

Introduction to PRODUCT MANAGEMENT

Jules Yang



What is a PM?

- A product manager (sometimes called program manager or project manager) is like the **mini-CEO of their product**
- Lead a team with authority, influencing them with **your vision and research**
- The intersection of **technology, business, and design**
 - A highly collaborative role
- Sometimes split role between the more business-focused and more engineering-focused person
 - TPM vs. PM

Project vs. Product vs. Program

(in most cases)



Project Manager

Make sure projects get delivered on time and on budget, to the satisfaction of the customer



Product Manager

Works over the course of a product life cycle to translate a customer's needs into product goals



Program Manager

In charge of a long-running program with a series of projects with set end dates

Companies



Google

2-year APM program, TPM,
bottom-up approach



Microsoft

Program Manager role,
top-down vision, spec-heavy



Facebook

Few PMs, rotational
1-year PM Program



Apple

Top-down structure,
EPM program



Amazon

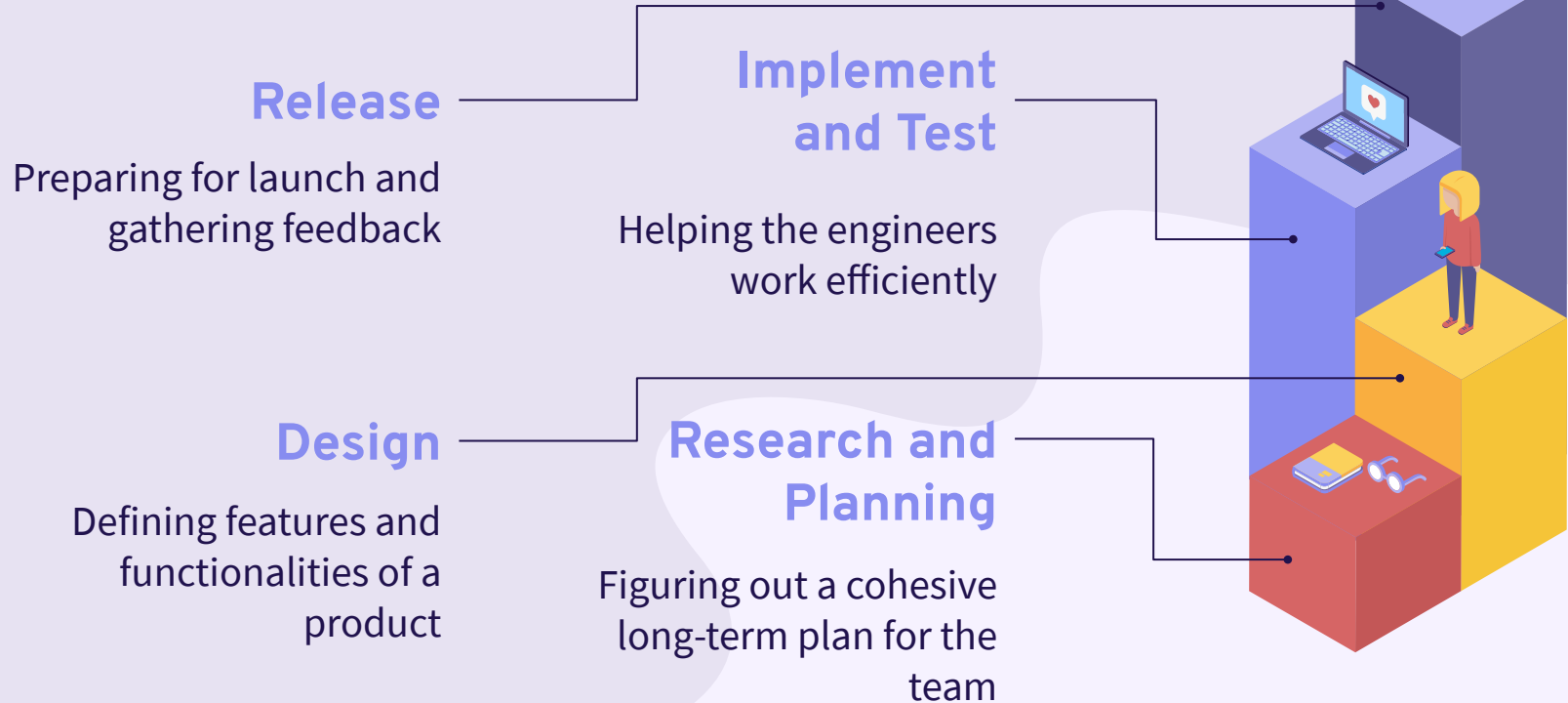
TPM role, data driven,
business case in memos



Twitter

PM and TPM, quarterly
hack week, data driven

Product Life Cycle





01

Research & Planning

Figuring out a cohesive
long-term plan for the team

What to Build Next?



