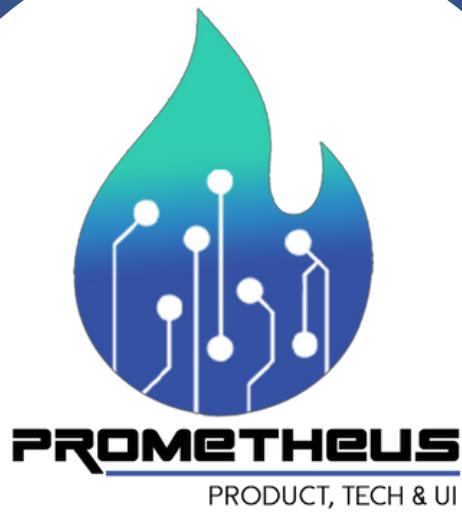


PM CASEBOOK 2023



PREPARED BY





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 the aspiring product managers of XLRI and beyond. As a vibrant part of XLRI's student community, Prometheus provides a platform for students who are passionate about pursuing careers in product management. Knowledge should go hand in hand with practical application, and that's 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 alums 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

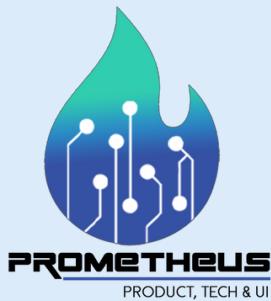
Prometheus, the Product, Tech & UX Committee at XLRI, is proud to launch this pocketbook for the year 2023-24!

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 in most PM interviews. To aid students' preparation and a general understanding of the PM field, we have included vital concepts associated with the field and a few critical product design frameworks in addition to covering essential aspects of popular products through tear-downs.

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 assist you in getting a refresher into many topics quickly, and you can wish to deep dive 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 the readers all the very best in their future endeavours and would welcome any suggestions towards improving the book!

Thank you & good luck!



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Table of Contents

Introduction to Product Management	<hr/> 3
1. The Product Management (PM) role	<hr/> 4
2. Functions of a PM	<hr/> 4
3. What companies look for – the PM of the future	<hr/> 6
Product Management: Key Concepts & Terminologies	<hr/> 8
1. Cloud Computing	<hr/> 9
2. Artificial Intelligence & Machine Learning	<hr/> 10
3. AR & VR	<hr/> 13
4. Internet of Things (IoT)	<hr/> 14
5. Agile Methodology	<hr/> 15
6. Edge Computing	<hr/> 17
7. Web 3.0	<hr/> 18
8. Data Analytics	<hr/> 19
9. Generative AI	<hr/> 20
10. Miscellaneous Buzzwords	<hr/> 21
Product Design Frameworks	<hr/> 23
1. CIRCLES	<hr/> 24
2. User Journey	<hr/> 31
3. HEART	<hr/> 32
4. RICE	<hr/> 34
Product Cases	<hr/> 37
1. Product Improvement Case	<hr/> 38
2. Root Cause Analysis Approach	<hr/> 41
3. Guesstimates	<hr/> 45
4. Pricing	<hr/> 48
5. Go-To-Market Strategy	<hr/> 54
6. Product Metrics	<hr/> 58
7. Hardware Case	<hr/> 62

App Teardowns	64
1. You Tube	65
2. Amazon	67
3. Instagram	70
4. Microsoft Teams	75
5. Netflix	79
6. Swiggy	84
7. Uber	88
Interview Experiences	93
1. Walmart	94
2. Microsoft	106
3. Amazon	113
4. Media.net	118
5. InfoEdge	132
6. DarwinBox	134
7. Uber	136
8. Unilever	139
9. Google	141
Additional Tips	140
1. How to select a favorite application?	144
2. Do's and Don'ts in a PM Interview	145
3. How to approach a PM Interview	148
4. More Resources	149

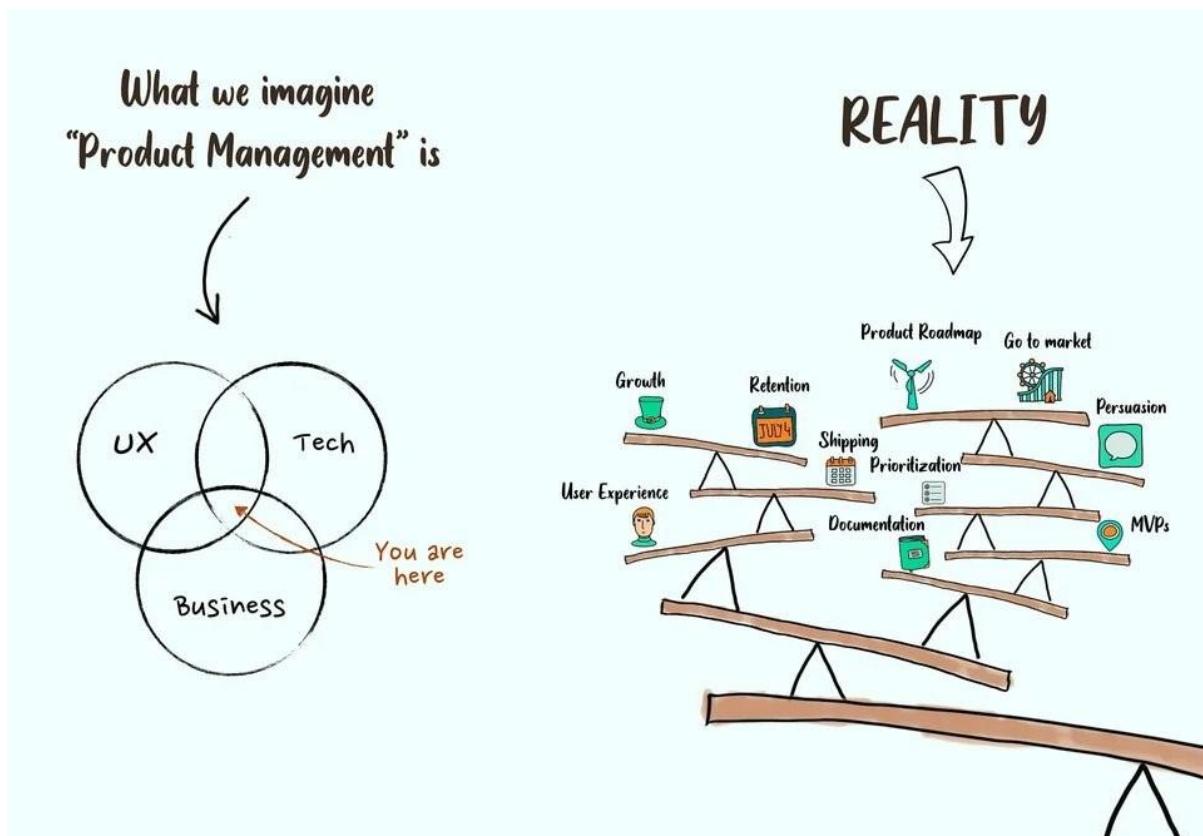


Introduction to Product Management

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?

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.

<p>Technologist</p> <p>Profile: Deeply technical</p> <p>Focus: Technology solutions</p> <p>Product: Back-end platforms or highly complex B2B products</p> <p>May take technological risks on “cool ideas” that aren’t tied to a metric</p>	<p>Generalist</p> <p>Profile: Technical depth and business savvy</p> <p>Focus: User delight</p> <p>Product: B2C products or front end for B2B products</p> <p>Measured by ability to drive end-user metrics</p>	<p>Business-oriented</p> <p>Profile: Business background</p> <p>Focus: Maximizing specific business metrics</p> <p>Product: B2C products that have another source for creative inputs</p>

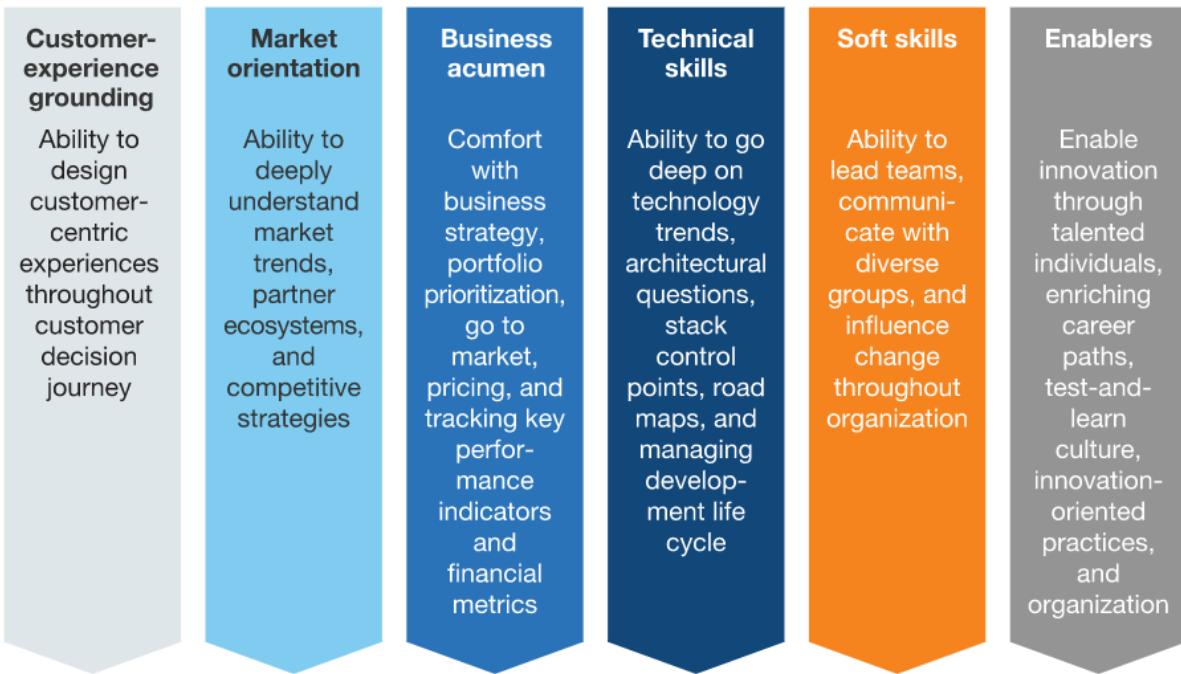


Some companies (such as Amazon and Alphabet) have a mix of archetypes, depending on specific product

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.



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- [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

Cloud Computing

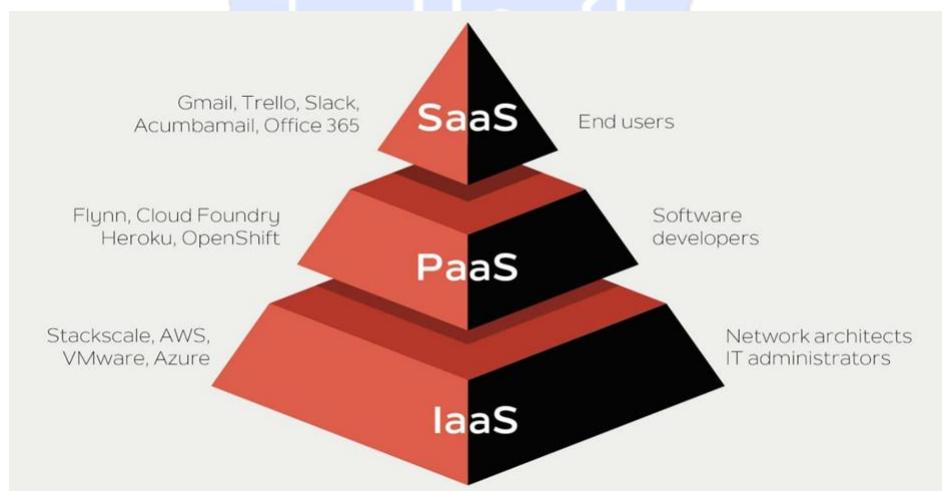
On-demand delivery of computing resources (data storage, servers, software, analytics & intelligence) over the Internet to offer faster innovation, flexible resources, and economies of scale.

Benefits of cloud computing:

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

Types of cloud computing:

- a. **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.
- b. **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.
- c. **Software as a Service (SaaS)** – focuses on the product's usability without looking at the underlying infrastructure or software.



More resources:

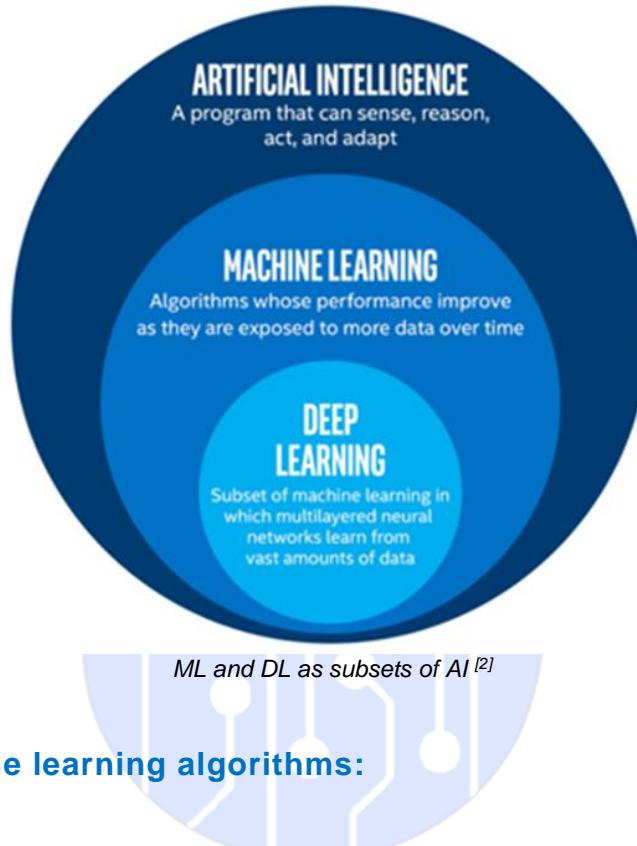
- Basic terminologies - [IBM](#), [Microsoft Azure](#)
- [Use cases & success stories](#)
- Brush-up videos – [Basics](#), [AWS](#)

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.

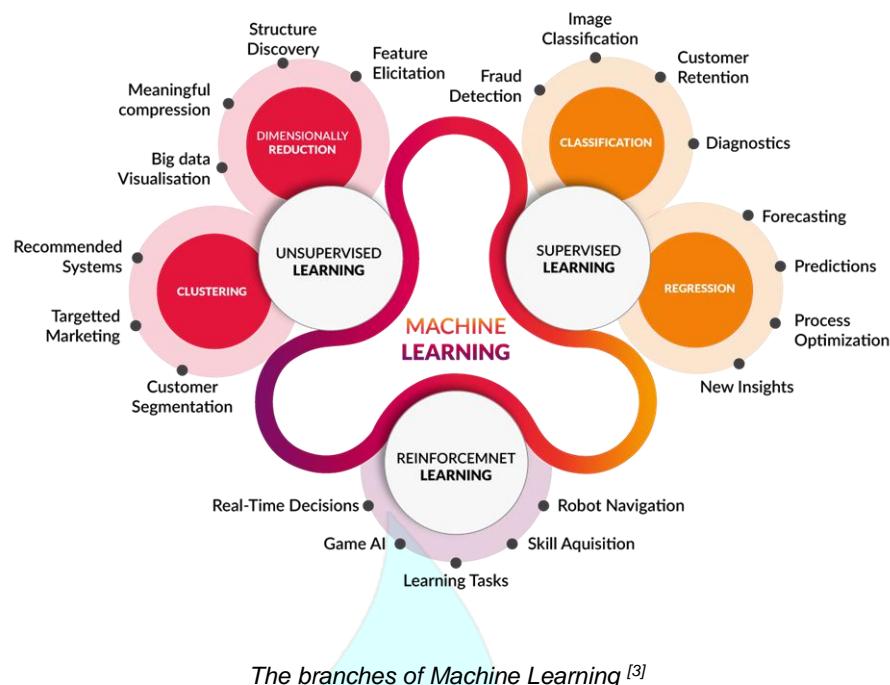
Deep Learning – a class of machine learning algorithms that uses multiple layers to extract higher-level features from the raw input progressively.



Types of machine learning algorithms:

- a. **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.
- b. **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.
- c. **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

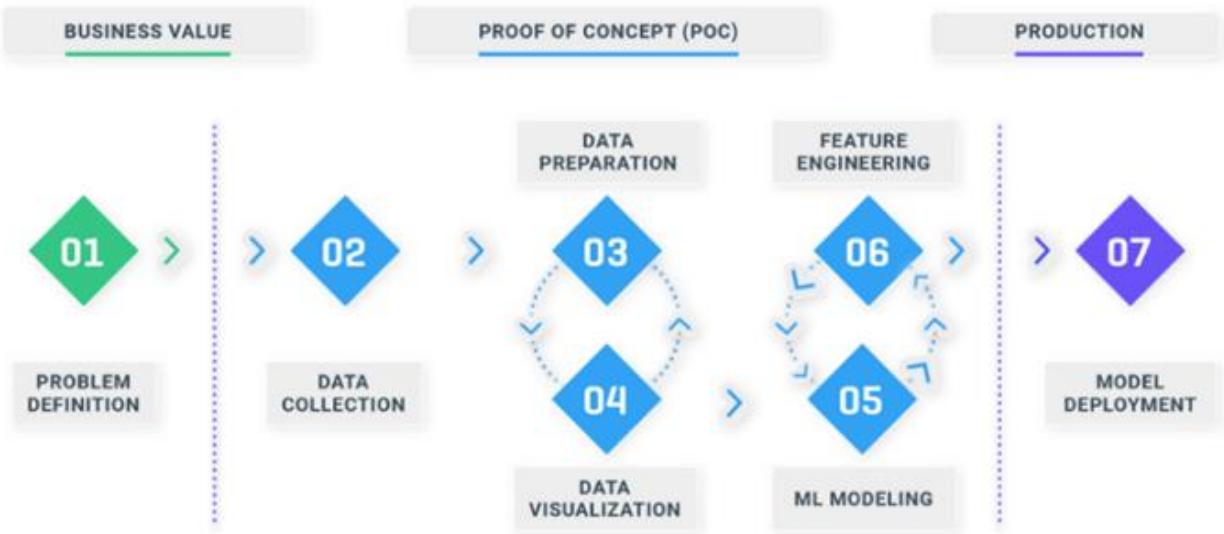
in industrial automation, RL is used to enable the robot to create an efficient adaptive control system that learns from its own experience and behavior.



