	% of users completing genre/artist personalization during sign-up
	Early Retention Rate	% of users active on Day 7 and Day 30 after onboarding
AI-Powered Discovery Layer	Discovery Playlist Engagement	Plays / skips per discovery playlist user; increase in "new artist" listens
	Recommendation Diversity Score	% of new artists vs. repeats in a user's weekly recommendations
Offline Mode Preview	Upgrade Conversion Rate	% of Free users converting to Premium within 14 days of using offline preview
Ad Experience Control	Ad Satisfaction Score	User rating after ad interaction (1–5 scale or skip vs. feedback rate)
Feedback Loop Buttons	Feedback Usage Rate	% of users using dislike or "not for me" on recommended tracks
	Personalization NPS	User survey: "How well does Spotify understand your taste?" (scale of 1–10)
Recently Added Tab	Playlist Retention Rate	% of active users who re-engage with created playlists after 7 days
Social Listening Rooms	Session Join Rate	% of invited users who join a room within 5 minutes
	Avg. Room Session Duration	Total listening time per social session
Minimal Mode	App Crash & Latency Rate (Low-End)	App load time and crash frequency across bottom 20% device performance band



Interview Experiences

Disclaimer: The shared experiences in this document are solely based on individual accounts and may vary depending on factors such as the candidate's profile, work experience, and the specific interview context. They are intended for reference purposes only and should not be considered as definitive outcomes for future candidates. Individual preparation and adaptability are essential for success in any interview process.

Amazon

Amazon.com, an American electronic commerce and cloud computing company based in Seattle, Washington, was founded by Jeff Bezos on July 5, 1994. The tech giant is the largest Internet retailer in the world as measured by revenue and market capitalization, and second largest after Alibaba Group in terms of total sales. The Amazon.com website started as an online bookstore and later diversified to sell videos, MP3s, audiobooks, software, video games, electronics, apparel, furniture,
food, toys, and jewellery. The company also owns a publishing arm, Amazon Publishing, a film and television studio, Amazon Studios, produces consumer electronics lines including Kindle e-readers, Fire tablets, Fire TV, and Echo devices, and is the world's largest provider of cloud infrastructure services (IaaS and PaaS) through its AWS subsidiary. Amazon also sells certain low-end products under its in-house brand Amazon Basics.

Mission statement:

"We aim to be Earth's most customer centric company. Our mission is to continually raise the bar of the customer experience by using the internet and technology to help consumers find, discover and buy anything, and empower businesses and content creators to maximize their success."

Vision Statement:

"Our vision is to be Earth's most customer-centric company; to build a place where people can come to find and discover anything they might want to buy online."

Guiding Principles:

Amazon is guided by four principles:

- Customer obsession rather than competitor focus
- Passion for invention
- Commitment to operational excellence
- Long-term thinking

Interview Experiences

Transcript 1

Round 1 - Simulation	Simulation based test for different roles.
Interview - 1 **Duration: 40 mins**	• **Introduce yourself.** • **Guesstimate the total working population in India:** I asked questions to clarify what working population meant, i.e., whether we would be considering gig worker and self-employed people. The interviewer said no. Then I considered India's population to be 120 crores and divided it into urban and rural, in a 30-70 split. Then I split based on ages, 0-18,18-65, <65 in both urban and rural. In the 18-65 population, I took a gig worker and self-employed vs working professional split and added the estimates for working professionals in urban and rural areas to arrive at my estimate • **Create a teleconsultation app:** I talked about the target user group and their requirements pre-consultation, during consultation and post-consultation. Pre-consultation required help finding a general

	physician/specialist, Reviews, recommendations. During consultation platform that allows for video calling and option to chat were required and post-consultation - prescription stored to patient history, prompt to schedule follow-up in person or using app and prompt to review/recommend were suggested by me. • **Design the landing page of the app:** I described it as having an option to search for a physician along with cards for various specialists and ailments to aid with discovery. Over this, I suggested we could leverage a social network to recommend physicians to users as users are more likely to trust reviews of people, they know rather than strangers. Along with this, I also suggested that each physician could have a tag mentioning the number of users that they consulted with as social proof. • **Whether I would build the social network within the app or leverage an existing one?** I answered that it would depend on the stage at which the app is. If at the initial stages, it makes sense to leverage an existing network and if it a mature stage, it would make sense to build one within the app for more enhanced social functionalities.

Interview - 2
Duration: 40 mins
	• **Introduce yourself**
	• **Narrate instances where -**
	  ○ **where I was faced with a challenge and how I overcame it,**
	  ○ **where I received negative feedback from a superior and how I dealt with it,**
	  ○ **where I had to coordinate with many stakeholders, and**
	  ○ **where I had to convince the team to go along with a decision, they didn't like in the short run but would benefit them in the long run.**
	• **Name your favorite app and why it was your favorite?** I talked about Netflix and its superior recommendation algorithm and its good user experience and interface
	• **What you don't like about the app and how to improve it?** I answered that deciding what to watch is a huge pain point for users and I would use the landing page better by using it as a discovery tool for users by playing short previews instead of having a poster of only one movie/show. I also mentioned social proof where I said that we could display tags on shows that were being watched by many users at a given time.
	• **How would you improve the Amazon app?** I again mentioned that having too many choices is the pain point and enhancing the app to aid with that would be what I would do.
	• **Would you improve the search on the app as it sometimes gives irrelevant results?** I answered that I assumed that the app was displaying the nearest results

	as the items searched weren't available in the inventory. If that weren't the case, then the search algorithm would need to be improved. I then thought of a feature for Netflix which involved the integration of the Netflix Party (App that syncs shows for a group of users) in the app as it would be widely used during the lockdown. So, I mentioned the feature to the interviewer, and she accepted that it would be useful. • **Questions for the interviewer, if any**

Transcript 2

Interview - 1 **Duration: 40 mins**	• **Introduce yourself.** • **Tell me about a project from your work experience that you are excited and proud about?** Mentioned about a time-intensive, critical project I was a part of. Involved with ERP processes, so detailed on that as well. • **What excited you about the project?** The time-bound nature of the project. Explained further on how too much work had to be fit into 2-month period. (Went into details of the project, tried to understand WHAT we did very thoroughly, in layman terms) • **Give a customer journey map of VaccineAware (my undergraduate project, was a website that we built end-to-end) How did you decide that you should build this? And how would it be for a customer once they open the website?** Gave a detailed answer on why we decided to build this website (talked about identifying the pain points of customers. How? Mentioned about a survey we conducted on a group of people, and second, gave a personal (and genuine) reason on why this issue was important to me). Moved further to how the website would look like to a customer. Basically, ran her through the entire navigation and features of the website. Starting from signing up to the page, what all things will happen and how a customer can potentially use it. (Asked thrice to elaborate more and more, I spoke uninterrupted for 10ish minutes at one point! Was finally satisfied with the answer at the end.) • **What were your two major learnings from the marketing project you did (mentioned on my cv)?** One how to take decisions when time is less (one of Amazon's principles). Did thorough research initially, such that towards the end when there was less time, I was able to make decisions quickly. Elaborated on what decision had to be made. Two) Understood the functioning of a product from start to end (described on what all I did in the project, which was not mentioned in the cv thoroughly) **Any question?** Asked about Amazon's upcoming farm-to-fork project, as this was like a project that I did during my work experience, and I have been reading up on it since quite some time. She described it in detail for 5-7 minutes, then I said that I

	had also worked on a similar project, which was based on blockchain. Little discussion on that (what my project was).
Interview - 2 **Duration: 40 mins**	• **Introduce yourself** • **Swiggy, Zomato have a lot of delivery men who are generally free during the morning, during breakfast hours. How to utilize them better?** I gave a 2-way solution. One, make them utilize this time by upskilling them, like if they want to complete education, learn new skills etc. Two, make them do some other work during this time – either a new part time job altogether or do errands etc. for the restaurant owners. • **Elaborate on the customer personas that can be potential customers for breakfast?** One segment would be working professionals, living outside their native (skip breakfast due to dearth of time in the morning), not just bachelors but also couples. Another, kids again when their parents are working to save their time. (Could not think of more, but they kept asking for more and more) Finally done with this question, moved on to next. • **How can you make the in-flight experience better for customers?** Started on how I will go about surveying, researching about the problems people face, identifying the pain points. (Was interrupted midway.) • **We understood the process you will follow. Based on your experience travelling, how will you make your own experience better?** Started with the physical changes needed. E.g., I'll make sure the time taken on airports is reduced by various means. (Was interrupted again.) • **We are in a dearth of time. Just tell us, how will you make the in-flight screen experience of the people better?** (Finally understanding the question) Enabling Wi-Fi on it - once Wi-Fi would be on, streaming services like Amazon Prime can also be used in flight taking care of the traveler's entertainment experience. Besides, the landing time and air-time remaining details can also be always displayed on the screen. The travelers can order meals and water from the screen itself.
Tips	• First interview was very interactive, second one seemed lik a stress interview. The latter were not listening to my answers properly, so I tried to keep the answers crisp and quick. The former (the first interviewer) however, was asking me to elaborate further on all my answers. • I tried to bring in as many Amazon principles as I could in my answers, subtly. • The entire process ended in less than 40-50 minutes for me, started at around 9 AM and I was the first one to be interviewed.

DarwinBox

Company Overview:

Darwinbox is a leading provider of cloud-based Human Resources Management Software (HRMS). With a new-age enterprise-focused HR Technology suite, Darwinbox engages and empowers employees across the entire lifecycle (hire-to- retire) with a smarter, simpler & mobile-first HR Tech experience powered by AI and Machine Learning Recognized as one of the most preferred HCM platforms in APAC by Gartner, more than 500+ global enterprises and unicorns such as Arvind, Dr Reddys, Kotak, Mahindra, Paytm, Swiggy, and Myntra have digitized their HR with Darwinbox. Powered by AI and ML features such as an HR Voice Bot, Advanced Talent Analytics, Candidate Shortlisting, OCR-based expense scans, etc., Darwinbox is used and loved by 1M+ employees!

Founded in 2015 with a vision to transform the interaction between workforce and technology, Darwinbox has been backed by the likes of Salesforce Ventures, Sequoia Capital, Lightspeed, and Endiya Partners.

Values:

- ***Simplicity & innovation***: There's always a better, sharper, faster, simpler way to do things. We question every assumption, cherish bright ideas and make new things happen.
- ***Customer centricity***: Our clients' shoes are too big to fill, but we never learnt to walk without putting ourselves in them. Our endeavour is to empower our customers to engage more meaningfully with their colleagues across levels, and take more informed decisions.
- ***Ownership***: Ownership for us is not just building the product – it is ensuring we are solving a problem, managing the change, helping the user drive results and seeing it through to the end.
- ***Meritocracy****:* Reason always trumps designation. We believe in crediting every valid point no matter how young the source may be. We value consistent high performance and expect everyone to be the best version of themselves.

Internship Experiences

Transcript 1

Round 1 (PI)	*Interviewer: Tell me about yourself* *Interviewer: (Opened my CV) What was your designation at OFSS* Me: Associate Consultant *Interviewer: Can you explain your job* Me: Explained *Interviewer: (Then asked questions about my job and the projects I worked on. Not mentioning details here. Very specific to my job)* Me: Answered the questions. *Interviewer: (Then went to my academic projects. Asked questions about them. Specific to my project.)* Me: Answered them *Interviewer: What is ProdMan?* Me: I explained my basic understanding, i.e., a person who interacts with the client/customer, identifies problems, defines business objectives, etc. (Gave a detailed explanation)

	Interviewer: Why ProdMan? Me: Mentioned my CS background and how my work at OFSS helped me learn about requirement gathering and design specifications. (Again, went in detail). *Interviewer: What is your favorite app? Explain about it and mention things you most like and dislike about it. Also, note how to improve upon certain features I disliked.* Me: I talked about 9gag. It is a social media app dedicated to memes. Went on to mention in detail about the application. *Interviewer: (Many counter questions as the he himself was a user. Counter question on every statement I made)* Me: Answered all questions. I knew about the app very well. *Interviewer: I was asked to design features for a SCM application for a logistics company.* Me: After some thought, answered back with 2 features. *Interviewer: Explain why you selected these 2 features.* Me: Answered. Again, multiple counter questions. *Interviewer: Then how to measure whether the features are a success or failure? (Are they being used or not)* Me: Explained. Did not go into proper measurements. Went too generic. Then the interviewer grilled me as to why chose these measurements. Then he suggested better features and explained how they are a better match than mine. (This was the longest part of the interview). *Interviewer: Rate yourself on a scale of 1-3 (3 being best) on my hard work and talent.*

Disney+ Hotstar

Interview Experiences

Transcript 1

Round 1 (Case Submission)	*Case was about improving revenue for D+H.* The case submission focused on identifying main user cohorts, their pain points, and proposing features to address the same. Emphasis was placed on metrics and metric orientation. Also proposed product delivery roadmap for development of new feature(s). A 6-slide presentation was submitted.
Round 2 (Personal Interview)	Interview focused mainly around the case submission. I was asked to elaborate on a proposed feature, the problem/pain point meant to be addressed and how the final solution would look like. Also asked to elaborate on the metrics. A disproportionate focus was again placed on metrics and metric orientation. Few general BQ questions, why MBA, why Product Management etc.
Round 3 (Personal Interview)	Interview began with a question on a user cohort described in the submission and what market research, user behaviour and new user discovery it offered. Follow up question on favourite product (mentioned Chess.com app), what I like and disliked about it. What would I improve. Moved on to BQ questions regarding work-ex, why Disney+ Hotstar etc.

Transcript 2

Round 1 (Case Submission)	*Case submission on differentiated premium user experience for Disney+ Hotstar users*
Round 2 (Personal Interview)	This was a case discussion round which was focused more on discussing our submissions to the first round. I was first asked to explain all the assumptions that were made in the submission. We had a brief discussion around this. Then we moved on to the user personas mentioned in the submission. We talked about the user personas in detail, with the interviewer trying to understand about the thought process that went into selecting these user personas
Round 3 (Personal Interview)	*Interviewer: Design an algorithm to improve utilisation of badminton service at societies.* Started off with trying to narrow down the scope with a few clarifying questions. It was mostly an open-ended design question so I went ahead with making a few assumptions. These assumptions were thoroughly discussed with the interviewer. Then went ahead with drafting solutions for the problem. Again, I had an extensive discussion with the interviewer about the solutions proposed. Overall, it was a good experience and the interview really tested my knowledge.

Transcript 3

Round 1 (Case Submission)	*Case submission on differentiated premium user experience for Disney+ Hotstar users*
Round 2 (Personal Interview)	**Interview Round with 1 panellist focusing on the case submission** I was first asked to give a run down about the complete case and ultimately identify a north-star metric. Then the discussion went ahead with the rationale behind the metrics that were considered and not considered. We had a healthy discussion on the criteria which helped me make this decision. Finally, I was asked about how I identify the pain points of the stakeholders involved and how the prioritization of these pain points took place. Overall, this round was mostly focused on the submission round and the rationale used for creating the submission. Be thorough with your submissions and the associated assumptions you are making for it.
Round 3 (Personal Interview)	Interviewer: Find why WhatsApp engagement is going down. I applied the same approach for any other generic RCA by always keeping the customer journey in mind and was able to comfortably answer the question.

Transcript 4

Candidate profile	B.Tech(EEE), Bank of America (38 months)
Interview 1	• Tell me about yourself. • Asked about my hobby (I like to collect sneakers) • Tell about work experience • Asked to give a 5-minute summary of the submission. Before going into the submission, I clarified the problem statement and explained my thought process while coming up with the case submission. • Went into how I came up with features to increase user acquisition and retention based on customer behaviour. • I gave a reason for prioritising the feature and was asked to provide the 'make or break' step in implementing the feature. • I went into the GTM strategy for the feature, breaking the process into 'pre-launch', 'during launch', and 'post-launch'. • What should be the success metrics for Disney Star to measure customer retention for premium subscribers?
Interview 2	• I was asked questions about my work-ex. • I was asked an RCA on the declining number of WhatsApp users. This wasn't a typical RCA; it went more like a consulting case where I had to do a PESTLE analysis. • I was asked to do product improvement for WhatsApp to increase acquisition. • Why PM? A little bit of grilling over this.

Google

Interview Experiences

Transcript 1

Interview 1	• **Imagine you are leading a team which is supposed to launch a feature in 2 weeks. However, your team members have reported that due to a recently detected bug, the launch will get delayed by a month. How would you react to the situation? Started with clarifying questions on the app, feature to be launched, criticality of the launch timeline, need for understanding the root cause (further discussion on possible root causes), evaluating the pros & cons of a possible launch delay vs employing alternative options of completion within the constrained timeline.** Started with clarifying questions on the app, feature to be launched, criticality of the launch timeline, need for understanding the root cause (further discussion on possible root causes), evaluating the pros & cons of a possible launch delay vs employing alternative options of completion within the constrained timeline. • **Suppose you are working on a project to meet a certain deliverable (assume a product feature launch). However, after a point of time, you get to know that within the same company, a different team overseas is also working on the same project. How would you react to the situation?** Started with clarifying questions on understanding the deliverables of the concerned projects, understanding if the feature launch is being built across the same app, the differences in targeted success metrics across the geographies and the criticality of product feature. Depending on the source of information and organizational structure, take up the issue to explore the possibility of optimizing the company's resources by employing a common team to work on the project. • **Imagine you are the PM for user ratings at Amazon. What would be the success metrics you would look at?** Using AARRR framework, discussed the number of individual ratings per product, average rating per user, number of user ratings against the number of purchases, repeat user orders for a product against user rating etc. • **Suppose the average rating per user in India is lower than the global average. How would you look at this data and resolve the issue if it's a matter of concern?** Discussion on understanding root cause behind low user rating in India, whether product quality is a matter of concern or Indians are unlikely to rate a product post-purchase in comparison to foreign users. Discussion on factors such as product repeat orders per user in India against the user rating vs the global data. If quality is not

	a concern, explore the possibility of changing the user journey by employing a rating method similar to that of cab/food aggregators asking users to rate the previous purchase post-app login.
Interview - 2	• **Design an app for users to learn cooking.** Used the CIRCLES framework. In-depth discussion and cross-questions on user personas, app features • **Tell me about a Google app you dislike and why?** Google Drive. Discussed app goals, user pain points, and solutions • **Tell me a non-Google app you dislike and how would you improve it. Asked to directly discuss improvement points.** Discussion on intrusive ads in Clear trip. • **In a situation where you have been asked to fix the problem with intrusive ads, given that they cannot be removed from the app, how would you handle the situation?** Discussion on targeted ads on the user journey and re-distribution of the ads based on where the user is present in the user journey and ad-relevance.
Interview - 3	• **Tell me about yourself. What was the product you managed earlier and elaborate on the deliverables?** • **How would you price your product?** • **Design a new app or suggest an existing Google app with new features which would increase Reliance Petro-chemicals business revenues by 10X. The feature needs to be in line with how you would price the products at RIL.** Identification of pain points. Brainstorming on all ideas with the interviewer pushing to come up with new ideas at every feature recommendation. Converged on Data Analytics using Google Cloud services.

InfoEdge

Company Overview:

Info Edge (India) Limited is an Indian internet company that was founded by Sanjeev Bikhchandani in 1995. The company runs an online job portal **Naukri.com**, a matrimony website **Jeevansathi.com**, a real estate classifieds platform **99Acres.com** and an educational website **Shiksha.com** It also holds a stake in other online companies including two unicorns—the food delivery company **Zomato** (25.13% stake, as of January 2020) and the insurance aggregator **Policy Bazaar** (19% stake, as of November 2019)
Info Edge went public in 2006 under the name "Naukri"; as of 2018, more than 70 percent of the company's revenue comes from the job portal Naukri.com. In 2020, the company set up a venture capital fund, Info Edge Venture Fund, to invest in online start-up companies.

Vision, Mission & Values

Vision

To create world class platforms that transform lives

Mission:

We will continuously delight our customers in current and new businesses by delivering superior value through enhanced offerings on the internet and other platforms.
We will do this by preserving our entrepreneurial spirit and leveraging our financial strength and expertise in building brands, communities, product and technology, and sales and service.

