The Lean Startup Process

May 2021

- [Eric Ries Lean Startup Video](#)

- [Soul Cycle Podcast](#)

- [The Lean Product Playbook by Dan Olsen (Video)](#)

- How is entrepreneurship like management?
- How does Eric Ries define entrepreneurship?
- If building good software is not a problem, why do so many startups fail?
- What is broken about the waterfall approach to building software?
- Why did IMVU fail?
- Where do each of these things fall in the feedback loop?
  - Ideas
  - Data
  - Code
- Outline the process of innovation accounting
- What tips does Eric give Google for using Lean Startup principles to encourage validated learning?

Lean Startup Principles

- Entrepreneurs are everywhere
  - "A startup is a human institution designed to deliver a <u>new product or service</u> under conditions of <u>extreme uncertainty</u>."
  - This has nothing to do with the size of the company, sector of the economy or industry
  - Startups are about running experiments
- Entrepreneurship is management

Lean Startup Principles

- Entrepreneurship is management:
  - Our goal is to create an institution, not just a product
  - We however cannot use traditional management practices. We need practices and principles geared to the startup context of **extreme uncertainty**
- Validated learning (Build-Measure-Learn)
- Innovation Accounting is at the core (good metrics vs vanity metrics)

The Pivot

- What do successful startups have in common:
  - They started out as digital cash for PDAs but evolved into online payments for eBay
  - They started building BASIC interpreters, but evolved into the world's largest operating systems monopoly
  - They were shocked to discover their online games company was actually a photo-sharing site
- The one thing they do well is that they **PIVOT**: They change directions but stay grounded in what they've learned.
- We do not want to celebrate failure, we celebrate successful pivoting!

We need to move fast

- If we can reduce the time between pivots

- We can increase our odds of success

- Before we run out of money (or time)

Validated learning: Achieving Failure

- If we are building something nobody wants, what does it matter if we accomplish it:
  - On time?
  - On budget?
  - With high quality?
  - With beautiful design?
- Achieving failure is basically successfully executing a bad plan

Build-Measure-Learn
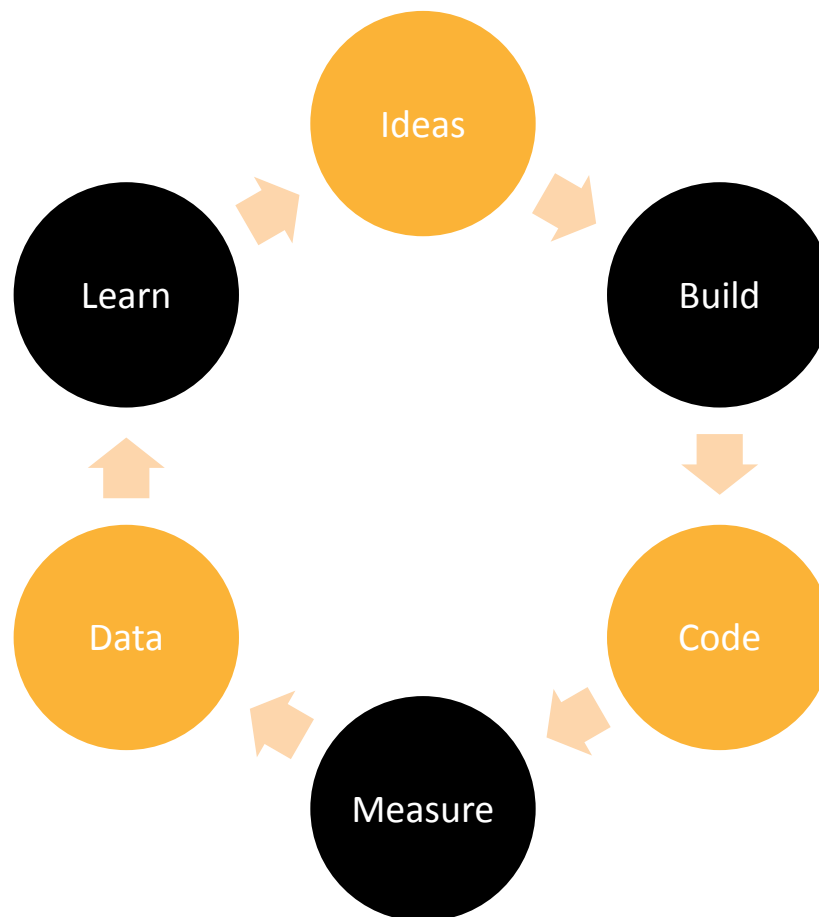
Innovation Accounting: The Three Learning Milestones

1. Establish the baseline
   - Build a Minimum Viable Product (MVP)
   - Measure how customers behave right now
2. Tune the engine
   - Experiment to see if we can improve metrics from the baseline towards the ideal
3. Pivot or persevere
   - When experiments reach diminishing returns, it's time to pivot

Lean Product Methodology

What causes a company's success/ failure?

1. The caliber of the startup team

2. The quality of product

3. The size of the market

PRODUCT – MARKET FIT

Think about the products you have used for the last year

How many of those do you love?

How many did you hate?

How many can you even remember?

Customers *love* very few products. It is extremely hard to build products that customers love, and that is why most products fail
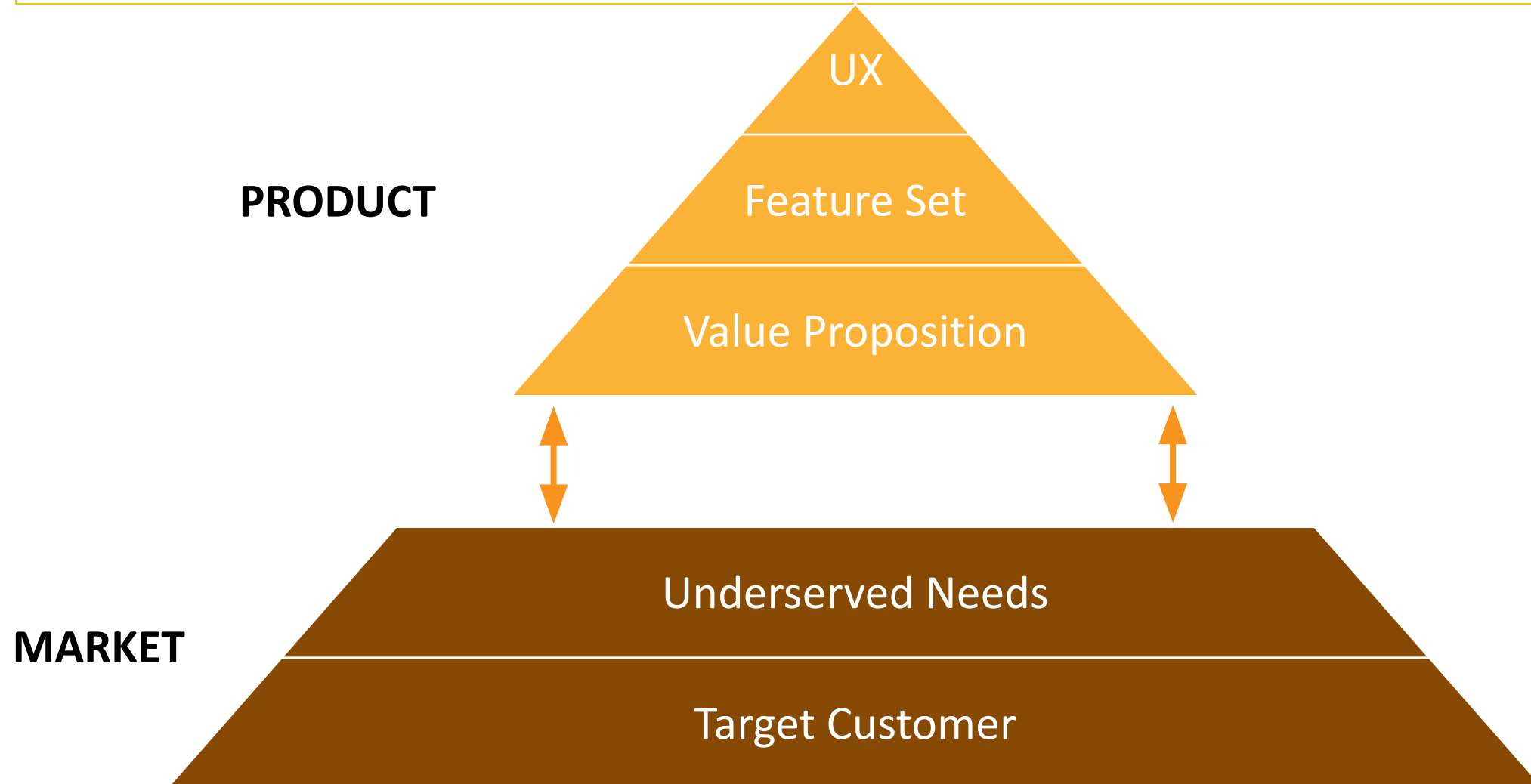
Why then do products fail?