Choosing Features

Brainstorming to see what features to pick



Defining a User

Identifying customers needs and wants



Defining Success

What is the goal?



Analyze the Market

What technologies are currently out there?

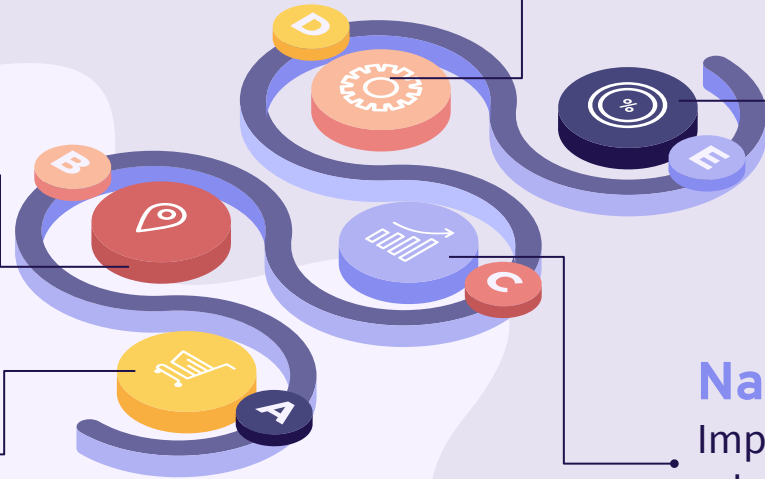
Finding a Problem Statement

Current Issues

Curriculum material,
teacher/student
relationships, access
to resources

Problem Space

Improving Education



Identify Pain
Points

Define users

Narrowing to Issue

Improve teacher/student
relationships

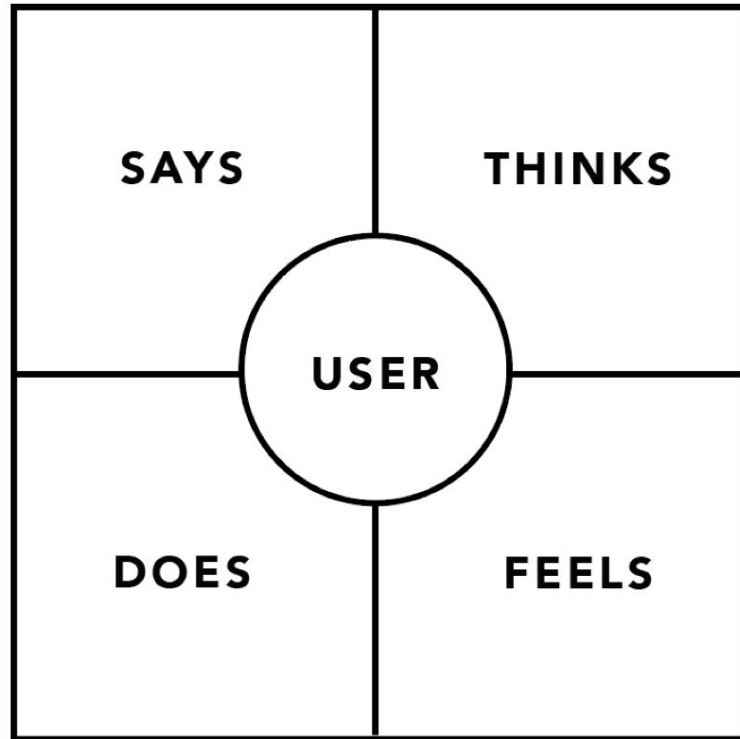
Customer Empathy Activity

Problem space: improving
education experience for
students by strengthening
student-teacher relationships

Crazy 8's



EMPATHY MAP





David Miller

-  28
-  New York
-  Product Designer
-  Living with his girlfriend

Bio

Lives in a rented apartment, 2.5 rooms, with his student girlfriend, works in a high-tech job. Likes hosting people. After a long day at work, he likes to throw on the couch with his girlfriend in front of the TV.

Wants & Needs

- Create a cozy atmosphere at home with innovative design.
- Design the house at low investment and without much effort.