Values:

Customer delight | Entrepreneurship | Knowledge | Results | Trust

Interview Experiences

Transcript 1

Round 1 (Personal Interview)	*Tell me about yourself: Couple of questions related to my profile; (Had designed a website)* *Interviewer:* • *How did you go about it?* • *How much were you able to generate?* • *Do you think it was successful? (Reasons, why or why not?)* • **What are some of the applications you use daily?** WhatsApp, Chess apps, Timers, Meditation apps • **Let's say you are the Product Manager of WhatsApp, identify user personas where WhatsApp does not exist and how can we increase them?** Sure, but before we go ahead, what is it we are trying to accomplish, do we just want to acquire new users, or improve engagement, or add revenue? • **Let's say we want to add revenue.** Okay, (Thought about it for a minute), We could expand into three categories: Children (12-16), Working professionals, Elders (65+). Talked about pain points in all of them, then

	he asked me to expand more on working professionals' segment. • **How can we make it more user friendly and useful for them?** The following features would help them: 1. Transactions with no upper cap, as well as balances b/w parties 2. Targeted advertising (receiving) 3. Blast SMS kind of Advertising (sending) 4. Calendars and schedule send. • **Design an alarm clock for the blind.** An application or a physical product? • **Your call** Will design an application, because of the easy availability of smartphones it would help more people. Voice assisted alarm clock with functionalities Expanded on them with relevant examples, seemed convinced.
Round 2 **(Senior Partner + First Interview)**	• **You are a category manager of the apparel segment in an ecommerce company your target is to increase the top line of your segment through discounts, how will you do that?** Breakdown of revenue: Sales vs. Price per sale. We must compensate heavily for discounts offered, could look at wish listed products/ items in cart etc. • **How much discount do you plan to offer?** Discussion on parameters, questions on margins, etc. Arrived at a range of 20 to 30% • **You have an option of 20% discount directly or 30% cashback later Which one to go for and how do you decide, show your working?** ○ Asked about how much sales would be expected to grow in each case of discount based on historical trends ○ Customer segments price sensitivity ○ Introduced the concept of leakages in cashbacks claims ○ Added publicity in cashback is going to be higher because the number (30>20) seems bigger ○ Interest rate can be earned until the cashback is claimed ○ We could also partner with different wallet providers like Paytm and PhonePe and explore revenue generating options with them This was a very calculation intensive round, after discussing in different factors the 20% discount still seemed better based on the numbers that I was offered (though by a tiny margin) and hence we decided to go by that. Feedback received about what went well: a. Passion for solving problems. b. Asking questions. c. Considering various factors.

Media.net

Company Profile

Media.net is a leading global advertising company with one of the most comprehensive portfolios of advertising technology in the industry across search, native, display, mobile, local, products and video. Media.net manages high-quality ad supply on over 500,000 websites and its platform and products are licensed by some of the largest publishers, ad networks and other ad tech companies worldwide.

By market cap, it is one of the Top 5 largest ad tech companies worldwide. By revenue, it is the second largest contextual advertising business worldwide.

It currently manage traffic that generates 70+ million paid ad clicks each month. By contrast, at the industry average display CTR of 0.08%, it will require others an estimated 87.5+ billion display ad impressions per month to generate this volume of ad clicks.
Media.Net is the original creator of the display-to-search (D2S) ad format, a highly sophisticated method of monetizing display placements by identifying user search intent and displaying relevant search keywords, which lead to display of search ads bought by advertisers on a CPC pricing model.

Media.net was originally started by Divyank Turakhia, a serial entrepreneur from India. He started the company back in 2010 with only 20 employees. Within just 9 years, it has grown to 1200+ employees with 6 offices in USA, UAE, Switzerland, India and became a leading player in the display ad industry. Although, more than 90% of Media.net's total revenue comes from the US.

Core Strengths

- It's a '**one-stop shop**' for clients
  Why? Simplifies online advertising by building top-tier products across multiple segments within ad tech such that all of the customers' needs are met without them having to engage multiple vendors (they can also use the company's platform to unify the solutions from multiple vendors if desired)

  (***FACT POINT:*** *It currently manages traffic that generates 70+ million paid ad clicks each month. By contrast, at the industry average display CTR of 0.08%, it will require others an estimated 87.5+ billion display ad impressions per month to generate this volume of ad clicks.*)

- Advertisers see extremely **high conversion/sales** through this format, without the risk of having to buy CPM impression-based media where they run the risk of paying for media with which users do not engage. Hence, D2S enjoys uncapped advertising budgets as it is perceived as a 'cost of sales' rather than an 'operating expense' from a discretionary marketing budget.

- They offer direct access to the **Yahoo-Bing network.**

Products and Services:

Media.net builds products that auto-learn and optimize to display the most relevant ads and offers, while also providing user privacy protections. This creates long-term sustainable value, maximizes publisher revenue and provides high ROI to advertisers.
Media.net simplifies online advertising such that all of the customers' needs are met without them having to engage multiple vendors.
Their offerings incorporate proprietary machine-learning algorithms, sophisticated data processing, and detailed analytics capabilities to target users successfully.

Capabilities that distinguish Media.Net

- Scalability with 100% uptime
- Traffic quality and compliance management capabilities

Interview Experiences

Transcript 1

Case Submission	Design an app for Space Tourism in the year 2050.
Interview - 1 **Duration: 40 mins**	• **Walk me through your CV.** Went through academic achievements, one point for each bucket in Work Experience, Positions of Responsibility and Extra-Curricular Activities. • **Explain a project from your work experience.** Explained the project in terms of customer need, planning, implementation, impact, and future scope. • **Guesstimate: how many mobile phones are there in the city of Bangalore**. Started the discussion by asking clarifying questions, like asking whether only smartphones were to be considered. Worked on the categorization for 1 minute and proposed an income-based top-down split of the population of Bangalore, and further split it by the size of the family and requirement of smartphones in each family. The interviewer was not satisfied with this answer and asked me to start again. The second time, I proposed an age-wise split of the population and estimated the number of smartphones by requirement. This answer was accepted. • **A drop has been observed in the number of add-to-carts in the Flipkart grocery section. Analyze why and give recommendations.** Walked through the customer journey for an average shopper on the Flipkart app to identify the drop-off point. At every stage/page of the app, detailed out the different branch outs that could occur. The interviewer clarified which branch to go with at each stage to progress through the problem. The drop off was observed at the very end between the choosing of the grocery specifications and payment, and it was concluded that the direct checkout button “Buy Now” for single items had increased and this had led to the reduction in the number of add-to-cart interactions. • **Which metrics would you have used to observe, diagnose, and fix this problem?** No. of Add-to-cart interactions, No. of cart drop-offs, No. of items checked out per person, Total sales per day, Average sales per person per day. • **Design a daily dashboard for the CEO of Flipkart.** Identified all the verticals that the CEO would like to observe: Operations, Marketing, HR, Sales, and Special Offers/Events of the Day. Identified the different metrics that would be required to monitor the verticals. For e.g.:

	1. Operations: Order Delivery Time, Failed orders, No. of returns, Active Drivers (avg. segregated by week, month, etc.), Number of orders (the previous day, last month, etc.) 2. Marketing: Discount coupon usage - Avg. discount applied, Marketing performance (Segregated with the marketing platform channel), Marketing Cost (by channel), ROAS (Return on Ad Spend) 3. HR: Attrition Rate, Delivery Boy Online Time (Avg.), Idle Time(Unallocated Jobs)
Interview - 2	• **(Shared screen with my case submission PPT opened). What was your rationale to decide user persona? Come up with a new user persona that would fit in with your solution and submission**. Answered the user persona question by identifying any other needs that may come up in the context of the case (space travel for this). Suggested an educational tour experience for students and scientists. He asked why I hadn't suggested space travel for work/commercial purposes. Explained my rationale for how it does not fit in with the solution for space tourism and those needs may need to be addressed separately, and not through a tourism app. • **Do a walkthrough of the metrics you have mentioned and why you chose them. (Follow up question) Did you use CIRCLES anywhere in your submission? If yes, how?** Talked about the metrics used in 3 categories: Engagement (No. Of bookings/day, No. of app opens per day), Adoption(New users/day) and User Satisfaction (PlayStore and AppStore ratings, NPS). Related each metric to a feature and a user need. Explained the CIRCLES framework briefly and broke down the solution using the framework to explain the thinking process. • **Determine the bidding price that Netflix should give for ad space on a blog.** Asked clarifying questions regarding the blog, laid out possibilities of pricing with respect to Amazon Prime ads. The final answer was arrived at by estimating the number of conversions to subscriptions from viewing the ad(impressions) daily and pricing the ad accordingly. • **Guesstimate for the total number of airborne flights in a 10 km radius around Mumbai airport at any given instant.** Started with the assumptions and clarifications that at any given point of time, a flight is ready to take off and demand for flights is infinite and only one runway is available for use. Calculated the time taken by a flight to take off from the point of taxiing from the airport to the

	runway and upwards (speed of taxiing, speed of takeoff to be considered), calculated the amount of time taken by one flight to reach the edge of the 10 km radius bubble, lined up flights based on the calculated time split between taxiing and take off.

Transcript 2

Case Submission	You are the Product Manager for a hypothetical travel reviews site, say, "TravelSite.com." Part 1: List 3 new features that can be added to TravelSite.com. Part 2: Create an additional new revenue stream for TravelSite.com – propose one. additional monetization mechanism
Interview - 1 **Duration: 50 mins**	• **Introduce yourself** • **Any project I did in my work ex where I had to come up with an innovative solution.** Talked about a project I did in my internship where I had led the team on a complex problem statement to come up with a solution. No further questions were asked on this. • **View Time on YouTube has gone down by 30%. Analyze and give recommendations.** Asked clarifying questions and asked whether it is limited to YouTube or if YouTube Music should also be considered and if it's happening on the app or website or both. Then, asked if it has been happening for YouTube shorts or all types of media. Further clarified whether the drop was sudden or gradual. The drop was observed for a week and had been seen for all types of media. Then, I asked about the metric and confirmed how it is being calculated currently and if any bugs had been reported recently. Then, I did a quick go through of all possible external causes such as new competitors. I then walked through the entire customer journey and considered only the website as advised by the interviewer. At every stage, I detailed out on the different branches and clarified with the interviewer if I should process further at every branch. Finally, I reached the viewing page of the YouTube website, and it was found that the location of the "Share" option had been changed. I concluded that it could be the reason behind the drop-in view time. On being asked to elaborate, I went ahead with the reasoning that probably users are not sharing as much as before due to the change in "Share" option location and view time of shared videos has dropped. • **Guesstimate: How many daily orders are placed in Swiggy Instamart?** Started by asking clarifying

questions such as if the orders are to be considered for a weekday or a weekend, if I need to consider it for a particular city, etc. Worked on the approach for a min and then proposed income-based family top-down split of the population of Delhi. After dividing the population of Delhi into High Income, Middle Income and Low-Income families, I estimated the average number of orders in these categories and assumed that Low Income families will not be ordering Swiggy Instamart. The interviewer was satisfied with this approach.

- **Puzzle : You have 25 horses, and you need to identify the fastest 3 horses out of those 25. Only 5 horses can run in each race at the same time as there are only 5 tracks. What is the minimum number of races required to identify the fastest 3 horses without using a stopwatch or timer?** Started the solution by saying that we will conduct 5 races with 5 different horses. The winners of these races will be made to participate in a separate race and the winner will be the fastest horse out of all the horses. So, with every 6 races we get the fastest horse, and we can use this to get the top 3 horses. The interviewer was not satisfied with this brute force approach and prodded me to come up with a better solution. He asked me to think about which horse could be the second fastest. I then pointed out that it can either be the horse which came 2nd in the final 6th race or the horse which came 2nd with the fastest horse in its initial race. So, we just need to conduct one more race with the second fastest and third fastest horse of the final race(6th) and the second fastest and third fastest horses of the initial grouping of the fastest horse. The last horse of this group will be the horse which came second with the initial race of the second fastest horse. Therefore, the minimum number of races would be 7.
- **Design a daily dashboard for the CEO of Uber.** Listed down all the verticals : Marketing, Operations, Finance, HR, and Customer Feedback
- **Now consider only the verticals Operations and Finance and list down the important metrics in them.** Identified the different verticals that would be relevant for the Operations and Finance verticals such as :

  I. Number of rides being taken : Divided the rides further into canceled, completed.

  II. Time being spent on the app : active time (during rides) & idle time.

  III. Location being covered by the Uber drivers : To understand potential areas where users do not usually get rides.

  IV. Safety ratings of drivers

	• **Asked me basic questions on Web Tech such as DNS and cookies.** Gave a brief overview on these concepts. He then asked me to read up on these in detail for future rounds.

Transcript 3

Case Submission	We were assigned a case where we were required to add new features to an existing hypothetical travel review website and design the revenue model for the same. Deliverables: 1. Three new features 2. Wireframes 3. Revenue Model 4. Excel Sheet including calculations for next 3 years
Interview - 1 **Duration: 40 mins**	• **Introduction** • **Why do you want to become a product manager?** I linked my background in computer engineering and work experience as software engineer along with explaining what day to day tasks of product manager are and how they align with my career goals. • **RCA – You are a PM of YouTube and watch time decreased by 30%. Find root cause and suggest how can we work on that.** I started with asking scoping questions like time period of decrease, definition of watch time, problem particular to a specific platform, any geography or segment getting affected, external factors like government regulations, competition, internal factors like recommendation or UI/UX change - recently updated the UI and moved the share button on top of video and below search bar. So the issue was that users have tendency to scroll down after watching the video and it's mapped in mind that they will find share button below the video panel. But since button has been shifted up, users are not sharing the videos that is decreasing the # of users and therefore watch time is decreasing. ○ **What can be done to fix this?** Maybe roll out the previous feature and do AB testing. Or add a pop up/tutorial notifying user that share button has been shifted upwards. • **Let's do a puzzle. There are 2 candles, each take 60 minutes to burn. We need to calculate 45 minutes using them. Candles can be burn from both side.** Light the one candle from both ends and at the same time burn other candle from one end. First candle will burn in 30 minutes while other will be burnt half. Now

	burn the second candle too from other end, now it will be burnt in next 15 minutes. • **Guesstimate – I am working at a Delhi Based Bike Start-up. Currently, they are in pilot mode and need to launch in last quarter of 2022. Estimate the # of bikes required.** Defined the equation: # of bikes = # of riders / # of rides per day Delhi population = 30 million Segmented the riders on basis of age and their usage frequency 10-22 years (Fun activity) 10% -> 20% frequency per week 2 times 23-40 years (Commute for work) 50% -> 40% frequency per week 4 times 40-60 years 30% -> 20% frequency per week 2 times 60+ 10% -> 1 time/week Avg. rides / day = 3 • **Seems fine. Can you think of other users who can be your customer?** Maybe delivery guys for Zomato/Swiggy or other companies. He didn't ask me to calculate for them and was satisfied with the approach. • **Technical Question – What are cookies and why they are used?** Gave definition of cookies. Defined different types of cookies i.e. First party cookies, Third-party cookies, Session cookies etc. • **Can you explain why third-party cookies are used citing any example.** Gave the example of Finshots and explained it's significance. • **Design a dashboard for CEO of Swiggy Instamart?** Discussed the approach by stating all the domains and metrics in them i.e., Marketing, Operations, Finance, HR, Customer Experience. North star metric: # of orders/day Negative metric: # of failed orders/day
Interview - 2	• **Introduction** • **Product Design – Design an ATM for kids.** Used CIRCLES Framework. Asked scoping questions like the age which was given as 5-15 years. Defined 2 User personas and discussed their pain points Pain points:

Kids going to school/tuition may need money as pocket money.

Kids can get basic financial knowledge in childhood.

Deposit money they get from parents

Solution:

Kids have short height so ATM height must be adjustable

Basic terms should be there in ATM and not heavy financial jargons

It should be gamified so that it is fun while kids learn

Virtual assistant to guide kids when they enter ATM

Withdrawal Amount limit and each time notification goes to parents for permission with a reason of withdrawal.

Location near the schools and educational centres for maximum traffic.

Colour theme should be colourful so that it is attractive to kids.

Face/Finger recognition if kids don't remember the pin.

Prioritization: Used RICE and prioritized 1st ,2nd ,3rd and 5th solution initially.

Defined north star metric: # of successful transactions/day

Negative metric: # of failed transactions/day

Summarized with MVP.

- **Guesstimate- How much MMT should bid for CCP for Delhi to Mumbai flight on google ads.** Equation: # of users searching on google for flight* # of ads per search* CTR

  Estimated each part of equation and made assumptions.

- **What do you mean by CTR?** Explained it's equal to # of clicks/impressions*100 and its significance
- **What if MMT bids a bit high CCP? How would it help them?** It will be a loss leader strategy that Amazon implemented to attract traffic but in long run will help them company to earn profits
- **Any other reason you can think of?** Maybe to get traffic use it other features when they click on the ad.

	• **How would you measure success for Instagram reels.** Defined the features of Instagram reels to be on same page with panellist. Asked what's the goal we may look for i.e., User engagement, Monetization, Activation etc. • **Let's discuss User Engagement.** Explained customer journey and different segments of users. Discussed success metric for each step-in customer journey and defined north star metric - # of views/user Also discussed negative success metric
Tips	Try to follow framework that helps to gather the thoughts and discuss your approach in the beginning so that you are on the same page and panellist will get an impression that you think in a structured manner. Always ask question at the end to show your interest towards the role/company.

Transcript 4

Case Submission	We were assigned a case where we were required to add new features to an existing hypothetical travel review website and design the revenue model for the same. Deliverables: 1. Three new features 2. Wireframes 3. Revenue Model 4. Excel Sheet including calculations for next 3 years

Interview - 1
 	
Duration: 40 mins
	• **Introduction. Cross questions on work-ex responsibilities**. Give examples. Gave appropriate answers
	• **"Its 2017 and Ola is planning to launch Ola Bike. No one has done this before."**
	  ○ **Identify 3 problems that Ola Bike would solve.** Affordability, Commute Time, Availability
	  ○ **What would you do once problems are identified?** Launch Ola Bike
	  ○ **What would you do next once Ola Bike is implemented?** Measure success metrics
	  ○ **Define 5 key metrics to measure success of Ola Bikes.** No. of ride bookings, Bounce Rate, Idle Time for drivers, Avg. booking time, Customer Reviews

	○ **What factors would you consider while pricing.** Competitive Pricing (Including Public Transport), Dynamic Pricing based on availability ● **"30% of PhonePe users churn out after 3 months. This is not an RCA problem, use a different approach".** ○ **Who are the competitors for PhonePe?** Other payment apps, Credit/Debit cards, Cash ○ **Identify the issue.** Payment stuck for a few banks without any confirmation ○ **How would you resolve the issue identified?** Product Improvement – Warning before payments if any issue is identified, Payment animation, Grievance Redressal information on failure screen.
Interview - 2	● **Tell me about yourself** ● **You are a PM at Swiggy/Zomato. What are some of the important metrics you will consider? What would be the North Star metric? What would be the 5 most important metrics?** No. of orders – North Star, DAU, Cart conversion rate, No. of riders, NPS ● **You are a PM at YouTube. What parameters would you consider while designing an algorithm for recommendations?** Location, Language, Age, Gender, Category of videos, Channels followed, Watch History, watch time, Type of videos watched – Videos/Shorts/Live Streams ● **What is API? Explain API to a 5-year-old.** ● **When you logout of Facebook and come back, it allows you to sign in again by just clicking on your profile name. How does Facebook do that? What happens in the background?** Gave a functional answer, did not know technical details ● **What are cookies?** ● **Design a pen for school-going children aged between 10-15 years. Use any assumptions, any budget. Since we are short on time, skip all structures and just mention the problems you will be solving.** Ink leakage, Ink out, finding lost pen, erasing what is written, Handwriting improvement, Intuitive writing & sketching. ● **I will be very honest with you. We are looking for technically strong PMs at Media.Net. Since you are a Mechanical Engineer, how do you think you will be able to fit in?**
Tips	Read about AdTech Industry, SEO, Media.net, Competitors, GTM, Pricing Strategies, technical internet keywords like API, Cookies, DNS, etc. Special focus on success metrics

Transcript 5

Case Submission	We were assigned a case where we were required to add new features to an existing hypothetical travel review website and design the revenue model for the same. Deliverables: 1. Three new features 2. Wireframes 3. Revenue Model 4. Excel Sheet including calculations for next 3 years
Interview - 1 **Duration: 40 mins**	• **Introduction** • **Asked about a project I had worked on during my work experience** • **Tell me about the most interesting projects you picked up during your work experience.** Told about CRM implementation for my company • **What's your favourite product?** Had a well-prepared answer on this. • **Gave a guestimate – Estimate the number of Insta reels uploaded daily.** Scoped down to the geography being India, reels only include those by content creators and not by businesses. Number of Insta users in India = Smartphone penetration rate (40%- asked if it can be assumed) * Social media penetration (Assumed to be 75% among the smartphone users) * Instagram's penetration (Assumption – 50% of social media users - Instagram being the most popular social media application in India) Number of reels per day = Average number of reels uploaded by users per day * Number of Insta users in India The average number of reels – Divided users into content creators and content consumers, further divided content consumers on low, medium, and high usage activity basis (Assigned a number of reels per day for each category and took weighted average) • **Great level of detail, But how did you assume high usage users to be 20%, medium usage users to be 50%, and low usage users to be 30% (I Had assumed all this in my answer)? Give me the rationale behind this.** Talked about how I extrapolated the data that I have

	on a general usage basis of people around me – explained in detail
	• **(Not impressed) Don't you think your data sample is very biased as you fall into the tech-savvy category and people around you also are somewhat the same.** Accepted the mistake and talked about how to remove the bias we can add a bias factor.
	• **(Satisfied with the answer). RCA – The number of photo uploads on Instagram has declined. Find the reason.** Followed the conventional patterns of asking the scoping questions. Got information that only the number of uploads from mobile applications is down and not the ones from the website. Hypothesized that this could be more of an internal reason than an external one but wanted to get external reasons out of the picture and then dive into internal reasons.
	  ○ **(Stopped me abruptly) When your hypothesis only says that the probability of the reasons being internal is more, then why are you wasting time on external reasons?** Defended my point by talking about how external reasons are easier to cross out and serve as a platform to build on the internal reasons
	  ○ **(Looked convinced by the answer). Go ahead with your approach then.** Asked him in detail about all the external reasons, then went on to the internal reasons by describing the user journey in posting a picture to get cues on where the issue lies.
	  ○ **(After a certain point in the UJM) From this point identify all the reasons that you can think of which could go wrong in uploading a picture.**

