The Unicorn Club – Billion dollar Startups

- Coined in a TechCrunch article, "Welcome To The **Unicorn Club**: Learning from Billion-Dollar Startups".
- A unicorn is generally defined as a **privately held startup with a $1 billion valuation** – something rare (like a unicorn).
  - **Private** companies are run the same way as public companies, except that ownership in the **company** is limited to a relatively small number of investors. Some of the most famous companies in the world are **private** companies, including Ikea, agriculture giant Cargill, and candy maker Mars.
  - **Valuation** – how much the company is valued **based on** its assets, future cash flow, profit, etc.

https://bits.blogs.nytimes.com/2015/07/05/unicorns-a-fitting-word-for-its-time-and-place (Apr'25)

Why so many more 'unicorn' companies now?

- **Compelling products that are easier than ever to adopt**
- A perception of **winner-take-all** markets (Dominant design)

- Competitive later stage capital
- Vibrant public markets

- New Technologies
- New disruptions

Competitive neutrality: regulating interconnection disputes in the transition to competition (Apr'25)

Five primary business models among Unicorns

- 36% **E-Commerce companies** – companies where a consumer pays for a good or service through the internet or mobile, e.g., companies like Uber and Airbnb

- 27% **Audience companies** – the product is free to use for consumers, the company makes money through ads or leads, e.g., SnapChat

- 20% **Enterprise software companies** – where a business customer pays for larger scale software, often 'on-premises' vs cloud-based, or hardware with software, e.g., Cloudera, MagicLeap

- 12% **SaaS companies** – cloud-based software offered often via a 'freemium' or monthly model, e.g., Slack and MangoDB

- 6% **Consumer Electronics/Internet of Things** – where the consumer pays for a physical product, e.g., Xiaomi

https://techcrunch.com/2015/07/18/welcome-to-the-unicorn-club-2015-learning-from-billion-dollar-companies/ (Apr'25)

Five primary business models among Unicorns

- An important note – **32% has characteristics of broad or local network effects**, where the value of the product/service gets better the more people are part of the system.

- Many are platform companies, e.g., bytedance, uber, stripe

https://techcrunch.com/2015/07/18/welcome-to-the-unicorn-club-2015-learning-from-billion-dollar-companies/ (Apr'25)

Unicorns, Decacorns and Undercorns

- Unicorns – private companies valued at more than $1 billion….
    - **Private** companies are run the same way as public companies, except that ownership in the **company** is limited to a relatively small number of investors. Some of the most famous companies in the world are **private** companies, including Facebook (until 2012), Ikea, agriculture giant Cargill, and candy maker Mars.
- Decacorns – private companies **valued at over $10 billion** are now the gold standard for startup success.

- Undercorns - Unicorns that sell or go public below their last private valuation

Size and structural dimensions of companies

- However, large companies might also **be disadvantaged in innovation** because…
  - R&D efficiency may decrease due to loss from managerial control
  - Large companies can have more bureaucratic inertia
  - More commitments tie companies to current technologies
    - Learning effects (see Week 3); dominant design

  Mac OS 1997 case (Apr'25)

- Small firms are often more flexible and entrepreneurial
  - Can change direction quickly based on changing circumstances or new observations (pivot)
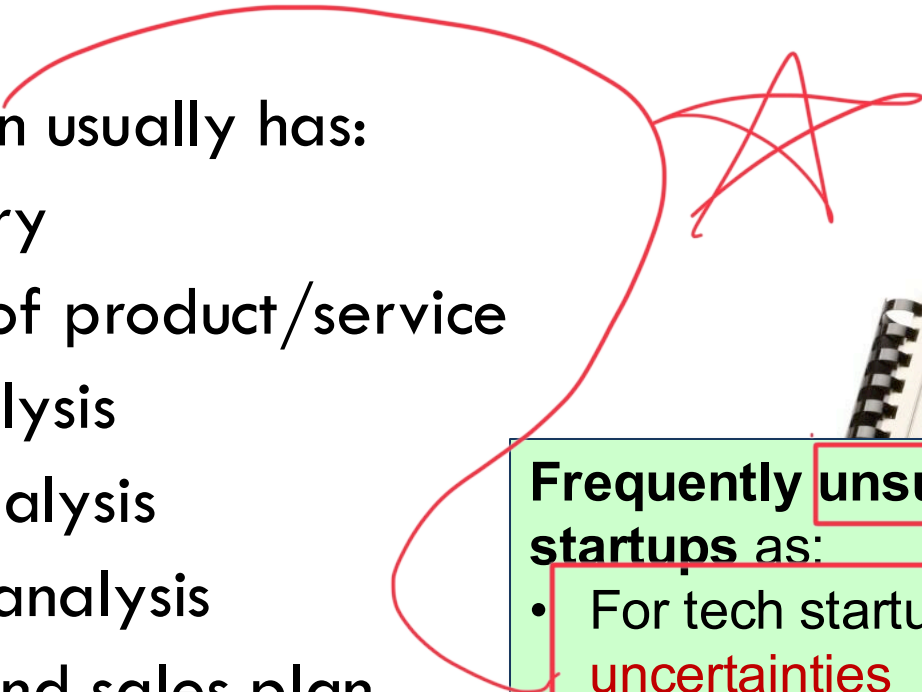
- **Innovation favours agility - It's easier for a small company to be agile than a large company**