The branches of Machine Learning [3]

Stages of machine learning model development:

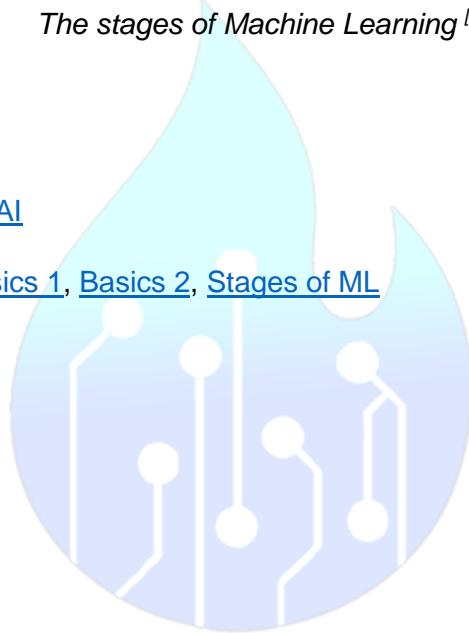
- Problem Definition** – Understand the reason behind developing the model and conducting the study. Ask the right questions and set measurable goals for the study.
- Data Collection** – Once the goal is finalized, collect data from various sources. One can use focus groups, surveys, and interviews to generate data. Additionally, there is publicly available data as well, which is generally accessible.
- 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.
- 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.
- 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.
- 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.
- 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]

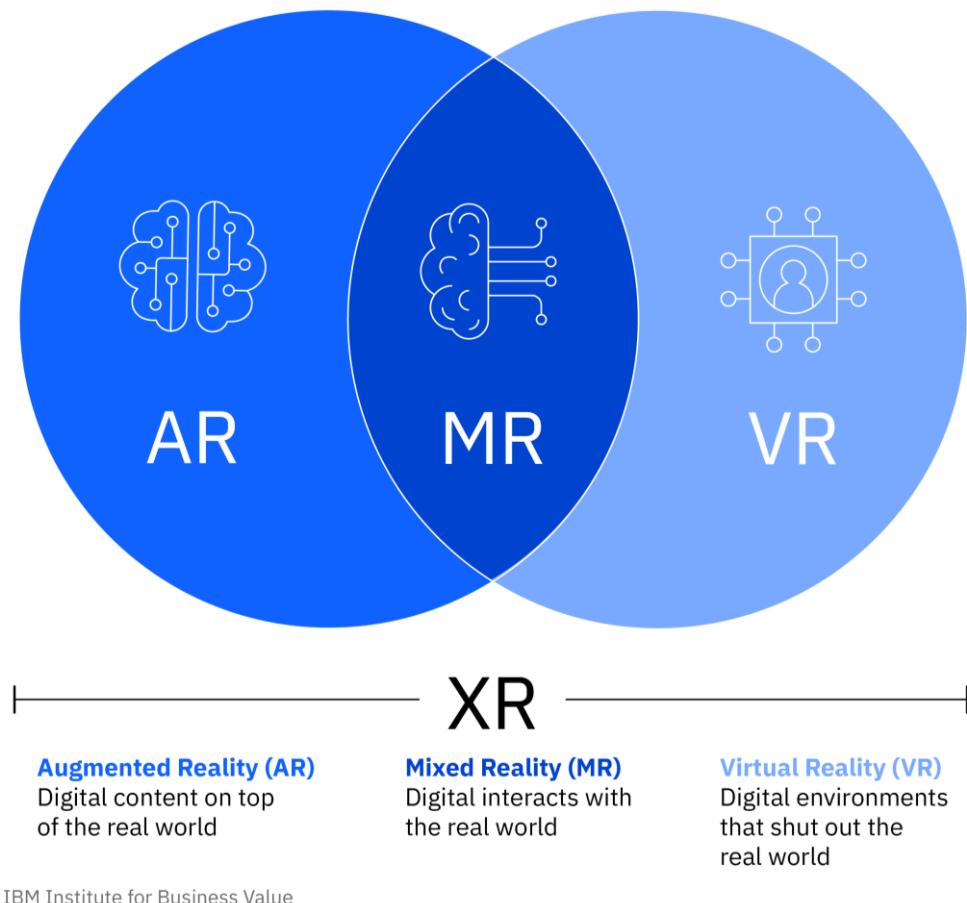
More resources:

- [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)

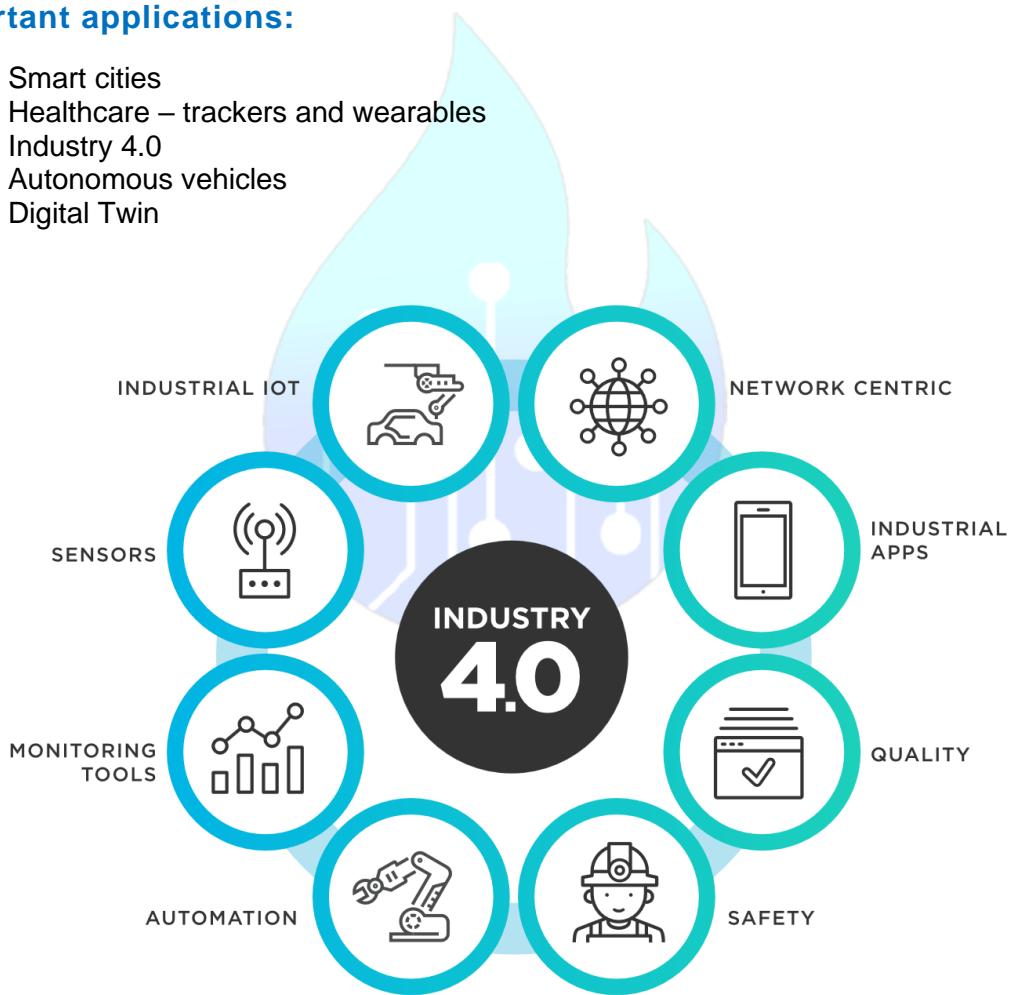
IoT is essentially a bunch of devices that are connected over any network. Widely regarded as the 4th stage of the industrial revolution, its significance grows with the rise in AI, ML, and big data analytics.

The IoT tech stack:

- a. 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.
- b. Device software – Primarily the operating system and the group of applications that connect with upper layers of the tech stack.
- c. 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.
- d. Data and Analytics – From the information from sensors, relevant data needs to be identified and structured before being processed.

Important applications:

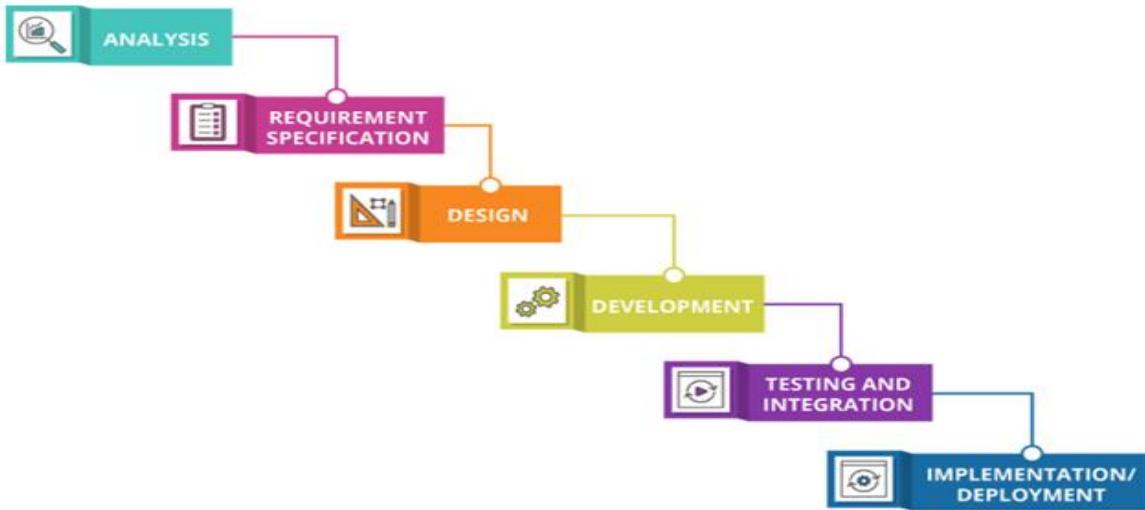
- a. Smart cities
- b. Healthcare – trackers and wearables
- c. Industry 4.0
- d. Autonomous vehicles
- e. Digital Twin



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:

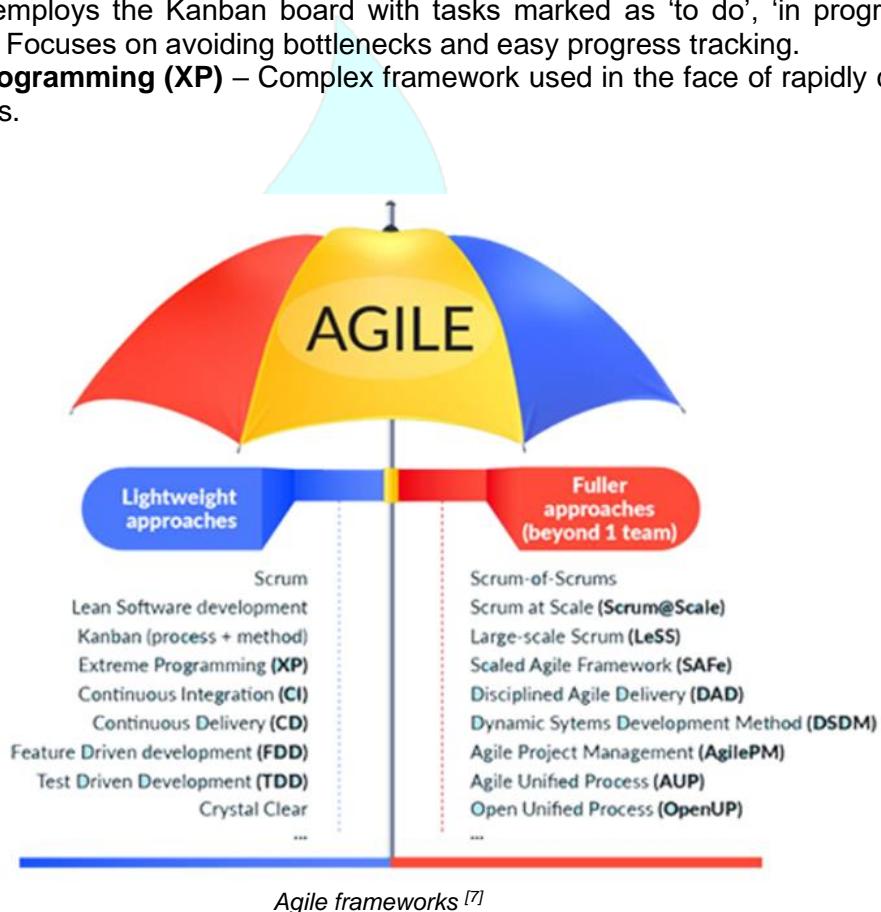
- a. The highest priority is to satisfy the customer through early, fast, and continuous delivery of valuable software.
- b. Changes are welcome till late in the development process.
- c. Businesses and developers must work hand-in-glove throughout the project.
- d. Invest in motivated individuals & 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

Popular agile frameworks:

- a. **Scrum** – a lightweight, easy-to-understand framework used to drive complex problems. Based on values of courage, focus, commitment, respect, and openness.
- b. **Kanban** – employs the Kanban board with tasks marked as 'to do', 'in progress' and 'completed'. Focuses on avoiding bottlenecks and easy progress tracking.
- c. **Extreme programming (XP)** – Complex framework used in the face of rapidly changing requirements.



Edge Computing

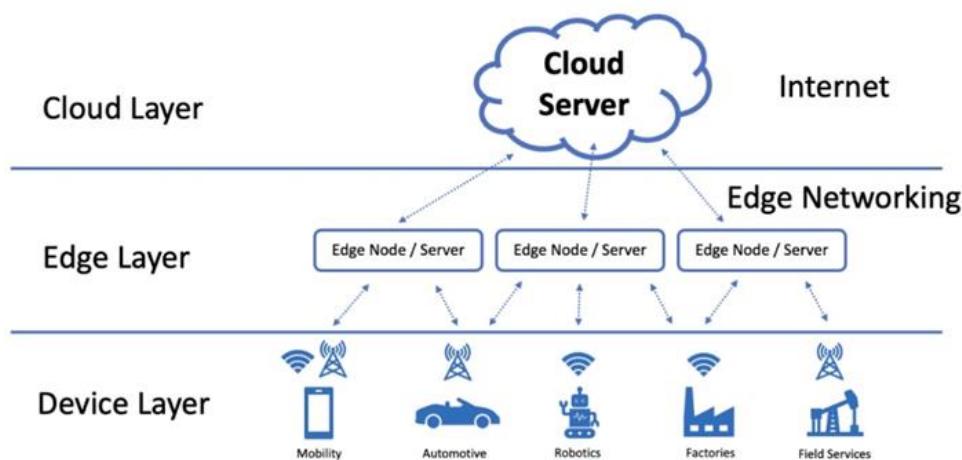
Edge computing is a decentralized computing architecture that brings computational power and data storage closer to the source of data generation or consumption. Instead of relying solely on centralized cloud infrastructure, edge computing leverages a network of distributed edge devices, such as routers,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

Advantages of Edge Computing:

- a. **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.
- b. **Enhanced Security** - Minimized exposure of sensitive data by keeping it within the local network, reducing the risk of data breaches or unauthorized access.
- c. **Bandwidth Optimization** - Edge computing offloads some of the processing tasks to local devices, optimizing bandwidth usage and reducing network congestion.
- d. **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:

- a. **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.
- b. **Autonomous Vehicles** - By processing sensor data locally, vehicles can respond rapidly to changing road conditions, improving safety and reliability.
- c. **Retail and E-commerce** - Processing customer data at the edge allows for real-time recommendations, inventory management, and streamlined checkout processes.
- d. **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.



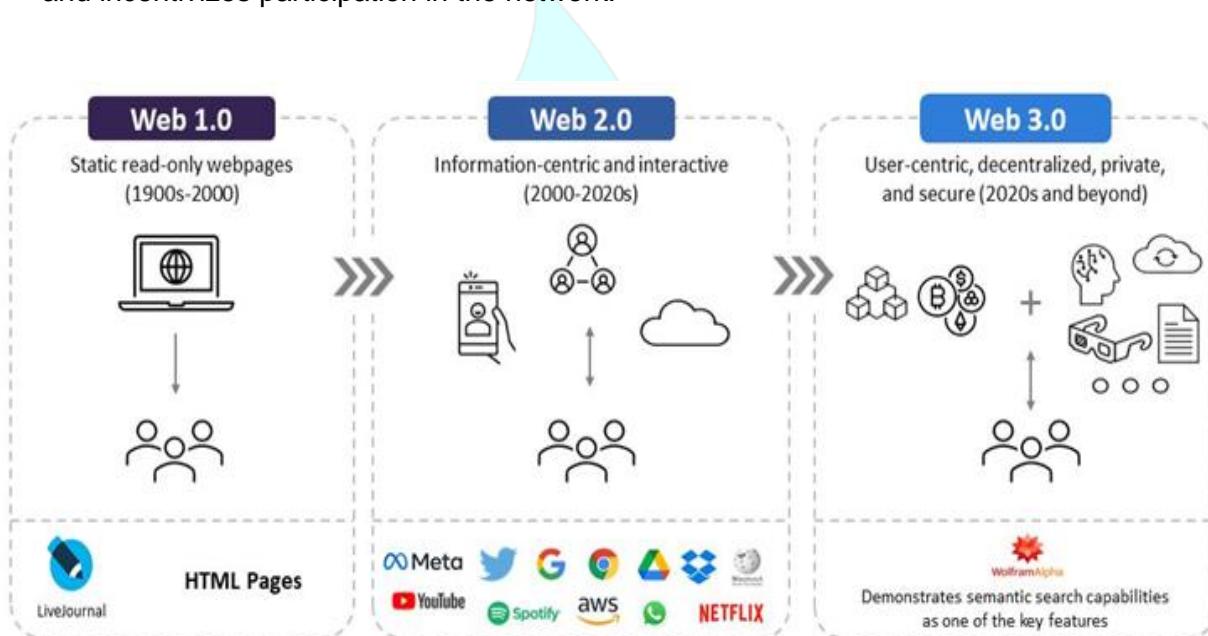
Simplified Edge Computing Architecture [8]

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:

- a. **Blockchain Technology** - At the core of Web3 is blockchain, a distributed ledger technology that enables transparent and tamper-proof record-keeping.
- b. **Smart Contracts** - Web3 relies on smart contracts enabling decentralized applications (DApps) to operate autonomously, without the need for intermediaries.
- c. **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.
- d. **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]

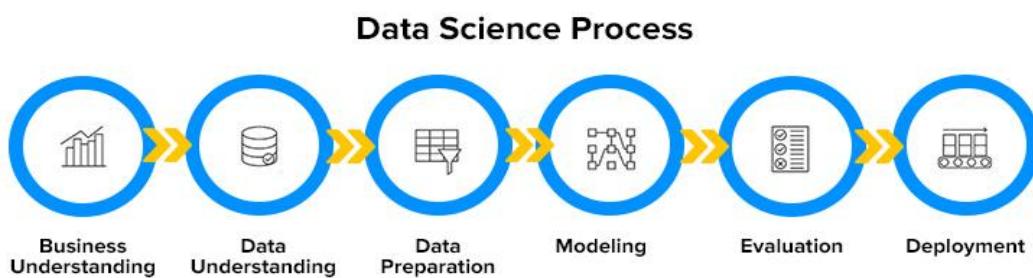
Data Analytics

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:

- a. **Data Collection** - Data analytics begins with the collection of relevant data from various sources, including databases, spreadsheets, APIs, sensors, social media, and more.
- b. **Data Cleaning and Preprocessing** - Handling missing values, removing duplicates, correcting errors from raw data and transforming data into a consistent format suitable for analysis.
- c. **Exploratory Data Analysis (EDA)** - Summarizing and visualizing data to gain initial insights using techniques like descriptive statistics, data visualization, and correlation analysis.
- d. **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.
- e. **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.
- f. **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:

- a. **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.
- b. **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.
- c. **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.
- d. **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:

- a. **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.
- b. **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.
- c. **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

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.