Interview - 2	• **Introduction** • **Walk me through your work experience and one project of it** • **You seem to be extremely technically sound, why product management then and why did you not continue in tech?** Gave a prepared answer. • **What do you know about ad tech and Media.net.** Talked about the end-to-end process of AdTech and what media.net does • **For a person who has never worked in Ad-tech, you seem to know too much about it. Tell me then what factors Google will consider for giving an ad space to amazon or Flipkart if both are bidding the same amount for a space (Had talked about bidding in AdTech).** (No clue), tried to formulate some factors. • **Swiggy has launched in a new city. Give me the success metrics.** Divided into stakeholders – Delivery person and

	customers (Chicken egg problem) and gave one north star and 2 more metrics for both. ● **Can you think of another major stakeholder here that you are missing?** Had missed restaurants – did the same for it i.e., north star and 2 other metrics ● **Product design – Improve Google's restaurant recommendation features.** Detailed product design approach – Included one feature for measuring the psychographic variables and changing the overall rating on the basis of that (e.g If a person who visits restaurants for good spicy Indian food would have a different experience than a person who visits for vibe and ambiance in the same restaurant – but the ratings are the same). ○ **I really like the psychographic variable feature. Can you create a customer journey map for this?** Created a detailed map and explained it to him. ● **Puzzle: There are 10 bags full of coins, 9 of them have original gold coins -1 has fake coins. You have a digital weighing machine. What would be the minimum number of times you would have to use it to determine the fake coins bag?** Simple puzzle, got confused at the beginning (Thought we have a spring balance instead of the digital weighing machine but then recovered later) ● **Do you have any questions?** Since the privacy concerns of users are rising day by day, what do you think would be the solution for personalized ads, and what future PMs should look at? Has a detailed 5 mins TO and FRO discussion on this topic. ● **Any more questions?** What would you have focused more during your MBA for a PM role if you were in my place? Explained how PM works in detail (This is where I think I missed the trick, he explained to me the very basics of what a PM do which I very well know but because of my question it looked as if it created an impression on him that I did not know)
Tips	1. Very common tip for Media.net – They prefer technical PMs, Be thorough about all the AdTech basics and other concepts that can be relevant – e.g. – How websites work, Cookies, APK, SDK Etc. 2. In the design questions try to involve the interviewer as much as possible and ensure it does not get monotonous. 3. Media.net interviewers generally grill you about your rationale behind a particular direction of thought/assumption. E.g. – If you are assuming something in a guestimate has a solid rationale behind it or if you don't have it say directly that it is a complete assumption and you don't have much idea on what number to take – he will help you out directly. Even in the case of RCA if you are asking any unconventional question or going into

	external/internal reasons try to give a one-sentence explanation on why are you doing so.

Transcript 6

Candidate Profile	B.Tech(CSE), TCS(10 months)
Interview 1 **Duration: 50-55 mins**	• Introduce yourself • Explain what you did in your work experience • Favourite product and why ? • Product development case: Develop something similar to channels WhatsApp • RCA: PM at a Spanish teaching application company, there has been a drop in subscriptions bought by users in the last month. • Difference between cookies and cache • Difference b/w first-party and third-party cookies • Why has there been a pushback on third-party cookies ? • Any questions for me ?
Interview 2 **Duration: 45-50 mins**	• BQ Questions: • Intro • Why PM • PM Case: Product improvement around non-tech product • RCA: Decrease in signup of e-commerce site Metric Qn around YouTube shorts • Prod Improvement: Improvement features for YouTube

Transcript 7

Interview - 1 **Duration: 40 mins**	• **Case 1: Root Cause Analysis (RCA)** • **Interviewer**: • Let's do a guesstimate. Can you estimate the number of cars in Delhi? • **Candidate**: Sure! To start, are we focusing only on privately owned cars? • **Interviewer**: Yes, only privately owned cars. • **Candidate**: Got it. Do we know the approximate population of Delhi? • **Interviewer**: Around 20 million people.

- **Candidate**:
  Thanks! I'll assume an average household size of 4 people. This gives us about 5 million households (20 million ÷ 4).

- **Interviewer**:
  That sounds reasonable.

- **Candidate**:
  Now, not all households own cars. I'll assume about 30% of households don't own cars due to income constraints. Does that sound fair?

- **Interviewer**:
  Yes, go ahead with that assumption.

- **Candidate**:
  Great. That leaves us with 70% of households owning cars. So, 70% of 5 million is 3.5 million households.

- **Interviewer**:
  Makes sense.

- **Candidate**:
  For these households, I'll assume most middle-income families own 1 car, while some high-income families own 2 cars. I'll estimate that about 20% of these households are high-income and own an extra car.

- **Interviewer**:
  How does that affect your calculation?

- **Candidate**:
  Out of 3.5 million households:
  80% own 1 car, so that's 2.8 million cars.
  20% own 2 cars, so that's another 0.7 million cars.
  Adding these together gives about 3.5 million + 0.7 million = 4.2 million cars.

- **Interviewer**:
  Good reasoning. Anything else to consider?

- **Candidate**:
  We could refine this by accounting for car-sharing households or two-wheeler preference.

- **Case 2: Root Cause Analysis (RCA)**

- **Interviewer**:
  During Flipkart's Big Billion Days, we observed a drop in GMV. Can you help us analyze the root cause?

- **Candidate**:

Sure! To narrow it down, is this drop specific to a particular product category, or is it across all categories?

- Interviewer:
  It's primarily in the mobile phones category.

- Candidate:
  Got it. Is this issue observed across all user segments and geographies, or is it specific to certain segments?

- Interviewer:
  It's consistent across user segments and geographies.

- Candidate:
  Understood. Were there any operational or platform-related changes during the sale, like delivery timelines, discounts, or payment methods?

- Interviewer:
  Yes, exchange offers were unavailable for mobile phones this time.

- Candidate:
  That's helpful. I'd like to analyze the customer journey to understand where the issue might have impacted GMV.

- Interviewer:
  Go ahead.

- Candidate:
  Starting with the homepage, were deals on mobile phones prominently displayed, considering they are a high-demand category during sales?

- Interviewer:
  Yes, they were featured.

- Candidate:
  On the product listing page, were users able to filter and sort effectively to find relevant deals?

- Interviewer:
  There didn't seem to be any issues there.

- Candidate:
  Next, on the product display page, did the unavailability of exchange offers impact perceived value? For example, was this mentioned upfront or discovered later in the checkout process?

- Interviewer:
  It wasn't highlighted until users reached the checkout.

- Candidate:

	That could explain drop-offs. The lack of transparency about exchange offers might have led to user frustration, especially since mobile phones are a high-value purchase. • Interviewer: Good observation. What else would you analyze? • Candidate: At the checkout stage, were there any other issues like payment failures or longer delivery timelines? • Interviewer: No, everything else seemed to work as expected. • Candidate: Understood. I'd summarize the root cause as the unavailability of exchange offers, combined with late communication about this during the user journey. This likely reduced conversion rates significantly. • Interviewer: Makes sense. How would you address this issue? • Candidate: I'd recommend: • Fixing the operational issues behind exchange offers for mobile phones. • Communicating transparently on the product page about offer availability to set user expectations. • Running A/B tests to quantify the impact of exchange offers on conversion rates for future sales planning. • Interviewer: Good approach. Anything else? • Candidate: Monitoring key metrics like bounce rates on product pages and drop-offs during checkout would help pinpoint where users disengaged the most.

Transcript 8

Interview - 1 **Duration: 40 mins**	• **Question 1: Root Cause Analysis (RCA)** • **Interviewer**: Uber has observed a 10% increase in cancellations over the past year. Can you help us analyze the root cause and propose a solution?

	• **Candidate**: Sure! To begin, is this issue observed across all geographies, or is it region-specific? • **Interviewer**: It's observed globally but is more prominent in urban areas. • **Candidate**: Understood. Does this trend affect all types of rides—like UberX, UberPOOL, or Premium—or is it specific to certain ride categories? • **Interviewer**: It's consistent across all ride categories. • **Candidate**: Got it. Have there been any changes in pricing, driver incentives, or platform features recently? • **Interviewer**: Driver incentives were reduced significantly in the past year. • **Candidate**: That could be a factor. I'd like to break this down into two aspects: • **Driver-side issues:** Lower incentives may lead to drivers canceling unprofitable rides, especially long-distance trips or low-fare rides. • **Rider-side issues:** Longer wait times or higher surge pricing due to reduced driver availability may increase rider cancellations. • **Interviewer**: Makes sense. How would you solve this? • **Candidate**: **Solution**: • **Driver-side improvements**: • Reintroduce targeted incentives, focusing on critical time slots and high-demand areas. • Penalize repeated cancellations by drivers without valid reasons. • **Rider-side improvements**: • Improve transparency in ETA (estimated time of arrival) to set realistic expectations. • Introduce cancellation protection plans for riders, ensuring minimal financial loss if they cancel under valid circumstances. • **Interviewer**: How would you launch these solutions? • **Candidate**: **GTM Strategy**: • **Pilot Testing**: • Launch targeted incentives and cancellation penalties in select high-cancellation cities for three months. • A/B test cancellation protection features with different pricing models. • **Marketing Campaign**: • Communicate driver incentive enhancements via in-app notifications and emails to drivers. • Promote rider-side features like cancellation protection with banners and push notifications. • **Feedback Loops**: • Use real-time surveys post-ride or post-cancellation to understand ongoing issues. • **Key Metrics**: • Cancellation rate (split by drivers and riders). • Driver availability in high-demand areas. • Rider satisfaction score (post-ride surveys).

- Average wait times.
- Adoption rate of cancellation protection plans.

- **Question 2: GTM – Zerodha-like App for Trading**
- **Interviewer**: Let's design a Go-to-Market strategy for a trading app similar to Zerodha. How would you approach this?
- **Candidate**:
  GTM Strategy:
- **Market Segmentation**:
- Target first-time investors and semi-experienced traders who seek low-cost platforms.
- Focus on tech-savvy millennials and Gen Z users in Tier 1 and Tier 2 cities.
- **Product Differentiation**:
- Highlight zero or minimal brokerage fees.
- Offer an intuitive UI, educational resources, and features like real-time market data and fractional investing.
- **Acquisition Channels**:
- **Digital Advertising**: Run campaigns on Google Ads, YouTube, and Instagram, focusing on financial freedom and wealth-building.
- **Influencer Marketing**: Partner with personal finance influencers to promote the app.
- **Referral Program**: Incentivize users to onboard friends with bonus trading credits.
- **Launch Plan**:
- **Beta Launch**: Onboard early adopters to test the platform and gather feedback.
- **Full Launch**: Roll out nationwide with targeted ad campaigns and offers for new users.
- **Retention Strategies**:
- Personalized portfolio insights and alerts.
- Gamification elements like badges for achievements (e.g., first trade, completing a learning module).
- **Key Metrics**:
- **User Growth**: Daily and monthly active users (DAU/MAU).
- **Customer Acquisition Cost (CAC)**: Cost per new user through each channel.
- **Trade Volume**: Number of trades executed on the platform.
- **Retention Rate**: Percentage of users actively trading after 30, 60, and 90 days.
- **Net Promoter Score (NPS)**: Measures user satisfaction and likelihood to recommend the app.
- **Interviewer**: That's a solid GTM and metrics framework. Anything else?
- **Candidate**: Yes, continuous user feedback and iteration post-launch would be critical to stay competitive in the fintech space.

- **Question 3: Cache vs Cookies**

	• **Cache** and **Cookies** serve different purposes in web browsing. • **Cache** stores static resources like images, scripts, and stylesheets, which helps in faster page loading by avoiding re-downloading them every time. It's managed by the browser and typically expires after a longer period. • **Cookies**, on the other hand, store small pieces of user-specific data, such as login information, preferences, or session details. They are set by websites and can be accessed by both the browser and JavaScript. • While **Cache** improves performance by speeding up loading times, **Cookies** help maintain a personalized user experience across sessions. Cache typically has no security concerns, while cookies can store sensitive data and be more vulnerable to privacy issues.
Interview – 2 **Duration : 40 Minutes**	• **Question 1: Guesstimate** • **Interviewer**: Can you estimate the number of trees in Chandigarh? • **Candidate**: Sure! Let's break this down step by step. First, I need to know how large Chandigarh is. What's the total area of the city? • **Interviewer**: The city spans about 114 square kilometers. • **Candidate**: Great! Now, for the green spaces—parks, roadsides, and gardens—how much of that area would you say is covered with greenery? Maybe around 20-30%? • **Interviewer**: I'd say about 30% is green space. • **Candidate**: Okay, so if 30% of 114 square kilometers is green, that gives us around 34.2 square kilometers of green space. Next, let's assume the number of trees per hectare. What do you think would be a reasonable estimate for a city like Chandigarh with parks and streets? • **Interviewer**: Probably around 1,000 trees per hectare, considering the density of the greenery. • **Candidate**: Sounds reasonable. Now, since 1 square kilometer is 100 hectares, we can multiply the 34.2 square kilometers of green space by 100 to get the number of hectares. That's 3,420 hectares. • Now, if there are 1,000 trees per hectare, that means there are **3.42 million trees** in Chandigarh. Does that make sense? • **Interviewer**: Yes, that seems like a solid estimate. • **Candidate**: Perfect! This method gives us a ballpark figure. Of course, the actual number could vary depending on factors like urban development and the exact number of parks, but for now, 3.4 million trees sounds good.

- **Question 2: Product Design**

- **Interviewer**: Design a smart lock product for Google. How would you approach it?
- **Candidate**: Alright, let's think through this. First, we should define our target audience. Are we aiming at homeowners, renters, or maybe property managers?
- **Interviewer**: Mainly homeowners and apartment dwellers.
- **Candidate**: Got it! Since we're focusing on these groups, the main priorities for them would likely be security, ease of use, and integration with their existing devices. Now, for **features**, I think a good start would be integration with **Google Home**. Users can unlock their door using **Google Assistant**—just by saying "Hey Google, unlock the door."
- **Interviewer**: That's a nice touch. What other features would you include?
- **Candidate**: Another important feature would be **biometric access**—perhaps a **fingerprint scanner** or **facial recognition** for keyless entry. This would make it easier for users to get in without worrying about losing keys. Also, integrating **Bluetooth** technology so the lock can automatically unlock when the user approaches would add a lot of convenience.
- **Interviewer**: I like where this is going. What about security?
- **Candidate**: Security would be a huge priority. First, we can implement **high-level encryption** for all communication between the lock and the app. We could also have a feature where the lock sends **tamper alerts** to the user's phone if anyone tries to force it open.
- To ensure users aren't locked out in case of a malfunction or battery issue, we could add a **backup key option** and a **long-lasting battery** with a low-battery warning.
- **Interviewer**: Sounds solid. How would you handle installation?
- **Candidate**: We could make the installation process as user-friendly as possible. Maybe a **DIY installation** where users can follow simple instructions through the **Google Home app**. We can also provide a setup guide in the app for those who may need extra help.
- **Interviewer**: Okay, let's talk about how to market it.
- **Candidate**: Since this smart lock would fit perfectly into the **Google ecosystem**, we could target **Google Home** users who are already familiar with voice-controlled smart devices. Marketing could be done through the **Google Store**, alongside **Google Ads** to target smart home enthusiasts. Collaborating with tech influencers to review

	the product would also generate buzz, especially among early adopters. • **Interviewer**: I like that strategy. Any final thoughts? • **Candidate**: I think we should also focus on building trust. Since it's a security device, we could offer a **guarantee** for users who feel uneasy about the lock's reliability, as well as regular software updates to improve performance and add new features. • **Question 3: GTM** • **Interviewer**: What would you suggest as a new service or revenue stream for Uber? • **Candidate**: Hmm, Uber already has its core services with ridesharing and Uber Eats, right? But what if we leveraged Uber's existing fleet and infrastructure to create a **local delivery service**? This could involve partnering with **small local businesses**—like grocery stores, retail shops, or even pharmacies—to offer **same-day delivery** of their products to customers. • **Interviewer**: Interesting! But how would we generate revenue from this? • **Candidate**: We could start by charging businesses a **delivery fee** for every order fulfilled. Think of it like Uber Eats, where Uber takes a cut from the total cost. Another option is introducing a **subscription model** for businesses. For example, businesses can pay a monthly fee for discounted delivery rates. For consumers, we could offer **premium delivery services**, like faster or scheduled delivery windows, for a slightly higher fee. • **Interviewer**: How would you get businesses to sign up for this service? • **Candidate**: Great question! We could start by offering **free trials** to local businesses. This would allow them to test the service and see its value before committing to a paid plan. To boost adoption, we can target businesses that don't have their own delivery network or can't afford to use other services. We could also run **incentive campaigns** to encourage businesses to try it out, like a reduced delivery fee for the first few months. • **Interviewer**: Nice. How do you plan to market it to consumers? • **Candidate**: For consumers, we can introduce it directly within the **Uber app**. Since many users are already familiar with Uber, they would be able to easily add delivery services to their list of options. We can run **targeted ads** and push notifications to people within the app to drive awareness. Additionally, offering exclusive discounts or promotions for first-time users would encourage adoption.

	• **Interviewer**: Sounds good. What metrics would you track to measure the success of this service? • **Candidate**: There are a few key metrics I would focus on: • **Number of Active Businesses** using the service. This shows how many businesses are adopting the service. • **Number of Deliveries Per Day/Week**—how frequently are we fulfilling orders? • **Customer Satisfaction**: We could gather feedback through ratings and reviews to see how happy customers are with the service. • **Cost per Delivery**—to ensure the service is profitable, we need to track how much it costs Uber to complete a delivery. • **Revenue per Delivery**: We need to ensure that the fees we charge businesses and consumers are covering operational costs and driving profitability. • **Interviewer**: That makes sense. What's your timeline for launching? • **Candidate**: We could start with a **pilot** in a few urban areas with high local business density. Once we have a solid user base and feedback, we could gradually scale it to other regions, fine-tuning the service as we grow.

Transcript 9

Interview - 1 **Duration: 40 mins**	• **Case 1: Root Cause Analysis (RCA)** • **Interviewer:** YouTube's watch time per user has decreased by 10%. Can you help us identify the root cause? • **Candidate:** Sure! To narrow this down, I'd like to ask a few questions. First, is this issue specific to a particular region or is it happening globally? • **Interviewer:** It's a global issue. • **Candidate:** Got it. Is this trend consistent across all devices, like mobile, desktop, and smart TVs, or is it more pronounced on a specific platform? • **Interviewer:** It's consistent across all devices. • **Candidate:**

Interesting. Is this drop uniform across all user demographics, or do we see significant variation among different age groups or geographies?

- **Interviewer:**
  It's consistent across user demographics as well.

- **Candidate:**
  Understood. Have there been any recent changes to YouTube's platform, such as updates to the algorithm, interface, or features?

- **Interviewer:**
  Yes, the search algorithm was updated recently.

- **Candidate:**
  That could be a significant factor. If the search algorithm has changed, it might be returning less relevant results, causing users to engage less with the platform. Additionally, I'd analyze the customer journey and list metrics for each stage:
- **Landing Page**: Click-through rates from notifications or recommendations.
- **Search Page**: Relevance of search results and search query volume.
- **Video Page**: Average watch time per video and engagement metrics like likes or shares.
- **End Screen**: Drop-off rates and clicks on recommended videos.

- **Interviewer:**
  Great. What if I asked you to think from the creator's perspective? How could their behavior impact watch time?

- **Candidate:**
  From the creator's perspective, a possible reason could be shorter videos. To cater to trends like short-form content, creators might be producing videos with less watch time per view.

- **Interviewer:**
  That's correct. Can you think of any other reasons?

- **Candidate:**
  Perhaps creators are diversifying to other platforms, like Instagram or TikTok, reducing their focus on YouTube. Alternatively, stricter monetization rules might be discouraging creators from uploading as frequently.

- **Case 2: Guesstimate**

- **Interviewer:**

Reliance Jio has partnered with the government to provide free WiFi on all buses in India. Estimate the average daily data consumption.

- **Candidate:**
  Sure! To start, are we considering both private and government buses?

- **Interviewer:**
  Yes, both are included.

- **Candidate:**
  Understood. Could you share an estimate of how many buses are in operation?

- **Interviewer:**
  There are about 150,000 government buses and 300,000 private buses, so 450,000 buses in total.

- **Candidate:**
  Thank you. What is the average occupancy per bus?

- **Interviewer:**
  Let's assume 40 passengers per bus on average.

- **Candidate:**
  Noted. How many passengers, on average, would use the free WiFi during a journey?

- **Interviewer:**
  Let's assume all passengers use it.