Source: Schilling (2013)

Traditional approach: Treat startup as small version of large company

– The business plan focused on:

1. Identifying business opportunities (<u>addressable market</u>)

2. <u>Problem to be solved</u>

3. <u>Planned solution</u> to the problem

4. <u>Forecast</u> for income, profit, costs, etc. (e.g. for 5 years)

Traditional business plan

– The business plan usually has:

- Exec summary

- Description of product/service

- Industry analysis

- Customer analysis

- Competitor analysis

- Marketing and sales plan

- Operations and HR plans

- Financial plan

Frequently unsuccessful for tech startups as:

- For tech startups, there are many uncertainties
- The plan may have many untested assumptions
- Much of the plan may rely on these untested assumptions
- The business plan is often rigid, and it is hard to change direction quickly

Established companies vs startups

– Established companies…

– **Execute a business model**

– Startups…

– **Search for a business model**

Paul Graham: How to get startup ideas

Paul Graham, Founder of Y Combinator

Some of their startups: Reddit, Scribd, Dropbox, Airbnb, Stripe, Heroku, Weebly, …

- The way to get startup ideas is <u>not to try to think of startup ideas</u>. It's to **look** for problems, preferably problems you have yourself.

The very best startup ideas tend to have three things in common:
  - they're something the <u>founders themselves want</u>,
  - that they <u>themselves can build</u>,
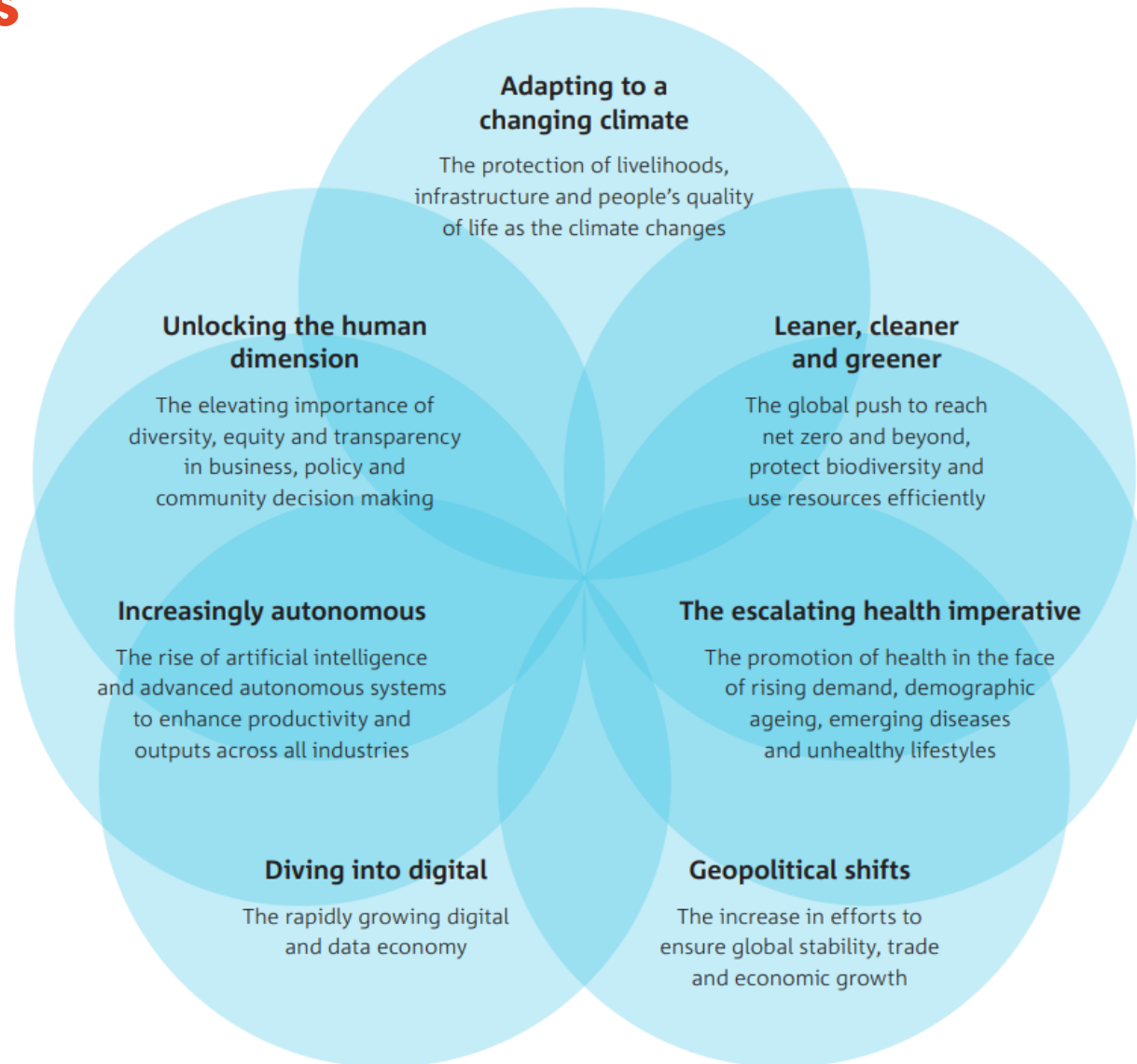 - and that <u>few others realise are worth doing</u>.

