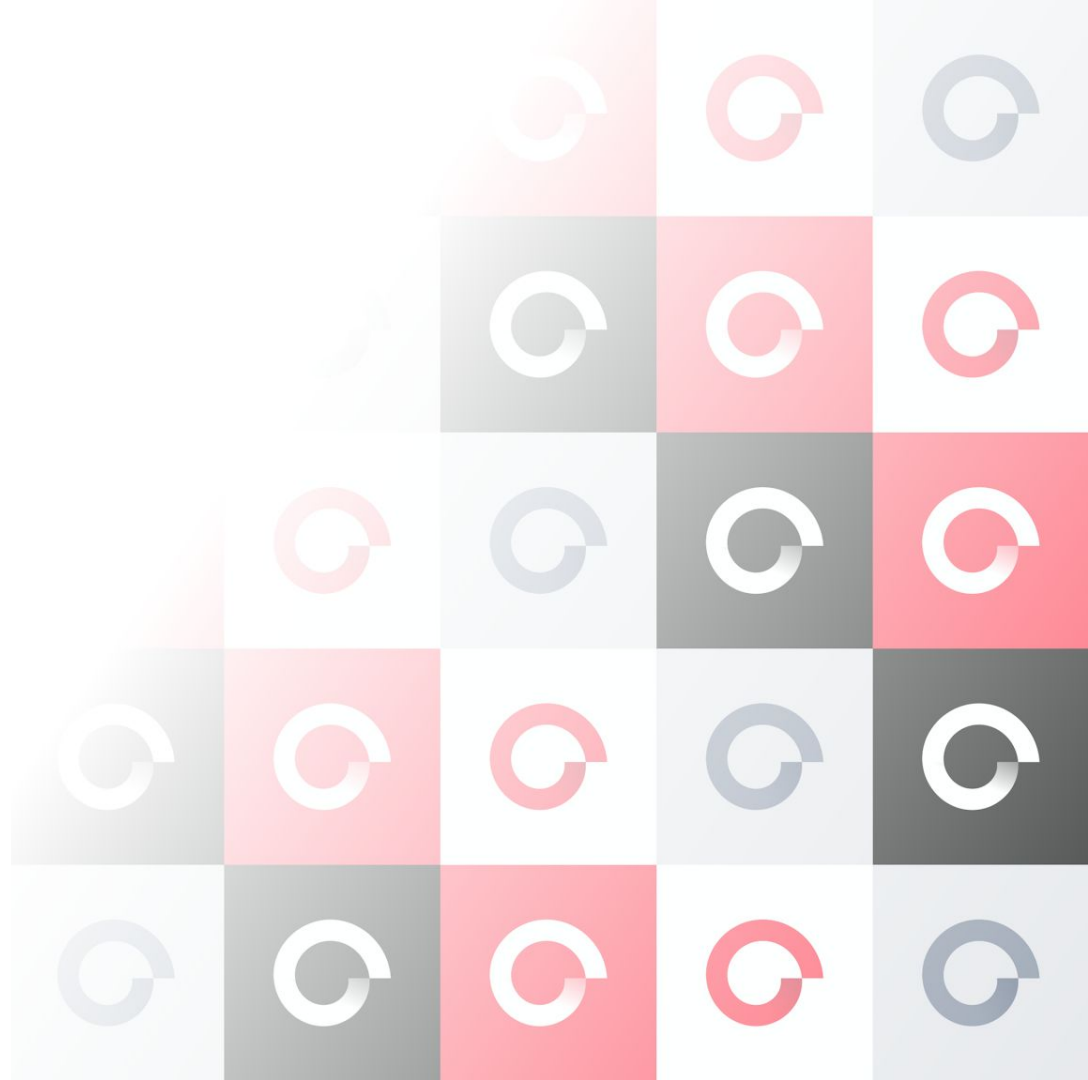


Fall 2025 - Week 5

PMA Week 5: Developing a New Product



Why Does This Skill Matter?

In Day-to-Day PM Work:

- PMs constantly make decisions about what to build next.
- Balancing user needs, business goals, and technical feasibility.
- Aligns cross-functional teams behind a shared product vision.

In Interviews (especially for APMs):

- Product sense and structured thinking are core to case interviews.
- Common prompt: *“Design a product for X user”* or *“What would you build next?”*



PM Framework for Building New Products

1. Identify the Problem & Define Users

- User interviews
 - a. Who are they? What do they struggle with?
 - b. What are their goals and behaviors?
- Data analysis
- Support tickets, reviews, user feedback

2. Explore the Opportunity Space

- Is this a real, frequent, painful problem?
- Market sizing, competitor analysis, user impact
- Prioritize the Problem to Solve: consider user value, business value, tech effort



Types of product questions

	Skills assessed	Example
Product Design	<ul style="list-style-type: none">• User centered design• Solution / feature prioritization• Modifications for new markets / use cases	<ul style="list-style-type: none">• Design a smartphone for the elderly• Design a product to encourage voting• Design a smart kitchen system
Analytical	<ul style="list-style-type: none">• Relate metrics to performance• Explain what data will validate / inform decisions• Identify & track KPIs	<ul style="list-style-type: none">• How would you determine success for Instagram Reels• What 3 key metrics would you pick for Threads and why?• Devise an A/B test to improve usability for Google Maps
Product Strategy	<ul style="list-style-type: none">• Competitive analysis & market identification• Product roadmap, positioning, pricing• Evaluating product success	<ul style="list-style-type: none">• Should Google enter the food delivery business• How would you price a new line of high-end, ultra secure iPhones in the US



Types of product questions (cont.)