- **Candidate:**
  Got it. What is the average journey duration for these buses?

- **Interviewer:**
  About 2 hours per journey.

- **Candidate:**
  And what is the average data usage per passenger during this time?

- **Interviewer:**
  200 MB per passenger.

- **Candidate:**
  Understood. Finally, how many hours a day do these buses operate?

- **Interviewer:**
  About 12 hours a day.

- **Candidate:**

	Thanks! Based on this information: Each bus completes approximately 6 journeys a day (12 hours ÷ 2 hours per journey). Data usage per journey per bus: 40 passengers × 200 MB = 8 GB. Total data usage per bus per day: 6 journeys × 8 GB = 48 GB. Total data usage for all buses: 450,000 buses × 48 GB = **21.6 PB (petabytes)** daily

Transcript 10

Interview **Duration: 40 mins**	• **Interviewer**: Let's start with the basics. Can you tell me about yourself? • **Candidate**: [basic introduction] • **Interviewer**: That sounds great! Let's dive into some technical concepts. What is an API, and how would you explain it to a 5-year-old? • **Candidate**: An API is like a waiter in a restaurant. Imagine you're sitting at a table, and you want to order food. You don't go into the kitchen yourself; you tell the waiter what you want, and the waiter goes to the kitchen to get it for you. The kitchen is like the server, and the waiter is the API – it takes your request, gets the information, and brings it back to you. APIs help different programs communicate with each other in a similar way. • **Interviewer**: That's a nice analogy! Now, let's move on to a problem-solving question. Can you guesstimate the number of people in the booking queue who did not get tickets for the Coldplay concert? • **Candidate**: Alright, let me start by asking a few scoping questions to understand the situation better: • How many total tickets are available for the concert? • What is the total number of people trying to book tickets? • How many people have successfully booked tickets already, if we have that data?

- If we assume that 50,000 tickets are available and 100,000 people are in the queue, we can estimate that half of them will not get tickets. Of course, this would depend on the booking rate, so I would need more details to get a more accurate estimate.

- **Interviewer**:
  Great! Now, can you tell me what metrics are and how they're important?

- **Candidate**:
  Metrics are measurements used to evaluate the performance or progress of a product, service, or business. For example, if we're tracking a product's success, we might look at metrics like user engagement, revenue, or customer satisfaction. These metrics help us make informed decisions and adjust our strategies to improve the product. Would you like me to focus on any specific metrics for a particular industry?

- **Interviewer**:
  Let's move on to the next question. What's your favorite application, and who are its target customers? Can you also design a CEO's dashboard for that application?

- **Candidate**:
  One of my favorite apps is **Spotify**. It provides a personalized music experience for a wide range of users. Its primary target customers are music lovers, aged between 18-35, who enjoy discovering new music and like personalized playlists. They're typically tech-savvy and value convenience in their music-listening experience.
- Before I dive into the CEO dashboard design, could you help me understand what specific goals or priorities the CEO would like to focus on? Are they more interested in user growth, revenue, or something else?

- **Interviewer**:
  Good question! The CEO is particularly focused on growth and user engagement, as well as monetization strategies. They want to ensure that the app remains competitive and sustainable.

- **Candidate**:
  Got it! For a dashboard with a focus on growth, user engagement, and monetization, I would need metrics that show the health of the app and its user base. First, let me confirm – do we have both **subscription-based** and **advertisement-based revenue**?

- **Interviewer**:
  Yes, that's correct. The revenue model includes both premium subscriptions and ad-based revenue from free-tier users.

- **Candidate**:
  Thank you! Let me start by outlining key sections that I would include in the dashboard. I'd want to track the following:

- **User Growth Metrics**:
- **Total Active Users (TAU)**: This helps track the total number of active users engaging with the app.
- **Monthly Active Users (MAU)** and **Daily Active Users (DAU)**: These metrics are crucial for understanding user retention and engagement over time.
- Would the CEO want to track **retention rates** over a longer period, like 6 months or a year, to gauge the app's long-term sustainability?

- **Interviewer**:
  Yes, absolutely. Retention over time would be valuable to track, especially since we have a large user base across multiple regions.

- **Candidate**:
  Great! Retention metrics are critical. I would track the **1-day, 7-day, and 30-day retention** to give a clear picture of how sticky the app is for different time frames. Moving on to the revenue side, I would include:
- **Revenue Metrics**:
- **Total Revenue**: This includes both subscriptions and ad revenue.
- **Average Revenue Per User (ARPU)**: To track the profitability of each user, broken down by subscription vs. free-tier (ad-supported) users.
- **Conversion Rate from Free to Premium**: This shows how successful we are at converting free users into paid subscribers.
- For ad revenue, I'd track **ad impressions**, **ad engagement rates**, and **ad revenue per user**. Should I include any specific breakdowns like regional performance for ad revenue?

- **Interviewer**:
  Yes, definitely. We have different ad rates based on regions, so regional performance would be very helpful.

- **Candidate**:
  Got it! I'd also include **Regional Ad Revenue Breakdown** to help the CEO understand which regions are most profitable. Additionally, to understand the app's performance and user experience, I'd include:
- **Engagement Metrics**:
- **Average Time Spent on the App**: This is a key metric for engagement and can help identify how much value users are getting.
- **Number of Playlists Created**: This shows how active users are in contributing content and engaging with the platform.
- **Skips per Song**: This can help identify if there are any issues with the content being suggested.
- Would you want to track **NPS (Net Promoter Score)** or customer satisfaction on the dashboard as well?

- **Interviewer**:
  Yes, definitely. NPS is important, as we use it to gauge customer loyalty. That would be useful to include.

- **Candidate**:
  Great! I would include **NPS** and **customer satisfaction ratings** from surveys or app reviews. Finally, since the CEO is interested in both growth and monetization, I'd also suggest tracking:
- **Content-Related Metrics**:
- **Content Consumption**: Metrics like the number of songs played per user per month.
- **Top Genres/Artists**: This helps in understanding user preferences and guiding content curation.
- Would the CEO also be interested in seeing **marketing campaign performance metrics** to track how various campaigns are driving growth?

- **Interviewer**:
  Yes, that would be a great addition. We frequently run campaigns, so being able to track their performance in real-time is important.

- **Candidate**:
  Perfect! I'd add **Campaign Performance Metrics**, such as the number of new users gained per campaign, conversion rates, and how campaigns impact overall engagement and subscriptions.
- To summarize, the CEO's dashboard would include:
- **User Growth Metrics**: TAU, MAU, DAU, retention rates.
- **Revenue Metrics**: Total Revenue, ARPU, conversion rates from free to premium.

	• **Engagement Metrics**: Time spent on the app, playlists created, skips per song. • **Content Metrics**: Content consumption, top genres/artists. • **NPS and Customer Satisfaction**: To track user loyalty and satisfaction. • **Marketing Campaign Metrics**: Performance of campaigns in driving growth. • This would provide a comprehensive view of how the business is performing from both a user and revenue standpoint, while also enabling targeted decisions based on user feedback and campaign results. • **Interviewer**: That's a solid dashboard design! Now, let's move on to the next part of the interview. We'll be discussing a case for about 15 minutes. The case involves suggesting a new feature, identifying the target customers, choosing relevant metrics, and proposing a new revenue model. • **Candidate**: Got it! Could you give me some details about the product and its current situation to help me suggest a new feature? • **Interviewer**: Sure! Let's assume we're working on a fitness tracking app. The app currently tracks basic activities like steps and calories burned. Now, we want to add a new feature that can provide more personalized health insights. • **Candidate**: Thanks for the context! For a new feature, I'd suggest adding a **Sleep Tracker** that integrates with users' wearable devices. This feature would provide personalized sleep insights, such as how long the user slept, sleep quality, and suggestions for improving sleep hygiene. • **Target Customers**: This would appeal to users who are health-conscious, fitness enthusiasts, and people with sleep issues. The target age group would likely be between 18-45 years, who are tech-savvy and interested in tracking their health holistically. • **Metrics**: We'd track metrics like the number of users engaging with the sleep feature, **user retention** (how many users continue to use the feature over time), **user feedback**

	(ratings or NPS scores specific to this feature), and **impact on overall app usage** (does adding the sleep tracker increase daily app interactions?). • **Revenue Model**: The sleep tracker could be part of a **premium subscription plan**, or we could charge users a one-time fee to unlock advanced sleep analysis features. Alternatively, we could offer the feature for free and monetize it by incorporating **partnerships with sleep-related products** (like sleep aids, weighted blankets, etc.), creating a new revenue stream. • **Interviewer**: That's a great suggestion! I like how you've thought through the customer base, relevant metrics, and a sustainable revenue model.

Microsoft

Company Overview:

Microsoft Corporation (MS) is an American multinational technology company with headquarters in Redmond, Washington. It develops, manufactures, licenses support and sells computer software, consumer electronics, personal computers, and related services. It has products that include the Windows operating system, Office productivity applications, and Azure cloud services. LinkedIn, its business-oriented social network is used by millions to make connections; some 36 million software developers visit the company's GitHub platform; and, outside the office, Microsoft's Xbox gaming system is second only to Sony's PlayStation. Microsoft's customers range from consumers and small businesses to the world's biggest companies and government agencies. Geographically, Microsoft's revenue is evenly split between the US and the other countries. In the eyes of investors, this adds up to a trillion-dollar market capitalization.

In 2016, it was the world's largest software maker by revenue (currently Alphabet/Google has more revenue). The word "Microsoft" is a portmanteau of "microcomputer" and "software". Microsoft is ranked No. 15 in the 2021 Fortune
500 rankings of the largest United States corporations by total revenue. Internationally, Microsoft operates research and development centres in China and India; data centres in Ireland, Singapore, and the Netherlands; and operations and facilities in Ireland, and the UK. The company also has offices in India, China, Canada, Australia, Germany, Japan, and the UK. Microsoft set up its India operations in 1990. Microsoft in India offers its global cloud services from local data centres to accelerate digital transformation across Indian start-ups, businesses, and government agencies

Mission Statement:

"To empower every person and every organization on the planet to achieve more."

- **Citizenship:** We work to be a responsible partner to those who place their trust in us, conducting business in a way that is inclusive, transparent, and be respectful of human rights.

- **Trustworthy Computing*:*** We build our Trusted Cloud on four foundational principles - Security, Privacy, Compliance and Transparency.
- **Innovation:** Using the power of AI and computing, we deliver technology innovation that inspires people of all ages and abilities, eliminate barriers, improve lives and strengthen communities.
- **Diversity and Inclusion:** Being inclusive is not just something we do
- **Environment:** Discover how we lead the way in sustainability and use our technologies to minimize the impact of our operations and products.

Tagline:

"To help people and businesses throughout the world realize their full potential."

Purpose and Values:

"Our values align to our mission to empower every person and organization on the planet to achieve more. They support our culture and serve as a declaration of how we treat each other, our customers and our partners." – it's who we are. We celebrate diversity. Our continued success is a corollary of the unique skills, experiences and backgrounds that our employees bring to the company.

Interview Experiences

Transcript 1

Round 1 (Written Spec Design)	*Spec Design Question -* Individuals today face many day-to-day challenges requiring legal assistance. E.g., Cheated by online /offline retailers, Real Estate Disputes with Landlords/ tenants / builders, Family Disputes, Theft of goods, etc. In such situations they are not clear on how to seek legal counsel since the traditional legal system is complex, cluttered, time consuming and hard to navigate for individuals. On the other hand, legal practitioners have no clear business acquisition / scheduling / document storage channel. Design a marketplace to connect clients and lawyers. *Answer -* (I had created a format beforehand and used the same to write the spec design) Defined different user personas, wrote multiple features, selected a few prioritized features, and then gave success metrics. *Question during Presentation: How would you get the first hundred lawyers to use your application?* Answer: Told that I would try to contact lawyers in courts, but he was looking for specific places, so in my second attempt I told that I would go to Law colleges to connect with interns or newly graduated law students directly, or I will go outside the court houses where Lawyers sit in search for work and will focus on the ones who are finding it difficult to make a living as they would be easy converts.

Round 2 (Personal Interview)	One panelist (more than 4-5 years of experience) Greeted each other. *P: Tell me something about yourself.* Me: Told the prepared answer for product management interviews. Started with how I have always been involved in technology. My research paper during undergrad was on a product that we designed and created, so emphasized that point in intro. Then told about my experience with Deloitte consulting as a DevOps engineer and molded my answer to point towards problem solving and communication skills dealing with clients. *P: Great! So, tell me why do you want to become a product/program manager?* Me: Again, emphasized on my research paper where we designed a Smart Walking Stick for the visually impaired and how it helped solve real life problems for them. Then moved onto my DevOps experience where I was involved in solving the issues faced by developers as well as clients by developing better DevOps solutions and how that motivated me to create more impact. *P: Who do you think a program manager has to communicate with daily and why and what is their main job?* Me: Daily, a program manager needs to communicate with both the developers, UI/UX designers and the top-level management. The communication is to relay two things; one how to best understand customers issues/problems and devise the best solutions for them and on the other side making sure that we stay focused on the vision and mission of the organization. (Added an example by taking Microsoft's vision of helping organizations achieve their true potential and he seemed impressed by my clarity of thought) *P: Okay lets now jump on to some technical questions. Tell me the number of daily active users on MS Teams. (I had done my marketing project on MS Teams in Term-1 and had put it on my Resume, maybe that's where this question came from)* Me: Asked questions to reduce the scope of the answer. Do I need to calculate it for entire world or just India? Do I consider COVID scenario or pre-covid? Then, I divided the users in two parts: Schools/Colleges & Corporates. I started by calculating the users for college and then went on to do the same for schools. After calculating for both, he stopped me there before I could start calculating the users for corporates. While solving the guesstimate for colleges, I scoped it based on rural/urban, avg. strength of the college, student usage/ Professor usage, chose a correction factor for students who are absent from the class. And then followed similar approach for schools. *(After assuming any proportions or numbers I confirmed with him if he wants me to change it and went ahead after his consent)* *P: So, lets now talk about the case that today you solved morning*

	(referring to the written test). Tell me how you approached that question and why did you arrive at that solution. Me: I started by telling him my understanding of the marketplace and then directly went on to the user personas by explaining who would need that application and then explained each step of my solution by giving logic behind my thinking. (*After my answer, he appreciated me for my thorough thinking*) *P: Do you have any questions for me?* I did not ask any questions and the interview got over.
Interview - 2	One panelist, Senior manager with 20+ years of experience. (Looked very serious and in a hurry) *P: Okay quickly tell me something about yourself which is not on your resume.* Me: (wasn't prepared for this answer) Started off with my interest in Football and Pool. And then circled back to my research paper and talked very briefly about my work-ex. (not more than 40 secs) *P: Okay, lets directly jump on to the question that I have. Tell me, if you were to design a feature in MS Teams to conduct interviews, how would you approach it?* Me: I asked a few clarifying questions. Do we need to create something inside the video conferencing feature of MS Teams or something else entirely can be created? (Reply: It is up to you) So, I started off from very basic, why do we need an interview feature in MS Teams and who would it serve (interviewers & interviewees). Then, I focused on different pain points that interviewer have like "Asking interviewee to solve a question, processing/ rejecting applications, grading and comparing, keeping a list of interviewees etc." and then the pain points that interviewee face like "What and how many steps are there in the process, status of the application, solving questions on pen/paper or computer, using different software in case of coding interview etc.". Using these pain points, I came up with a few features like "A status board for interviewee, a dashboard for interviewers to directly grade, accept, reject, process the application, an in-call integrated solver which could be a flow chart designer, or a coding platform integrated in video conferencing itself etc." (*The interviewer asked me to prioritize the integrated flow chart designer feature and tell him how I would design it*) I explained the need of the feature, and then the essentials needed to design the feature completely. *P: Tell me some of the metrics you would use to check if this feature is successful* Me: Told both health as well as usage metrics. (No. of crash reports, latency in the application, no of interviews conducted, no

	of interviews scheduled) *P: Do you have any questions for me?* Me: What does a typical day look like for you at Microsoft? (Told about his work).

Transcript 2

Round 1 (Group Discussion)	Case: Application for connecting lawyers and clients
Round 2 (Personal Interview)	Tell me something not in your CV (about professional experiences) Product development case: Design an application by Netflix for catering to the educational needs of students Described teachers as a stakeholder - cross questioned. Mentioned about AR/VR possibilities for teachers. How does a teacher use AR-VR capabilities won't it be complicated? Would you start a new app or integrate it into existing app? Give pros and cons of both. How would you prevent students from misusing the single app? (One con of the answer that I said). You have built the app. Tell me how you would take it to the market? (Said I would target metros. specifically Bangalore it professionals). If you are looking to target, say 1000 IT employees which metrics, would you target them? How has your day been? Take me through the process. Netflix education app, tell me three features that you would add and three features you wouldn't add (Said I wouldn't add examinations MCQs and leaderboards comparing students) Don't you think parents would not be able to track progress? (Had another feature which was tracking progress) Any questions? Additional pointers: Was product specific. Clearly mentioned that end output was not what they were looking for and the structure framework is what they are looking for.

Transcript 3

Round 1 (Group Discussion)	Duration: 35mins No. Of panelists: 1 *Q. Tell me about yourself.* *Q. Why MBA?* *Q. Design an edtech platform for CAT aspirants. Take any assumptions you want to take.* I started by asking the scope of the platform and whether they want it to be more of an LMS or for delivering lectures. Went ahead

	with a mixture of both. Started by mentioning the current competitors, both offline and online. Most of the institutes are not the best in all the fronts. There are YouTube channels that teach specific subjects, but everything is scattered. Also on online platforms, there is very less interaction between students and lack of doubt solving among peers. Basic idea behind the platform was creating a one stop platform for all CAT prep. After this mentioned the basic requirements like availability of recorded lectures, taking tests on the platform, analyzing the mocks etc. Major USP would be availability of courses specific to sections like quant, verbal, logic. Another one was a discussion forum built into the platform that would help students interact and solve each other's doubts. Even people already in b-schools could contribute through the forum to let students know about essential exam management tips. There was a lot of cross questioning in between about why I am including a particular feature and why not. *Q. Why Microsoft?*
Round 2 (Personal Interview)	Duration: 35mins No. Of panelists: 1 *Q. Tell me something about yourself apart from your CV that you want people to know.* *Q. Build features for MS teams for education purposes.* I started with listing existing features of MS teams which are used for education purposes. Mentioned some problems faced by teachers and students in the online mode. Suggested a feature of having individual copies of class ppts for each student so that they can make their own notes in the ppt itself. Was stopped and asked to think in terms of educating apart from school, like teaching of musical instruments or sports. I went ahead with building features for teaching a musical instrument like a guitar. Started by describing the process of learning an instrument. Mentioned features like having specific recordings of class available where the teacher is teaching how to play different chords (instead of having the entire lecture). This would save time for the student since they don't have to go through the entire lecture. Small breakout rooms where students can practice playing and review each other. Finally asked me to estimate potential market size for such a product. Segmented the market age wise and mentioned which age bracket would be most likely to learn a musical instrument. Estimated percentages for each age segment, the interviewer wasn't interested in numbers but just my rationale of going with a high or a low proportion of target segment across age groups. *Q. How will you explain Quantum computing to a layman.*

Transcript 4

Round 1 (Case-Based Round)	Individuals today face many day-to-day challenges requiring legal assistance. E.g., Cheated by online /offline retailers, Real Estate Disputes with Landlords/ tenants / builders, Family Disputes, Theft of goods, etc. In such situations they are not clear on how to seek legal counsel since the traditional legal system is complex, cluttered, time consuming and hard to navigate for individuals. On the other hand, legal practitioners have no clear business acquisition/ scheduling / document storage channel. Think of an India focused Greenfield Technology platform to connect individuals to certified Legal practitioners to get advice in a predictable, convenient, and cost-effective manner. My solution outlined the objective, user persona, user journey, user pain points, features, and success metrics for this platform. There are brownie points for demonstrating customer empathy.
Round 2 (Personal Interview)	Introduce yourself & some CV-based questions. Then a case: How would you leverage teams to build a product that caters to the hybrid online education scenario. Then at the end panelist 2 came and asked if I have any questions.
Round 3 (Personal Interview)	The interview was conversational in nature and revolved around my accomplishments and interests. *Q. Walk me through your resume.* *Q. Follow-up questions on the novel I had penned and a Product Management live project I had done in Term 1* *Q. Deep dive into the live project: procedure, customer research methodology, my takeaways* *Q. How was your experience at the Microsoft PM Engage Challenge?* *Q. Case on Intellectual property security: If data protection laws are instated in a particular geography, free flow of information shall not take place among regions. How do MNCs ensure business continuity in such a scenario? You have interned at EY. Consider that an MNC has approached EY asking for a way forward. What would your recommendation be?* Asked a couple of clarifying questions to ensure I had understood the context properly. Scoped out the problem in terms of stakeholders, geographies, and potential limitations. Defined target customers across geographies and tracked their behavior. Was directed to a particular use case for analysis. Laid out the possible modes of data sharing and means of securing data.