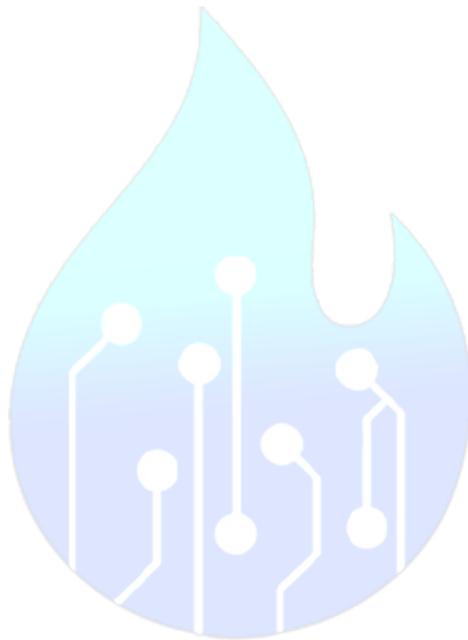
Inklings of the metaverse already exist in online game universes such as Fortnite, Minecraft and Roblox. And the companies behind those games have ambitions to be part of the evolution of the metaverse.

Read more here:

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

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- [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/>
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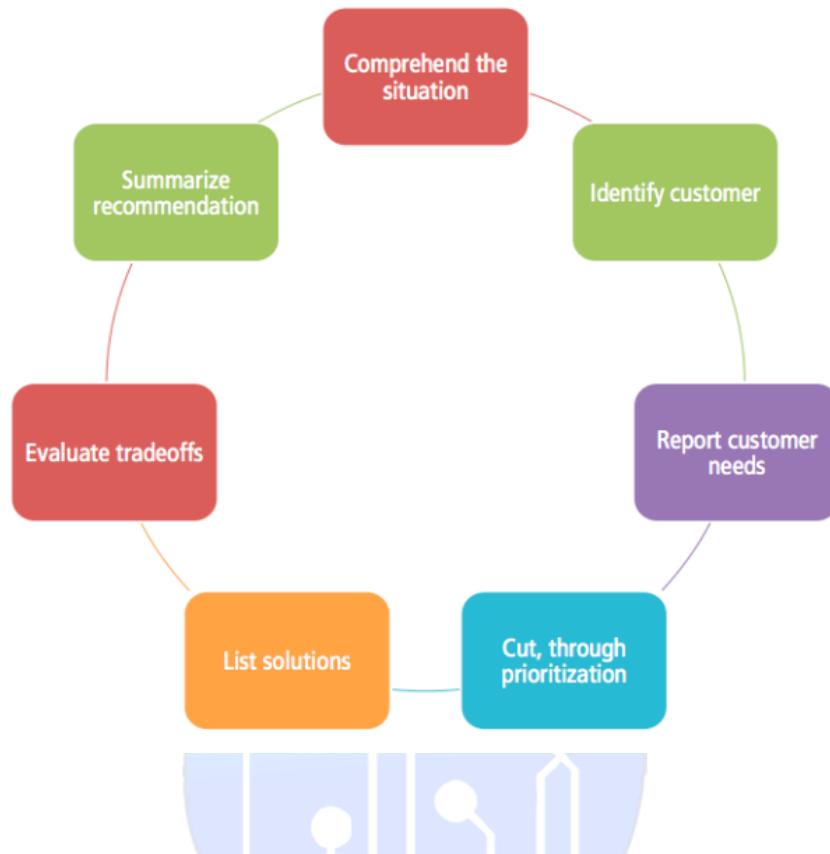




Product Design Frameworks

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	<p>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.</p> <p>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.</p>
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	<p>Translate the customer's needs into user requirements or use cases using the following format:</p> <p>As a <role>, I want <goal/desire> so that <benefit></p> <p>E.g., As a travelling reader, I want to write 500 words a day so that I can publish my memoir</p>
C	Cut, Through Prioritization	<p>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.</p> <p>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.</p>
L	List Solutions	<p>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.</p> <p>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.</p>
E	Evaluate Trade offs	<p>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.</p> <p>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.</p>
S	Summarize your recommendations	<p>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.</p>

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?

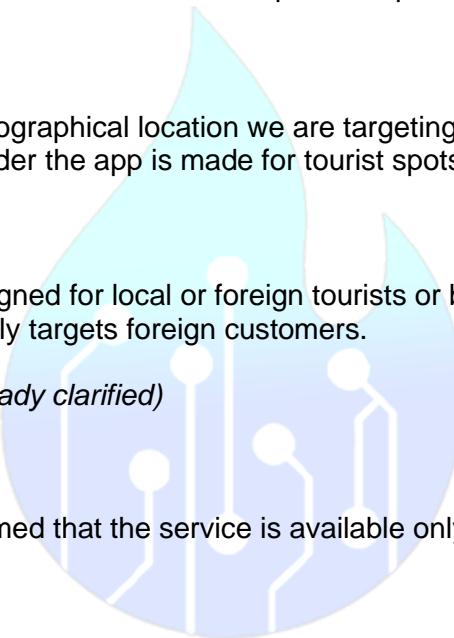
Interviewer: Just online payment.

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 Bellotti, 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 Bellotti: (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 would 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.

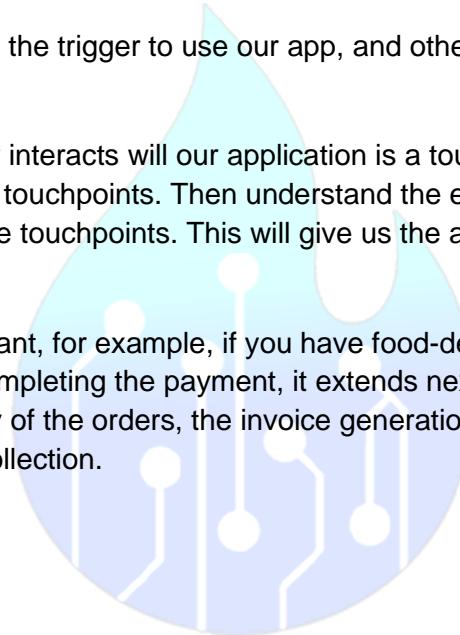
The user journey starts even before the user interacts with our application or product. And it also extends after the user needs are met. So, the total experience can be divided into

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 with 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.



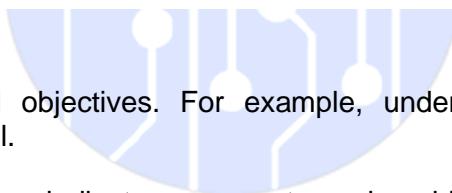
HEART

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
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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
<i>Lawyer case management portal (lawyer side App)</i>	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
<i>Lawyer description and area of expertise (Client side)</i>	High	High	Med-High	Low
<i>Pricing quotation (Client side)</i>	High	Med-High	Med	Med
<i>Requirement Posts (Client side)</i>	High	High	High	Low-Med

<i>Lawyer case management portal (Lawyer side)</i>	Med	Med	High	High
<i>See interested clients</i>	High	Med	Med	Low-Med
<i>Contact point</i>	High	High	Med-High	Med

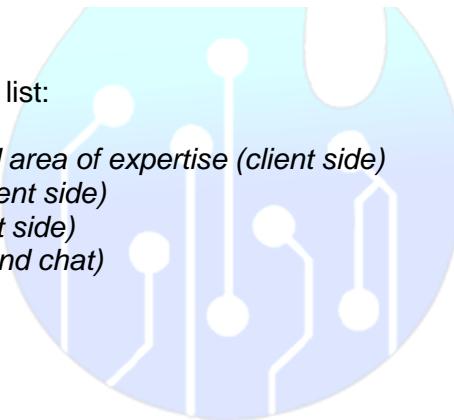
Now, Solutions with **HIGHER** values for Reach, Impact, and Confidence and **LOWER** values for Effort required make the highest priority solutions features.

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

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

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 pain 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 pain 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 pain 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

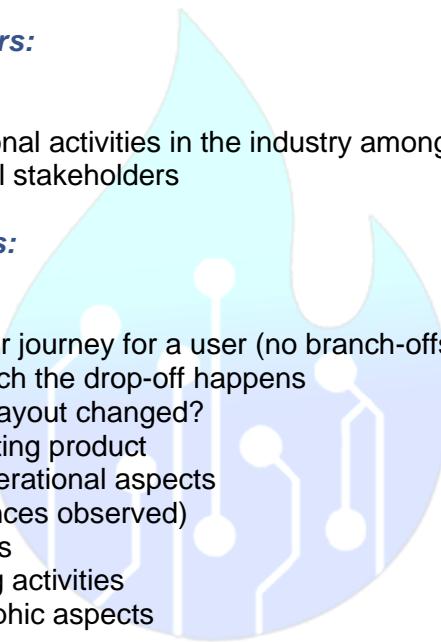
Internal and External factors

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-vuvmlro>
- <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	$10 \text{ lakhs} = 10^6$
1 crore	$100 \text{ lakhs} = 10^7$
1 billion	$1000 \text{ million} = 10^9$
1 trillion	$1000 \text{ billion} = 10^{12}$
	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

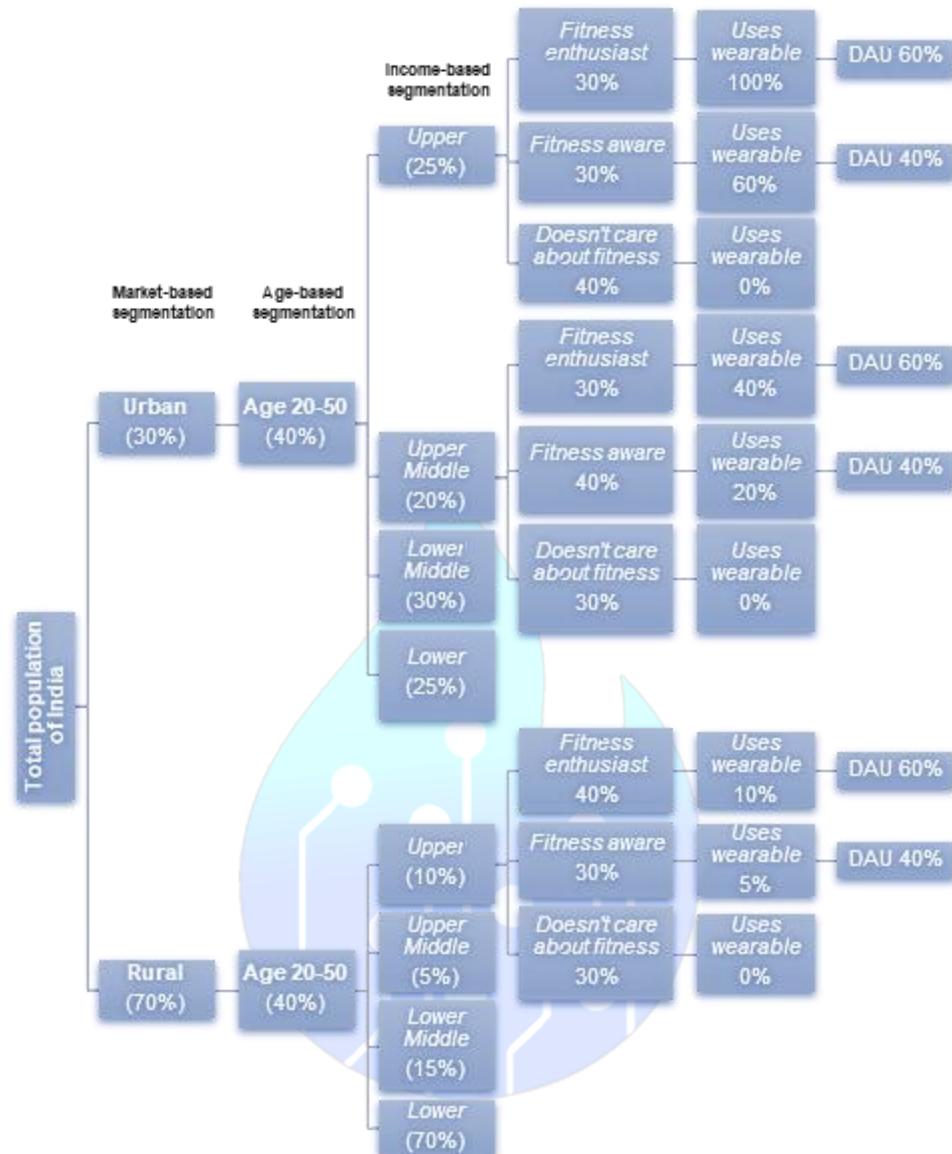
Example

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.

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.

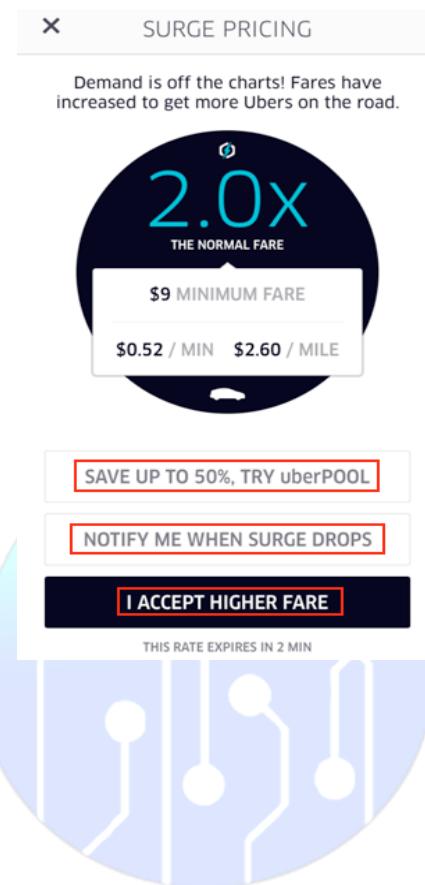
Good examples are:

- **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
Every meal is a tasty deal. Extra Value Meal™ From \$5	
	
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

Before we delve into understanding how to answer a metrics question in a Product Management Interview, let's understand what exactly metrics are and why it is so important.

Product metrics refer to measurable data points that a business monitors and analyzes to assess the effectiveness and performance of its product. They are important for various reasons -

1. **Performance Evaluation:** Product metrics provide objective data that allows businesses to evaluate how well their product is performing. By measuring key indicators, businesses can assess whether their product is meeting its goals and identify areas for improvement.
2. **Decision Making:** Metrics help in making informed decisions regarding the product. By analyzing metrics, businesses can identify trends, patterns, and customer preferences, enabling them to make data-driven decisions about product enhancements, pricing, marketing strategies, and resource allocation.
3. **Goal Tracking:** Metrics provide a way to track progress towards predefined goals. By setting specific metrics aligned with business objectives, organizations can monitor their product's performance over time and ensure they are on track to achieve their desired outcomes.
4. **Performance Comparison:** Metrics enable businesses to compare the performance of different products or versions. By measuring metrics across different products, businesses can identify the most successful offerings, understand customer preferences, and allocate resources effectively.
5. **Customer Insights:** Product metrics help in understanding customer behavior and preferences. By analyzing metrics related to customer usage, feedback, and satisfaction, businesses can gain valuable insights into how customers interact with the product, identify pain points, and make informed decisions to improve the customer experience.
6. **Iterative Improvement:** Metrics serve as a feedback mechanism for continuous improvement. By regularly monitoring and analyzing product metrics, businesses can identify areas of weakness or opportunities for optimization, leading to iterative product development and refinement.
7. **Accountability and Alignment:** Metrics provide a clear measure of success and hold teams accountable for their product's performance. By establishing metrics and tracking progress, businesses can align their teams towards common goals and ensure everyone is working towards improving the product's success.

With this let's begin to understand how we can answer a Metrics question in a product management interview.

These questions are asked either for a particular feature of a product or the product itself and these questions mainly assess your ability to measure the performance of the feature from various perspectives for various stakeholders such as the user, the firm, and the ecosystem. Usually there are three things to keep in mind while answering a metrics question - North Star Metric, Success Metrics and finally the customer funnel/journey. A **North Star Metric (NSM)** is a key performance indicator (KPI) that represents the core value a business delivers to its customers. It is a single, overarching metric that serves as the primary focus for the entire organization, aligning teams and guiding decision-making towards achieving long-term

success whereas success metric is a measurable data point used to assess the performance and achievement of specific goals or objectives. It quantifies the degree of success in reaching a desired outcome or milestone. Success metrics are typically specific, measurable, attainable, relevant, and time-bound (SMART) to provide clarity and focus in evaluating performance.

Here are broad steps on how you can answer a metrics question:

1. Explain the feature

Provide a clear understanding of the feature, its purpose, and how it addresses a particular problem. Seek clarification from the interviewer if needed to ensure a shared understanding of the feature.

2. Define the feature's goal

Identify the specific objective the feature aims to achieve. Keep the company's mission in mind when determining the goal. Sometimes there may be multiple goals associated with a feature.

3. Describe the customer journey

Outline the steps a customer goes through when interacting with the feature, starting from the beginning to the end. Demonstrate your comprehension of the customer experience and confirm with the interviewer if you've covered all the key stages.

4. Identify and quantify user behaviors

Map user behaviors within the customer journey that influence the achievement of the feature's goal. For each relevant phase, discuss scenarios and outcomes that impact the goal. Propose metrics to measure these behaviors and outcomes, indicating if they contribute to the goal or not.

The following is a compilation of all the phases a user may go through in their customer journey:

- **Awareness**
- **Acquisition**
- **Activation**
- **Engagement**
- **Retention**
- **Monetization**
- **Referral**

It's important to note that not all these phases may be applicable to the specific feature or goal being evaluated. For instance, if you are assessing the engagement of Facebook Likes, it is already known that only the engagement phase is relevant. In such cases, you need to select the pertinent phases for the feature under evaluation and devise appropriate metrics as you guide the interviewer through the user journey. For each relevant phase related to the feature being evaluated, you should address two aspects:

1. Discuss various scenarios within each step of the journey that impact the product/feature's goals.
2. Highlight metrics that quantify user behaviors and their outcomes, estimating their impact.

Now, let's examine each step of the customer journey in more detail-

Awareness:

Awareness marks the initial stage of the customer journey. If users are unaware of a feature's existence, they won't utilize it.

Metrics should be chosen to measure the level of awareness among users, assessing their knowledge and awareness of the feature. By examining the appropriate awareness metrics, you can determine how users become aware of the feature (e.g., the effectiveness of different channels in driving awareness) and potentially identify methods to enhance awareness.

For example, if you are evaluating the success of Facebook Groups, it is essential to measure the awareness level of Facebook Groups among Facebook users. Do users know about Facebook Groups, understand how they work, and comprehend the user flow for joining a Facebook Group?

Acquisition:

Acquisition represents users who are interested in using a feature and are willing to take actions to begin using it (e.g., sign up, click, download an app). It indicates the feature's success in capturing users' attention and their level of interest.

The metrics chosen for the acquisition phase should effectively measure the size of the opportunity.

In the case of Facebook Groups, solely considering the number of new Facebook Group users doesn't reveal the extent of user interest. However, metrics such as the number of new Facebook Group users, the percentage growth in new users, and the percentage of aware users who have been acquired can indicate the acquisition success of Facebook Groups.

Activation:

If acquired users are not converted into activated users, it suggests that highly interested users either face barriers or become discouraged from activating their accounts.