Tech

- Internet** 
- Social Media** 
- Online Shopping** 
- Gadgets** 
- Early Adopter** 

Favorite Brands



Frustrations

- Don't want to spend money on interior designer and he doesn't have much time to deal with the design planning.
- He designs his apartment, but he thinks that she can look much better.

Getting to the Features

Feature List



Narrowing Features



User Scenarios

Ideas

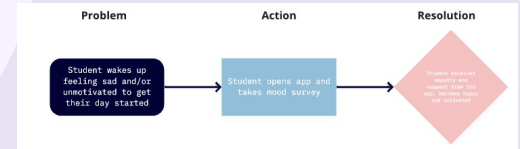
- Hub for teachers students, search for activities, manage assignments, manage, schedule, calendar, etc.
- is important to have a connection with teachers and students, especially in terms of feedback and support.
- A hub for students and teachers to report on their progress and personal subjects, building learning experiences.
- quiz-style forum but with emotional focus

Functionality

- message, post, react, comment
- profile: search through users to know who to reach out to
- channels: personal discussion, classroom feedback
- grade management/assignments
- award system
- different types of posts
- post reactions
- connections through interests
- thread conversation starters
- functionality for parents
- administrative overlook
- parent portal
- separate dashboards for teachers/student
- Collaborative Gamified Learning

Feature Narrowing

Top level	post feed	user profiles	messaging	separate channels/groups	
Second level	Award system	different types of posts	post reactions	connections through interests	thread conversation starters
Third level	functionality for parents	administrative overlook	parent portal	separate dashboards for teachers/student	Collaborative Gamified Learning



S

STRENGTHS

- Things your company does well
- Qualities that separate you from your competitors
- Internal resources such as skilled, knowledgeable staff
- Tangible assets such as intellectual property, capital, proprietary technologies etc.

W

WEAKNESSES

- Things your company lacks
- Things your competitors do better than you
- Resource limitations
- Unclear unique selling proposition

O

OPPORTUNITIES

- Underserved markets for specific products
- Few competitors in your area
- Emerging need for your products or services
- Press/media coverage of your company

T

THREATS

- Emerging competitors
- Changing regulatory environment
- Negative press/media coverage
- Changing customer attitudes toward your company