	Mentioned that key stakeholder teams (tech, legal etc.) need to be consulted at each stage for their expertise and to proceeded with the solution accordingly. Arrived at the most feasible solution using these constraints. Recommended other alternatives pending further analyses. Towards the conclusion of the interview, a senior leader was brought in with whom I had a 20 mins session. How did you like the process so far? (*Spoke at length about my experience right from Microsoft PM Engage Challenge through the interview day.)* Why Microsoft? Any questions for me. I ended up asking 6-7 questions on the company products, government policy interventions, impact of customer review, challenges faced by a PM etc.
Tips	• *Highlight some interesting bits about your profile (not necessarily related to PM or tech) that make you stand out.* • *Ask relevant questions to ensure the interviewer and you are on the same page. I had a doubt on one aspect that the interviewer admitted he had not explained properly. He then reframed the problem.* • *Request some time out to gather your thoughts before structuring your solution.* • *Lay out your solution on a notepad that you can revisit at any time.* • *Try to maintain a MECE approach (consult prep will come handy here). It helps to break the problem down into parts at each stage.* • *Be aware of ProdMan frameworks but avoid force fitting them into your solution.*

Transcript 5

Round 1 (Case-Based Round)	Individuals today face many day-to-day challenges requiring legal assistance. E.g., Cheated by online /offline retailers, Real Estate Disputes with Landlords/ tenants / builders, Family Disputes, Theft of goods, etc. In such situations they are not clear on how to seek legal counsel since the traditional legal system is complex, cluttered, time consuming and hard to navigate for individuals. On the other hand, legal practitioners have no clear business acquisition/ scheduling / document storage channel. Think of an India focused Greenfield Technology platform to connect individuals to certified Legal practitioners to get advice in a predictable, convenient, and cost-effective manner. My solution outlined the objective, user persona, user journey, user pain points, features, and success metrics for this platform. There are brownie points for demonstrating customer empathy.

Round 2 (Personal Interview)	Introduce yourself & some CV-based questions. Then a case: How would you leverage teams to build a product that caters to the hybrid online education scenario. Then at the end panelist 2 came and asked if I have any questions.
Round 3 (Personal Interview)	The interview was conversational in nature and revolved around my accomplishments and interests. *Q. Walk me through your resume.* *Q. Follow-up questions on the novel I had penned and a Product Management live project I had done in Term 1* *Q. Deep dive into the live project: procedure, customer research methodology, my takeaways* *Q. How was your experience at the Microsoft PM Engage Challenge?* *Q. Case on Intellectual property security: If data protection laws are instated in a particular geography, free flow of information shall not take place among regions. How do MNCs ensure business continuity in such a scenario? You have interned at EY. Consider that an MNC has approached EY asking for a way forward. What would your recommendation be?* Asked a couple of clarifying questions to ensure I had understood the context properly. Scoped out the problem in terms of stakeholders, geographies, and potential limitations. Defined target customers across geographies and tracked their behavior. Was directed to a particular use case for analysis. Laid out the possible modes of data sharing and means of securing data. Mentioned that key stakeholder teams (tech, legal etc.) need to be consulted at each stage for their expertise and to proceeded with the solution accordingly. Arrived at the most feasible solution using these constraints. Recommended other alternatives pending further analyses. Towards the conclusion of the interview, a senior leader was brought in with whom I had a 20 mins session. How did you like the process so far? (*Spoke at length about my experience right from Microsoft PM Engage Challenge through the interview day.)* Why Microsoft? Any questions for me. I ended up asking 6-7 questions on the company products, government policy interventions, impact of customer review, challenges faced by a PM etc.
Tips	• *Highlight some interesting bits about your profile (not necessarily related to PM or tech) that make you stand out.*

	• *Ask relevant questions to ensure the interviewer and you are on the same page. I had a doubt on one aspect that the interviewer admitted he had not explained properly. He then reframed the problem.* • *Request some time out to gather your thoughts before structuring your solution.* • *Lay out your solution on a notepad that you can revisit at any time.* • *Try to maintain a MECE approach (consult prep will come handy here). It helps to break the problem down into parts at each stage.* • *Be aware of ProdMan frameworks but avoid force fitting them into your solution.*

Transcript 6

Round 1 (Personal Interview)	*Interviewer: Tell us about yourself, brief introductions of the panel.* Answered *Interviewer: (Case Study) The literacy rate of the elderly population of the country according to the 2011 census was 44% and is expected to be 45% now. How would you help the govt improve this?* Divided usercase into rural and urban Further divided it according to income levels Listed down pain points for all segments defined after setting context for each and telling them what experience I'm thinking of while stating this Also considered disabilities They went into the details of rural Went into further detail and discussed the different uses of the apps (no constraint, therefore they have been provided with devices) Came up with solutions Post this they asked if I had any questions and we spoke a little about Copilot
Round 2 (Personal Interview)	*Interviewer: Tell me about yourself. Tell me about some of the work you've done in the two offices.* Answered *Interviewer: How would you integrate AI into architecture?* Spoke about how it is already being used and how I think it could be put to better use *Interviewer: Develop an application for educating children in rural areas.* Answered - very similar to R1 *Interviewer: Describe a situation where you were in an argument*

	with someone and how you resolved it. Answered Any questions for me - spoke about a day in the life of a product manager at Microsoft and the kind of work interns do.

Transcript 7

Round 1 (Personal Interview)	**Problem Statement:** In a hybrid work environment, employees struggle with managing schedules, tasks, and priorities, leading to burnout or reduced productivity. I was asked to design an AI-driven personal assistant (using Gen AI or LLM) to help employees boost productivity, improve communication, and enhance collaboration while reducing stress. Explained the features of the product: 1. **Smart Task Management:** AI categorizes and prioritizes tasks automatically based on deadlines, importance, and team dependencies. 2. **Intelligent Scheduling:** The assistant suggests optimal time slots for meetings and deep work, syncing with employee calendars. 3. **Collaboration Tools:** Real-time meeting summaries, action items, and shared dashboards for teams. 4. **Burnout Prevention:** Nudges for breaks and AI-driven insights to balance workloads. **Interviewer Cross-Questions:** • *"How would you ensure privacy when handling employee data?"* I suggested end-to-end encryption and anonymized data processing to maintain confidentiality. • *"How will the AI stay relevant for multiple companies with diverse cultures?"* I proposed customizable workflows, where companies can configure the tool to match their specific processes. 1. **Designing a Class Schedule App:** **Question:** "How would you design an app to help users create, manage, and optimize class schedules?" **Answer:** • Allow users to input preferences (timing, subjects, and workload). • Suggest optimal schedules using AI based on preferences and availability. • Features like automated conflict resolution and calendar sync.

	• Notifications for upcoming classes or schedule changes. 2. **KPIs for Payment Gateway:** **Question:** "What KPIs would you use to measure the effectiveness and reliability of a payment gateway?" **Answer:** • **Transaction Success Rate:** Percentage of completed payments. • **Average Processing Time:** Time taken to complete a transaction. • **Error Rate:** Frequency of failures or declined transactions. • **Customer Retention:** Impact on repeat customers. • **Dispute Resolution Time:** How quickly issues are resolved. 3. **Handling a Drop in E-commerce Engagement:** **Question:** "How would you tackle a significant drop in user engagement on an e-commerce platform?" **Answer:** • Analyze user data for patterns (drop-off points, session durations). • Implement targeted re-engagement campaigns like discounts or gamification. • Optimize the UI/UX for smoother navigation. • Introduce personalization (e.g., AI-based recommendations). • Conduct A/B testing to validate solutions. 4. **Coding Question – Meeting Room Allocation:** **Question:** "Write a program to allocate meeting rooms efficiently." **Answer:** I designed a solution using a greedy algorithm: • Sort meetings by start time. • Allocate the first available room or add a new room if no room is free. • Used data structures like heaps for efficient room tracking. another feature which was tracking progress)

Ola

Interview Experience

Transcript 1

Round 1 (Personal Interview)	**Interview was with a Senior Product Manager** *Interviewer: Tell me about yourself.* Gave the prepared answer - included educational background, workex, PORs, and extracurriculars. *Interviewer: Questions about work experience. Picked up points from my CV and asked to elaborate on them.* Explained my project end to end. It was an analytics project so talked about metrics and their business context. *Interviewer: Why do you want to join Ola?* Mentioned that I'm really passionate about the work Ola Electric is doing and how they're thinking big about the EV space. Also talked about the upcoming electric bikes and that I really liked the design. *Interviewer: Why do you want to become a product manager?* Talked about how my background of working with data as a business analyst helps me understand numbers in a business context and this is a transferable skill in the product management domain. Secondly with my experience in stakeholder management across 7 countries during my time work experience, I'm confident in my ability to collaborate effectively across cross-functional teams. *Interviewer: A series of CV-based questions and discussions regarding academic projects and ECA.* Had a project on pricing strategy - explained in detail how we implemented competitor analysis and relative pricing model for an ed-tech startup. Next, discussed a few stories around sports mentioned in ECA - talked about participating in football and taekwondo tournaments during school and college. *Interviewer: Explain software development life cycle.* Gave a generic answer that how it starts from conceptualization, followed by execution, growth, maturity, and eventual decline. *Interviewer: Question regarding my internship project - just asked to explain what I did.* Explained the project and the outcome in detail. It was a dashboard comparing the reviews mentioned on E-Commerce portals for the company's products compared to the competitors. Talked about how the dashboard helped identify customer complaints regarding product installations as well and not just the features. *Additional Tip: Be extremely thorough with your CV as you might be asked to elaborate on any mentioned point. Also, have well-*

	prepared answers on why Ola and why product management.
Round 2 (Personal Interview)	**Interview was with the Head of Talent Acquisition** *Interviewer: Tell me about yourself.* Gave the same prepared answer as in R1. *Interviewer: What did you do at Amazon (related to work-ex)?* Talked about my role as a business analyst - working with data using SQL, Excel, and python. Elaborated on the metrics we used to track for the operations team. Also mentioned the cross-functional collaboration with diverse teams consisting of program managers, financial analysts, supply chain managers, etc. *Interviewer: What do you think the role of a product manager looks like at Ola?* A. Answered that how a product manager needs to have a customer-first approach while thinking of user pain points, new features, and prioritization. *Tip: Be very thorough with answer on why do you want to join Ola and why do you want to become a product manager.*

Uber

Interview Experiences

Transcript 1

Round 1 (Excel-Based Assessment)	*Info about the Panelist or Round:* The assessment was on code signal and had a time limit of 75 minutes with 26 questions to be answered. There were 3 datasets given in the form of excel sheets which we had to analyze and use to answer the questions. They had already mentioned which dataset was to be used for which set of questions. The excel file was attached with the questions themselves, we had to find appropriate variables to be used to solve specific questions.
Round 2 (Personal Interview)	*P: Tell me something about yourself.* Interviewee: Had a prepared answer, included details of my education and work-ex along with some other interests and hobbies. *P: Asked some general questions about how my experience at XL has been so far.* Interviewee: Gave brief answers. *P: How would you introduce Uber to a new city? How much should a driver earn in the city?* Interviewee: Provided a structured GTM for launching Uber in a new city, however, it was very conversational, and the panellist asked me questions in between. *P: How would you onboard the first 1000 drivers in the city where you're launching Uber? What would your one-minute pitch be for the same?* Interviewee: I mentioned the major places where we could find potential drivers who would be willing to join Uber's platform and answered accordingly. *P: Any questions for us?* Interviewee: Asked about how a day at Uber looks like and expectations from incoming interns.
Round 3 (Personal Interview)	*P: Tell me about something about yourself.* Interviewee: Introduced myself again. *P: Cross questions on work-ex, asked about the KPIs used at work.* Interviewee: Answered accordingly. *P: Suppose you're working at Uber, what KPIs would you look at majorly to understand customer satisfaction?* Interviewee: Explained the entire user flow covering major touchpoints where customers interact with Uber and pointed out KPIs at each point.

	P: How would you make sure that the aggregate feedback from customers that reach out to Uber (support) is maximized? Interviewee: Based on my work-ex, gave points on how support can be improved. *P: A promotion of 25% of up to 50 Rs OR 15% up to Rs 100 – which is better?* Interviewee: Calculated the prices up to which the respective promotions would make sense and then answered based on the distance usually covered in rides in a city. *P: How would you go about deciding prices in a new city? If Uber fees is not counted, how much should a driver earn on a daily basis?* Interviewee: Answered based on the fixed and variable costs incurred by a driver. *P: Any questions for me?* Interviewee: Asked a little bit about the kind of work the panellist did at Uber.
Tips	Be thorough with your CV (especially on work-ex), they might make up questions from the points you mention in your introduction, so be well prepared with what you say in the introduction. Both the panelists were very friendly, keep the interview as conversational as possible, and make sure you clear your doubts on any questions before answering them. Go through the business model of Uber and understand some specific terms like surge pricing, they might come in handy during the PIs.

Transcript 2

Round 1 (Personal Interview)	1. *Introduction. Why do you want to join uber?* Ans. Answered 2. *Pick any city and pick any uber product - how will you go about pricing that product in that city. Mention factors you would consider when pricing Uber go in any city.* Ans. Gurgaon – Uber Go Discussed in detail about Cost based, Value Based, Competitive and Dynamic Pricings 3. *If you go ahead with cost-based pricing, what factors would you consider and how will you decide the appropriate profit margin for drivers?* Ans. Explained and did a guesstimate to reach a number 4. *Describe a situation where you observed an issue with uber. How would you solve it?* Ans. Finding Uber in a regularly crowded public place like sports stadiums and airports. Having digital displays on car roofs with passenger information. 5. *Ask the interviewer 3 questions* Ans. Why did Uber stop Uber pool post pandemic? What is

	Uber's plan for EVs? How does the career trajectory for an Operations Intern look like at Uber?
Round 2 (Personal Interview)	1. *Tell me about yourself. Why Uber? Questions about WorkEx.* Ans. Answered 2. *Uber premier bookings have gone down and you are looking to double the number of gross bookings (trips*fare). How will you go about this? How would you increase the fare? Will it come at a cost? How will you increase fare without incurring losses or without incurring promotion expenses?* Ans. Increasing Trips – Promotions, Improved App Experience, Increasing driver availability Increasing Fare – Dynamic Pricing, Premium for additional optional services like Wi-Fi 3. *How would you reduce the time taken by the driver to reach the passenger for uber premium?* Ans. Identified Problems. a. Distance of driver from passenger's location b. Issues in locating passenger due to internet issues c. Delays due to crowd in big events, toll booths and because of traffic d. Entry restrictions in societies and airports. Designed solutions for these problems 4. *There are 2 kinds of offers - 25% off up to 50 Rs and 15% up to Rs 100. What are the pros and cons of both? Calculate at what value, which offer will be more lucrative for the passenger.* Ans. For customers, 25% off up to Rs. 50 is better for short trips, 15% off up to Rs. 100 is better for long trips. Uber can select the offer based on the type of rides they want to promote. 25% up to 50 is lucrative below rides worth Rs. 333 and 15% up to 100 is lucrative for rides above Rs. 333 5. *Any questions for us* Ans. How does the career trajectory for an Operations Intern look like at Uber?
Tips	*Prepare case-based questions, the business model of Uber, GTM and Pricing*

Unilever

Interview Transcripts

Transcript 1

Info about Panellist or Round	The interview will be held on the HireVue platform, wherein you will be given three scenarios, and you have to record your responses for the same You will be given one minute for the preparation and 3.5 mins for answering the question. The shortlisting for this round will not be AI-based; rather, current employees of HUL will access your answers and prepare the shortlist.
Interview - 1 **Duration: 40 mins**	• **How has the adoption of the Cloud impacted the approach toward application development? Give some examples.** I talked about how the adoption of Cloud has enabled Continuous Integration and Continuous Deployment in the application development process. Mentioned its advantages regarding reducing system dependency of applications and quick bug fixes in the production. Gave examples of Azure and Jenkins and how they enable the same. • **You are an IT lead for Logistics Function for a particular Unilever cluster (set of 7-8 countries) which spends 7% of their turnover as distribution costs. You are expected to put together technology interventions to help business function reduce costs by 20% and improve customer experience by improving servicing. Make assumptions and share how would you go about the transformation program.** Started by mentioning my assumption that the current distribution model follows the traditional point-to-point model. I proposed a multi-modal, Hub and Spoke model of distribution which is more energy and time efficient than traditional channels. Moreover, I proposed that the "HUB" in the model would be armed with technologies like ARMs (Autonomous Robotic Machines) and IOT for efficient loading/unloading of products and ease of tracking within the HUB. I also proposed Blockchain implementation from procurement to distribution, to increase transparency and traceability in the supply chain. Leveraging these technologies, a unique QR code could be printed on the packaging of the products which could be scanned by the customers to receive information regarding the origin and processing of the product to increase customer satisfaction. • **With new Digital Capabilities, what are relevant ones for Unilever to consider to help reduce the cost of Technology to the organization.** Divided the Supply Chain of Unilever products into 4 parts – Procurement,

	Processing, Transportation, and Retailers. For each part, gave a brief about the technological capabilities that Unilever can leverage to get a cost advantage. Mentioned implementational constraints and feasibility wherever necessary.
Interview - 2	• **Tell me about Yourself** • **Related to work experience: Which field I was working on and what tools I was using, Asked a couple of cross-questions.** • **More in-depth questions on my work-ex, asked about the pros and cons of the tools I was using. Asked how much automation could be introduced in the current processes and what were the limiting factors.** Took a few seconds to structure the thoughts and then came up with an answer with explanations for each decision taken. • **Asked about the Marketing project at XLRI and the key findings from it.** Had a prepared answer. (Our product was Nescafe) • **If you are the tech manager of Bru, what technological inventions will you use to increase the market share of Bru, special Supply chain interventions?** Took a few seconds to structure the thoughts. First mentioned where Bru is lagging behind its competitors. Then, drew the entire value chain of HUL and mentioned what technological advancements we can make to improve the process at each stage. Finally, explained how all this would culminate in a higher market share for Bru. • **Any questions for us?** Asked about HUL's Shikhar app and how HUL is going to proliferate the app among retailers in the future.
Tips	1. Prepare your CV well, as there will be many questions asked of it, especially about your work experience. 2. Study about HUL and the technological advancements it is making in its processes. Get yourself acquainted with upcoming technologies like cloud computing, blockchain, IoT, etc. Also, understand their advantages and disadvantages for practical use.

Walmart

Company Overview:

Walmart Labs, the technology arm of the US retail giant, launched its new global identity as Walmart Global Tech in August 2020. Its Indian entity is now known as Walmart Global Tech India. Walmart Global Tech has a team of over 15,000 software engineers, data scientists, and service professionals within Walmart, delivering innovations that improve its customers' shopping experience and empower its 2.2 million associates. Its teams at Walmart Labs India are using technology to deliver leading-edge innovations for the retailer. These innovations help ensure a seamless experience for 275 million customers per week across 11,300 stores under 58 banners in 27 countries and e-commerce websites in 10 countries. The teams work on the innovations to define the Walmart experience everywhere across the world - from brick-and-mortar stores to apps to online.

Mission and Vision

Mission - To save people money so that they can live better.
Vision - To be the destination for customers to save money, no matter how they want to shop. Walmart maintains its competitive advantage by negotiating hard with suppliers, and its supply chain.

Walmart, founded in 1962 by Sam Walton, is an American multinational retail corporation that operates a chain of hypermarkets, discount department stores, and grocery stores in the United States, headquartered in Bentonville, Arkansas. Walmart is the world's largest company by revenue and the biggest private employer in the world, with a strong presence not just in the U.S. but in many countries worldwide.

The company's primary business revolves around retail. It covers a vast range of product categories, including groceries, electronics, clothing, toys, furniture, and a multitude of others. Besides, Walmart also provides numerous services such as pharmacy, financial services, and photo center services.

Walmart's E-commerce initiatives

Walmart has continually adapted to the changing needs of its customers by investing heavily in e-commerce. It launched its online store, Walmart.com, which offers an even wider array of products, many of which are only available online. This platform also provides a seamless online shopping experience with services like in-store pick-up for online orders and online grocery shopping with curb-side pick-up or home delivery.

In addition to its own online platform, Walmart also acquired a few e-commerce businesses to strengthen its online presence and diversify its offerings. Notable acquisitions include Jet.com and Flipkart, which significantly bolstered Walmart's e- commerce capabilities.

Walmart also has a global presence across markets like Canada, Mexico, Chile, India, and UK.

Innovative Technologies Initiatives

- **Artificial Intelligence (AI) and Machine Learning (ML):** Walmart uses AI and ML for a variety of applications, from predicting what products will be popular and managing inventory to optimizing delivery routes. It has also implemented AI-powered self-service kiosks and robotic cleaners in its stores.
- **Blockchain:** Walmart has been a pioneer in applying blockchain technology for supply chain management. It has used blockchain to improve food safety by enhancing traceability in its food supply chain.