Activation has a specific meaning that is tailored to the feature or product being dealt with. For instance, activating a new online bank account might involve completing identification verification, making the first transaction, and setting up bill payment. Conversely, activation for a mobile accounting app could be as simple as user registration.

Note that in some cases, acquisition and activation can be combined into a single step. In the Facebook Group example mentioned earlier, as soon as a user joins a group, they are immediately activated.

The categorization of a user behavior into a specific phase of the customer journey depends on the behavior's context. For example, signing up might be considered an acquisition or activation activity depending on the specific context. In the online banking example, signing up is an acquisition activity, while for an online accounting website, signing up is seen as an activation activity.

Engagement:

User engagement is what makes new users valuable to the organization and the product's ecosystem.

Like activation, engagement metrics will be specific to the feature and its goals.

For the Facebook Group example, several metrics can be considered:

- Percentage of Facebook Group users that like posts in Facebook Groups
- Percentage of Facebook Group users who comment on Facebook Group posts.
- Average number of groups a Facebook user is a member of, and any changes in that number.

- Percentage of users who visit their Facebook Group pages within the last 30 days.
- Average number of comments per Facebook Group post per 1000 views, compared to user comments in other posts.

There are numerous other metrics that can indicate the level of engagement with Facebook Groups. Keep the feature's goal in mind and select the most relevant metrics.

Engagement can directly impact retention, as higher engagement generally leads to increased retention. For example, if you use your mobile banking app every day and actively engage with the provided services, you are more likely to remain a customer of the bank.

Retention:

Retention is highly significant since acquiring a new customer is often more challenging than retaining an existing one. The relevance of this phase depends on the feature, and in some cases, retention is a key driver of revenue. For service-based products like online travel websites (e.g., Expedia) or car-sharing apps (e.g., Uber), retention and repeat business are critical.

Metrics to consider for retention include the percentage or number of 30-day active users, the percentage of new users who repurchase, the distribution of ratings and user reviews, and product return rates.

Monetization:

Monetization metrics are particularly important for e-commerce websites (e.g., online travel booking platforms). However, not all new features are designed to drive revenue and may serve purposes other than generating income. Some features may focus on enhancing customer satisfaction, engaging with the core product, reducing customer support calls, or achieving other objectives unrelated to monetization.

If the monetization phase is relevant, some metrics to consider include average revenue per user, the percentage of paid users, average spending within a specific time, frequency of purchases, and revenue generated via ads.

Referral:

If users find a product valuable, they are more likely to refer it to their friends and family. Referrals are indicators of a feature's success and usefulness to users.

Metrics that can help measure referrals include the number and percentage of users who refer the product or feature, as well as the number and percentage of converted referrals.

5. Evaluate metrics

Assess the proposed metrics based on criteria such as reach, impact, confidence, and effort. Consider the number of people affected, the significance of the impact, your level of confidence in the estimates, and the effort required to measure each metric.

6. Prioritize metrics

Prioritize the metrics based on the evaluation results.

8. Summarize your response

Conclude your answer by providing a summary of the feature's goal and the key metrics you would use to measure its success.

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?

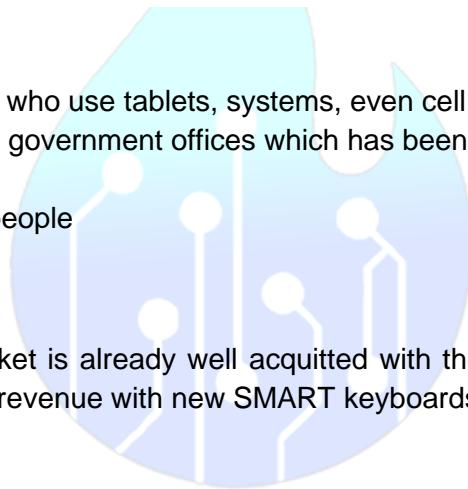
All

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 acquainted 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

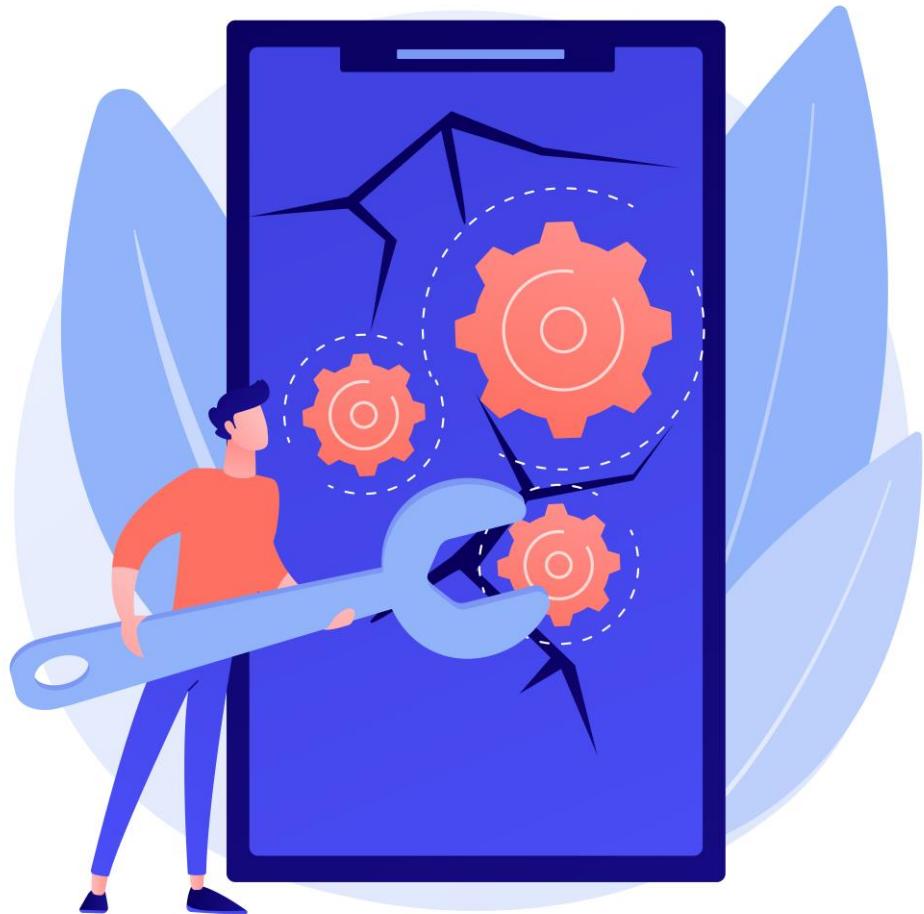
- Smart keyboard can be foldable device that can be easily accommodated in a purse or pocket.
- The user can use one uniform device to connect on cell phone, laptop, even smart watch, tablets.
- Keyboard can be voice controlled where instead of typing thru finger the voice command can be converted to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

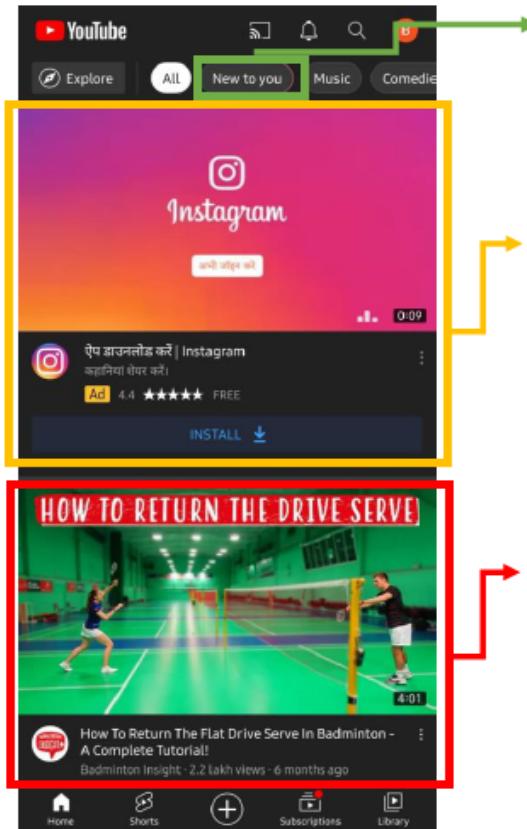
P3

- 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.



App Teardowns

YouTube



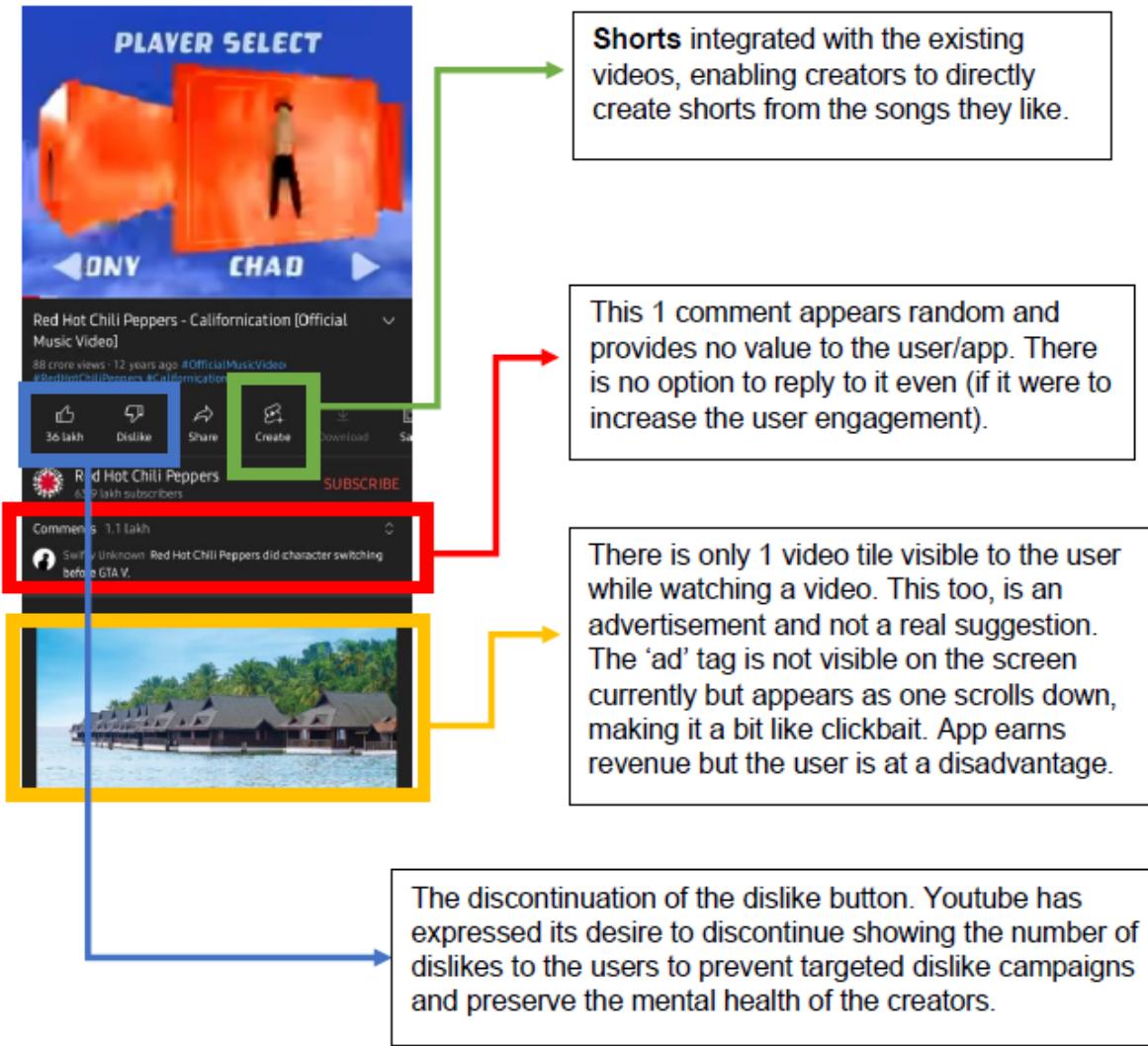
The “new to you” feature besides the explore section helps in keeping the feed fresh and lively. This helps in preventing attrition. User also has an option to move out of the repeated suggestions.

The huge advertisement takes up ~50% of screen space. While this helps YouTube to earn more advertisement revenue, the user stands at a disadvantage.

The wide tiles in the app take up space and only 1 suggestion is visible effectively at a time on the launch screen.

An option can be given to user to choose the layout on his launch screen. The advertisement thumbnail layouts can also be modified as per the home screen layout.

- **User persona:** There is no typical user persona. Almost everyone uses it. The app is seeing increasing users from teens and pre-teens category because of increasing digital penetration in the younger audience.
- YouTube (as a video aggregator service) is past its growth phase. The platform is now working on increasing user engagement, retention, and revenues.
- To increase engagement, an additional category of **YouTube shorts** (small length content) with a Fund of \$100 Mn set aside ~4 months back to market it. This feature is expected to compete with Instagram Reels, TikTok, and Snapchat. Although still nascent, it does not have visible “paid branding” tags like Instagram reels.



This general trend of decreased control for the user can also be seen in YouTube shorts, the wide tile structure of the feed, more ads etc. It shows a **general shift from pull to push marketing strategy**.

Few measures to increase revenue:

- Primarily, the revenue source is advertisements and subscriptions to YT premium.
- YT Music spun off as an offering competing with music streaming apps like Spotify, Amazon Music, Gaana etc. This has enabled YT to add a new revenue channel. Although, there is no link/prompt for its music service in the app
- YT has become a monopoly in customized, long-length video content. Therefore, user acquisition and content creator acquisition are not a priority now. So, it changed its revenue sharing model in mid-2021 to take control away from the content creators regarding the placement of ads. This led to more adverts and sometimes worse placed ads in the videos.

Amazon

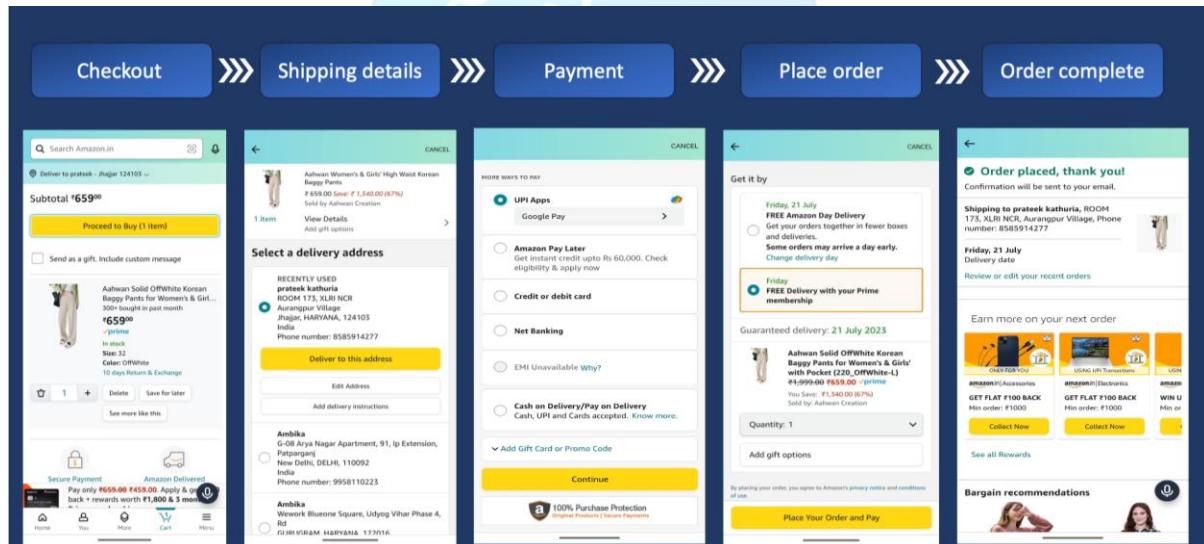
E-commerce talking points:

- The Indian E-commerce market is expected to grow to US\$ 200 billion by 2026 from US\$ 38.5 billion as of 2017.
- In India, cash on delivery is the most preferred payment method, accumulating 75% of the e-retail activities.
- In 2017, the largest e-commerce companies in India were Flipkart, Snapdeal and Amazon.
- In 2018, Amazon beat Flipkart and was recorded as the biggest e-commerce in India in terms of revenue.

User persona

Seller	Consumer	Delivery Executive
<ul style="list-style-type: none">Brands (e.g., Cloudtail)Shop ownersIndividual dealers	<ul style="list-style-type: none">Serious buyers (Lower cart abandonment rate)Casual buyersWindow shoppers (High cart abandonment rate)Offer seekers (High cart abandonment rates)	<ul style="list-style-type: none">Part-time delivery executive (can pick a time slot and deliver orders)Full-time delivery executive (can pick up orders throughout the day)

User Flow



A consumer typically goes through the following stages:

- Research/Browse - Surfing the platform to find the best-suited product
- Select – Pick an item of your choice after selecting the brand/colour/size/fit of your choice
- Schedule order and select relevant discount offers if applicable
- Place order - Make the final payment using an online payment gateway or choose COD.

Competitor Analysis

Features	Our Product	Direct	Indirect
	Amazon	Flipkart	Mynta
Customer Service	Best	Average	Good
Flight booking	Present	Present	Absent
Brand filters	Not user-friendly	Efficient and user-friendly	Efficient and user-friendly
Timed discounts/offers	Present	Absent	Absent
Return/Exchange Date	Customizable	Non-customizable	Non-customizable

Pain Points, Features, Metrics

Pain points:

- Research multiple products before buying
- new items do not have a lot of review and ratings.
- YouTube Reviews or google customer opinions about the product.
- How do you launch a product with 0 reviews, even when you know it's better than competition's?
- Products are found damaged leading to increased returns.
- Lack of proper sorting or filter tool

Metrics:

- *North Star metrics* - Number of purchases per month
- *Acquisition* – Cost of Acquiring Customer (CAC), Bounce Rate
- *Activation* - Shopping Cart Abandonment (SCA) or Abandonment Rate (AR), Time on Page, On-site Searches
- *Revenue* - Conversion Rate (CR), Monthly Recurring Revenue (MMR), Customer Lifetime Value (CLV), Average Order Value (AOV), Return Rate
- *Retention* - Churn Rate (CR), Retention Cost (RC), Repeat purchase rate

Features to remove:

As amazon is only known for shopping, we can remove amazon pay section and create a new app for it and provide an integration option.

1. Niche segment for big items
2. 2nd hand section

Unique features:

1. Amazon Pay
2. Amazon Prime – early delivery
3. Language compatibility
4. Flash Sales
5. Tile

New features Suggestions:

1. Amazon penny store
2. Social Shopping
3. Shoot unboxing
4. Shopping combos
5. Promote reviewers to create content on amazon
6. Niche segment for big items
7. 2nd hand section

Questions

You're a PM at Amazon. You found out on Monday that searches decreased by 10%. What would you do?

This is a typical question which could be asked for any product. The fundamental clarifying question would be:

- Clarify metric: Is the searches number per user or overall? Is this drop compared to the last day or average?
- Location: Is the drop in a specific region or globally?
- Time: Is this a sudden drop or incremental over a span? What is the fall compared to last Monday or last month?