Product – Market Fit

Coined by Mark Andersen in his famous blog post *the only thing that matters*.

The main reason products fail is because they don't meet customer needs in a way that is better than other alternatives

The Product-Market Fit Pyramid

PRODUCT

- UX
- Feature Set
- Value Proposition

MARKET

- Underserved Needs
- Target Customer

1. The Market

- A market consists of all the existing and potential customers that share a particular customer need or set of related needs.

- You can describe the size of a market <u>by the total number of customers</u> in the market <u>or the total revenue generated by those customers.</u> For either of those two measures, you can refer to the current size or the potential future size of the market.

- Different customers within a market choose different solutions to meet their needs.

- Within a given market, you can analyze the market share of each competing product—that is, what percentage of the market each product has. This is what is called Market Share

PRODUCT

MARKET

Underserved Needs
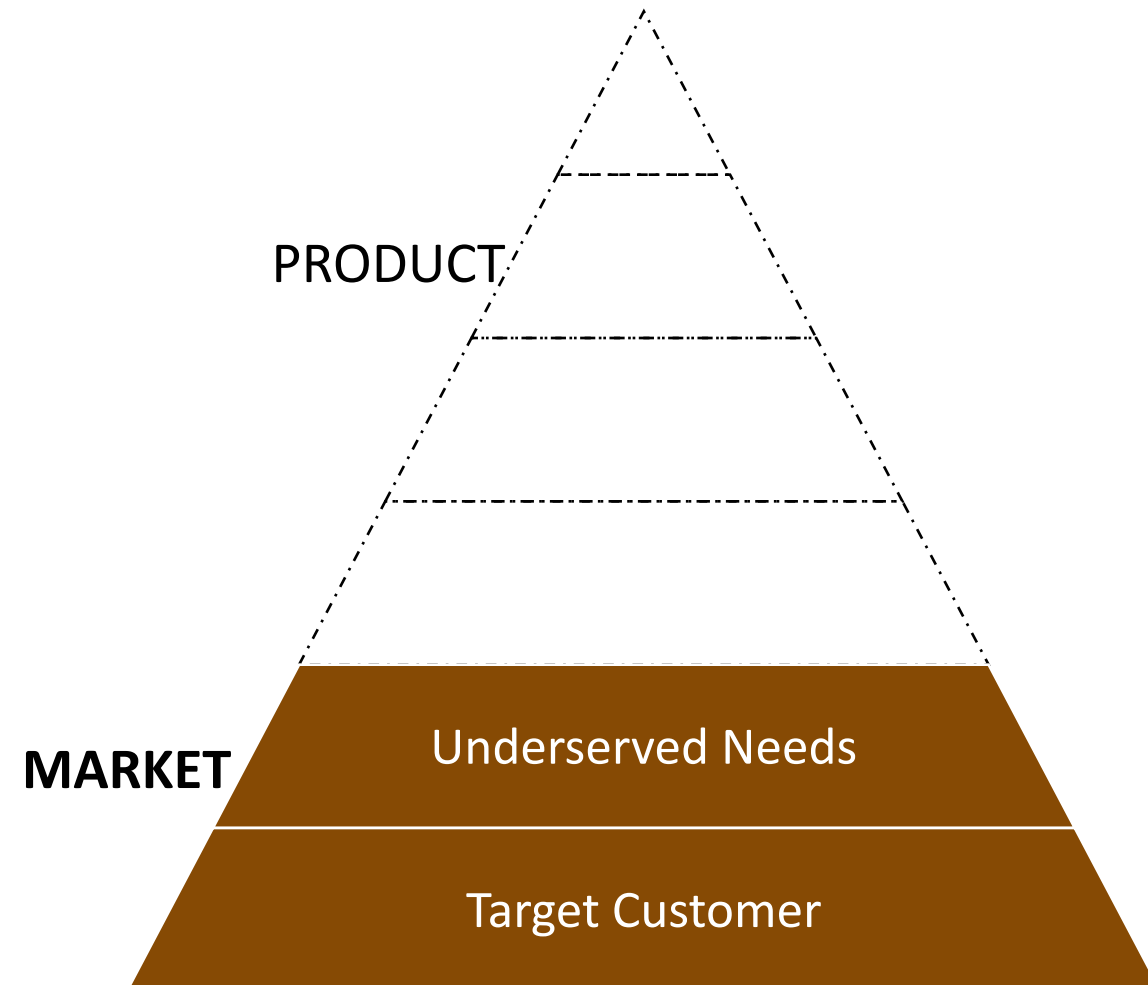
Target Customer

1. What is the size of the mobile network services market in Kenya?
2. What is the market share for each of the mobile network operators in Kenya?

The Market (contn'd)

- The needs layer is above the target customers layer in the model because it's their needs that are relevant to achieving product-market fit.

- As you try to create value for customers, you want to identify the specific needs that correspond to a good market opportunity. For example, you probably don't want to enter a market where customers are extremely happy with how the existing solutions meet their needs. When you develop a new product or improve an existing product, you want to address customer needs that aren't adequately met.