- **Automated Pickup Points:** As a part of their omni-channel strategy, Walmart introduced automated grocery pickup points, where customers order online and pick up their items from a vending machine-like tower in the parking lot without leaving their car.
- **Walmart Plus:** To compete with Amazon Prime, Walmart introduced Walmart Plus, a subscription-based service that offers unlimited free deliveries, fuel discounts, and the ability to shop in-store using the mobile scan & go feature.
- **Robotics and Automation:** Walmart has invested in robotic process automation (RPA) to automate repetitive tasks and free up staff for more complex tasks. For example, they've deployed robots for tasks like scanning shelves for inventory, cleaning floors, and unloading trucks.
- **Virtual Reality (VR):** Walmart uses VR for training purposes, putting employees in real-world scenarios through VR headsets to help them learn how to handle situations ranging from a Black Friday shopping rush to a produce spill.
- **Augmented Reality (AR):** Walmart filed a patent for an AR-based app to enhance customer experiences by guiding customers through stores and providing product information.

Walmart's continuing evolution has made it a leader not only in traditional retail but also in digital commerce. The company's drive to innovate and adapt to new technologies has positioned it at the forefront of the retail industry's digital transformation. This constant innovation is necessary to meet the needs of its customers and maintain a competitive edge in an ever-evolving market landscape.

Interview Experiences

Transcript 1

Round 1 (Group Discussion)	***Topic -*** *Many companies are investing in the space tourism industry. Do you think there is scope for Walmart to enter the market? How?* Introduced the topic - spoke about the current scenario of the space tourism industry and the market potential, mentioned orbital and sub-orbital space flights and the competitors – Blue Origin, SpaceX, and Virgin Galactic, and what they are doing currently. Mentioned in brief the possible areas Walmart could explore. Spoke about two possibilities - develop complete infrastructure, including space flights which the current competitors are doing or explore allied services, e.g., training of space travelers, health checkups and certification, food, and nutrition etc. Also, in the short term, Walmart could investigate allied services and parallelly work on developing the infrastructure in the longer term.
Round 2 (Personal Interview)	The interviewer guided me throughout, asking detailed questions based on my responses. Why Prod Man? - spoke about my Tech background and how I like the idea that as a PM, instead of leading a single team, I would work as a facilitator and get to work with different teams like tech, business, and design.

	Why Walmart? - Spoke about the current technological advancements Walmart is making in building an omnichannel retail experience. New Product Case - As a PM, you want to develop an application that digitizes visiting/ business cards. How would you go about it? What features would you add? - I spoke about possible stakeholders in this case - freelancers, third-party hiring companies etc. Then I tried to map the use of a physical visiting card and suggested features accordingly. Most of the interview was based on the same case. Asked about pricing strategy for the product and metrics. Root cause analysis - Asked how I would figure out if there is an issue with my product. Let's say I notice my sales going down in an e-commerce application. He didn't have a specific solution in mind; he just wanted to test my approach. I took the example of amazon and spoke about possible areas that could be investigated after asking clarifying questions. *Tips: Focus on metrics - concrete ones; even if you are not aware of the technical term, an explanation on the same would be acceptable.*
Round 3 (Personal Interview)	Tell me about yourself. What is your favorite app? Tell me what you like about it and what you dislike. (Spoke about Zomato and mentioned features I liked and disliked. Brief discussion on the same.) What features would you like to add to Zomato as a PM? - I spoke about adding group features and bill splitting and explained the rationale behind the same. (Lots of discussions on the specifics, like how would you implement it? How would you measure the success or failure of the features, essentially the metrics etc.) Any questions?

Transcript 2

Round 1 (Group Discussion)	***Topic -*** *Many companies are investing in the space tourism industry. Do you think there is scope for Walmart to enter the market? How?*
Round 2 (Personal Interview)	*Hi. Tell me a bit about yourself.* I'm an engineer who spent five years in the education industry. *What interests you in ProdMan?*

	I like it because it is an amalgam of multiple verticals that come together to solve the problem for the consumer. *Alright, design this for me - a camera for senior citizens.* Okay, needs to be met - they forget their everyday things and people, so something that helps them keep track. Features - simple setup, big power and shutter buttons as their motor functions aren't that great and the pictures need to be immediate otherwise, they don't serve a purpose. *How would you market this?* Through word of mouth, newspapers because that's what would be most appealing to them. And through doctors who treat Alzheimer's. *What issues do you foresee?* Problem of acquisition. As senior citizens are likely to be dependent on their children to buy things for them. If we can somehow make that easier, it would be very impactful.

Transcript 3

Round 1 (Case-Based Group Discussion)	***Topic -*** *There is a book publisher who owns several stores across Asia-Pacific region in High- end shopping malls. The publisher wants to take his business online. How can he approach this?* *General Discussion:* • Points about how to market and promote the new product. • The feasibility of going online and how it could impact the business. • Some examples of how Amazon had captured the online bookstore market. *My inputs:* How the bookstore could use their existing stores to increase traffic online by providing incentives such as discounts and subscriptions. Also, the bookstore could tie up with schools and colleges and provide them subscription models for many students at discounted rates.
Round 2 (Product Design Interview)	*Interviewer: Tell me about yourself* Me: A 40 second introduction, also mentioned why I wanted to pursue ProdMan roles *Interviewer: Tell me about your Work-ex* Me: Outlined my roles and responsibilities. Mentioned how I worked across multiple teams and was adept in stakeholder Management (This was important because Stakeholder Management is a crucial skill for ProdMan roles) *Interviewer: Tell me about your favorite Product* Me: Google Maps *Interviewer: Product Design question related to customer*

	acquisition Me: Asked Clarification Questions: Is this acquisition local or Global? Is there a Particular Segment we are targeting? *Interviewer: It is global, we want to target Customer Segments we haven't tapped before.* Me: Can I have 2 minutes to frame my answer please. *Interview: Of course* *Suggested Solution:* A new map view mode, where travelers to a new city can discover places of interest around them. These places of interest will be recommended by Google Maps based on the preferences of the user and their past data. Note: This answer was framed using the CIRCLES framework. It was crucial to recognize the pain points and how this solution could solve those. It was also important to recognize the different personas using the new feature. *Interviewer: Final Question, Why Walmart?* Me: Mentioned the principles of Walmart, and how my style of working aligns with the organization's principles.
Round 3 (BQs and Guesstimate Interview)	*Interviewer: Tell me about an instance where you had a disagreement with your boss/ coworker.* Me: Had prepared answer *Interviewer: Tell me your 2 biggest achievements during your work-ex.* Me: Had prepared answer *Interviewer: Guesstimate - how many flights land in Delhi airport every day?* Me: Asked clarification questions: Should we assume only Domestic or include international flights as well? Can we assume all the flights have the same number of passengers? *Interviewer: Include International flights as well and we can assume all flights have same number of passengers.* Me: Can I have 2 minutes to frame my answer please. *Interview: Of course* Suggested Solution: I went ahead with the Top-down approach, where I divided the population into frequent fliers to Delhi and people who come from abroad to vacation in India. Found this number for a year and divided it by 365. Further divided it by 100, assuming every flight had 100 passengers to get the final answer. *Interviewer: Your approach has a few problems. The way you approached it, it was from the supply side. The number you have given overshoots the actual answer. Another way to do it could be by incorporating the Bottom-up approach, where you restrict your*

	answer according to the demand of the population. But overall, I liked your approach, good job. Me: Thank You *Interviewer: Final Question, Why Walmart? (Asked again, please prepare well for such questions)* Me: Mentioned the principles of Walmart, and how my style of working aligns with the organization's principles.

Transcript 4

Round 1 (Case-based Group Discussion)	***Topic -*** *There is a book publisher who owns several stores across Asia-Pacific region in High- end shopping malls. The publisher wants to take his business online. How can he approach this?*
Round 2 (General Questions)	Tell me about yourself? 1. What is your understanding of a product manager role? 2. What are the most important skills required to be a PM? 3. Are there instances in your previous work experience where you displayed these skills? 4. Do you have any questions for us?
Round 3 (Case-Based Questions)	*Case based 1* - Swiggy is seeing a decrease in conversion (orders/ users opening) in the last 3 weeks, analyze the possible reasons? How can you test which is the right reason among the 3-4 identified? How can you test them on critical urgency? What are the key data metrics you'll look for in this situation? Assuming backend algorithms is the reason, how will you correct it? *Case based 2* - Pilferage and theft of inventory in retail stores increased by 40% in recent weeks. Identify the potential reasons and suggest solutions? (Follow-up questions on my responses, expecting a lot of deep dives into the root causes involving all stakeholders) Summarize all the points we discussed and suggest solutions?

Transcript 5

Round 1 (Group Discussion)	***Topic:*** *A beverage company wants to increase its profit by increasing the price of its soft beverages only in local mom and pop stores. Do you think this is an effective idea?*
Round 2 (Personal Interview)	Introduction and background Why HR? Why PM? What is my understanding on what a PM does? Basic questions regarding my role in last job Consider a service/app like Uber or Ola and find it's pain points. Detailed discussion went on about this for around 20mins. I was

	asked to list several pain points and then rank them in order of importance, explain the rationale. Use a framework while deciding. Then the discussion dived deeper into the topmost problem (for e.g., Safety and security of female passengers) and how you can mitigate that (e.g., Have a feature in your app that allows rider to send SOS messages in distress//enable location sharing with closed ones). What kind of a market segment are you looking at? How much would it really help? What metrics will you be using to quantify the use of the new feature? The interviewer guided me every step of the way. He came up with technical words for each thing I listed in layman's words. Emphasis is on a structured thought process. Go through the various frameworks. You do not have to come up with new problems that a customer of Uber would face...you can just as well highlight a problem whose solution is already in place.
Round 3 (Personal Interview)	Mainly to check communication skills. Free flowing conversation on WorkEx, questions for the interviewer.

Transcript 6

Round 1 (Group Discussion)	***Topic*** **-** *Whether an aerated drinks company should increase its prices of products in grocery stores while it is working on low margins and high volumes.*
Round 2 (Personal Interview)	Initially was asked to introduce myself. Then it went straight into a case. I was asked to design an app for online travel for senior citizens by considering all factors from start to finish. After the app design part was done, I was asked to assess the feasibility of market entry and estimate the potential size of the market/ come up with an appropriate pricing strategy to be followed.
Round 3 (Personal Interview)	I had to introduce myself again. I had to explain why I wanted to get into Product Management. I mentioned how I have had prior work experience in the technology sector and how I got interested in the role through some interactions with Product Managers in my company. After this, I was asked to explain in detail the last project I was a part of during my time at Capgemini and how I had to interact with Product Managers. When I explained about my work, asked me to mention 3 key features of a software/tool that I would consider when designing for executing a similar task. Each feature/aspect that I mentioned,

	he asked me to elaborate and explain my rationale for making it a key feature. Why Walmart?

Transcript 7

Round 1 (Case-based Group Discussion)	***Topic -*** *There is a book publisher who owns several stores across Asia-Pacific region in High- end shopping malls. The publisher wants to take his business online. How can he approach this?*
Round 2 (General Questions)	• Tell me about yourself. • Why ProdMan? Give a situation where you had to deal with conflict. Describe a project you have done in ProdMan terms. • Why Walmart?
Round 3 (Case-based Questions)	Both interviews were case based. 1st interview had 2 cases; one was discussed in detail: I must digitize visiting cards (including choosing the platform for digitizing). 2nd was just discussed in passing for 5 mins: why are the number of people giving feedback on Ola/Uber decreasing. 2nd interview had one case, if Walmart plans to launch a WhatsApp application, how should they go about catering to the pain points of WhatsApp. (For the feature suggested, possible technologies to implement it was also discussed).

Transcript 8

Round 1 (Group Discussion)	*"As a PM of a government service, explore ways to create marketplace for blue collar workers"* *Followed CIRCLES and took 3 entries. Integration with government schemes like MNREGA. Bidding process with minimum bid for better than fair wage for workers, and app in vernacular language and tutorial to use for users. The panellist was a PM with high experience (who eventually took my third round). I tried to integrate other people's points into my entries and build upon that, for e.g., if some other people made the personas or the mentioned pain points, I tried to base my solution off of that along with giving some new ideas of my own*
Round 2 (Personal Interview)	*Q: Tell me your CV?* A: Talked about introduction, work ex, hobbies and why I wanted to be a PM *Q: Since you mentioned in your introduction that your client was in the hospitality sector, imagine you are the PM for Taj Group. You have to create an app specifically for the elderly.* A: Started with three personas: abled elderly, non-abled elderly and

	caretakers. Followed CIRCLES and elaborate on pain points (SOS, might need medicines, might need help to book rooms), and gave solutions (voice assistant, wallet, SOS, audio-visual cues). Did prioritization according to impact and dev effort and gave metrics according to Acquisition, Engagement and Retention.
Round 3 (Personal Interview)	*Q: Introduce yourself?* A: Did *Went through CV. She was from XL, so discussed about the course that I liked the most till now (I said marketing as I had listed a project in the CV of the same) and Prof Rajkumar* *Q: You are the PM of the delivery associate app of a food delivery service like Zomato. We are seeing a constant churn from the past year. Find the root cause and give suggestions.* *What I should have ideally done:* Listed out the CJM of a delivery associate. That would have given me the pain points along the journey, and should have listed out problems such as if he is being sent to faraway locations, is the app showing him online but he is not getting order requests, etc. *What I did:* Listed out reasons such as not getting orders, getting less commission, incentives are less, usability issues, not paying for overtime etc. She was very disappointed and said these are all business issues and out of a PM's scope. She asked me to stop, think and restart. I gave very bad solutions like video session with delivery people to make them feel part of the company (impractical), easier onboarding (acquisition), referral (again acquisition). She was very disappointed and wrapped up the interview
Tips	*You never really know what the interviewer is looking for. I felt I didn't do as well as I could have as compared to interviews for other companies, but I got in this one.*

Transcript 9

Round 1 (Group Discussion)	*GD Topic: As PM of a grocery store, you have to increase the stickiness of the customers Total Candidates in the discussion: 10* *GD Duration: 15 mins* *P: You have 15 minutes to discuss the case.* **GD Starts** The GD starts with one person giving structure to the GD. Structure was as follows: Let's talk about the necessary assumptions first Then let's create Customer Personas Let's talk about their Pain Points & prioritize their pain points based on the discussion Based on the pain points, let's discuss about the

	features/services that should be employed in the grocery store to increase the customer stickiness Then we can prioritize the features based on the Effort vs Impact model Then we can talk about different success metrics for all the features prioritized and come up with a North-star metric to define the success of the features/services prioritized in the discussion **After 10 mins of discussion on Assumptions, Personas, Pain Points, Features** *P: Great! I have understood all the features you have discussed. Please prioritize the features and discuss about success metrics in the last 5 mins. Please go ahead.* **GD continues and ends after 5 mins of discussion on the same** Main points discussed in the GD were: **Assumptions:** • Geography of the grocery store • Main objective of the case clarified • User demographic **User Personas:** • 3 customer personas created and discussed at length with their pain points • Their pain points prioritized based on the relevance of the topic **Features:** • Using the app/platform customers can know what all items are available in the store • They can order online and pick later (BOPIS - buy online pick in store) • Using Video Intelligence using current CCTV infrastructure to improve Customer experience and avoid any pilferage and resistance in buying for customers in the store • Using Video Intelligence to monitor available stocks & monitor trends in order to prevent any stockout • Talked about creating an omnichannel experience All-in-all 8 to 10 features were discussed **Prioritization:** • Used Impact vs Effort model to prioritize the features discussed • Drilled down to 4 or 5 features • Even though, there was some difference of opinion in the group on which features to go ahead with, but there was no fish-market GD scenario in this particular discussion **Success Metrics:** • The North Star metric was told in the beginning of this discussion (which was wrong, it should be mentioned post success metrics of each feature is discussed) • Success metrics of each feature prioritized was discussed

	• And then the GD was cut-off by the panellist at the end of 5 mins
Round 2 (Personal Interview)	*Panellist: Hello, I am Mr. X, I am the Head of Online Retail department at Walmart. I haven't gone through your CV, would you mind sharing something about yourself in under 3 mins?* Interviewee: "Sure" *Started with About myself, and then started adding points about my work experience and the opportunities and learnings from the same* **The Panellist interrupted and asked multiple questions in between my About Myself question** **We talked in detail about what my last organization did, my role in it, how my role changed over the years, etc.** **For reference, I worked in a Video Intelligence start-up that used existing CCTV infrastructure to monitor and generate reports about SOP violation and Events detected** *Panellist: So, let's say you're working for your last organization, and I have a hospital chain of 50 hospitals in US. Half of those hospitals have this expensive X-ray detection machine, and I am thinking of deploying this machine to the rest of my hospitals as well. But, the problem is that we don't have any professionals in these hospitals who can use and analyse the data generated by the machine. As a manager in your company, how would you go about this project, if we come to you. How can your solution help us in generating data from the CCTVs installed in our hospital to help resolve this issue of ours? Just mention the flow of what steps will you be taking in order to onboard this project, I do not need to know about the logic of finding the feasibility of the project, just need to know about your approach towards this problem.* *Explained the whole process of this based on how my company actually processed the feasibility of a project, checking on the effort and scale of the project, and then how we would pitch to the hospital for the solution* *Panellist: Okay. Have you seen the Walmart website?* Interviewee: No, sir. **After this, the panellist showed the website of Walmart by sharing screen** **He showed different sections of the website and how a normal user goes about shopping on the website by going on the home page, then checking categories and then sub-categories, and then onto the listings of the product** *Panellist: Tell me, how would you ensure that people go from landing page to the listings page? Please describe only the success metrics that you'd look at, not the solutions.* *This was a bit tricky, because the panellist was looking for some particular metrics in this question*

	Talked about different metrics such as: • Prior user data (purchase info), assuming that the user is logged in to the website, and then showing products/categories on the home page in order to ensure click from the user • Geography data (got a good response from the panellist on this) • Demographic data generated • Seasonal listings shown on the landing page • CTR (Click-through-ratio) • Time spent on the landing page before clicking any listing/product • Bounce rate *Panellist: Okay. Let's say that we have seen a reduction in users going to our listings page. They're coming to our landing page but not going to the listings. Please share the metrics you would look at to diagnose this. No need to mention the solutions.* Talked about metrics such as: • From which geography are these bounce rates happening from • Any particular demography related bounce rate • Whether this is coming from a particular geography where the users face regular internet connectivity issues, not allowing them to move past the landing page • Products/Advertisements displayed on the landing page • Time spent on the landing page • User info (assuming the user is logged in) **It was a very interactive interview, where the panellist was constantly asking me rational behind my answers, and also trying to guide me towards the right answer** P: Great! I think I am done with the interview. Do you have any questions for me? **Asked 2 questions**
Tips	• Try to be crisp and to the point • Try to use framework as much as you can. Even if you answer incorrectly, but you follow the framework, there's a good chance that they'll consider your candidature • Try to talk about the things in "About myself" that you want panelist to ask you questions about Keep smiling, and play to your strengths

Transcript 10

Round 1 **Group Discussion**	***Topic:*** *BNPL in India* Spoke second, contributing reasonable points without making additional entries. The group discussion had become somewhat disorderly, with some individuals reiterating unnecessary points.