Possible domains to investigate

- **Server issue:** Could be debugged further by checking the response time or load time.
- **Technical bug:** Primarily check by increased in issue counts or app store rating, or could be debugged by funnel approach of how user journey is & where the drop rate has increased.
- **Cannibalization:** Checking if a new feature is launched in the product, which could have affected the metric.
- **Competitor:** Check if the app opens or if the time spent on the app has reduced and if there are any updates in the competitors' app.

Suggest a new feature for Amazon?

This question could be asked differently to add a new feature. Framework to follow:

CIRCLES

- **Goal:** Increase revenue/converts (could be acquisition/activation/engagement)
- **Customer:** Frequent buying young female users interested in fashion and beauty products
- **Pain points:** Can't find or visualize perfectly matching products
- **Possible Solutions:** Club products and offer set (incl. making kit and jewellery). Create a customization dashboard to visualize products together.
- **Trade-offs:** Time spent on buying would increase, cart abandonment rate could go up.

How would you implement a new feature for Amazon?

This is generally a follow-up question after feature recommendation. Approach:

Pre-launch:

- Check the need and its ROI
- Check if the feature is available in the market and its impact
- Customer interview to get more insights

Launch:

- Design MVPs (could be a launching page, a blank button or partial implementation)
- Customer training
- A/B testing (decide your focus customer segment as the highly active users)
- Focus on acquisition and activation metrics

Post-launch:

- Focus on growth
- Retention, referrals and revenue metrics to be checked

Instagram

Business Objective

Acquire new users + drive more engagement from existing users + increase revenue from advertisements.

Videos:

- Reels - 30 secs: Can be considered TikTok of Instagram → Users can show Creativity.
- IGTV - 1 min or more: YouTube of Insta but with vertical orientation → Can be shared to Stories.
- Feed Video - up to 1 min: Upload the video as a post.

Chats:

- Simple messaging
- Form groups to message
- Create video chat rooms (latest feature)

Others:

- Photos
- Stories-Original/Reshare (Stay for 24 hours)
- Close Friends Feature for restricted sharing.
- Advertisements (via Business Accounts)
- Live Broadcasts (with Video feed)

Recent Feature Updates:

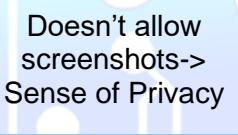
1. Live videos' time extended from 1 hour to 4 hours, owing to the content they have been creating during the COVID-19 lockdown period.
2. Updates in the chat section:
 - a. Option to change color for different chat windows- allows users to identify chats better.
 - b. Facebook Messenger and Instagram's DM section merged for cross-platform messaging.
 - c. React to a message with different emojis by long pressing a particular message.
 - d. Create selfie stickers and send your personalized stickers to people.
3. Updates in Reels
 - a. Businesses and creators will be able to tag products when they create Reels. Viewers can now tap a "View Products" button to buy, save or learn more about the featured products.
 - b. Creators can add a "Branded Content" tag to their Reels to be transparent about when they're working with a brand to promote their products, a form of paid promotion.
4. More on other Feature Changes: [Article 1](#), [Article 2](#), [Article 3](#) and [Article 4](#)

User Needs & Persona:

**Influencers are a sub-category within Content Creators

User Persona	Needs
Advertisers/Companies/Shops and Stores	Reach masses for professional purposes- paid advertisements, digital events, collect user opinions, direct engagement, reach maximum members in relevant audience
Influencers	show off creativity, endorse brands, and share life with a community of followers-get likes and comments
Content Creators	Show off creativity
Normal Users	Discuss daily life, share life with friends via photos and videos - get likes and comments, message directly or in groups, and share posts with

Competitor Analysis:

Instagram	Facebook	Snapchat	Twitter
Both professional and non-professional	Both professional and non-professional	non-professional	140 characters- Short and fast-paced environment
Tells # of active hours for each user		 Doesn't allow screenshots-> Sense of Privacy	
Sharing your best photos/product and videos with your followers for “interactive engagement.”	For example, connecting with friends, family, and community can be used for “long-term engagement.”		For example, sharing ideas, real-time information, and trending news can be used to build brand awareness.”
Gives insights from each Post for Business Account, Ad Shop Option			Ads more expensive than FB/Insta

For more on the competition: [Click Here](#) and [Here](#)

User Journey for Content Creator:

- Clicking a good picture → Applying filters and editing the pic right → Adding captions and hashtags → Post → Get likes and comments.
- Click a picture/Share a picture → Apply filter & edit → Add captions/hashtags/polls/questions/location/time/music → Story → Show for 24 hours.
- Your ID tagged in a story → Share the story to your profile.
- Create/upload a video → Reels for 30 secs (edit 30-second multi-clip videos with audio, effects, and new creative tools) OR IGTV (>1 min & <60 min) OR Feed Video (Up to 1 min)

Examples of Pain Points for Different Users:

1. For Regular Users:

- Pressure to produce witty/likeable captions for all their posts.
- Difficult to find a particular post on the second person's feed.

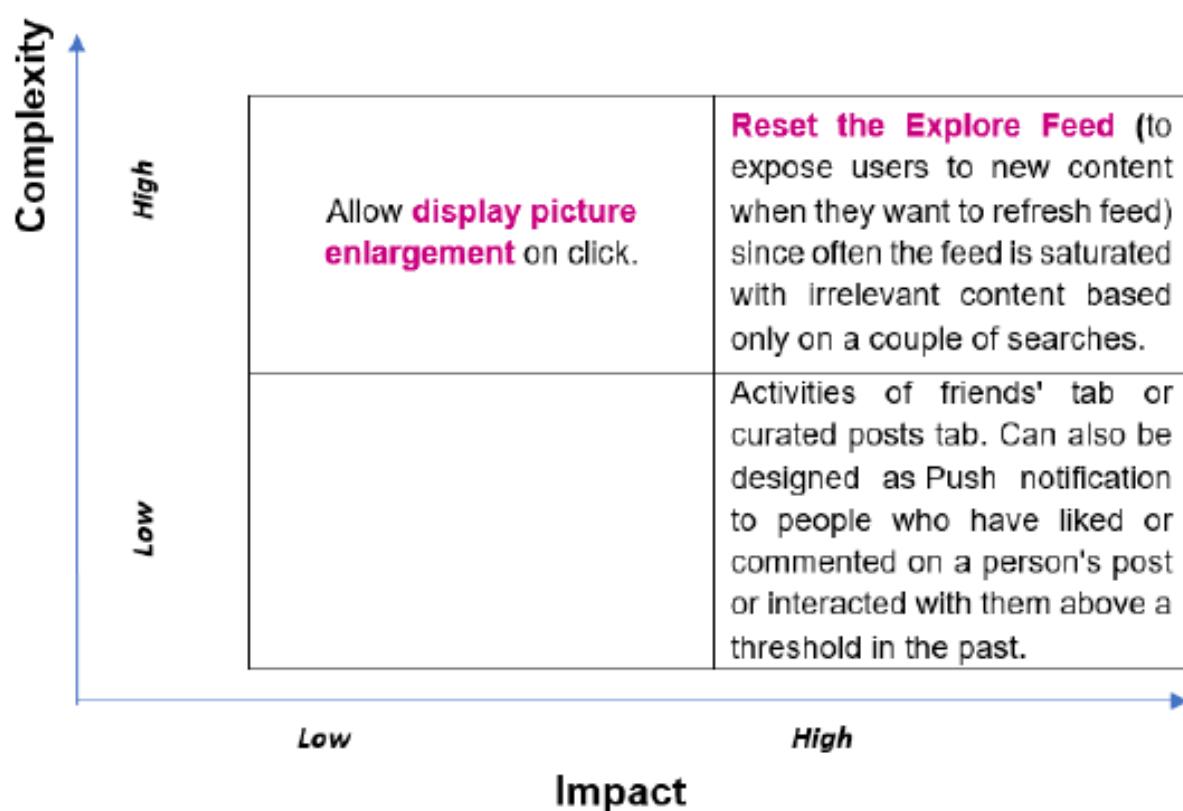
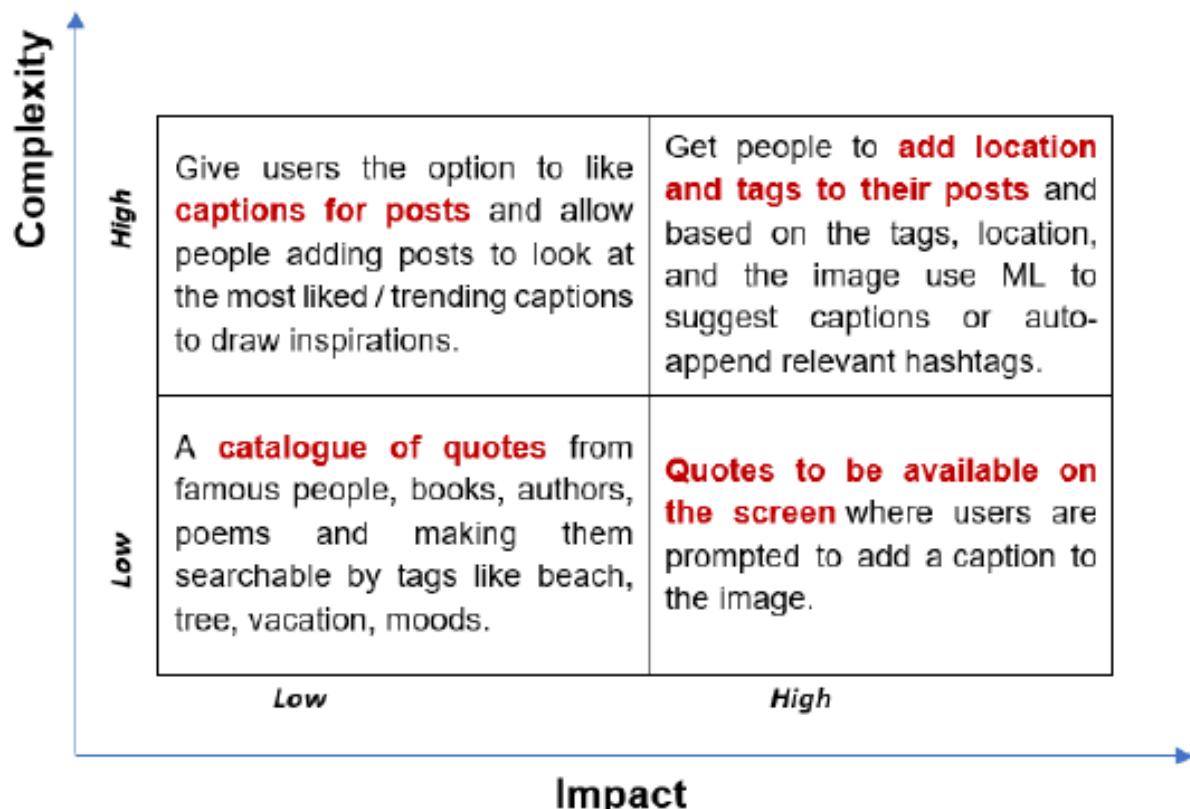
2. For Content Creators:

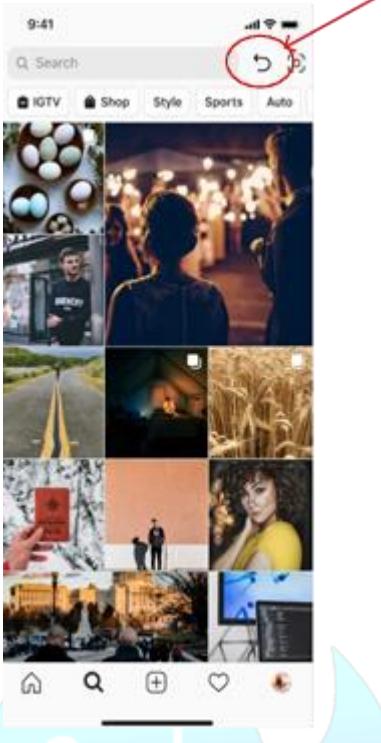
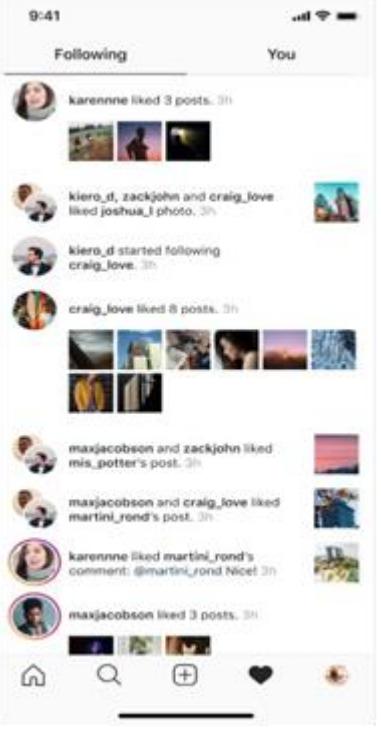
- Challenging to check updates of all followers if a particular follower likes multiple posts leading to an overflowing timeline with the posts.

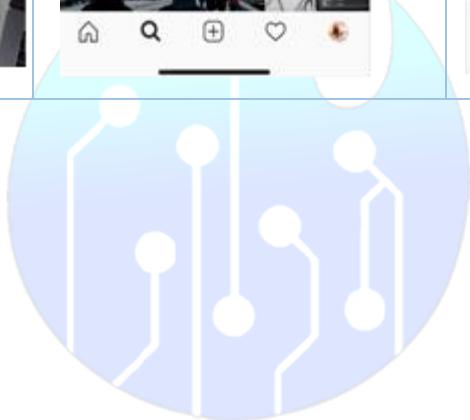
Assessment Metrics:

For General Users	Adoption Rate	By demographics, satisfaction with new feature retention
	Frequency of Use	Monthly Active Users (MAUs) and Daily Active Users (DAUs)
For Business Accounts	Adoption Rate	By demographics, size of business, by # of followers, category of business
	Map Engagement Numbers	Find the effect (increase/decrease) on # of engagement actions (dm/like/share/website clicks/ad clicks) due to the new feature - assess the long-term value offered
	Campaign Design	# of return users or first-time users, brand awareness, marketing expenditure allotted
	ROI Calculations	Cost Per Lead (CPL), Cost Per Acquisition (CPA or CAC), Return-on-Ad-Spend (ROAS), Average Order Value (AOV), Customer Lifetime Value (LTV), Lead-to-Close Ratio (LTCR)

Recommendations:



Display picture enlargement	Reset the Explore Feed Button	Activities of friends/curated posts tab
 <p>9:41 Signal WiFi Battery</p> <p>jennie_w ✓</p> <p>54 Posts 834 Followers 162 Following</p> <p>Jennie West Digital goodie designer @pixels Everything is designed.</p>	 <p>9:41 Signal WiFi Battery</p> <p>Q Search</p> <p>IGTV Shop Style Sports Auto</p> <p>The explore feed shows a grid of various photos and videos.</p>	 <p>9:41 Signal WiFi Battery</p> <p>Following You</p> <ul style="list-style-type: none"> karenne liked 3 posts. 3h  kiero_d, zackjohn and craig_love liked joshua_l photo. 3h  kiero_d started following craig_love. 3h  craig_love liked 8 posts. 3h  maxjacobson and zackjohn liked mis_potter's post. 3h  maxjacobson and craig_love liked martini_rond's post. 3h  karenne liked martini_rond's comment: @martini_rond Nice! 3h  maxjacobson liked 3 posts. 3h 



Microsoft Teams

About:

Microsoft Teams is a dedicated team chat and collaboration tool that helps teams stay connected and share information immediately.

Competitor analysis:

Competitor	Google Meets	Slack	Zoom
Pros	Easy-to-use interface Intuitive UI High value for money in premium versions	Unlike any email inbox, the conversations in slack are well-organized and occur within specialized spaces known as channels. Monopolized most businesses due to convenience. Has a Standard and a Plus version (pricing in line with Teams)	Intuitive Extremely easy to use; no need to be tech-savvy Focus on core functionalities
Cons	Inability to handle over a certain number of users. Bad optimization for video resolution. Grid view is a plug-in and not automatic.	Minimum file storage No video/audio meeting feature (Not considered in their business model)	Time limit restrictions Fear of Security breach

Video conferencing industry:



3 Key Video & Web Conferencing Statistics You Should Know

1 Top videoconferencing benefits

Source: Frost & Sullivan



2 Top barriers to wider end-user adoption of videoconferencing

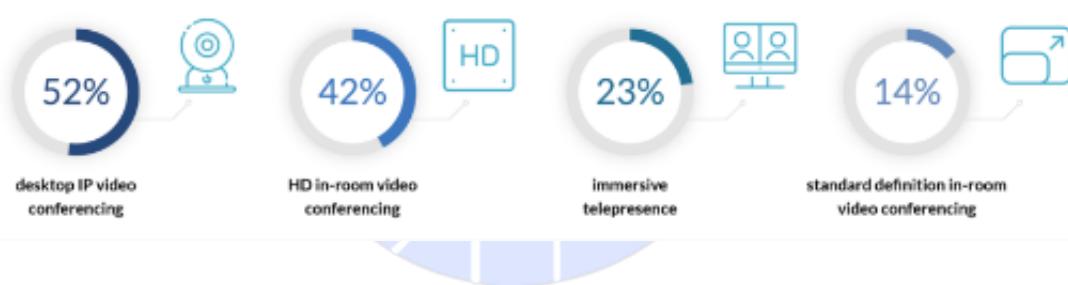
Source: Tech Radar



3 Most popular video technology expansions planned by companies

Source: Forrester

Ratio of companies considering a specific upgrade:



Customer Needs and complaints:

Delight:

1. High customizability
2. Tightly integrated with other Microsoft Teams apps
3. Plenty of different integration options and tools, especially with Outlook and OneNote
4. Included with Office 365 business account

Complaints:

1. Not fundamentally intuitive
2. Microsoft for education as a teaching platform is challenging to comprehend without a demo
3. Not as friendly to non-tech-savvy users

Recommendation and Product Improvements:

- **Edit:**
This feature allows users to edit the content being shared. For example, students can make real-time notes and mark essential points as and when shared. Users can download their annotated version of the shared content whenever required.
- **Download:**
Real-time download of content being displayed or streamed enables easy access and use.
- **Pause and Play:**
Currently, we can pause and play live streams (such as live sports) in real-time. Such a feature must include caveats on a time limit, a maximum of up to n minutes as set by the admin
- **Simpler UI:**
Depending on the user login – less cluttered and more sequential/intuitive

User Persona:

Meeting Hopper	Organizer	Jabber	Casualizer
High-frequency user, typically a senior level manager at a firm. Places special emphasis on reminders and notifications, quality video and audio streaming E.g., A 45-year-old senior manager handling a specific product	Majorly uses the application to store and organize documents. Usually prefers good third-party application (TPA) linkage and seamless online editing E.g., A mid-level software developer in a product	Inclined towards the chat feature and prefers apps that offer a smooth transition between instant messaging and simultaneous audio/video appointments. Values shortcuts in messaging and a good repository of emojis and creative media usage E.g., Specific, customized users	Recreational use of the video conferencing app, mainly to talk to friends, family and ex-colleagues. Low frequency of usage and usually value non-interruptive meetings E.g., Any age user who likes exploring and using different tech platforms

Business Model Canvas:



Netflix

User Journey/Case

Let's start with first understanding what the primary use cases these two products are trying to support are:

- User wants to watch a show or a movie.
- User needs to have a bunch of options to choose from and needs some basic info like IMDB rating and exciting trivia to make a final call.
- Users must watch a trailer to avoid switching to Netflix and going to YouTube.
- User wants to watch ad-free content and smooth streaming.
- The user wants to see what movie/show he was watching earlier to continue in the future.