- Customers will measure your product against the alternatives that they have in the market

PRODUCT

MARKET
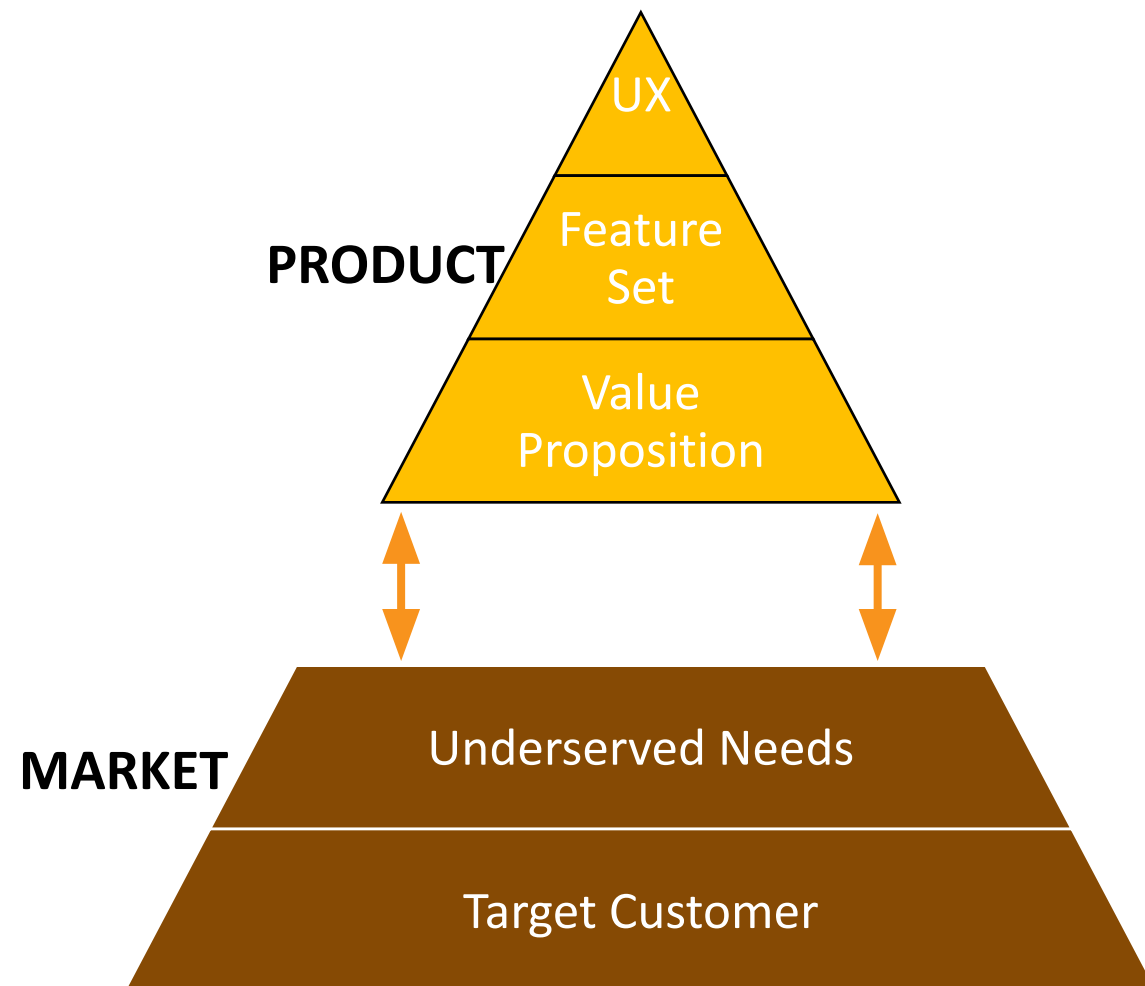
Underserved Needs

Target Customer
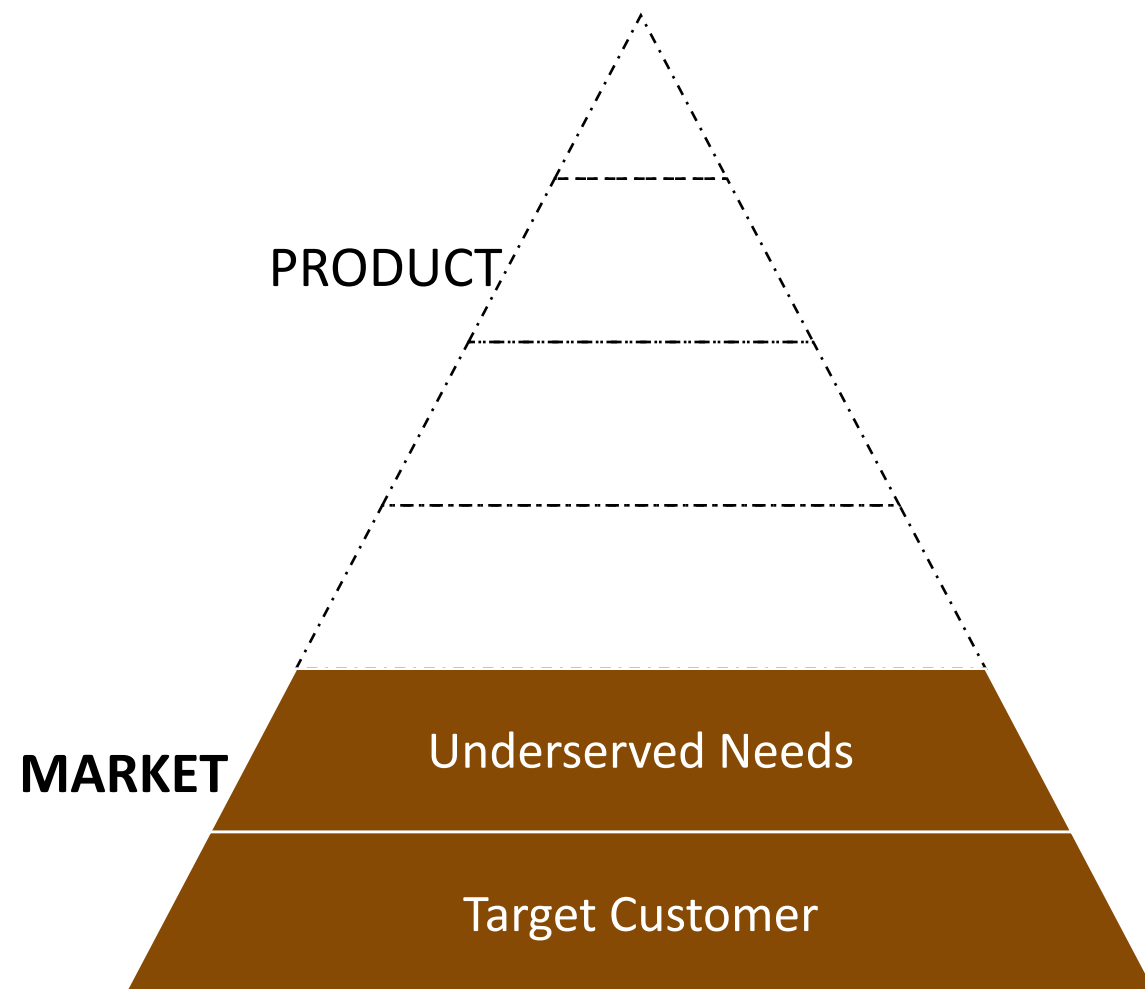
2. The Product

- A product is a specific offering intended to meet a set of customer needs. From this definition, it's clear that the concept of product-market fit applies to services as well as products.