	Skills assessed	Example
Execution	<ul style="list-style-type: none">• Structuring a problem	<ul style="list-style-type: none">• As a PM at Paypal, you are noticing an increase in fraud. How would you solve this problem?
Technical (system design)	<ul style="list-style-type: none">• Understanding of the software development process• Technical communication skills	<ul style="list-style-type: none">• Design a payment system for an e-commerce company
Estimation (market sizing)	<ul style="list-style-type: none">• Business sense & logic	<ul style="list-style-type: none">• Estimate the number of Uber drivers needed in NYC• How many gas stations are there in the US



General tips

- **Understand what is being asked**
 - Don't be afraid to ask clarifying questions on the problem space (what, where, how, why, who)
- **Be top-down**
 - Walk through how you will answer the question before giving the actual answer (e.g., To determine A, I will look into X, Y, and Z... Starting with X, I think...)
 - Summarize at the end (e.g., In summary, we've discussed X, Y, and Z)
- **Validate your answer and don't be afraid to pivot**
 - Check in with the interviewer and see if you need to pivot (e.g., I'll move on to the next segment / doing Y if that's alright)
 - Pivot if you need to (I realize there are several flaws with my answer. I'd actually like to shift it to...)



Product Design - CIRCLE

C – Comprehend the Situation	<ul style="list-style-type: none">● Clarify the problem, users, and constraints● Ask questions before proposing solutions
I – Identify the Customer	<ul style="list-style-type: none">● Who is the primary user? Secondary users?● Understand their pain points and goals
R – Report the Customer Pain Points	<ul style="list-style-type: none">● Translate pain points into clear, actionable needs● Prioritize user problems you want to solve
C – Cut, Prioritize, and Choose	<ul style="list-style-type: none">● Decide which needs/features to focus on first● MVP mindset: prioritize high-impact, feasible solutions
L – List Solutions / Features	<ul style="list-style-type: none">● Brainstorm multiple ideas● Consider creative, practical, and innovative options
E – Evaluate Trade-offs	<ul style="list-style-type: none">● Assess feasibility, impact, user experience, and constraints● Make trade-offs explicit and justify choices



Design an app to improve the cooking experience

Potential questions to clarify scope & context

- What do you mean by "cooking experience?"
- How do you define "improve?" Are there specific goals or metrics we're trying to meet (e.g., shorter time spent per dish / more times eating in)
- Is it for home or commercial purposes?

Assumption: we are designing a smart product or system that improves the in-home cooking experience for the general US population



Design an app to improve the cooking experience

- New cooks: people that don't know how to cook
- **Experienced cooks: people that know how to cook but do not cook regularly**
- Pro cooks: people that know how to cook and cook regularly

Target: experienced cooks

- They are a good target because they obviously have the necessary skills, but there are obstacles preventing them from cooking regularly
- Will also likely create value for pro cooks and new cooks if we unblock this obstacle

User segmentation can be created in a few different ways: age, lifestyle, experience level, goals.
Prioritize user group based on market size and ease of access



Design an app to improve the cooking experience

- **Goals**

- Eating healthier
- Saving money
- More options

- **Challenges**

- **Lack of motivation (alternatives, boredom, time)**
- Health concerns (e.g., kitchen fumes)
- Cost (e.g., raw materials are sold in bulk quantities that can't be finished, higher or equivalent cost to alternatives)

Prioritize based on effort and value



Design an app to improve the cooking experience

Solution: Recommending new recipes based on user interests so the cooking experience is more innovative and rewarding

Cooking process:

- User stocks up fridge
- Based on available ingredients, appliances, and time, user decides what to make
- User makes the dish

Therefore, our app needs to accommodate for users' available ingredients, appliances, and time. It also needs to be customized to users' interests

- Logging kitchen appliances, creating and logging grocery lists [**reduce time in grocery shopping**]
- Database of recipes that filters automatically based on available appliances and ingredients, sorting of recipes based on time required to make, ML recommendation of recipes based on past recipes made [**boredom with cooking / eating the same stuff, selection based on time available**]
- Simplification / combination of recipe steps so they can be done simultaneously [**reduce time required in cooking**]
- Specificity in recipe steps so users know exactly what to do [**simplifies cooking, reduces difficulty**]
- Periodic goal setting with reminders [**motivation**]



Design an app to improve the cooking experience

Risks

- The kitchen has a lot of fire / knives / hot surfaces, which can be dangerous if users get distracted on our app
- Making sure this doesn't overwhelm users with options and slow them down

Implementation challenges

- Creating or compiling these recipes – how do we make sure they are tested and high quality?

Edge cases

- Accommodating for dietary restrictions

Given more time...

- Recipes for different skill levels
- Automated grocery list generation based on selected weekly recipes



Design an app to improve the cooking experience

Metrics

Weekly Active Cooks: The number of target users (Experienced Cooks) who complete a cooking action in the app (e.g., view the final recipe steps, mark a dish as complete) at least once per week.

Cooking Frequency: The average number of dishes completed per Active Cook per week (or month).

Increase average dishes per week from 1 to 2: This measures how much the solution drives new cooking behavior.

Retention Rate: The percentage of users who return to the app in the next period

Recipe Novelty Rate: The percentage of recipes cooked in a month that the user has never cooked before using the app.

Filter Usage Frequency: The number of times per week users interact with the ingredient, appliance, and time filters on the recipe discovery page.