Basic Features:

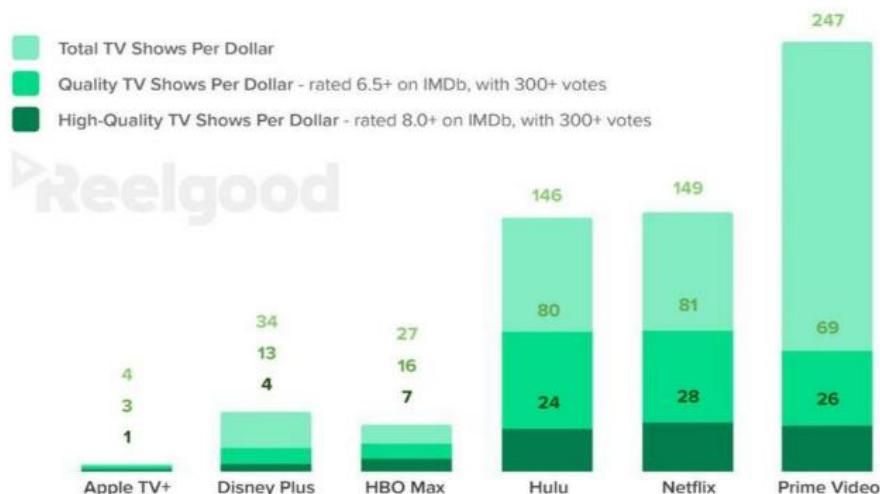
- Set up multiple accounts
- Watch multiple shows at the same time
- Parental Control
- Adding shows to your list
- Rating shows
- Turn off autoplay
- Skip Intro/show theme
- Limiting your data use | Downloading shows | Wi-fi only downloads
- Watching Ultra HD 4K content, HDR content, Dolby Vision content, virtual reality content
- Language, Subtitle options

Unique Differentiators:

- Can Fast Forward movie/show
- Search option is very smooth and interactive
- Customised thumbnail according to viewing history

HOW MANY TV SHOWS DO YOU GET PER DOLLAR?

*based on U.S. catalog data from Reelgood and monthly streaming service costs as of June 1, 2020



	Netflix	Prime Video
Number of movies*	3,751	22,876
Number of shows*	1,569	1,984
Movies in IMDb Top 250	33	21
TV Shows in IMDb Top 250	69	47

Competitor Analysis:

Content Wise:

Prime has Quantity, but Netflix has Quality. Prime has 5x content compared to Netflix but lacks quality.

Trivia

Amazon Prime search recommends shows that don't even exist on Prime. Such blunders turn off the viewing experience.

Monetization models

- Ad-supported free content - (Netflix - No, Disney+ - Yes, Prime - No)
- Subscription (monthly & yearly) - (Netflix - Yes, Disney+ - Yes, Prime - Yes)
- Subscription (yearly only) - (Netflix - No, Disney+ - No, Prime - Yes)

Value Wise

Pricing - Monthly		
Type	Screens	Netflix
Mobile - 480p	1	₹ 199
Basic - 480p	1	₹ 499
Standard - 1080p	2	₹ 649
Premium - 4K+HDR	4	₹ 799

Amazon Prime: ₹129 monthly & ₹999 yearly

Disney+: VIP plan at ₹399 yearly & Premium plan at ₹1499 yearly

ZEE5: ₹99 monthly & ₹999 yearly

Success Metrics:

1. **Bit Rate & Play Rate** - A video with a higher-than-average bit rate typically means a higher resolution (quality) image. This means bit rate helps identify the number of bits of a video that can be transmitted over a certain period of time. An HDTV typically transmits between a bit rate of 8–15 Mbps, while for Netflix, it's 6 Mbps.
2. **Filling In the Buffer** - The time one spends buffering when a video begins is critical. This helps you understand the duration of time a user waits before a particular video actually starts to play.
3. **Post-Buffer Lag Length** - The time you spend while the video buffers until it begins to play, is together known as lag length. This metric helps you understand users' experience when they start watching a video.
4. **Play Length of Video** - This metric is equally vital in understanding and planning the infrastructure and capacity intake for streaming. With play length, you can make a rough estimate of the overall demand for the streamed data.
5. **Lag Ratio of Video** - Waiting time is technically called lag ratio, which is measured by calculating the overall waiting time in the video over the time spent watching the video. The lag ratio is never zero because the initial buffer fill that comes before the video plays remains, even if there is never a single buffer through the video.
Example: Three minutes of buffer time leads to a 2.5 percent lag ratio.

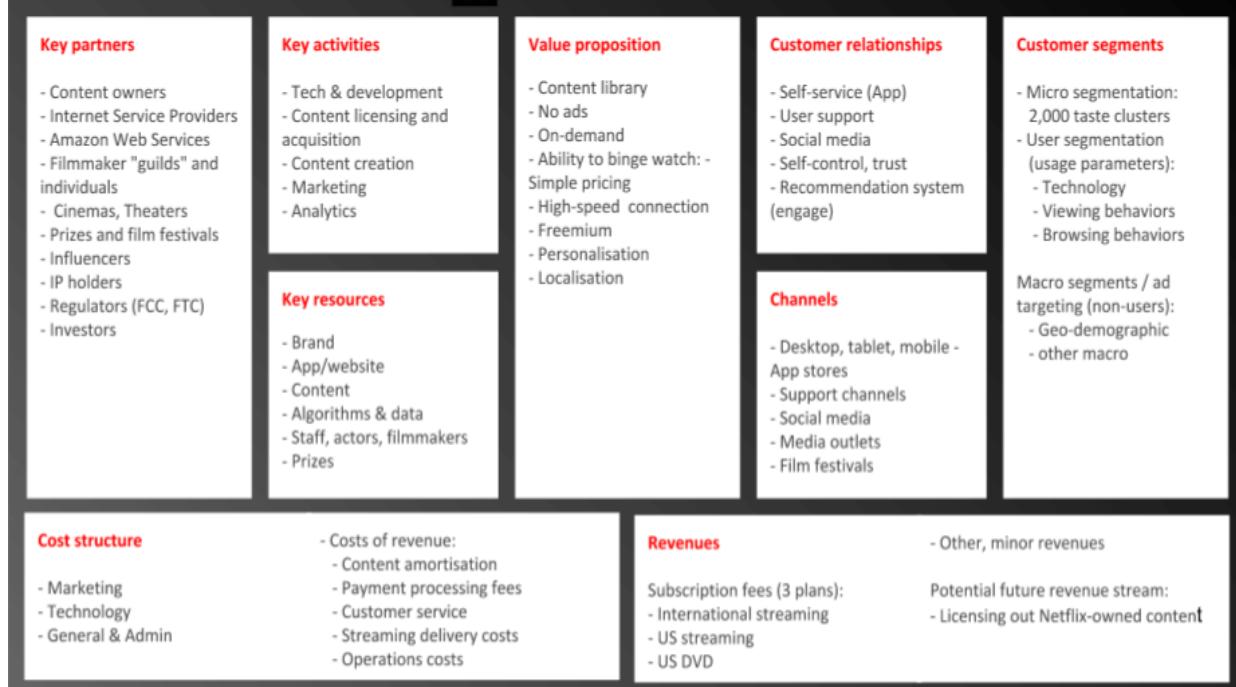
Recommended Features:

1. Let users subscribe to part of the Netflix collection (*High Impact, Medium Effort*)
 - a. Allow the user to choose and pay only for genres I am interested in.
 - b. Give the user an option to choose languages I am interested in
2. Let user rent/buy a single move/series (*Medium Impact, Medium Effort*)
3. Trial Option (*Low Impact, Medium Effort*)
 - a. Give the user an option to watch one or two episodes before he subscribes to content
4. Give the user an option to subscribe for their own flexible time (*High Impact, Medium Effort*)
 - a. Subscribe for 2 days/7 days.
 - b. Give the user a weekend option (8 days a month, i.e., 4 weekends a month).
5. Adopt the new payment methodologies like UPI (pre-paid) than credit card/debit card (*Medium Impact, Medium Effort*)

Success-Metrics:

1. Number of paying customers in a month
2. Number of paying customers by a different category
3. Paid for part of a collection
4. Paid for just one movie (etc.)
5. Paid for time-based subscription
6. Number of users who used the trial option but did not convert.

Business Model Canvas Netflix



Example

How to increase engagement on Netflix?

Goal for Improvement:

To increase engagement on the platform and make people spend more time watching content on the platform



Users Persona:

1. Baby Boomers
2. Millennials
3. Post Millennials

Millennials and Post Millennials are more active on the platform. So, I would pick these sets of users.

Behaviors and Pain-points:

1. The millennials and post-millennials are more active on social media. They are more used to the social nature of different apps where you share photos and media with other people. We can add this social angle to Netflix to help users discover more content to watch. They are likelier to trust and watch their friends' movies/show recommendations. These users also like a sense of competition.
2. One more behaviour I can think of is some users would often request someone to share their recommended list of movies/shows to watch. They share these over messages on WhatsApp or Facebook. There is no way in Netflix to do this.

Some improvements:

Allow users to connect their Facebook or Google account with Netflix and add friends.

1. Recommend/ Share a movie/ Show to a friend

Now, these friends can immediately share or recommend a movie which users can add to their watch list. A new section, “Recommended by Friends”, would appear on the home page. The recommendation would also appear in the notifications.

2. Video Lists

Users can create video lists based on different criteria: it can be based on genre, movies/shows to watch with kids, movies/shows to watch alone etc., top-rated movies, top-rated shows, binge-worthy shows/movies etc. They can make these lists visible to their friends by sharing them. The friends can see these lists and add the whole list or some of the movies to their own watchlists. The users can also make these lists public, and people can see a new section called “Lists”. The users can see the lists from their friends and other users.

3. Add these sections on the home page

- Top 10 Shows watched by their friends this week.
- Top 10 Movies watched by their friends this week
- We are more likely to watch and like similar content to our friends

4. Points/Badges System

Users would be given different badges based on the points they accumulate

- When they watch other movies or shows from various genres.
- When their friends watch a show/movie recommended by them and like it.
- When friends add movies to their list from their lists of movies.
- When other users add movies/shows to their list

I would prioritise as follows based on impact vs effort:

3 > 1 > 2 > 4

Success Metrics

1. Number of recommendations per user per week
2. % of this recommended content watched per week
3. Time spent on the platform post-launch of this feature
4. Number of lists created and shared per user per week
5. Average minutes of content per list
6. Number of lists browsed per user per week
7. Minutes of content watched from these lists per week

To summarise, we can add the social angle to Netflix by allowing users to connect their Facebook or Google accounts and add friends. By making users share content with each other and creating watch lists, we can help them discover content to watch. By adding a badges/points system, we gamify the experience and make them watch content even more.

Swiggy

Overview

- Founded in 2014, achieved 'unicorn' status and is valued at \$ 3.6 billion.
- Founders: Sriharsha Majety, Nandan Reddy and Rahul Jaimani.
- Acquisitions: 48East, Suprdaily, Scootsy and Kint.
- India's online food delivery market is expected to generate a revenue of Rs. 1,335 billion and reach 300 million+ users by 2024 with a CAGR of 30.55% between 2020-2024.

Swiggy Business Model



Competitor Analysis:

Swiggy	Zomato
60% market share	55% market share
Swiggy Genie (New)	Zomato Gold (New)
Partnered with Netflix to show trailers	Can view menus, reviews, ratings, pictures, etc.
1.5 million orders/day	1.2 orders / day

User Personas:

- Lazy Foodies - Customers who want to explore food but don't want to eat out. Foodie who wants to experience different cuisines at home/ trending items. Prefers ordering food
- Bachelors - Bachelors who don't have maids to cook food - prefer to order from food delivery apps
- Socializers - Get together at home and order from an app
- Office Lunchtime – People looking for a quick meal/ package/ thali during office lunch hours.
- Late night Workers - Working class late from the office and don't have time to cook
- Budget - Value customers looking for offers/ discounts
- Specialists - Specific food/ cuisine/ dish lovers (Biryani, Pizza, Desserts, Donuts, Ice Cream, Shawarma, etc.)

User Journey:

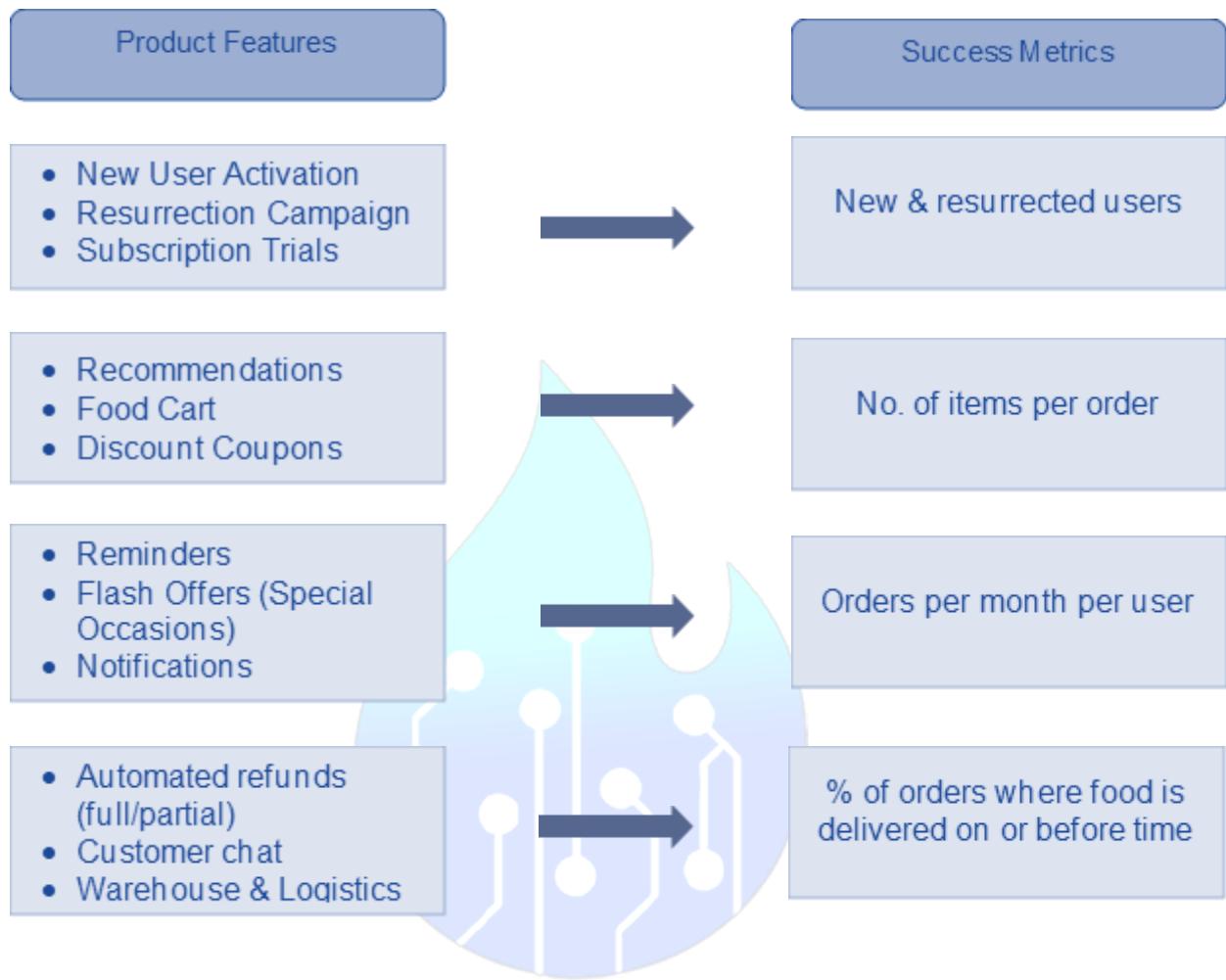


Pain Points:

- Delivery times get changed (Notifications are sent that the delivery executive is running late, or the restaurant is running busy).
- Delivery executives ask for extra money when the wait is longer or the location you entered is incorrect.
- Delivery executives not adhering to COVID-19 precautions.
- GPS tracking of delivery executives doesn't frequently update to show the correct location in real-time.
- The orders are often poorly packaged.
- The problem of plenty. The choice of a lot of restaurants to order from, at times, can confuse the users.
- The menu of the restaurants is not well organized and sometimes requires a lot of scrolling to reach the preferred items. It lacks any options for filtering.
- The option to apply coupons does not show the coupons outside; the user needs to click on it to view coupons and use them.

- It should also save the instructions for recurring orders and suggest them or show them in the recommendation.

Product Features & Success Metrics



Recommended Features:

1. Add filters to the menus of the restaurants. When viewing the list of food items for a restaurant, there can be a primary filter to sort out the items. E.g., a filter that sorts items based on price, servings, etc.
2. Although Swiggy shows the ratings, there is no option to collect or view ratings for a restaurant. A feature like this can help users get more information about the restaurants. Zomato has both reviews and ratings.
3. Social media features to see what friends are eating and where they are ordering. The idea is to engage more people on the platform. When a user goes to a particular restaurant page, it can show the name of their friends and their respective ratings for that place. This can help to increase the popularity of some food items as well as some restaurants, which will lead to more orders. Another way can be to have a dedicated social media section where the restaurants and users can post pictures and updates in a similar fashion to what Magicpin has done.

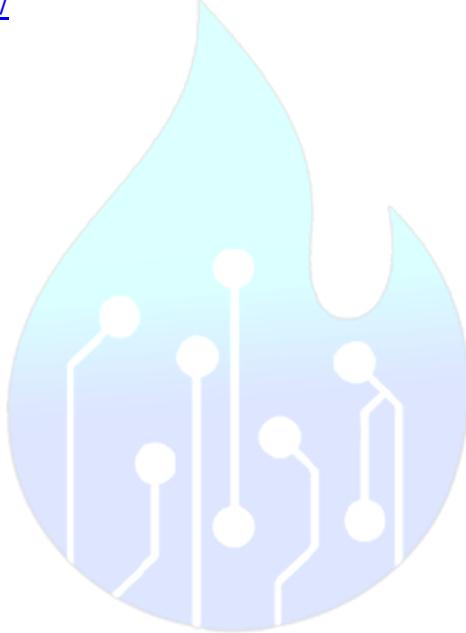
4. Swiggy can include gamification in the process and get users to play games and quizzes, for which they will get discounts or some credit in the form of Swiggy Money.

Swiggy Genie:

Swiggy Genie is a section within the Swiggy app that lets you either transfer items between two locations or deliver items like groceries, flowers, etc., to your home. It competes with Dunzo as well as traditional players like Grofers, Big Basket, etc. It operates in the hyperlocal delivery space.