02

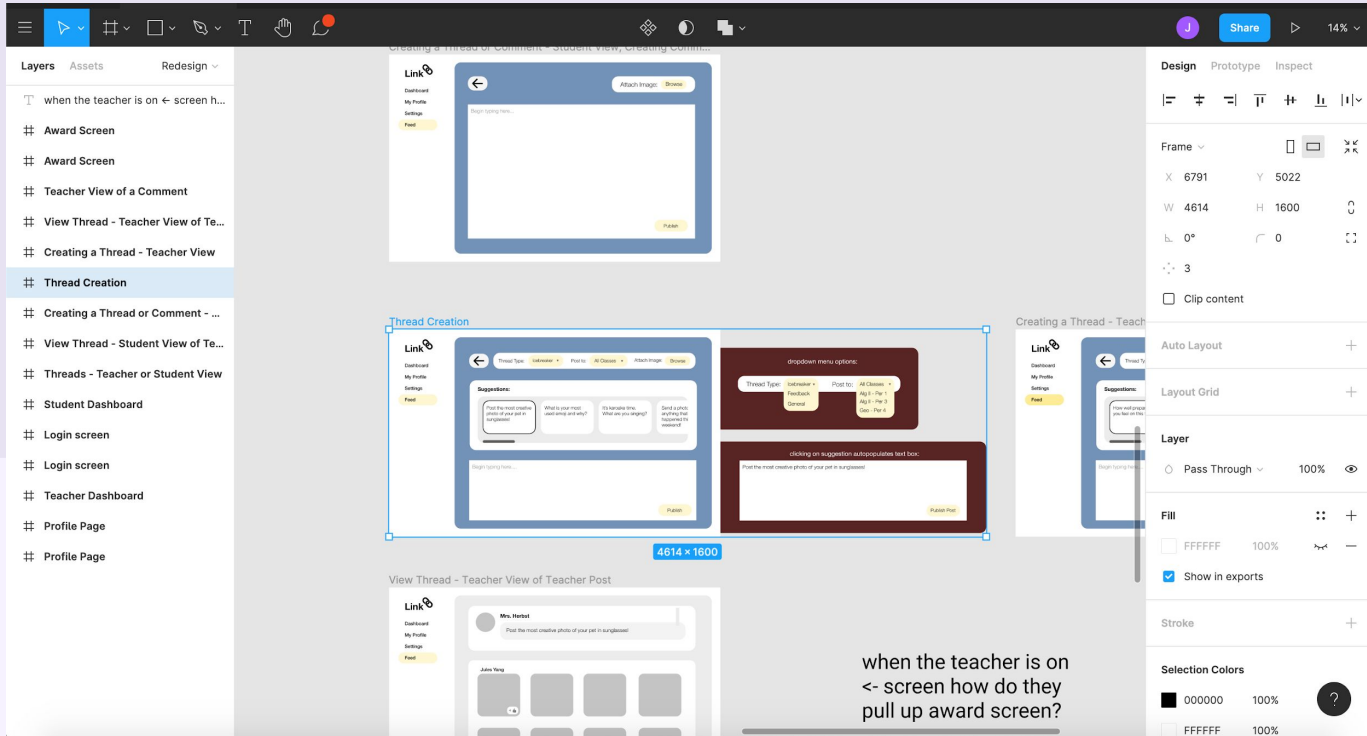
Design

Defining features and functionalities of a product

Paper Prototypes



Wireframes



Parts of a Spec

1. Problem statement

- a. Defines what the product is solving

2. Summary

- a. Background on why this product is needed

3. Customer profile

- a. Who the product is for

4. Goals

- a. What are you improving

5. In scope scenarios

- a. The user stories that the product will fulfill

6. Out of scope scenarios

- a. The user stories that the app will not fulfill at this time

7. UX

- a. Walkthrough of screens in product

8. Breakdown of work

- a. Engineering descriptions of how app is built

9. Compete analysis

- a. SWOT

10. Future opportunities



03

Implementation & Test

Helping the engineers work
efficiently

A PM's Work During Implementation

- **Unblock engineers** when they are waiting for work from another team
 - Find other tasks for engineer
 - Work with other team to get work finished more promptly
- Look for ways to **change a feature** to be easier to implement
- **Gather feedback and report bugs** on early version of product
 - Usability studies
 - Run experiments
 - Internal “dogfooding”

Task List

Task	Assigned To	Priority
Creating 'Publish' button as reusable component (S)	Jules	P0
Custom reactions for comments and posts (L)	Jules	P2

*T-shirt sizes to indicate size of task

P0 - highest priority

P1 - important

P2 - could be pushed off until later

P3 - would be nice to have, could be pushed off or eventually deleted

05

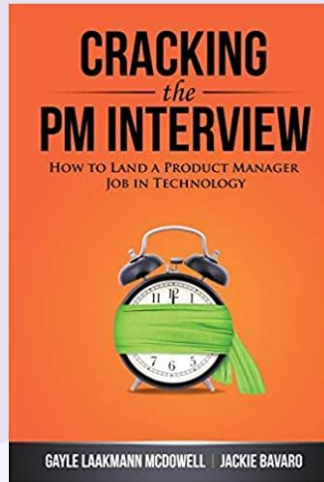
Your Future

What to do if you want to
explore PM further?

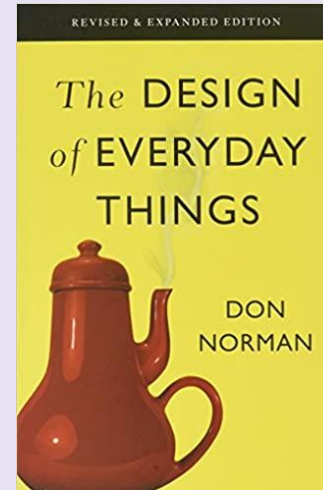


Resources

Cracking the PM Interview: How to Land a Product Manager Job in Technology



The Design of Everyday Things



Sample Interview Questions

1. What's your favorite product and why?
 - a. How would you improve that product?
2. Design a LinkedIn for educators.
3. How would you design a microwave for the visually impaired?
4. How would you optimize serving time at an ice cream shop?
5. Imagine you're a PM at Bing. What would you do to take over 5% of the Google Search market share?
6. What things should you consider when building a new feature?

Advice for Becoming a PM

1. Stay technical
Having a technical background helps a lot and may be even required

3. Take on leadership roles
Demonstrate strong leadership and innovation skills

2. Understand the Why?
Be able to see why a product or feature is a certain way

4. Start a side project
Show your customer focus and product design skills

<https://forms.gle/1McBsE1uzsuZ8iBd7>

Attendance Quiz!

THANKS!

Any questions?

jpyang@andrew.cmu.edu

CREDITS: This presentation template was created by **Slidesgo**, including icons by **Flaticon**, and infographics & images by **Freepik**