	People who provided valuable contributions and maintained civility, avoiding disruptive behavior, successfully advanced to the next round.
Round 2 (Personal Interview)	*Panellist: Introduce yourself* Went into a round of introduction *Panellist: What is your favourite product?* Clarified if it must be software or anything else I talked about GCam(the camera app on my Pixel phone). This is something I knew about and was able to talk good points about it. Was asked to compare with competitors, and managed to answer that as well. *Panellist: (Case Question) People have been complaining about the wait times at Walmart. What can we do?* Started like a consulting case, but the interviewer quickly wanted me to get to the problem Discussed what could cause the problem and broke it down to its elements- Too many people, too few checkout machines and too many items to check out Initially discussed the idea of increasing the number of checkout machines and cashiers, but was asked to evaluate that at the scale of Walmart(6500 stores across the country) Finally, arrived at a token ticketing system where people can leave their luggage in a queue, get a token and chill while their order gets processed. Discussed nuances on this on how would the system look like, the basic physics of such a system like notification, alarms, payment links etc The case ended there, and the interviewer asked me if I had any questions for him *I asked for feedback on how I did the case and he quickly said never to ask this in an interview, but anyway gave some feedback. The interview aimed to test structured thinking. It was not looking for comprehensiveness in terms of solutions like say a suggestion on improving operational efficiency and strictly wanted ProdMan solutions. The interviewer was very nice and helpful, gave ample time and also guided the case whenever I was stuck.*
Round 3 (Personal Interview)	*Panellist: Introduce yourself.* Went into around of introduction. Interviewer asked me what my favourite city was as a follow-up. We talked for a couple of minutes about Chennai and beaches, his experience in such places and his take on the Beaches vs Mountains debate ** Panellist then gave a very detailed intro about him and presented a case** *Panellist: In a company like Walmart there is a problem with having a lot of meetings. How to resolve?* I said I worked at a small company and asked him if he could help

	me understand the scale and mechanics of meetings in a huge company like Walmart I started thinking it was an HR case and discussed why this could happen but quickly realised he wanted me to come up with a product to help with this situation The main problem that we identified was that people tended to loop in entire teams just to be sure when only a couple of them added value Came up with and helped meeting schedulers loop in SPOCs who will loop in who is necessary and also cap the number of credits available for a scheduler in a month Also discussed several success metrics like collecting feedback and checking how many people accept the meeting to ensure that the implementation is on point. *Started as a very chill interview with lots of conversation. Walmart is big on success metrics and they want you to think about how you will ensure your implementation is on point. Otherwise continued to be a very sweet and friendly interview.*
Round 4 (Personal Interview)	**Interviewer was a very senior person at Walmart** *Interviewer: Introduce yourself and why Walmart?* Answered *Interviewer: What is your favourite product? Tell me something you had not prepped about and not software.* I talked about a bicycle tool that I have. He asked me what I liked in it, and how it could be made better and asked me how much it cost. *Interviewer: Where are you from in Chennai (as he was also from Chennai)?* Answered *When he asked me if I had any questions, I conveniently returned the question and the interview ended there.*

Transcript 11

Round 1 (Personal Interview)	**Interviewer asked general questions on work experience** *Interviewer: Do you know about the case where Berlin artist used handcart full of smartphones to trick Google Maps' traffic algorithm into thinking there is traffic jam? As a PM of Gmaps, how would you change it's features to make sure this doesn't happen again? Come up with solutions and explain answers.* Gave solutions like proximity check on vehicles, speed detection data using speedometer, image recognition. Cross questions were there, but interviewer just wanted to check if I was able to

	come up with innovative solutions to a case I wasn't aware of.
Round 2 (Personal Interview)	*Interviewer: Design a customer redressal portal for e commerce website. (Had to implement CIRCLES)* Picked amazon like site, picked few features like restock update notification, enhancement of chatbot feature (include languages), AR VR augmentation for objects like home decor etc for the customer to be able to visualize better, etc. Cross questioning on metrics. A lot of emphasis on why I chose a particular feature and success metric.
Round 3 (Personal Interview)	*Interviewer: What phone do you use? What are the apps in your phone, if there's one app that you couldn't live without what would it be?* Instagram *Interviewer: If you're a PM of insta, what would you change in the interface (additional feature)?* Answered that I would like to have a structured version of the explore section. Explained the design and the reasons. *Interviewer: What would you do to drive higher engagement on the app?* Spoke about gamification of the app in the dm section by introducing small games during sports events (score predictor etc) which helps in people engaging without actually taking the burden of chatting. *Interviewer: What do you know about the omnichannel feature of Walmart?* Answered

Transcript 12

Candidate profile	B.Tech (ECE), Amdocs(35 months)
Interview 1	• Tell me about yourself. • Work ex-based question. • Product Design: A food delivery app wants to enter the quick delivery market(like Zepto). • RCA: Increase in number of ride cancellations for Uber; find the root cause.
Interview 2	(This round was entirely metric-based and conversational) Why are metrics important? Asked important metrics for various cases, dashboards, and website pages. What would you choose if offered a choice between reducing the number of touchpoints or the number of pages a user has to go through? You will be dealing with the development team; how will you

	explain a business problem to them and mention metrics. (The interviewer was bored of frameworks and wanted unique answers)
Interview 3	• Tell me about yourself. • What is your favourite app? • How will you improve it? • What are its competitors? Draw parallels between the problems they face and the app.

Transcript 13

Personal Interview	**Interviewer:** "So, tell me about the kind of work you did as a software developer. What was your main role?" **Respondent:** "I worked on building and maintaining backend systems for an e-commerce platform. My job was to make sure the systems were scalable and could handle heavy user traffic, especially during sales or festivals. Most of the time, I focused on optimizing database queries, integrating APIs, and fixing performance issues." **Interviewer:** "Hmm, okay. Can you share an example of a big challenge you faced and how you solved it?" **Respondent:** "Once, during a big promotional event, we noticed that the app's speed became very slow—it was a major issue. After digging deep, we found out that it was due to improper database indexing. I reworked the indexing strategy and added caching where needed, which brought the latency down by almost half **Interviewer:** "What kind of interactions did you have with the Product Manager in your company? How did you contribute to product decisions?" **Respondent:** "I used to work closely with the PM to understand the product requirements and give inputs about the technical side. For example, once the PM suggested a real-time data syncing feature, but I flagged it as technically complex. Instead, I proposed a batch processing method that was much faster to implement, and it worked just fine for the users too." **Interviewer:** "Were there times you had to say no to the PM? How did you manage that?" **Respondent:** "Oh yes, a few times. Like once, the PM wanted a new feature within a very tight deadline, and I knew it wasn't practical. I backed my points with proper data and explained a phased approach, where we could release the core functionality first and add the rest later. The PM agreed, and it worked out well.

Interviewer: "Okay, now imagine you have to design an app for fitness enthusiasts. How will you go about it?"

Respondent:
"First, I'll start by identifying who the target audience is—are we focusing on gym-goers, runners, or just general fitness lovers? After that, I'll do some research—maybe surveys or interviews—to understand their pain points, like lack of motivation or difficulty tracking progress.
Based on that, I'll come up with features like:

- Setting fitness goals and tracking them.
- Integrating with wearables like Fitbits and smartwatches.
- A social aspect, where users can compete with friends in challenges.
- AI-driven personalized workout suggestions.

I'll also prioritize the features using something like the MoSCoW framework—what's a must-have, what can wait, etc. For monetization, a freemium model can work—basic features free, and advanced ones like personal coaching or exclusive plans can be paid."

Interviewer: "How will you make sure users stay engaged?"

Respondent: "I'll use gamification—things like badges for completing challenges, leaderboards, or rewards for achieving fitness milestones. Push notifications can also help keep users active on the app

Interviewer: "Alright, now tell me, if you were to add a new feature to Instagram, what would it be?"

Respondent: "I'd suggest a 'Group Story' feature, where multiple people can add to one story. Like if there's a wedding or a trip, friends can all share their photos and videos in one place. It'll make it fun and collaborative."

Interviewer: "Interesting. How would you validate this idea?"

Respondent: "I'd run surveys and check data from existing features like Close Friends and Collaborative Posts. If these features are already popular, it would mean users are likely to adopt something like Group Stories."

Interviewer: "What challenges do you see, and how will you tackle them?"
Respondent:
"One challenge would be privacy. Not everyone will be comfortable with such a feature. So, I'll add options like users can accept or decline invitations to contribute. Another issue is content moderation. I'd implement AI-based tools to flag inappropriate content.Lastly, for adoption, I'd roll it out as a beta feature and promote it through influencers and tutorials inside the app.

Additional Tips

What Does a PM Internship Look Like?

During a product management internship, experiences can vary widely across different companies and departments, depending on the nature of the product and the specific problem statements being addressed. The role of a product manager can range from highly technical to more business-oriented tasks, making it challenging to define a one-size-fits-all description for this position.

To provide a comprehensive understanding of what a product management internship entails and what one can expect from it, we have gathered and recorded the experiences of our fellow XLRI students. These insights will help you delve deeper into their journeys and appreciate the diversity in their experiences.

Microsoft

Transcript 1

During my internship with Microsoft's Windows+Devices organization in the Surface team, I contributed to optimizing the user experience for Surface device users and the Surface app. My responsibilities included conducting user experience surveys to pinpoint pain points and compiling insights to propose actionable improvements for Surface devices. I also performed competitive benchmarking of the Surface App and provided strategic recommendations to enhance feature adoption. Furthermore, I conceptualized a comprehensive vision for the Surface app, structuring its functionalities into three distinct categories: help and diagnostics, support services, and customization options.

Transcript 2

I interned with Microsoft as a Product Manager Intern. I was in the Azure Developer Division focusing on App Service which is their PaaS offering. My Problem Statement was to help businesses seamlessly integrate AI into their apps or help them launch their AI apps with ease. Microsoft calls them intelligent apps. I was supposed to follow the hypothesis progression framework where I constructed hypotheses using secondary research and data and then validated them using UX research and customer interviews. I gather statistical and research data on Gen AI adoption, conducted customer interviews, gauged inclinations of developer communities, conducted UX research etc. After that I proposed 5 concepts and designed 5 features based on those concepts. 3 of these concepts were mapped to the customer's journey of understanding the AI space and their proficiency with AI. I created Figma Mocks and Video demos of each and later measured the priority on an EI matrix.

Disney+ Hotstar

Transcript 1

During my internship at Disney+ Hotstar, I worked on increasing app adoption and enhancing localization. The user journey was easy to grasp, given our familiarity with the B2C app, but understanding the necessity of solving these problems was a significant focus. Emphasis was placed on understanding the 'why' behind issues, making solution-finding straightforward once the problem was clear. Decisions were data-driven, but I was encouraged to critique data, think from multiple perspectives, and play the devil's advocate before drawing conclusions. Conducting consumer interviews and emphasizing customer empathy were aspects I truly enjoyed. My lead often highlighted that while frameworks can be learned, balancing customer perspectives with data insights is crucial. Overall, the experience was gratifying and insightful.

Ola Electric

Transcript 1

During my internship at Ola Electric, I contributed to various products for both existing and upcoming EVs, rather than focusing on a single problem statement. My responsibilities included conducting user surveys and performing competitor benchmarking to prioritize features for the product roadmap. I wrote Product Requirement Documents (PRDs) for new and improved features, detailing user stories, metrics, acceptance criteria, and business impact.
Unlike most of the other tech companies with Ola having a physical product, I designed some features with a focus on hardware implementation and also worked on software features for the Ola Electric companion app. Additionally, I conducted numerous customer interviews to identify key user pain points with the Ola Care+ subscription. Over the course of two months, I collaborated with teams across engineering, design, QA, marketing, program management, and sales. Overall, it was a fulfilling experience that allowed me to gain a comprehensive understanding of product management.

Walmart

Transcript 1

I was assigned to the Walmart US Ecommerce team (a team that handled the Walmart app/website), and my area of work was in the Transactions funnel (Cart page, select delivery time, address page, Review order page). The problem statement assigned to me was to improve conversion of customers by improving/introducing features in these transaction pages. I was given access and lessons on how to use certain tools to find out drop offs and user journey. I used tableu to understand dashboards and analyse data. I also used two other tools - one to analyse customer reviews and pain points and other to see user journey, time spent and drop off rates at different sections of the app pages. Using all insights gathered I came up with certain solutions, which I had to get reviewed by my manager and multiple other stakeholders. I also interacted with the developer and analytics team to do impact and effort estimation of my features. People in my team were very helpful and always included me in their ongoing product review meetings, which helped me in understanding real world problems. In the end I had to give a presentation to the entire team and rank my solutions according to frameworks. Overall, I learnt a lot in the two months about product management and made some good connections.

How to select a favorite application?

The interviewer will focus on the following questions while asking about your favorite app, hence make sure that you prepare accordingly. It is recommended to select an app that is not too niche and not too common. Some questions that can be asked on this topic are as follows:

Why is this your favorite app?

1. You need to build a story about your connection to the app and how do you use it.
2. For example, YouTube is my favorite app because of the educational value I extract from it, and the frequency with which I use the app.

What is your favorite feature in the app and why?

a. The interviewer wants to know how well you know this application. Hence, it is recommended to identify some features that you can talk about in the interview.
b. While answering the "Why" of the question, you can give a personalized answer and mention why you like this feature.

What is your least favorite feature in the app and why?

a. The interviewer wants to understand how good you are at performing a critical analysis of an application.

As a PM, how would you improve these features?

a. This is not a personalized question, and you must think like a PM, hence it is of utmost importance to let go of any personal biases and think about the user.
b. While suggesting improvements, approach the question in the following parts:
   - What are the current pain points of the user?
   - How will the improvements solve these pain points?
   - What are the success metrics of the improved features?

Do's and Don'ts in a PM Interview

Do's

1. ***Listen and ask clarifying questions:***

   Listen carefully to the interviewer and ask clarifying questions to fully understand the problem statement. This will help you to get a clear understanding of the problem and make sure you are on the same page with the interviewer.

2. ***Develop a structured approach:***

   Develop a structured approach to solve the problem and communicate it clearly to the interviewer. You should have a clear plan of action.

3. ***Focus on the customer***

   When uncertain about a question, think about the product's users, their goals, and potential use cases. Avoid personal preferences when designing. Focus on explaining how the product will meet the customer's desired outcome.

4. ***Don't get stuck in a framework***

   During interview preparation, practice your preferred frameworks in mock interviews. Test them with different questions and note when they aid your responses or limit your creativity.

5. ***Know your favourite product***

   During the interview, you may be asked about your favorite product. It could be your favorite product from the company you're applying to or a preferred physical/digital product unrelated to the company. Be prepared with it.

6. ***Think before speaking***

   During interviews, it's crucial to remain mindful of the pressure and avoid hasty responses. Once spoken, retracting statements becomes challenging. It's completely acceptable to pause or request a few minutes to contemplate before proceeding. This allows for organized thoughts and prevents premature conclusions.

7. ***Use data and insights:***

   Use data to support your analysis, wherever possible. Additionally, you should be able to draw insights to support your recommendations.

8. ***Demonstrate your ability to prioritize:***
   You should be able to prioritize different tasks and make trade-offs based on the constraints of the problem.

9. ***Be prepared to articulate your thought process:***

   You should be able to explain your thought process and reasoning behind your recommendations to the interviewer.

10. ***Treat the interview like a conversation***

    This tip is valuable for individuals who find it difficult to stay composed during interviews. Remember, the interview is a mutual discovery process. The interviewer

assesses your suitability for their company, while you evaluate if the company aligns with your goals.

Don'ts:

1. ***Don't make assumptions:***

   You should not make any assumptions without verifying them with the interviewer.

2. ***Don't jump to conclusions:***

   You should not jump directly to conclusions without analyzing all the data and facts. The answer may seem obvious sometimes but still you need to eliminate all other possibilities.

3. ***Don't get bogged down by details:***

   You should focus on the relevant details and not get bogged down by extra information.

4. ***Don't use irrelevant words:***

   Using jargons might not always help if they do not fit the scenario or the questions. Do not try to force fit things.

5. ***Don't be afraid to ask for help:***

   You should not be afraid to ask for help or clarification if you are stuck.

6. ***Don't be defensive:***

   Don't be defensive if the interviewer challenges your assumptions or recommendations. You should be open to listening and incorporating feedback of the interviewer.

7. ***Don't forget to consider feasibility:***

   You should consider the feasibility of your recommendations and their impact in real-world scenarios.

8. ***Don't talk about the framework:***

   Framework should be there in the back of your mind to answer the questions, but you do not need to tell the interviewer about the frameworks that you are using.

9. ***Do not forget to research about the company***

   Don't go into the interview without researching the company, its products/services, industry trends, and competitors. Lack of preparation can be a red flag for interviewers.

10. ***Don't neglect to ask questions:***

    Towards the end of the interview, the interviewer will usually ask if you have any questions. Don't say "no" or remain silent. Prepare a few thoughtful questions about the company culture, team dynamics, or specific projects to show your interest and engagement.

How to approach a PM Interview

1. Understand the problem statement:

- Identify the key problem areas and ask clarifying questions if necessary.
- Summarize the problem statement and confirm your understanding with the interviewer.
- Make sure you understand the context, the problem, and the objective of the case.

2. Mentally categorize the problem:

- Determine whether the problem is a Product Design, Metrics, Go-to-Market or Strategy?
- Typical case questions such can easily be solved using existing frameworks. If not, break the problem down into smaller, manageable parts.

3. Apply or design a framework:

- Develop a framework to solve the problem or use any existing one, as applicable.
- Develop a structure for your analysis.

Pretty much every framework should start with the goal. Don't worry about writing the perfect goal; use it to clearly define assumptions upfront so you can reference the goal later in your case.

4. Analyze the problem using the structure/ framework:

- Scrutinize the problem in a step-by-step format.
- **Communicate your ideas to the interviewer to check whether you're going in the right direction or whether there needs to be a course correction.**
- After each step in the framework, summarize and move to the next step.
- Based on your analysis, develop potential solutions to the problem.
- Strive for at least one "moonshot" in your ideation/solutioning, wherever applicable. It could be applying technologies like AI/ML in a novel way or a simple change to the business model.

5. Develop recommendations:

- Evaluate the potential solutions based on their feasibility, impact, and cost.
- Recommend the best possible solution.
- Develop an action plan to implement your recommendations.

6. Communicate your findings:

- Summarize your findings and recommendations.
- Be prepared to answer follow-up questions.

Miscellaneous Buzzwords

Co-pilot AI

Co-pilot AI refers to artificial intelligence embedded within everyday productivity tools and platforms to assist users in real time. Unlike standalone AI tools, co-pilots are integrated features within apps like Microsoft Word, Excel, Figma, Notion, and even coding environments like GitHub. They help users by generating content, summarizing information, writing code, offering recommendations, or automating repetitive tasks.

The rise of co-pilots signifies a shift toward "AI as a UX layer," where intelligence enhances workflows without the user needing to switch tools. For Product Managers, this means rethinking feature sets to include assistive capabilities and measuring success in terms of user time saved or cognitive load reduced.

PM Insight: Interviewers might ask you to design a co-pilot for a product. Think of user personas, embedded touchpoints, explainability, and privacy.

Read More Here:
GitHub Copilot Official: https://github.com/features/copilot
Microsoft 365 Copilot: https://www.microsoft.com/en-us/microsoft-365/blog/2023/03/16/introducing-microsoft-365-copilot-a-whole-new-way-to-work/

Product-Led Growth (PLG)

Product-Led Growth is a go-to-market strategy where the product drives customer acquisition, conversion, and expansion. Rather than relying on traditional sales or marketing-led approaches, PLG focuses on delivering value through self-serve, free trials & product virality.

Popular examples include Notion, Slack, Zoom, and Calendly - products that users can adopt without needing a sales pitch. Features like easy onboarding, freemium pricing, usage-based expansion, and referral loops are key enablers of PLG.

PM Insight: You might be asked how you would improve product onboarding, optimize for conversion, or measure feature success in a PLG model.

Read More Here:
OpenView PLG Guide: https://openviewpartners.com/product-led-growth/
Figma PLG Blog: https://www.figma.com/blog/designing-for-product-led-growth/

Retrieval-Augmented Generation (RAG)

RAG is a technique that improves Large Language Models (LLMs) by allowing them to retrieve external information from a knowledge base before generating a response. Unlike traditional LLMs that rely purely on pre-trained data (which may be outdated or hallucinated), RAG systems first fetch relevant documents and then generate a more accurate, grounded answer.

PM Insight: Expect case questions on how you would integrate RAG in an enterprise search tool or customer helpdesk. Think of latency, cost trade-offs, and freshness of the knowledge base.

Read More Here:
AssemblyAI RAG Guide: https://www.assemblyai.com/blog/retrieval-augmented-generation-rag-explained/
LangChain RAG Docs: https://docs.langchain.com/docs/components/retrievers/retrieval-augmented-generation/

Zero UI

Zero UI refers to interfaces that rely on interaction modes other than traditional screens, such as voice, gestures, sensors, or automation. As the number of smart devices grows (smart speakers, wearables, IoT devices), interaction is moving away from clicking and typing toward more ambient experiences.

PM Insight: You could be asked to design a feature or product for a Zero UI environment. Focus on context triggers, feedback loops, and privacy concerns.

Read More Here:
Medium on Zero UI: https://uxdesign.cc/zero-ui-designing-for-a-post-screen-world-d3f9fc2211b7

Multimodal AI

Multimodal AI refers to artificial intelligence systems that can process and generate multiple types of data simultaneously — such as text, images, audio, and video. Unlike traditional AI models that work with a single data type, multimodal systems can handle complex inputs like a voice command describing an image or a combination of video and subtitles.

PM Insight: In interviews, you might be asked to build or enhance a product using multimodal AI. Consider UI implications, error handling, and performance trade-offs.

Read More Here:
NVIDIA on Multimodal AI: https://blogs.nvidia.com/blog/multimodal-ai/
DeepMind Gemini: https://www.deepmind.com/blog/next-generation-model-gemini

Jobs-To-Be-Done (JTBD)

Jobs-To-Be-Done is a product discovery framework that shifts focus from user personas to user motivations — specifically, the "job" they are hiring your product to do. Instead of asking “Who is the user?” JTBD asks “What progress is the user trying to make in a given situation?”

PM Insight: Be ready to identify the core JTBD behind a product feature, or prioritize roadmap items based on what job they solve.