For more information, you can view the following articles:

- <https://uxplanet.org/a-ux-case-study-on-swiggy-genie-5f463da8aa04>
- <https://medium.com/swiggydesign/swiggy-genie-the-design-story-e18a763717a1>
- <https://inc42.com/buzz/swiggy-goes-dunzo-way-expands-grocery-delivery-rebrands-swiggy-go-to-genie/>



Uber

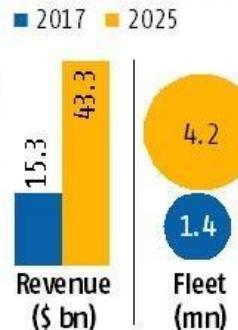
Overview:

- The global ride-hailing service market is projected to reach \$126,521.2 million by 2025.
- In India, the Ride-Hailing & Taxi segment is projected to grow at a CAGR of 22.9% between 2020-25, resulting in a projected market volume of US\$55,364 mil by 2025.
- In India, Uber claimed the majority share in Feb 2020, commanding more than 50% of the market.
- Uber sold its food-delivery division to Zomato for about 180 million USD, cutting off a cash-burn business

MARKET POTENTIAL FROM KEY MOBILITY CLUSTER IN INDIA

	Value (\$ billion)	
	2018	2030
Traditional carsharing	0.069	0.592
P2P carsharing	0.007	0.298
Corporate sharing	0	0.172
Dynamic shuttle	0.132	23.626
MaaS	0	3.356
Taxi services	15.39	61.66
Total	15.598	89.704

RIDEHAILING IN INDIA: A SNAPSHOT



Source: Frost & Sullivan

User Personas:

- Basic commute – Generic proposition
- Getting more – Convenience (Working moms, After-party travel)
- Treating oneself – Going on a date, need a chauffeur
- Weekend getaways – Renting a car for longer periods (one or more days)
- Sharing experiences – Pooling, sharing rides with friends

User Journey:

A consumer typically goes through the following stages:

- Set destination – Entering a location or using the pin to mark the drop location. Pickup is assumed to be the current GPS location of the device and can be changed as per need.
- Select Car type – Picking the car type (Go, Pool, Premier, XL, Lux, etc.)
- Schedule trip – Setting pickup time
- Select account and payment method – Choosing Payment method - which is the same as what has been set as default for that account or can be changed as per need.
- Request cab – “Confirm” or “Schedule” cab.
- Rate – Leave rating and feedback once the ride is complete.

Competitor Analysis:

Uber	Ola	Lyft
Highest reach globally, growing in India	High coverage in the Indian market	Growing rapidly in the US and Canada
Global brand – safety and trust	No competition in many cities, growing consumer base	Strong hold of the US market – 40%, growing investor and investments
Problems in operating under different jurisdictions, food-delivery business tanked in India	Lacks deep pockets, burnt a lot of cash already	Limited geography

Customer Pain Points:

- The last ride of the day for the driver should have the destination close to his house
- Have a feature to navigate to nearest essentials for drivers – petrol pump, public toilet, parking area, affordable eateries – or have own meal fulfilment facilities
- Congruence between drop-off point and the building (or society) of passenger
- Have more reasons listed in the ‘reason for cancellation.’

Unique Features:

- Calendar Events Feature – Syncing Meetings
- Split Fare Feature – Seamless splitting of fare
- Send Status feature – For letting others follow the ride in real-time

Suggested Features:

- Auto Connect Wi-Fi
- Uber Pay
- Local Language App for drivers
- 2G Optimization
- Uber Play

Metrics to track:

- Installs – serviceable in the areas
- Searches – rider/driver match
- Trips – fair/surge/discounted, start and end times, origin-destination pairs, common paths
- Cancellations – reason/locations
- Churn – Search but not book and why
- Cohorts – User groups that repeat book and their features
- Spots or boundaries – Idle spots (where drivers are mostly idle), ‘walls’ that aren’t booked by passengers or crossed by drivers
- Drivers – Utilization, requests per hour accepted/rejected, completion rate
- Miscellaneous – Accident-prone areas/spots, frauds, other safety hazards, refunds

Example

Strategy to Improve Uber’s Revenue?

1. Ask clarifying questions:

- Do we want to increase revenues or profits?
- Are we talking about just one vertical of Uber, i.e., ride-sharing services or the entire company?
- Do we have a specific geography/region in mind?
- Is there a time frame in which we need to implement changes?

Assumption: We need to improve the revenues of the entire company in India in 1 year.

2. Prepare a framework: Revenues can be increased by any of the following methods:

- Increasing the number of users on the platform
- Expanding the usage of the app by the existing users
- Increasing the prices of our services
- Diversifying into new verticals

3. Increasing the number of users on the platform: Users can be grown on the platform by any of the following methods:
 - Expanding into new territories
 - Target a different set of users
 - Decrease the prices to gain share from the competitors. However, care must be taken not to reduce the prices up to a specific limit.

4. Increasing the usages of the app by the existing users: Usages can be raised on the platform by any of the following methods:
 - Start providing hyperlocal delivery services wherein a user can book an Uber driver to do regular household chores like bringing laundry clothes, purchasing "paan" at night, etc.
 - Bundle the cab and food delivery services. For example, for a specific number of rides made on Uber, you get a discount on food orders.

	Pros	Cons
Expanding into new territories	No need to modify existing features	Will require new drivers. May not be implementable in one year.
Target a different set of users	Tapping the untapped market will give the first mover advantage. Easier to implement	Works well only if the size of the targeted niche market is sufficient
Decrease the prices to gain share from the competitors	Can eliminate the competition	Works well only if the revenue lost due to price cut is lesser than the revenue gained due to the increase in the number of users. Competitor retaliation can lead to price wars
Start providing hyperlocal delivery services	Can use existing infrastructure by making specific changes	May require a considerable initial investment
Bundle the cab and food delivery services	An excellent strategy to increase the number of food orders as well as cab rides. Easy to implement	Will work only for those customers who are potential users of both the services

Example 1

How would you acquire more users for Uber?

Assumptions: Uber has 2 primary users for ridesharing: the drivers and the riders. For the purpose of this exercise, let us stick with acquiring more riders. This also seems the first logical choice because a higher demand from riders will result in more drivers (to make money) and not the other way around.

Goal: To acquire more riders on the Uber platform.

Users and Use Cases:

- **Professionals** – who commute daily to work instead of driving or taking public transport
- **Students** – who shuttle between dorms and class when they are getting late. Example of groups.
- **Young professionals** – who like to go out at night to party without the worry of the designated driver.
- **Airport Commuters** – who like to go to and from the airport regularly

Let's pick the young professionals who want to party as the user because of the following reasons

- Higher-income range – leading to better tipping,
- Longer trips (they typically won't go to the same neighbourhood places and round trip opportunities – they must come home late when their best option is Uber).
- A large market – if you assume ages between 21-35 and assuming an 80-yr lifespan and uniform distribution, your market size in the US is $(15/80)*320$ million = 60 million.

Ideas for increasing users

- **Partnerships with OpenTable:** Uber could tie up with reservation systems to provide discounts to users going to that location.
- **Detect DUIs before they happen:** Uber could provide handheld machines at all bars that users can use for free (or minimal service) before checking out. If a user checks at > \$0.08, Uber should volunteer to provide a car for the user to get home or suggest to the user to wait. It would be legally impossible to detain or report the user against their will. This is easy to implement – devices are available, generally making the roads safer and clearly increasing customers. Since this is at peak time, surcharge rules apply, allowing for higher monetization
- **Strategic partnerships with Live events:** Most live events involve large groups of people, space constraints and parking challenges. E.g., Uber could partner with the IPL as the preferred transport mode for fans to and from the stadiums. This reduces traffic congestion, eliminates parking problems and allows Uber to demonstrate the product's value and retain more customers.

Metrics:

- Uber Rides/ User / Month
- 7-day / 30-day Repeat Users

Example 2

How would you improve the Uber app?

What is the purpose of Uber?

Ride app- It's a location-based mobile app that lets customers (riders) get rides with a private driver. It has two types of users – people who need rides and people who drive Uber cars.

- **Guaranteed ride** – A rider is guaranteed a ride within a predictable time to their desired destination.
- **Tracking** – The rider can even track the driver as they are enroute to pick up the rider.
- **Cashless** – The rider does not need to pay with cash/credit card. The payment is known up-front, and the rider's Uber account is charged after the ride is completed.

- **Feedback** – Uber lets the rider leave feedback for the driver for driving, cleanliness, behaviour etc. so that the experience can be improved over time
- **Safe** – Uber does background checks on drivers and guarantees the safety of the Uber rider (this has been in question lately with customers complaining about crimes/assaults during Uber rides)

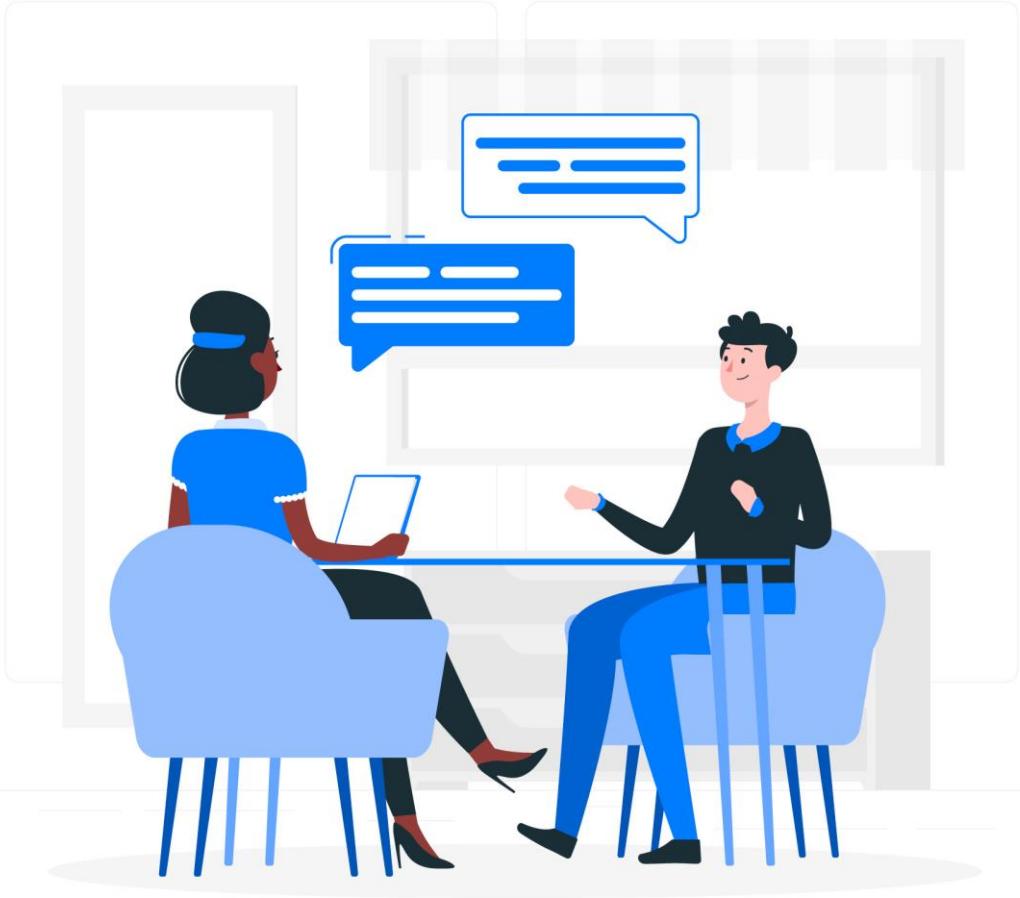
High-level features for driver

- **Crowd-sourced drivers**- Anyone can sign up as a driver as long as they have a safe driving record and no criminal record
- **Flexible work hours** – A driver can have flexible working hours
- **Flexible earning** – A driver can make as much money as they want based on the hours they drive and rides they take

What can be done to improve Uber

We might ask the interviewer what the purpose of the improvement should be. If they ask you to assume, you can say, given all the exposure that Uber has come under with customers complaining about safety issues with Uber. I recommend focusing on the user segment – riders and trying to solve for their compromised safety perception of Uber

- Enforce the use of go-pro cameras in all Uber vehicles
- Create a camera vision model which uses supervised and unsupervised learning (over time) to learn about suspicious behaviour and unsafe situations. Use existing police surveillance tapes and home surveillance tapes (shared by customers) as data input to the model.
- Have real-life alerts to cops and Uber customer service when the model detects potential crime. The rider's cell phone would be called, and the driver's cell phone would be contacted immediately to confirm if something is happening (by Uber's customer service). The ML algorithm would learn and get better with false positives over time.
- Also, add a “safety” feedback section in the app's feedback section for drivers and riders so that self-reported data can be collected. This data can be prejudiced if a pattern emerges with negative feedback about a particular driver/passenger – they can be blacklisted.



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.

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

General Format: 1st round: GD; 2 & 3rd round: PI.

Round 1 - Group Discussion (12-15 mins)

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 (35-40 mins)

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 (35-40 mins)

1. Tell me about yourself.

2. 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.)

3. 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.)

4. Any questions?

Round 1 - Group Discussion (12-15 mins)

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 (35-40 mins)

1. *Hi. Tell me a bit about yourself.*

A. I'm an engineer who spent five years in the education industry.

2. *What interests you in ProdMan?*

A. I like it because it is an amalgam of multiple verticals that come together to solve the problem for the consumer.

3. *Alright, design this for me - a camera for senior citizens.*

A. 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.

4. *How would you market this?*

A. Through word of mouth, newspapers because that's what would be most appealing to them. And through doctors who treat Alzheimer's.

5. *What issues do you foresee?*

A. 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.

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:

- 1) Points about how to market and promote the new product.
- 2) The feasibility of going online and how it could impact the business.
- 3) 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:

- 1) Is this acquisition local or Global?
- 2) 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:

- 1) Should we assume only Domestic or include international flights as well?
- 2) 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.

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

1. Tell me about yourself?
2. What is your understanding of a product manager role?
3. What are the most important skills required to be a PM?
4. Are there instances in your previous work experience where you displayed these skills?
5. 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?

R1: Group Discussion (12-15 mins)

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?

R2: Personal interview (30-35 mins)

1. Introduction and background
2. Why HR? Why PM?
3. What is my understanding on what a PM does?
4. Basic questions regarding my role in last job
5. 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.

R3: Personal interview (12min approx.)

Mainly to check communication skills.

Free flowing conversation on WorkEx, questions for the interviewer.

R1: Group Discussion:

Whether an aerated drinks company should increase its prices of products in grocery stores while it is working on low margins and high volumes.

R2: 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.

R3: Personal Interview II

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?

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?

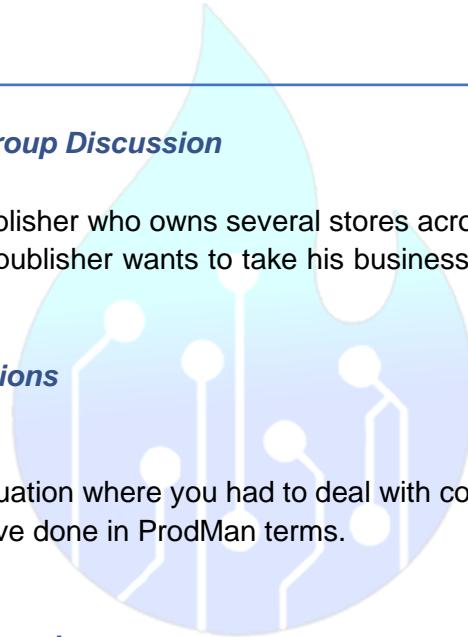
Round 2: General Questions

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).

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.

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 panellist to ask you questions about
- Keep smiling, and play to your strengths

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

General Format (Mostly followed): 1st round: Cased based discussion; 2nd round: PI.

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 (1st Interview) [Approximately 50 mins.]

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.

Round 3 (2nd Interview) [Approximately 25 mins]

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).

R1: Group Discussion

Case: Application for connecting lawyers and clients

R2: Personal Interview

1. Tell me something not in your CV (about professional experiences)
2. 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.

Round 1: PI

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 - PI

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.

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: PI (10 mins)

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.

Personal Interview Round 1 (60 mins + 20 mins)

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 proceed 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.

1. How did you like the process so far?

(Spoke at length about my experience right from Microsoft PM Engage Challenge through the interview day.)

2. Why Microsoft?
3. 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.

Amazon

Company Overview:

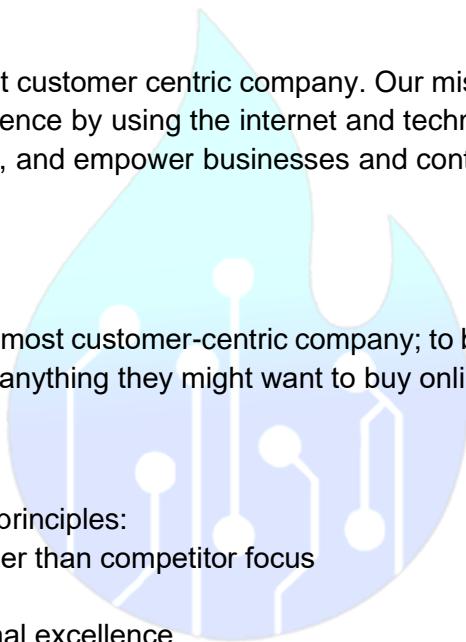
Amazon.com, an American electronic commerce and cloud computing company based in Seattle, Washington, was founded by Jeff Bezos on July 5, 1994. The tech giant is the largest Internet retailer in the world as measured by revenue and market capitalization, and second largest after Alibaba Group in terms 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

Round 1:

Simulation based test for different roles.

Round 2: Interview

The interviewer first introduced herself and then asked me to introduce myself. Then, I was asked to 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.

Then, the interviewer asked to create a teleconsultation app. I talked about the target user group and their requirements pre-consultation, during consultation and post-consultation.

Pre-consultation:

- Help finding a general physician/specialist.
- Reviews, recommendations

During consultation:

- Platform that allows for video calling.
- Option to chat as well.

Post-consultation:

- Prescription stored to patient history.
- Prompt to schedule follow-up in person or using app.
- Prompt to review/recommend.

I was also asked to 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.

I was asked a follow-up question about 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.

Round 3: Interview

I was asked to introduce myself after the interviewer introduced herself. Then I was asked BQs based on my work experience. I was asked to narrate instances.

- 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.

Then I was asked to name my favorite app and why it was my favorite. I talked about Netflix and its superior recommendation algorithm and its good user experience and interface. I was asked what I don't like about it or how I would 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. Then I was asked how I would 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. The interviewer asked if I would 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.

I was then asked if I had any questions. I asked her about what was expected out of me during the internship and what the structure of the internship would be. The interviewer answered the question and the interview concluded after that.

Interview - Round 1

One female interviewer. Gave her own introduction first and said that I need not give my introduction, as she already has my profile in front of her.

I – Tell me about a project from your work experience that you are excited and proud about?
E – Mentioned about a time-intensive, critical project I was a part of. Involved with ERP processes, so detailed on that as well.

I – What excited you about the project?

E – 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)

I – 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?

E – 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).

E – 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.)

I – What were your two major learnings from the marketing project you did (mentioned on my cv)?

E – 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)

I – Any question?

E – 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

I – Gave their introduction, then asked me to introduce myself.

E – Introduced.

I – Swiggy, Zomato have a lot of delivery men who are generally free during the morning, during breakfast hours. How to utilize them better?

E – 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.

I – Elaborate on the customer personas that can be potential customers for breakfast?

E – 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.

I – How can you make the in-flight experience better for customers?