- The typical distinction between a product and service is that a product is a physical good while a service is intangible.

- However, with products delivered via the web and mobile devices, the distinction between product and service has been blurred, as indicated by the popular term software as a service (SaaS)

PRODUCT

UX

Feature Set

Value Proposition

MARKET
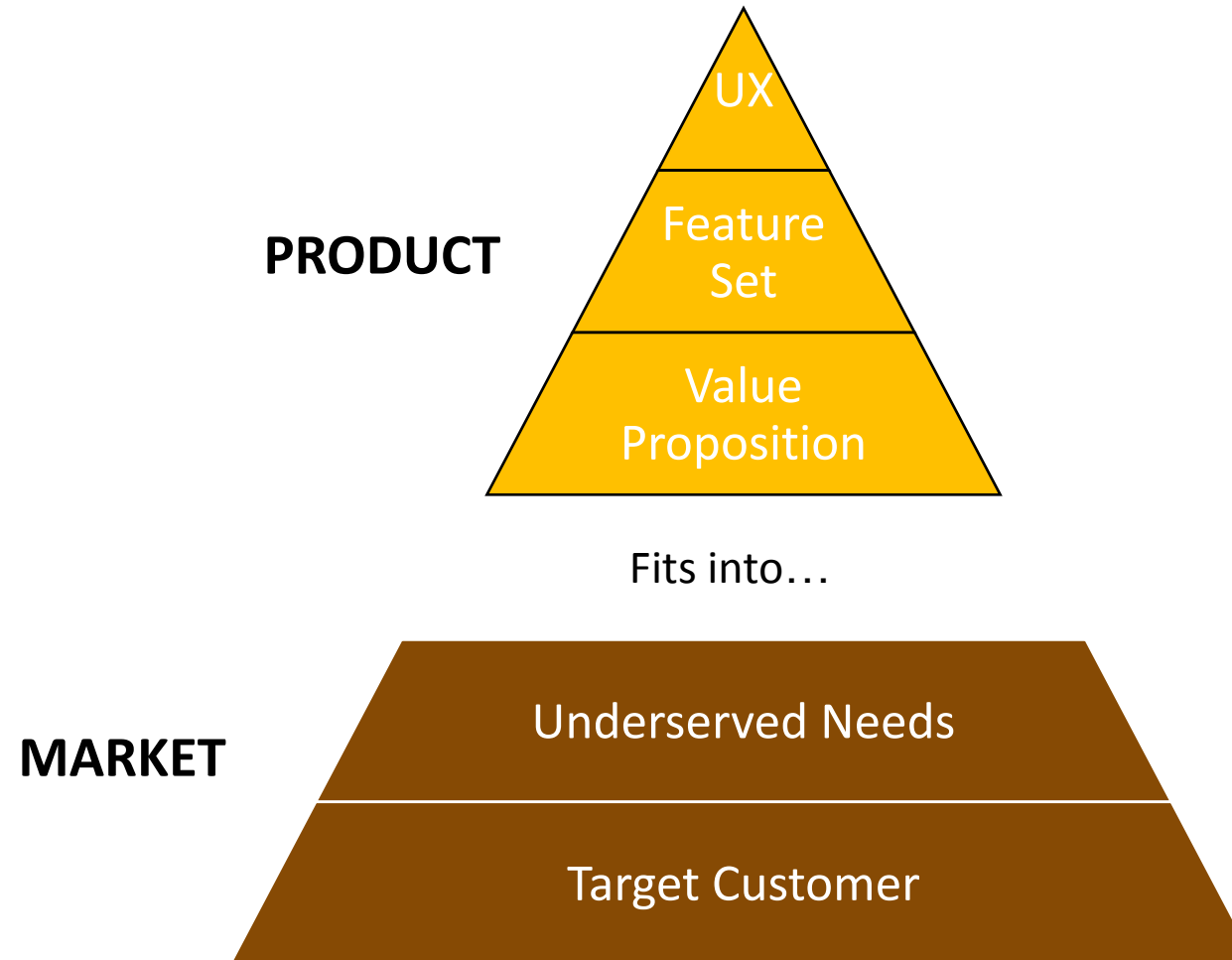
Underserved Needs

Target Customer
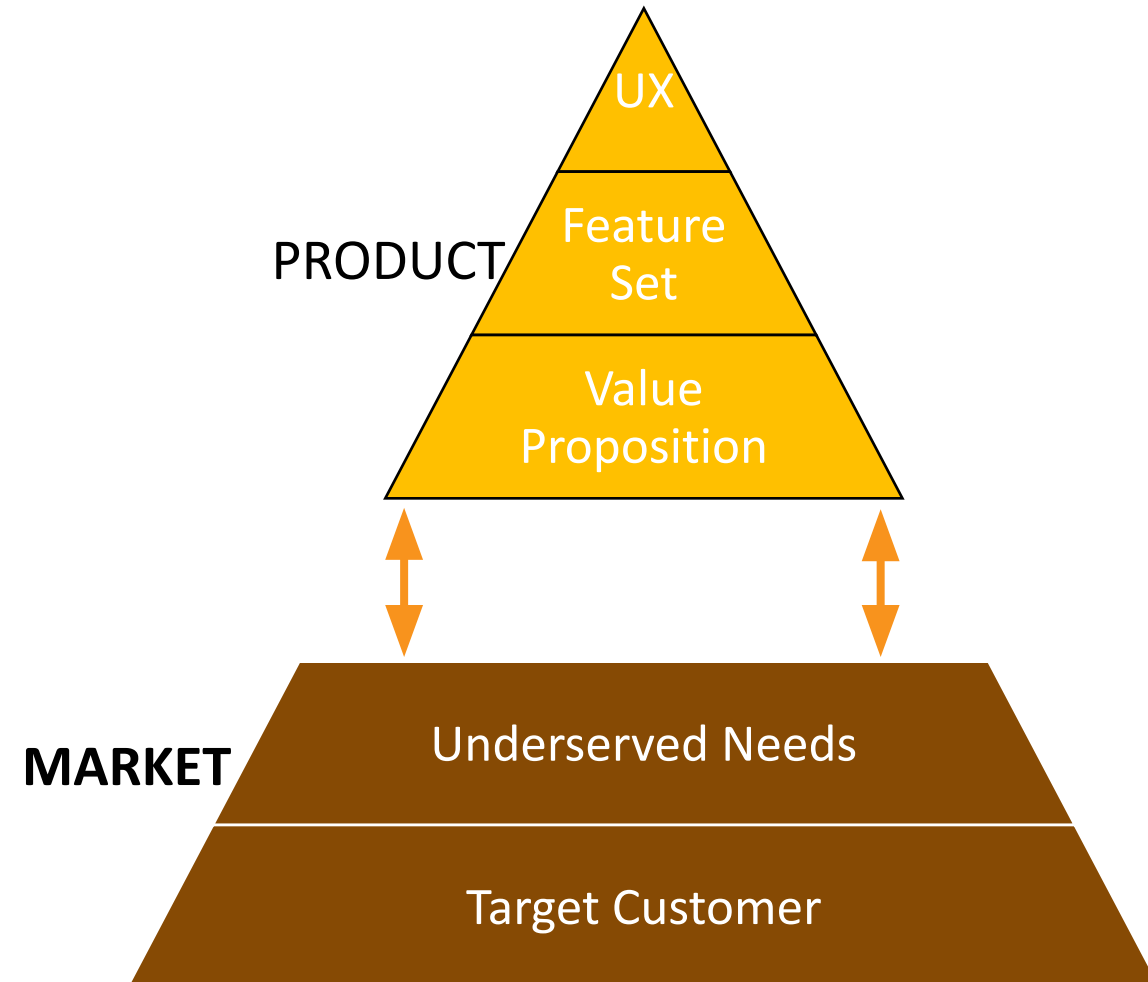
The Product (contn'd)

- For software, the product itself is intangible code, often running on servers that the customer never sees. The real-world manifestation of software products that customers see and use is the **user experience (UX).** The UX is what brings a product's functionality to life for the user.