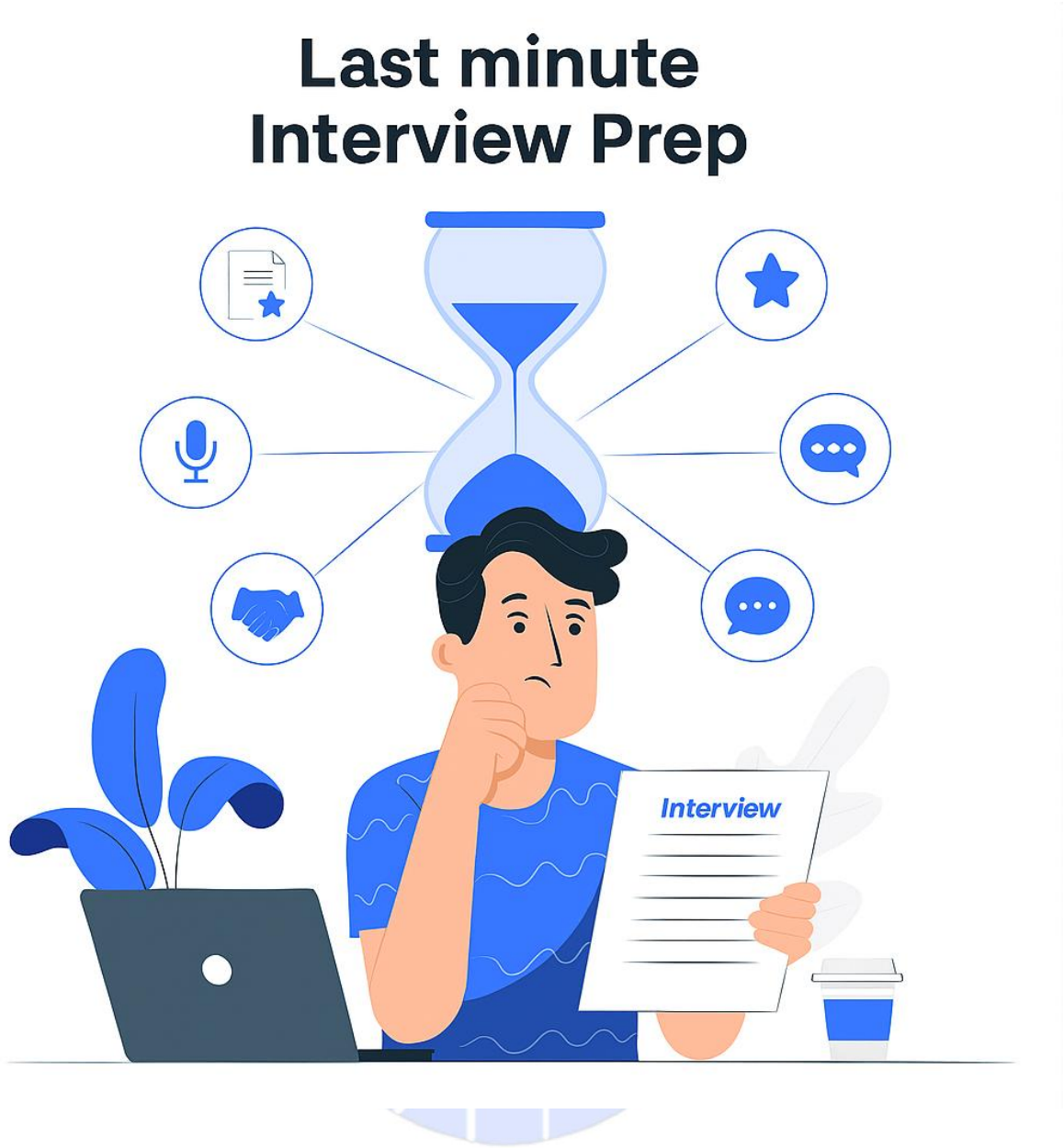
Read More Here:
HBR on JTBD: https://hbr.org/2016/09/know-your-customers-jobs-to-be-done

Responsible AI

Responsible AI is the umbrella term for the ethical, transparent, and accountable design of AI-powered systems. It encompasses concepts like fairness, explainability, data privacy, and compliance with evolving global regulations.

PM Insight: PMs may be asked how they would design a fair recommendation system or prevent hallucinations in an AI co-pilot. Bring up audit trails, user override mechanisms, and fairness metrics.

Read More Here:
Microsoft Responsible AI: https://www.microsoft.com/en-us/ai/responsible-ai
Google AI Principles: https://ai.google/responsibilities/responsible-ai-practices/



Last Minute Interview Cheat sheet

General Tips

- Be Conversational: Keep it engaging. Don't monologue. Take feedback after each step.
- Have clear communication
- If you have any clarifying questions, ask them in the beginning itself.
- Pause Thoughtfully: It's okay to take a few seconds before answering. (You can ask for a minute to think too)
- Use Frameworks Naturally: Don't recite like a robot. Use them for the structure and flow.
- Make sure you are aware about industry trends and what the company is currently focussing on.

Circles Framework: Your Product Development Compass

What it is: A structured thinking model for tackling product questions; "CIRCLES" is an acronym for the framework.
Where used: Product-management interviews, feature design discussions, product improvement, roadmap planning.
Why useful: Keeps answers comprehensive yet focused, highlights user-centricity, and forces explicit prioritization.

1. Comprehend the Situation
This is where you set the stage. Don't jump into solutions! Instead, take a moment to really understand the problem and context.

- Ask Clarifying Questions: Think of the 5 W's and How:
  - What exactly is the problem or opportunity?
  - Why is this important now? What's the business objective?
  - Where does this impact the product or users?
  - When is this happening? (e.g., a new feature, a long-standing issue)
  - Who are the key stakeholders and users?
  - How does the current system or situation work?
- **Understand the Business Model:** How does the company make money? This will influence your decisions in the later steps.
- Ask anything you are unsure about here.

2. Identify Customers & Stakeholders
Now that you understand the situation, let's talk about the people involved.

- List User Personas: Who are your target users (Primary & Secondary)? Think about their:
  - Demographics: Age, location, geography, tech-savviness etc.
  - Behaviours: How do they currently interact with the product or solve this problem?
  - Needs & Goals: What are they trying to achieve? What are their pain points?
- Consider all stakeholders: Who else is impacted or has a vested interest (e.g., engineering, sales, marketing, legal)?
- Say, "Who are we solving for?" Different customers = different priorities.
- Here, you can ask the recruiter which persona to focus on.

3. Report Customer Needs & Translate to Requirements
Once you understand your users, articulate their needs clearly.

- Translate Needs into Use Cases/Requirements: For each user need, define a clear use case or functional requirement. Focus on the "what," not the "how" yet.

- User stories: As a [user persona], I want [goal], so that [benefit].
- Identify Pain Points- user jobs-to-be-done, frustrations, and aspirations

4. Prioritization: Cutting Through the Noise
This is where you focus on impact. Don't get stuck on every minor pain point.

- Assess Against Key Metrics & Frameworks:
  - CSAT, Revenue, Implementation Effort: Re-evaluate your solutions against these core metrics.
  - MOSCOW Framework: (Must-have, Should-have, Could-have, Won't-have) - Useful for classifying feature priorities.
  - RICE Framework (Reach, Impact, Confidence, Effort) - Quantifies prioritization (commonly used)
  - Impact vs. Effort Matrix: A simple visual way to prioritize

5. List Solutions
Now that you have your prioritized use cases, it's time to find solutions for them.

- Top Solutions: For your chosen use cases, list out potential features or changes. Don't worry about perfection here; just get ideas down.

6. Evaluate Each Solution

- Choose Key Filters: Prioritize use cases based on key metrics like:
  - Revenue Impact: Will this drive sales or reduce costs?
  - Trade-offs: Every solution has pros and cons. Be ready to articulate them.
  - Customer Satisfaction (CSAT): Will this significantly improve the user experience?
  - Ease of Implementation: How much effort will this require from engineering?

7. Summarize Recommendation (User Journey)
Instead of just listing features, tell a story.

- Frame as a User Journey: "The feature I'd recommend is X. Here's how a user would experience it... I chose this over other solutions because..."
- MVP + Future Iterations: Always propose an Minimum Viable Product (MVP) first, and then sketch out a plan for future improvements. This shows you're thinking incrementally and strategically.
- You can also suggest a pricing model, GTM strategy, business impact on revenue, cost etc.

RCA (Root Cause Analysis):

RCA is about digging deep to understand *why* something went wrong. It's an investigative process, so approach it systematically.
What it is: A systematic method for uncovering the underlying reason(s) a problem occurs rather than treating surface symptoms.
Where used: Product bugs & outages, manufacturing defects, customer-support escalations, process-quality incidents, safety/operations failure
Why useful: Prevents repeat issues, reduces firefighting, improves reliability and customer trust.

1. Double Check the Problem Statement
Before you do anything else, make sure you understand the problem.

- "Is there anything that jumps out at you about this problem statement?"
- "What's the immediate impact we're seeing?"

2. Ask Clarifying Questions
This is crucial for narrowing down the possibilities.

- "How widespread is this issue? Is it affecting all users or a specific segment?"
  - *Probing:* "Is it device-specific (iOS, Android, web)? Operating system specific?"
- "How sudden was this change? Did it happen overnight or has it been a gradual decline?"
- "Are there any specific geographic distributions we're seeing?"
- "What about temporal patterns? Are we seeing this issue at specific times of day or days of the week?"
- "How confident are we in the quality of the metric itself? Could there be an error in the calculation or reporting system? Has the definition of the metric changed recently?"

3. Platform & Recent Changes

- "Have there been any recent changes or deployments to the app or platform?" (This is a common culprit!)

4. The RCA Approach: External First, Then Internal
Once you have clarity, you can start hypothesizing. It's often good practice to start with external factors to show breadth of thought, even if the root cause is often internal in a product context.

- "The problem could be due to internal or external factors. I'd like to start by exploring external factors."

Potential External Factors to Consider: Refer to the **PESTEL** framework

- Competitive Analysis: Have competitors launched new features or promotions?
- Promotional Activities: Any changes in marketing campaigns (yours or competitors')?
- Public Relations & Reputation: Any recent PR incidents, data breaches, or negative news?
- External Stakeholder Influence: Pressure from partners, investors, or regulatory bodies?
- Government Regulations: New laws or policies impacting your product or industry?
- Direct Substitutes: Are there new alternatives users are turning to?
- Public Sentiment/Trends: Shifts in public opinion or popular trends (e.g., a new social media platform gaining traction)?
- Large Scale Events: Major events (like an IPL match) that might distract users or shift behavior.

Potential Internal Factors to Consider (Think User Journey!):

- User Journey Analysis:
  - "Let's trace a typical user journey, step-by-step. Where are we seeing drop-offs or changes in behavior?"
  - "At each touchpoint, has anything changed?" (This is key!)
- Technical Factors:
  - Downtime: Was there a server outage?
  - Latency: Is the app or website slower than usual?
  - Errors/Bugs: Are users encountering error messages or unexpected behavior?
- Operational Changes:
  - Changes in Operations: New processes, staffing changes, etc.
  - Marketing Activities: Internal campaigns that might have unintended consequences (e.g., misdirected ads).
  - Demographic Shifts: Has your user base changed?
- Product & Feature Changes:
  - New Feature Launch: Did a recent feature introduce a bug or confuse

users?
    - Feature Deletion or Modification: Was a popular feature removed or changed?
    - Pricing/Monetization Changes: Any adjustments to pricing models or subscription plans?
    - Branding Updates: Changes to the brand image or messaging.
- Cost/Time Factors: Has the cost of operations changed or are there delays in processes?

Remember: This isn't an exhaustive list. The more you read about product cases, the more "unusual" reasons you'll discover. Having a unique insight can definitely leave a great impression!

Guesstimates

What it is: A quick, logical estimation technique ("educated guessing") to size a metric when hard data aren't readily available.
Where used: PM & consulting interviews, early market sizing, back-of-the-envelope business cases, capacity planning.
Why useful: Shows structured thinking under ambiguity, enables fast decisions when data are scarce, benchmarks feasibility.

What Interviewers Want

- Structured thinking – not fast math
- Take time to clarify the problem
- Use MECE breakdowns (Mutually Exclusive, Collectively Exhaustive)
- Make backed, logical assumptions & explain your reasoning
- Speak clearly and sequentially

Start Here: Clarifying Questions

Always begin with scoping questions before diving into math – helps you eliminate branches and have a simpler solution than a multi-branched one, which leads to confusion and is not recommended. You can ask about

- Ask units for market size - location, product, time, innovation, seasonality.
- Try to question each word in the problem statement.
- Try to put the thinking into formulas like: Market size = demand to replace old + demand due to growth in market

Think across Splits like:

- Income
- Age
- Gender
- Location

Core Guesstimate Frameworks

- Top-Down: Start from population and filter down
- Bottom-Up: Start from user behaviour and scale up
- Demand Side: User need, frequency, price
- Supply Side: Production, capacity, distribution

Example Assumption (with Reasoning)

- Assumption: Each urban household has approx. 2 credit cards
- Reasoning: Among friends and family, I have seen that salaried individuals often hold multiple cards to avail discounts and offers. While many households don't own any, this is offset by multi-card holders.

GTM

What it is: A structured plan that defines how a product or service will reach target customers and achieve competitive advantage. It covers positioning, channels, pricing, and launch sequencing.
Where used: New-product launches, market expansions, feature monetization, pivoting to new segments.
Why useful: Aligns cross-functional teams, accelerates revenue ramp, reduces launch risk, and ensures resources focus on high-impact activities.

I. GTM Overview

1. Product
    - What is the Unique Selling Proposition (USP)?
    - Key features, value propositions, or differentiators
2. Customer
    - Who are the target users or buyers?
    - What are their pain points, motivations, or needs?
3. Company
    - What are the strategic goals (growth, branding, profitability)?
    - What internal capabilities exist (tech, marketing, salesforce)?
4. Competition
    - Who are the main competitors?
    - What are their products, pricing, positioning, GTM tactics?
5. Environment
    - Market potential (TAM/SAM/SOM)
    - Regulatory constraints, compliance needs
    - Trends (technological, social, economic)

II. Product Launch Design

1. Launch Objectives
    - Validate product-market fit?
    - Achieve profitability quickly?
    - Build buzz and visibility?
    - Position as a category leader?
2. Launch Strategy
    - Target market: Niche, geographic, demographic
    - Roll-out model: Invite-only, beta, public launch, influencer-driven, stealth
    - Versioning: MVP, limited features, or full product
    - Target personas: Age, location, income level, behaviors
    - Risks: Technical, adoption, regulatory — and mitigation plans

III. Implementation Stages

A. Pre-Launch

- Inbound Marketing:
    - SEO, blog content, landing pages, social media
- Outbound Marketing:
    - Paid ads (Google, Meta), PR campaigns, offline activations, events

- Partnerships:
    - Co-branding, co-marketing, integrations, affiliates

B. Launch

- Distribution:
    - What channels? (Direct, marketplaces, resellers)
- Partnership Activation
- Pricing Strategy:
    - Freemium, subscription, pay-per-use, one-time fee?

C. Post-Launch

- Measure Success:
    - Define KPIs: CAC, LTV, MAU, DAU, churn, NPS, etc.
    - Set up feedback loops (customer reviews, surveys, usage data)
- Post-Launch Actions:
    - Iterations, bug fixes, feature rollouts
    - Scale marketing and ops
    - Plan next GTM cycles, geographies, or segments

CXO Dashboard

- When asked to build a dashboard for CXOs, know your metrics (refer to the updated *Metrics* chapter in the casebook).
- Use a MECE framework to bucket metrics — e.g., Revenue, Engagement, Retention, Customer Satisfaction, etc.
- Start by understanding the business context and identifying which buckets are most relevant for that CXO.
- Then, select the most representative metric from each bucket to build a focused, high-signal dashboard.

Less is More: Stick to 5–7 critical metrics. Avoid dashboard overload — CXOs want clarity, not clutter.

How to Answer: "What's Your Favorite App?"

Use this structured flow to give a sharp, product-minded answer.

1. Why It's Your Favorite App

- Start with a quick personal story or use case
- Explain the value it adds to your life

2. How You Use It Regularly

- Share daily/weekly usage patterns
- Mention both core features and engagement hooks

3. What Is Its USP

- One-line summary of its core differentiator (USP)

Example: "Hyper-personalized audio experience powered by smart curation at scale."

4. What Sets It Apart from Competitors

- Highlight 2–3 clear advantages over similar apps

5. Pain Points & Product Thinking (Important)

- Be ready with:
    - 2–3 gaps/pain points
    - 1 prioritized solution with reasoning for each

They could ask questions like: "Come up with features to enhance engagement, revenue, retention, etc."

Popular Prioritization Frameworks for PMs

1. RICE Framework

Formula: RICE Score = (Reach × Impact × Confidence) ÷ Effort

Factor	Description
Reach	How many users will this impact? (e.g., users/week)
Impact	How much will it improve the experience? (1–3 scale)
Confidence	Certainty of estimates/data (0–100%)
Effort	Time/resources required (person-days/weeks)

Example (Swiggy during COVID):
Feature: Contactless delivery

- Reach: 2 million users
- Impact: High (health safety, user trust)
- Confidence: 90% (based on user feedback)
- Effort: 2 dev weeks

Result: High RICE score → Prioritize

Use in interviews: When asked how you'd pick between 3 roadmap features, apply RICE to quantify tradeoffs.

2. KANO Model

Used to classify features based on **user delight vs expectation**.

Category	Description	Examples
Must-haves	Basic needs – users won't tolerate their absence	Ride booking in Ola
Performance	More = better, directly affects satisfaction	Faster delivery time
Delighters	Unexpected wow moments	Spotify Wrapped, Google Doodles
Indifferent	Users don't care either way	Font styling in a food app
Reverse	Too much of a feature is annoying	Too many push notifications

How to Use:
Prioritize **must-haves** first to meet expectations, then invest in **delighters** to stand out.

3. MoSCoW Method

Simple and powerful way to communicate priorities.

Category	Description
Must	Non-negotiable features for MVP
Should	High-value, but not MVP blockers
Could	Nice-to-haves, low impact if omitted
Won't	Not doing this now, but may revisit later

Example: In a student app:

- Must: Timetable, notifications
- Should: Grade tracking
- Could: Campus event calendar
- Won't: AR campus tour (for now)

Use in interviews: Great when asked to prioritize a list of 8–10 features or during agile sprint planning.

4. ICE Score

Formula: ICE = Impact × Confidence × Ease

Factor	Description
Impact	Value it can deliver
Confidence	Belief in success (data-driven or intuition)
Ease	How easy it is to build/implement

Difference from RICE:

- ICE is quicker, more intuitive
- Useful in hackathons, early MVPs, or lean teams

Example (Instagram)

- New filter → High ease, medium impact
- Creator tipping → High impact, but lower ease/confidence → Go with filter first

Real-World Prioritization Examples

Company	Decision	Framework Used
Swiggy	Contactless delivery in COVID	RICE
LinkedIn	Job alerts over AI-based recommendations first	MoSCoW → Must vs Should
Spotify	Wrapped vs playlist sorting features	KANO → Delighter vs Must
Zomato	Order tracking map redesign	ICE (low effort, high value)

How to Tackle Prioritization in Interviews

1. Clarify the Goal: Are we improving DAU, reducing churn, increasing revenue?
2. Define Constraints: Timeline, team size, tech stack, user type
3. Pick a Framework: Use RICE or ICE to assign scores; use MoSCoW if aligning with stakeholders
4. Think Aloud: Show tradeoffs. E.g., "Feature A has high impact but needs backend refactoring, while B can be shipped in 1 week with 70% impact."
5. Tie to Metrics: Always relate back to product KPIs (DAU, LTV, NPS, etc.)

Quick Tips:

- RICE is ideal for mature products with data
- ICE is great for early-stage ideas
- MoSCoW works well for cross-functional team alignment
- KANO helps with long-term vision & differentiation

Must-Know Frameworks Recap

Category	Frameworks
Design	CIRCLES, Design Thinking
Prioritization	RICE, KANO, ICE, MoSCoW
Metrics	AARRR, HEART, North Star
GTM	STP, 4Ps, Channel Matrix
Behavioural	STAR, SOAR, CAR
Roadmap	OKRs, Theme-based, Gantt Charts

Strategy	Porter's 5 Forces, Ansoff

More Resources

Books

- Cracking the PM Interview: How to Land a Product Manager Job in Technology by Gayle Laakmann McDowell
- Decode and conquer by Lewis Lin
- The IIMA ProdMan casebook
- **Drive link for books**

YouTube Playlists

- Exponent: Exponent (Youtube Channel)
- PM School: PM School (Youtube Channel)

Social Media

- Weekly PM challenge on LinkedIn: PM School Weekly Challenge (LinkedIn)
- For teardowns: https://www.theproductfolks.com/

PROMETHEUS
PRODUCT, TECH & UX

In the fast-paced world of innovation, where ideas shape reality and technology steers the future, there exists a pivotal role that drives success – the Product Manager. They are the architects of groundbreaking products, orchestrating the symphony of design, development, and strategy to bring dreams to life.

This casebook should serve as your compass on the path to mastery in this exhilarating realm. Delve into the art of empathising with users, the science of market analysis, and the finesse of team collaboration. Explore the secrets behind transforming ideas into tangible solutions, and learn to wield the power of innovation fearlessly.

Through captivating cases of triumphs and challenges in various interviews, this book will ignite the passion within you to embrace the responsibilities of a Product Manager. Gain the insights, tools, and wisdom to navigate the ever-changing landscape of product development and learn the trade of acing your dream company.

Whether you are a curious fresher seeking your true calling or an experienced professional looking to sharpen your skills, this book will serve as your trusted mentor. Are you ready to embark on a journey that will not only transform your career but also the way you think and approach problem-solving?

Discover the leader within. Unleash the Product Manager in you. The future awaits your genius.

All the best!

prometheus_xlri

prometheus_xlri_delhi

Prometheus - The PM & Tech Club of XLRI

prometheus@xlri.ac.in

prometheus.delhi@xlri.ac.in