E – Started on how I will go about surveying, researching about the problems people face, identifying the pain points. (*Was interrupted midway.*)

I – We understood the process you will follow. Based on your experience travelling, how will you make your own experience better?

E – 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.*)

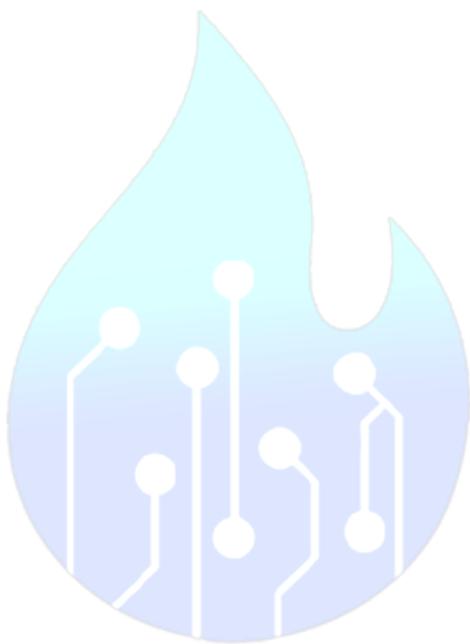
I – We are in a dearth of time. Just tell us, how will you make the in-flight screen experience of the people better?

E – (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.

I – That will be all. You can leave the call.

Tips:

1. First interview was very interactive, second one seemed like 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.
2. I tried to bring in as many Amazon principles as I could in my answers, subtly.
3. 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.



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

Case submission round

Design an app for Space Tourism in the year 2050.

Interview round 1

1. Walk me through your CV.

A: Went through academic achievements, one point for each bucket in Work Experience, Positions of Responsibility and Extra-Curricular Activities.

1a. Asked to explain a project from my work experience.

A: Explained the project in terms of customer need, planning, implementation, impact, and future scope.

2. Guesstimate: how many mobile phones are there in the city of Bangalore

A: 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.

3. A drop has been observed in the number of add-to-carts in the Flipkart grocery section. Analyze why and give recommendations.

A: 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.

3a. Which metrics would you have used to observe, diagnose, and fix this problem?

A: 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.

4. Design a daily dashboard for the CEO of Flipkart.

A: 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 round 2

1. (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.

A: 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.

1a. 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?

A: 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.

2. Determine the bidding price that Netflix should give for ad space on a blog.

A: 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.

3. Guesstimate for the total number of airborne flights in a 10 km radius around Mumbai airport at any given instant

A: 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.

Case Submission Round

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 round 1

Interviewer: Introduced himself and asked me for a brief introduction. Then, he went through my CV and asked to talk about any project I did in my work ex where I had to come up with an innovative solution.

Answer: 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.

RCA : View Time on YouTube has gone down by 30%. Analyze and give recommendations.

Answer: 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?

Answer: 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?

Answer: 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.

Question: Design a daily dashboard for the CEO of Uber.

Answer: Listed down all the verticals : Marketing, Operations, Finance, HR, and Customer Feedback

Question: Now consider only the verticals Operations and Finance and list down the important metrics in them.

Answer: 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

Questions: Asked me basic questions on Web Tech such as DNS and cookies.

Answer: Gave a brief overview on these concepts. He then asked me to read up on these in detail for future rounds.

Interview lasted for approximately 50 minutes.

Round 1 (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

Round 2 (Personal Interview)

P: Introduced himself. (To break the ice and made me comfortable).

P: Tell me something about yourself. (1 minute)

Interviewee: I gave my prepared answer that included my educational details, graduation details and work ex. Also, at the end added my interest towards product management.

P: Great! So, tell me why do you want to become a product manager? (2 minute)

Interviewee: 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.

P: RCA – You are a PM of YouTube and watch time decreased by 30%. Find root cause and suggest how can we work on that. (20 minutes)

Interviewee: I started with asking scoping questions like

- Time period of decrease

P: It's been 7 days.

I: What do you mean by watch time?

P: We define watch time as (# of users X time they spend on app)

I: Are we facing this problem on all platforms i.e., Android/iOS/ webapp or is it limited to one?

P: We are facing problem on Android app.

I: Geographical Location

P: We are facing this issue Globally.

I: Any particular user segment getting affected?

P: Not any particular

Then I started with “External Factors”

I: Is there any new feature our competitor added?

P: Not any of our knowledge.

I: Any new government regulation/policy change?

P: No

I: Sentiments on social media or any negative PR?

P: Not any

I: Any change in mobile data tariffs by telecom companies?

P: No

Since there was no external factor affecting, I switched to internal factors

I: I started with User journey. And asked if there is any problem at each pain point.

Any changes in search algorithm?

P: No, we have not made any changes to algorithm.

I: Update in UI/UX?

P: Yes, we recently updated the UI and moved the share button on top of video and below search bar.

I: 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.

P: What can be done to fix this?

I: 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.

P: Let's do a puzzle. There are 2 candles, each take 60 minutes to burn. We need to calculate 45 minutes using them. (5 minutes)

I: 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.

P: 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. (15 minutes)

I: Scoping questions: Do I have to include both bicycle and EV bikes?

P: For now only consider EV bikes.

I: 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

P: Seems fine. Can you think of other users who can be your customer?

I: Maybe delivery guys for Zomato/Swiggy or other companies. He didn't ask me to calculate for them and was satisfied with the approach.

P: Technical Question – What are cookies and why they are used? (5-10 minutes)

I: Gave definition of cookies. Defined different types of cookies i.e. First party cookies, Third-party cookies, Session cookies etc.

P: Can you explain why third-party cookies are used citing any example.

I: Gave the example of Finshots and explained it's significance.

P: Design a dashboard for CEO of Swiggy Instamart? (15 minutes)

I: 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

P: Any questions for me?

I: Asked about his experience so far at Media.net and project.

Round 3 (Personal Interview)

P: Tell me something about yourself.

Interviewee: I gave my prepared answer that included my educational details, graduation details and work ex. Also, at the end added my interest towards product management.

P: Product Design – Design an ATM for kids. (25 minutes)

Interviewee: Used CIRCLES Framework. Asked scoping questions.

What is the age segment we are targeting?

P: 5-15 years old

I: Are we looking for any particular location?

P: Assume any tier 1 city

I: 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.

P: Guesstimate- How much MMT should bid for CCP for Delhi to Mumbai flight on google ads. (20 minutes)

I: Equation: # of users searching on google for flight* # of ads per search* CTR
Estimated each part of equation and made assumptions.

P: What do you mean by CTR?

I: Explained it's equal to # of clicks/impressions*100 and its significance

P: What if MMT bids a bit high CCP? How would it help them?

I: It will be a loss leader strategy that Amazon implemented to attract traffic but in long run will help them company to earn profits.

P: Any other reason you can think of?

I: Maybe to get traffic use other features when they click on the ad.

P: How would you measure success for Instagram reels. (15-20 minutes)

I: 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.

P: Let's discuss User Engagement.

I: 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.

P: Was satisfied with the approach. Do you have any questions

I: Asked what role I can expect as a APM and day to day tasks.

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.

Round 1 (Case Submission)

Same as above

Round 2 (Personal Interview)

Introduction. Cross questions on work-ex responsibilities. Give examples. (5 min)

Ans. Gave appropriate answers

P: "It's 2017 and Ola is planning to launch Ola Bike. No one has done this before." (30 min)

a. Identify 3 problems that Ola Bike would solve (Lot of cross questions)

Ans. Affordability, Commute Time, Availability

b. What would you do once problems are identified?

Ans. Launch Ola Bike

c. What would you do next once Ola Bike is implemented?

Ans. Measure success metrics

d. Define 5 key metrics to measure success of Ola Bikes

Ans. No. of ride bookings, Bounce Rate, Idle Time for drivers, Avg. booking time, Customer Reviews

e. What factors would you consider while pricing

Ans. Competitive Pricing (Including Public Transport), Dynamic Pricing based on availability

8. "30% of PhonePe users churn out after 3 months. This is not an RCA problem, use a different approach" (15 min)

a. Who are the competitors for PhonePe?

Ans. Other payment apps, Credit/Debit cards, Cash

b. Identify the issue.

Ans. Payment stuck for a few banks without any confirmation

c. How would you resolve the issue identified?

Ans. Product Improvement – Warning before payments if any issue is identified, Payment animation, Grievance Redressal information on failure screen

Round 3 (Personal Interview)

1. Tell me about yourself

Ans. Gave appropriate answers

2. 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?

Ans. No. of orders – North Star, DAU, Cart conversion rate, No. of riders, NPS

3. You are a PM at YouTube. What parameters would you consider while designing an algorithm for recommendations?

Ans. Location, Language, Age, Gender, Category of videos, Channels followed, Watch History, watch time, Type of videos watched – Videos/Shorts/Live Streams

4. What is API? Explain API to a 5-year-old.

Ans. Answered

5. 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?

Ans. Gave a functional answer, did not know technical details

6. What are cookies?

Ans. Answered

7. 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.

Ans. Ink leakage, Ink out, finding lost pen, erasing what is written, Handwriting improvement, Intuitive writing & sketching

8. 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?

Ans. Answered based on my interests and previous work-ex

Tips

Read about AdTech Industry, SEO, Media.net, Competitors, GTM, Pricing Strategies, technical internet keywords like API, Cookies, DNS, etc.

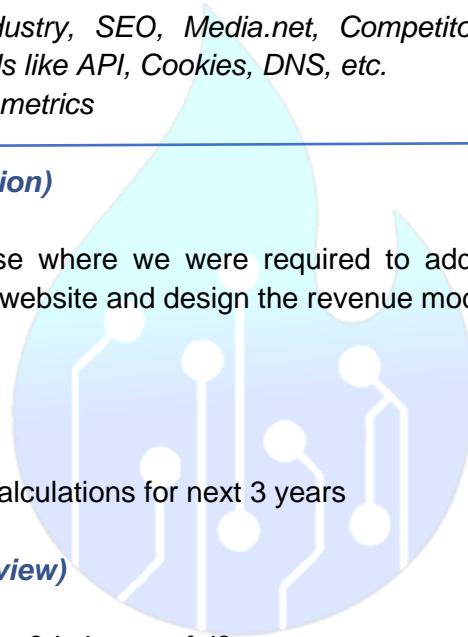
Special focus on success metrics

Round 1 (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



Round 2 (Personal Interview)

P: How is the process going? Is it stressful?

A: Told how I felt about the process and added that the classes are not happening so that's a plus

P: (Was in place com in IIML- started telling how placecommers ensure these things).

Tell me something about yourself.

A: Gave a basic generic introduction, and touched upon my work experience in SAP ABAP.

P:(Has my cv open with him) – Asked about a project I had worked on during my work experience

A: Answered

P: Tell me about the most interesting projects you picked up during your work experience.

A: Told about CRM implementation for my company

P: (Appreciated the work that I did). What's your favourite product?

A: Had a well-prepared answer on this.

P: Gave a guestimate – Estimate the number of Insta reels uploaded daily.

A: 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)

P: 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.

A: Talked about how I extrapolated the data that I have on a general usage basis of people around me – explained in detail

P: (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

A: Accepted the mistake and talked about how to remove the bias we can add a bias factor.

P: (Satisfied with the answer). RCA – The number of photo uploads on Instagram has declined. Find the reason

A: 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.

P: (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?

A: 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

P: (Looked convinced by the answer). Go ahead with your approach then

A: 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.

P: (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.

A: Gave 4-5 reasons

P: Do you have any questions?

A: Asked about how different it is to be a PM working on a niche tech(Ad-tech) as compared to the other PMs

P: Answered on how Ad-tech is no longer a niche industry with the advent of digital marketing – had a good 5 mins discussion on this topic.

Round 3 (Personal Interview)

P: How are you doing?

A: Doing great, a little stressed but otherwise great.

P:(Very Comfortingly) Don't stress too much, this is just going to be like a conversation. Introduced himself and asked for an introduction.

A: Gave the generic response again – never gets old

P: Walk me through your work experience and one project of it

A: Explained in detail

P: You seem to be extremely technically sound, why product management then and why did you not continue in tech?

A: Gave a prepared answer

P: What do you know about ad tech and Media.net

A: Talked about the end-to-end process of AdTech and what media.net does

P: 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)

A: (No clue), tried to formulate some factors

P: Swiggy has launched in a new city. Give me the success metrics.

A: Divided into stakeholders – Delivery person and customers (Chicken egg problem) and gave one north star and 2 more metrics for both.

P: Can you think of another major stakeholder here that you are missing?

A: Had missed restaurants – did the same for it i.e., north star and 2 other metrics

P: Product design – Improve Google's restaurant recommendation features.

A: 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)

P: I really like the psychographic variable feature. Can you create a customer journey map for this?

A: Created a detailed map and explained it to him

P: 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?

A: Simple puzzle, got confused at the beginning (Thought we have a spring balance instead of the digital weighing machine but then recovered later)

P: Do you have any questions?

A: 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.

P: Any more questions?

A: What would you have focused more during your MBA for a PM role if you were in my place?

P: 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.*

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:

1. We will continuously delight our customers in current and new businesses by delivering superior value through enhanced offerings on the internet and other platforms.
2. 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

Round 1 (Personal Interview)

Tell me about yourself: Couple of questions related to my profile; (Had designed a website)

Interviewer:

- 1) How did you go about it.
- 2) How much were you able to generate
- 3) Do you think it was successful? (Reasons, why or why not?)

Q. What are some of the applications you use daily?

A. WhatsApp, Chess apps, Timers, Meditation apps

Q. Let's say you are the Product Manager of WhatsApp, identify user personas where WhatsApp does not exist and how can we increase them?

A. 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?

Q. Let's say we want to add revenue.

A. 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.

Q: How can we make it more user friendly and useful for them?

A. The following features would help them:

- a. Transactions with no upper cap, as well as balances b/w parties
- b. Targeted advertising (receiving)
- c. Blast SMS kind of Advertising (sending)
- d. Calendars and schedule send.

Q. Design an alarm clock for the blind.

A. An application or a physical product?

Q. Your call

A. 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 interviewer)

Q. 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.

Q. How much discount do you plan to offer?

Discussion on parameters, questions on margins, etc. Arrived at a range of 20 to 30%

Q. 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 claims in cashbacks
- 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.

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.

Interview Experiences

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 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.

Uber

SIP Interview Experience:

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 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 panellists 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 Pls.

SIP Interview Experience 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

SIP Interview Experience:

Round 1 (Asynchronous Interview)

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.

Ques: How has the adoption of the Cloud impacted the approach toward application development? Give some examples

Interviewee: 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.

Ques: 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.

Interviewee: 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.

Ques: With new Digital Capabilities, what are relevant ones for Unilever to consider to help reduce the cost of Technology to the organization.

Interviewee: 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.

Round 2 (Personal Interview)

Ques: Tell me about Yourself

Interviewee: Gave brief info about myself.

Ques: Related to work experience: Which field I was working on and what tools I was using, Asked a couple of cross-questions.

Interviewee: Gave brief answers for each of these.

Ques: 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.

Interviewee: Took a few seconds to structure the thoughts and then came up with an answer with explanations for each decision taken.

Ques: Asked about the Marketing project at XLRRI and the key findings from it.

Interviewee: Had a prepared answer. (Our product was Nescafe)

Ques: 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?

Interviewee: 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.

Ques: Any questions for us?

Interviewee: Asked about HUL's Shikhar app and how HUL is going to proliferate the app among retailers in the future.

Tips

Prepare your CV well, as there will be many questions asked of it, especially about your work experience.

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.

Google

SIP Interview Experience:

Round 1 (Personal Interview)

Interviewer: 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?

Response: 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.

Interviewer: 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?

Response: 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.

Interviewer: Imagine you are the PM for user ratings at Amazon. What would be the success metrics you would look at?

Response: 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.

Interviewer: 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?

Response: 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.

Round 2 (Personal Interview)

Interviewer: Design an app for users to learn cooking.

Response: Used the CIRCLES framework. In-depth discussion and cross-questions on user personas, app features

Interviewer: Tell me about a Google app you dislike and why?

Response: Google Drive. Discussed app goals, user pain points, and solutions

Interviewer: Tell me a non-Google app you dislike and how would you improve it. Asked to directly discuss improvement points.

Response: Discussion on intrusive ads in Clear trip

Interviewer: 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?

Response: 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.

Round 3 (Personal Interview)

Interviewer: Tell me about yourself. What was the product you managed earlier and elaborate on the deliverables?

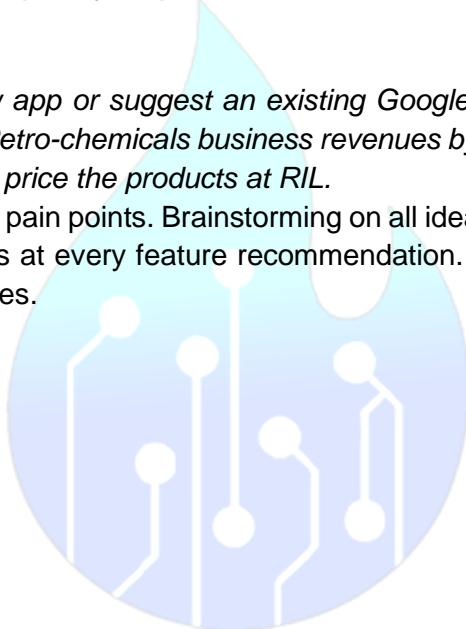
Response: Answered.

Interviewer: How would you price your product?

Response: Answered

Interviewer: 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.

Response: 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.





Additional Tips

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:
 - i. What are the current pain points of the user?
 - ii. How will the improvements solve these pain points?
 - iii. 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:

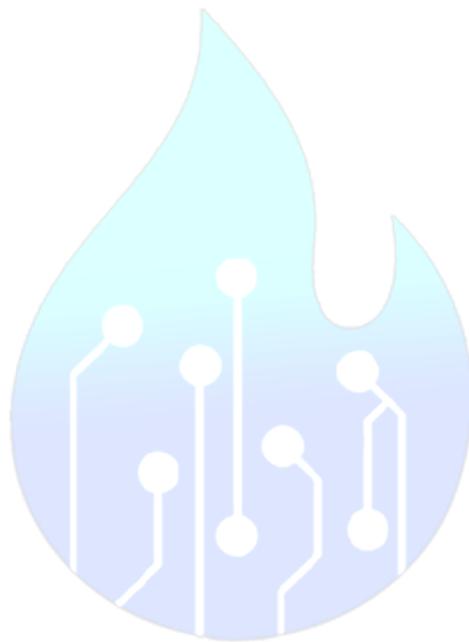
Framework should be there in the back of your mind to answer the questions, but you do not need to tell the interviewer about the frameworks that you are using.

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.

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:

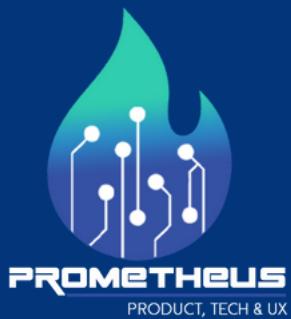
[PM School \(Youtube Channel\)](#)

Social Media

Weekly PM challenge on LinkedIn: [PM School Weekly Challenge \(LinkedIn\)](#)

For teardowns: <https://www.theproductfolks.com/>





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!