- The functionality that a product provides consists of multiple features, each built to meet a customer need. Taken together, they form the **product's feature set.**

- To decide which features to build, you need to identify the specific customer needs your product should address. In doing so, you want to determine how your product will be better than the others in the market. This is the essence of product strategy. The set of needs that you aspire to meet with your product forms your value proposition

PRODUCT

UX

Feature Set

Value Proposition

MARKET

Underserved Needs

Target Customer

Therefore, Product-Market fit is how….

PRODUCT

UX

Feature Set

Value Proposition

Fits into…

MARKET

Underserved Needs

Target Customer

Who determines whether you have Product-Market Fit

Your customers

The Quicken Story

- By the time they got into the market, there were 46 personal finance products in the market

- Scott Cook and Tom Proulx conducted market research and concluded that none of the products had perfected Product-Market Fit. The products didn't meet customer needs and were difficult to use.

- The cofounders had a hypothesis that a checkbook-based design would do well, since everyone at the time was familiar with writing checks.

- Their hypothesis proved right: the UX they built using the checkbook conceptual design resonated with customers and Quicken rapidly became the leading personal finance software.

Quicken®

The Quicken Story

- The company pioneered the use of customer research and user testing to inform software development.

- They routinely conducted usability testing of each version before launching it and organized public betas years before those ideas became mainstream.

- They invented the "follow me home" concept, where Intuit employees would go to retail stores, wait for customers to buy a copy of Quicken, and then ask to follow them home to see how they used the software. This helped immensely in understanding the customer's initial impressions of the product.

You achieve this through the Lean Product Process
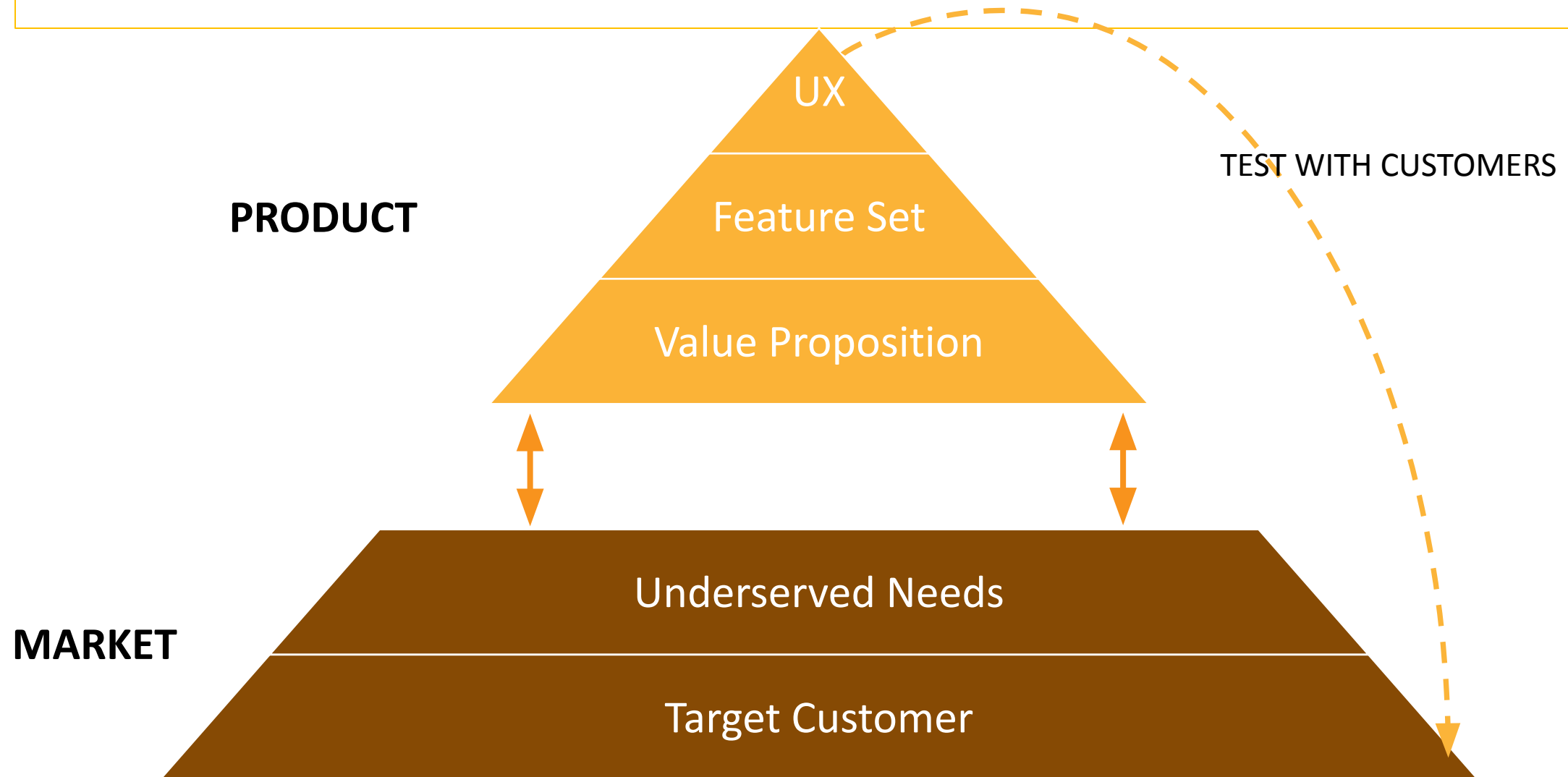
PRODUCT

UX

Feature Set

Value Proposition

TEST WITH CUSTOMERS

MARKET

Underserved Needs

Target Customer

The Lean Product Process has 6 steps

1. Determine your target customers

2. Identify underserved customer needs

3. Define your value proposition

4. Specify your minimum viable product (MVP) feature set

5. Create your MVP prototype

6. Test your MVP with customers

PROBLEM SPACE *versus* SOLUTION SPACE

Problem Space	Solution Space
• In contrast, there is no product or design that exists in problem space. • Instead, problem space is where all the customer needs that you'd like your product to deliver live. • You shouldn't interpret the word "needs" too narrowly: Whether it's a customer pain point, a desire, a job to be done, or a user story, it lives in problem space.	• Any product that you actually build exists in solution space, as do any product designs that you create—such as mockups, wireframes, or prototypes. • Solution space includes any product or representation of a product that is used by or intended for use by a customer. It is the opposite of a blank slate. • When you build a product, you have chosen a specific implementation. Whether you've done so explicitly or not, you've determined how the product looks, what it does, and how it works.

Lessons from "The Space Pen Story"

- Avoid the risk of jumping into the solution space prematurely – instead, start in the problem space.

- If we constrain our thinking to "a pen that works in zero gravity," we may not consider creative, less-expensive solutions such as a pencil.

- In contrast, having a clear understanding of the problem space (devoid of any solution space ideas), allows for a wider range of creative solutions that potentially offer a higher return-on-investment.
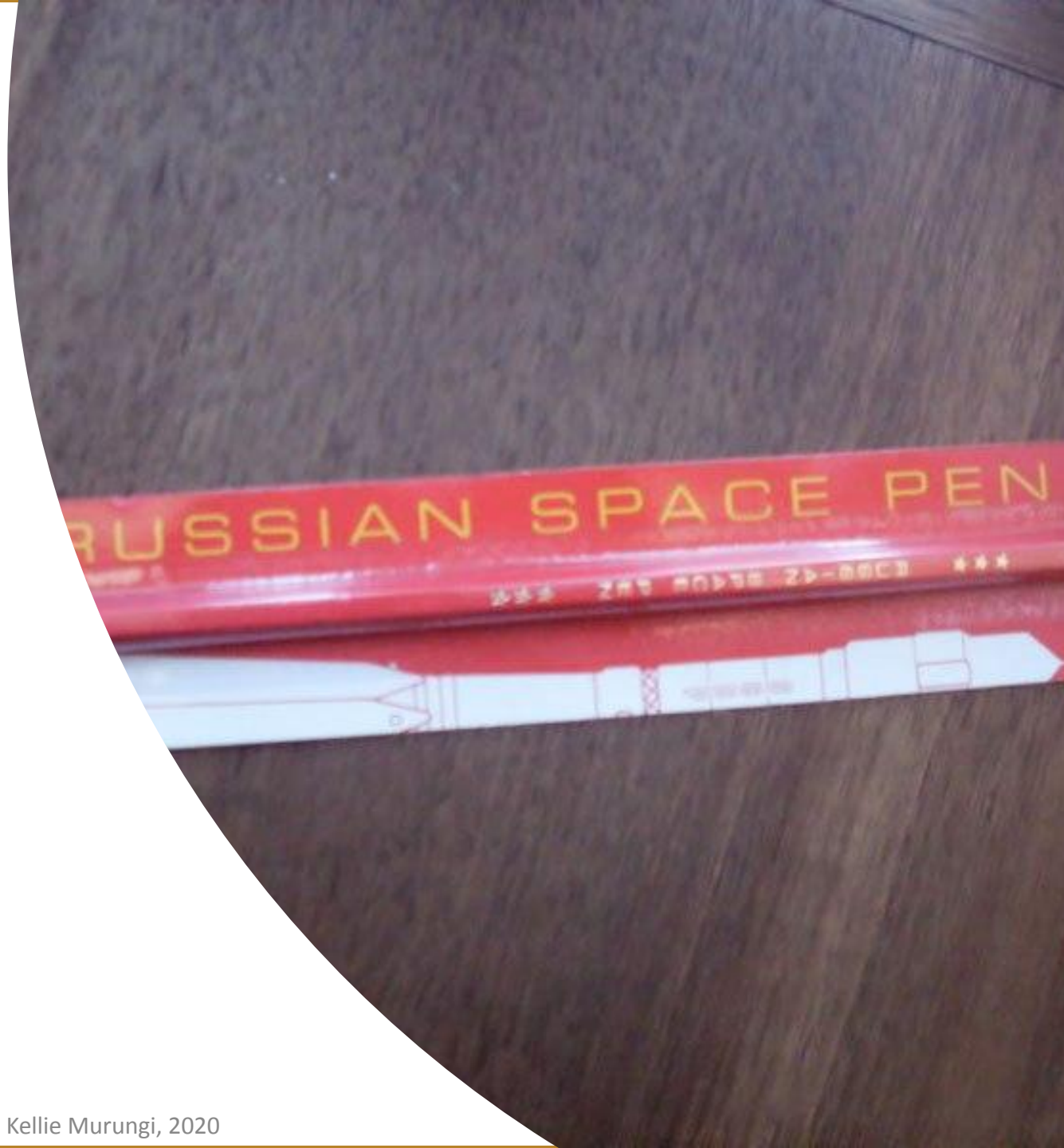
Ways we can rephrase the problem to avoid being anchored on the pen

- "A writing instrument that works in zero gravity"

  Or better still…

- "a way to record notes in zero gravity for later reference that is easy to use."

- Considering out-of-the-box solution ideas can help you refine your problem space definition, even if they aren't feasible.

Problems define markets

- When thinking about your competitors, do not just think about other tech providers – this shows that you are not thinking in the Problem Space, but are anchored in the Solution Space.

- A market is not tied to any specific solutions that meet those needs. It is purely about a set of related customer needs.

- Focus on "What" the product needs to accomplish, before getting into the "How"
  - "What" - the benefits that the product should give the customer—what the product will accomplish for the user or allow the user to accomplish
  - "How" - is the way in which the product delivers the "what" to the customer. The "how" is the design of the product and the specific technology used to implement the product.

"What" is problem space and "how" is solution space

Should we listen to customers?

Customers are not likely to identify the next breakthrough solution in your product category. They are not product designers, product managers, or technologists.

However, a good understanding of customer needs and preferences helps product teams explore new potential solutions and estimate how valuable customers are likely to find each one to be

Customers will not always talk about their problems

So how do we get to the Problem Space?

- *Contextual Inquiry or Customer Discovery* –You can <u>observe</u> what pain points they run into even if they don't explicitly mention them to you. You can <u>ask</u> them what they like and don't like about the current solutions. As you form hypotheses about the customer needs and their relative importance, you can validate and improve your hypotheses using these techniques.

- The reality is that customers are much better at giving you feedback in the solution space. If you show them a new product or design, they can tell you what they like and don't like. They can compare it to other solutions and identify pros and cons.

Where does the Problem Space and Solution Space Lie in the Product-Market Fit Pyramid

PRODUCT

UX

Feature Set

Value Proposition

Solution Space

MARKET

Underserved Needs

Target Customer
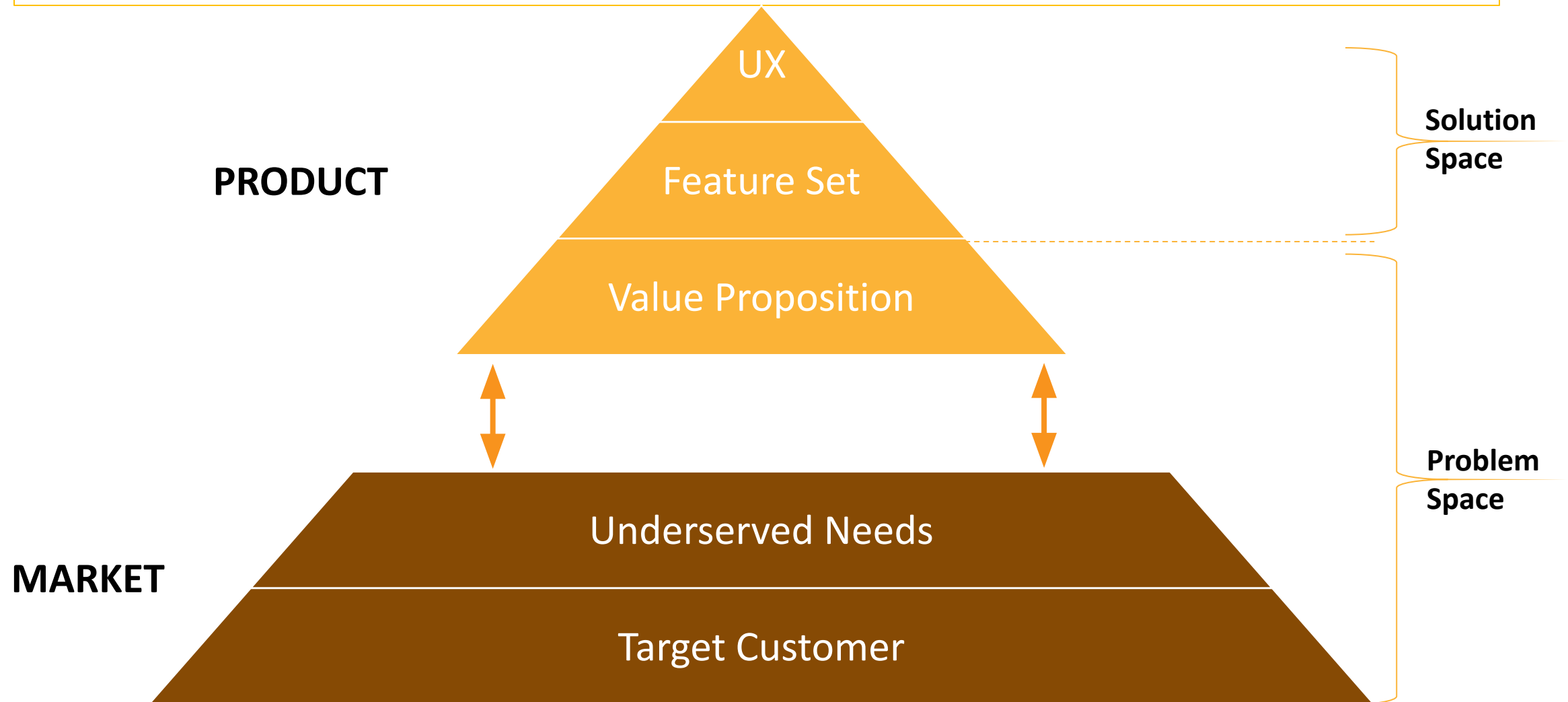
Problem Space

"Customers don't care about your solution. They care about their problems." – Dave Mc Clure (500 Startups)

Describe your Problem Space (in writing).

THE LEAN PRODUCT PROCESS

STEP 1: DETERMINING YOUR TARGET MARKET

Determining who will connect with your product is a bit like fishing

- Different customers will have different needs—and even those who have the same needs can have distinct views on their relative importance.

- You may end up with a different customer from who you first identified. You can develop hypotheses about your target market, but you won't truly know who your customers actually are until you throw your hook into the water and see what kind of fish bite.

- Once you have a product or a prototype to show customers, then you can gain clarity about the target market you're attracting.

How to segment your target market

1. <u>Demographic Segmentation:</u> Demographics are quantifiable statistics of a group of people, such as age, gender, marital status, income, and education level. Say you were developing an app for moms to easily share photos of their babies with friends and family. You could describe your target customers demographically as women 20 to 40 years old who have one or more children under the age of three.

   If you are targeting businesses, you'll use firmographics instead; these are to organizations what demographics are to people, and include traits such as company size and industry.

How to segment your target market

2) <u>Psychographic Segmentation:</u> Psychographics are statistics that classify a group of people according to psychological variables such as <u>attitudes, opinions, values, and interests.</u> For the same app, you might describe your target customers as moms who enjoy using social media and like sharing pictures of their babies with friends and family. Looking back on the demographic description, you'll see that it didn't say anything about whether or not the 20- to 40-year-old women wanted to share photos or not.

Psychographic attributes are more useful than demographics for many products. Rather than being the primary reason why someone is in your target market, demographics are often incidental. In this case, your app is targeted at moms with babies who want to share pictures. The fact that you're targeting moms drives the "women" part, and the statistical data on the age at which women give birth determines the "20 to 40 years old" range.

How to segment your target market

3. Behavioral Segmentation: You can also use relevant behavioral attributes to describe your target customer: whether or not someone takes a particular action or how frequently they do. You might define your target market as moms who currently share an average of three or more baby pictures per week on social media (e.g., Facebook, Instagram, etc.). If you were working on a stock trading app for active investors, you might define your target market as investors who place 10 or more stock trades per week.

How to segment your target market

4.   Needs-Based Segmentation: With this approach, you divide the market into customer segments that each have distinct needs. One product, say a security camera could be used for different things by security companies, busy parents, pet owners, home owners etc. Understanding each segment determines how you will then develop the product and market it to each of the segments.

5.   Users versus Buyers: For business-to-business products especially, the customer who will use your product (the user) is not the same person who makes the decision to buy it. In such cases, it is useful to distinguish the economic buyer—the decision-maker who controls the budget and writes the check—from the other stakeholders involved in the decision-making process. The others are often potential "blockers" who have the ability to veto your product if they object to unmet requirements. The buyer often has distinct needs from the end user that need to be addressed to achieve product-market fit, and you should define your target buyer in addition to your target customer when warranted.

Technology adoption life cycle
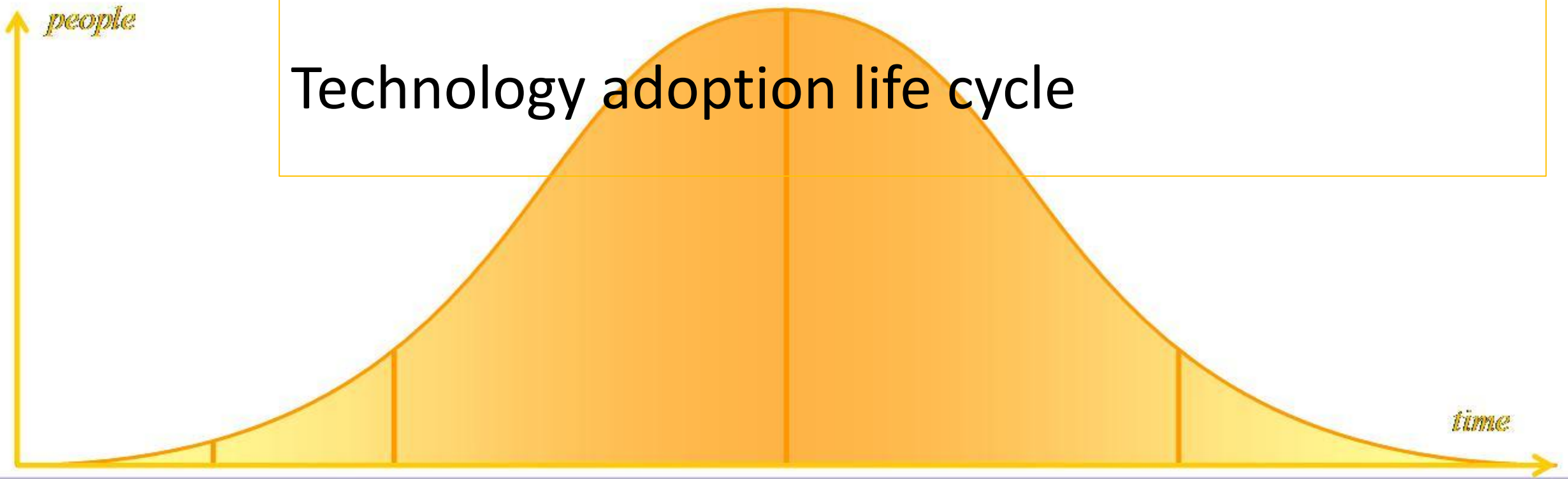
Innovators

(2.5%) are risk takers who have the resources and desire to try new things, even if they fail

Early Adopters

(13.5%) are selective about which technologies they start using. They are considered the "one to check in with" for new information and reduce others' uncertainty about a new technology by adopting it.

Early Majority

(34%) take their time before adopting a new idea. They are willing to embrace a new technology as long as they understand how it fits with their lives.

Late Majority

(34%) adopt in reaction to peer pressure, emerging norms, or economic necessity. Most of the uncertainty around an idea must be resolved before they adopt.

Laggards

(16%) are traditional and make decisions based on past experience. They are often economically unable to take risks on new ideas.

Bryce Ryan & Neal Gross (1943)

Technology adoption life cycle

- You may initially target innovators for a new market, since they embrace new solutions, are willing to pay a premium to have them, and are willing to overlook product shortcomings outside the core area of innovation.

- As you try to gain adoption by additional segments over time, you will discover that they have different needs and preferences—such as increased ease of use, higher reliability, and lower price—that require you to change your product before they will adopt it.

Personas

This is a hypothetical archetype of your actual users and not real people.

A persona is used to capture your hypotheses about your target customer and help to ensure that everyone in your team that is involved in the product process is building for the same customer.

Use of Personas to describe the customer

- Alan Cooper championed the use of personas as part of his "Goal-Directed Design" process. In his book The Inmates are Running the Asylum, he describes personas as "a precise definition of our user and what he wishes to accomplish." Cooper explains, "personas are not real people" but rather "hypothetical archetypes of actual users."

- Personas also help to ensure that everyone in your company who's involved with the product is aligned on the same customer. As with most endeavors involving a large number of people, if you don't write it down, share it, and discuss it, chances are that everyone won't be on the same page. At the end of the day, personas help people on the product team make decisions about which features are important and about how to design the user experience. A good persona empowers everyone on the team with the same solid foundation of information and reasoning.

Information a persona should provide

- Name
- Representative photograph
- Quote that conveys what they most care about
- Job title
- Demographics
- Needs/goals
- Relevant motivations and attitudes
- Related tasks and behaviors
- Frustrations/pain points with current solution
- Level of expertise/knowledge (in the relevant domain, e.g., level of computer savvy)
- Product usage context/environment (e.g., laptop in a loud, busy office or tablet on the couch at home)
- Technology adoption life cycle segment (for your product category)
- Any other salient attributes

Customer Persona Example

The Busy Mom
Lisa Bennett

Age: 32
Gender: Female
Marital Status: Married
Education: Bachelor's degree
Job: Teacher
Income: $55,000

"My children's health is my top priority, but raising two kids is a full-time job, so I need an easy way to stay on top of their prescriptions and medical appointments."

Lisa is an elementary school teacher. She lives with her hard-working husband Dave and their two children Addison (12) and Caleb (9). Because Dave often works late, Lisa is the primary caregiver to her children.

Although her children are generally healthy, they both have to take important prescriptions. Addison has asthma and must always have her inhaler by her side. Lisa worries that she might forget to refill a prescription for the inhaler and potentially put Addison in danger.

Life never stops for Lisa, and she rarely has a moment to herself. Therefore, she needs an easy way to keep track of her children's prescriptions and medical appointments.

Goals
- Be reminded of children's medical appointments
- Be able to keep track of children's health info
- Have the ability to refill prescriptions easily

Technology Use
- Average
- Owns an iPhone
- Uses desktop PC
- Uses Facebook to keep up with family and friends

Interests
- Spending time with family
- Being involved with her children's extracurricular activities
- Tennis

How to create personas

- You can gather information by doing customer interviews and surveys. Talking to customers in one-on-one interviews is the best way to build this knowledge. Once you know the right questions to ask, surveys can help you collect data from many customers at once.

- When you use survey data, it is critical that you not use averages of the collected data to populate your persona. You want your persona to represent a real person and should not design your product for some nonexistent "average" customer. You can use the aggregate survey data to help ensure your persona represents a meaningful portion of your customer base. Reading through the individual survey responses from people who match your target customer profile can be enlightening.

- if you are launching a new product or trying to expand to a new target market, you won't have existing customers. You can always use your judgment to make initial hypotheses about your target customer's attributes, and then test those hypotheses by talking to prospective customers who match that profile.

- As you talk with more customers, you learn more and revise your persona to make it more accurate and robust. Your goal is to iterate until you feel confident that you have identified a target customer with an underserved customer need that you believe you can address.

The problem with personas

- Weak personas can lack key information, be poorly written, or be based purely on speculation versus grounded in real customer data. At the other extreme are personas that contain too many superfluous details that don't add value. To be useful, a persona should be pragmatic and provide useful information that can help inform product design decisions.

- Developing a persona should not slow down your product process, and you should not spend an inordinate amount of time trying to perfect your initial persona. Instead, you should view it as a first draft that you will revise as you iterate through the process.

- Even if a persona is well written, the rest of the product team might ignore it. They should be referring to the persona as they make various design decisions and evaluate proposed designs. If your team members aren't using the persona, you should try providing some education about personas, the benefits they provide, and how the team should use them.
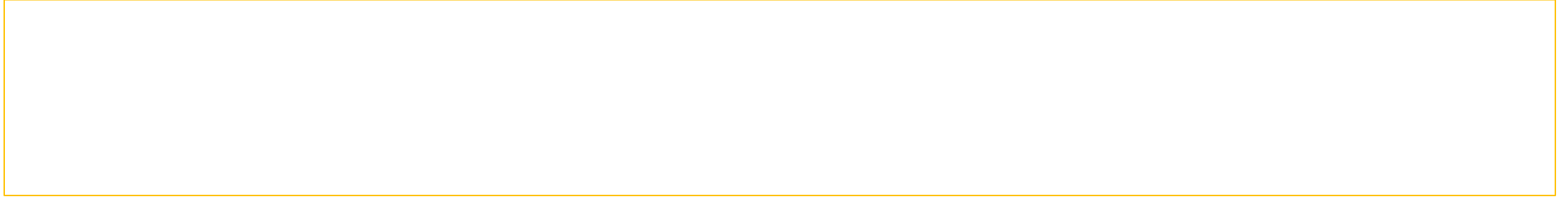
Do a market segmentation and customer persona for your problem space.

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6. Test your MVP with customers