Microsoft, Apple, Yahoo, Google, and Facebook all began this way.

Paul Graham: How to get startup ideas

- Real problems:
  - Address real problems, not made-up problems
- The "**Well**":
  - Build something a small number of people want a lot **rather than** something a large number of people want a little
    - It helps you focus and build quickly
- Getting yourself ready
  - Be at the leading edge of a field (even if just a user)
  - **"Live in the future, then build what's missing"**
  - External stimulus hitting a prepared mind
- Noticing:
  - Not "think up ideas" but "notice"
  - It's OK to work on projects that produce "toys" as it prepares you to notice
  - **"Live in the future and build what seems interesting"**

http://paulgraham.com/startupideas.html (Apr'25)

CSIRO: 7 Megatrends

– Looking to the future can be difficult, but there are many information out there…

Adapting to a changing climate

The protection of livelihoods, infrastructure and people's quality of life as the climate changes

Unlocking the human dimension

The elevating importance of diversity, equity and transparency in business, policy and community decision making

Leaner, cleaner and greener

The global push to reach net zero and beyond, protect biodiversity and use resources efficiently

Increasingly autonomous

The rise of artificial intelligence and advanced autonomous systems to enhance productivity and outputs across all industries

The escalating health imperative

The promotion of health in the face of rising demand, demographic ageing, emerging diseases and unhealthy lifestyles

Diving into digital

The rapidly growing digital and data economy

Geopolitical shifts

The increase in efforts to ensure global stability, trade and economic growth

Some differences between established companies and startups

	Established companies	Startup companies
Markets for products	Known	Mostly unknown (hypothesis only)
Customers	Known	Mostly unknown (hypothesis only)
Products	Known	Mostly unknown (hypothesis only)
Future product features	Learn from customers	Learn from potential customers and test hypotheses
Business model	Company executes the current business model	Company searches for the best business model
Product	Full specifications as needed by market	Minimum feature set (for speed to market and flexibility for change)
Product development	Smooth execution using proven methods	Pivots (until find market, customers, products, business model)
Structure	Relatively stable	Fluid

Based on work of Steve Blank
E.g. http://www.slideshare.net/sblank/why-product-managers-need-sneakers?from=ss_embed (Apr'25)

The startup – 3 key principles

– Customer Development
"get out of the building"
  – including hypothesis-driven experiments with customers, pivoting etc.

– Business Model Canvas
"Sketch Out Your Hypotheses."

– Agile software development
"Quick, Responsive Development."

Steve Blank, Why the Lean Start-Up Changes Everything, Harvard Business Review, 2013, https://hbr.org/2013/05/why-the-lean-start-up-changes-everything

What's wrong with the New Product Introduction Model (for startups)

- "The **9 Deadly Sins** of the New Product Introduction Model":
  1. Assuming "I know what the customer wants"
  2. The "I know what features to build" flaw
  3. Focus on a Launch date
  4. Emphasis on execution instead of hypotheses, testing, learning and iteration
  5. Traditional business plans assume no trial and no errors
  6. Confusing traditional job titles with what a startup needs to accomplish
  7. Sales and marketing execute a plan
  8. Presumption of success leads to premature scaling
  9. Management by crisis leads to a death spiral

Source: Steve Blank and Bob Dorf, "The Startup Owner's Manual" (2012)

Introducing new products to a market: Traditional model

New Product Introduction model:

Concept / Seed	→	Product Development	→	Alpha/Beta Test	→	Launch/ 1st Ship
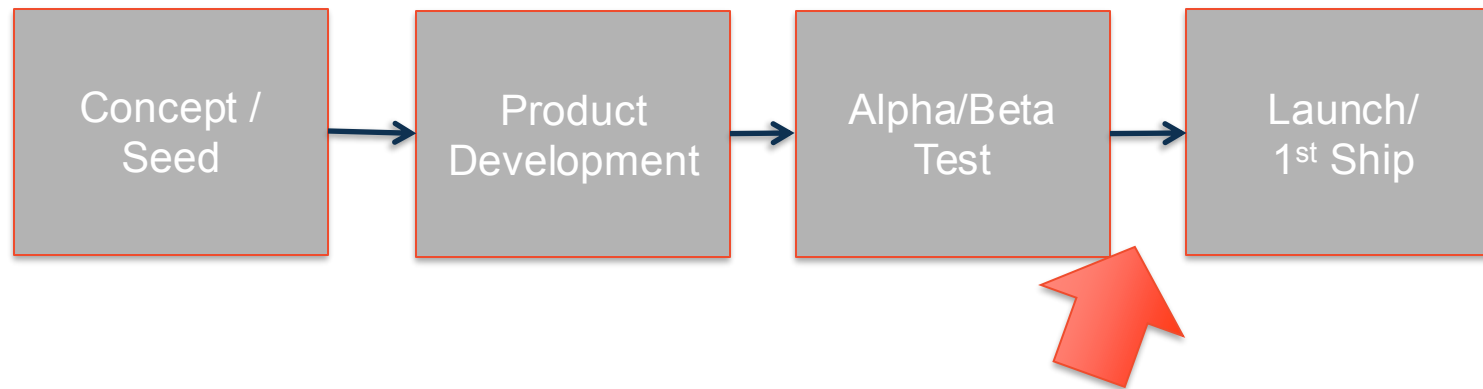
First contact between product and customer. Too late!

"No business plan survives first contact with customers" – Steve Blank

Created by Bill Simpson-Young based on Steve Blank and Bob Dorf "The Startup Owner's Manual" (2012)

Alternative approach for startups:
Customer Development Process

Customer Development Process:

Works where customers are unknown, product features unknown, the market is unknown, basis of competition is unknown – i.e. Designed to solve "**the 9 deadly sins**"
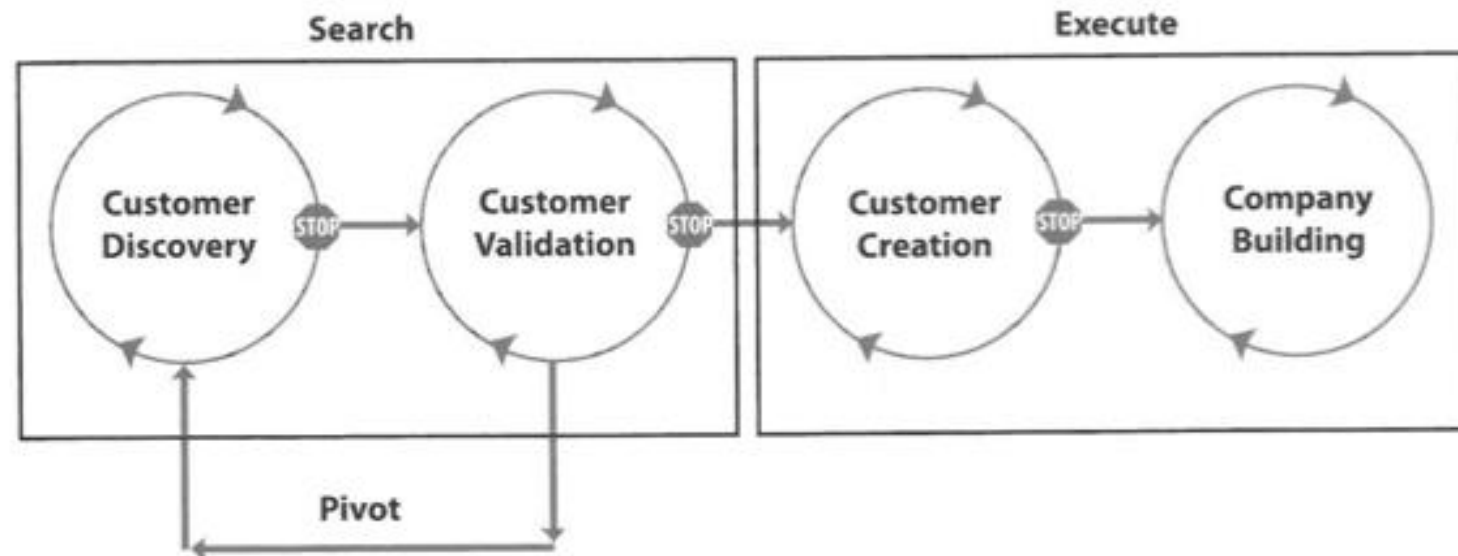
Customer Development Process *(Figure 2.1)*

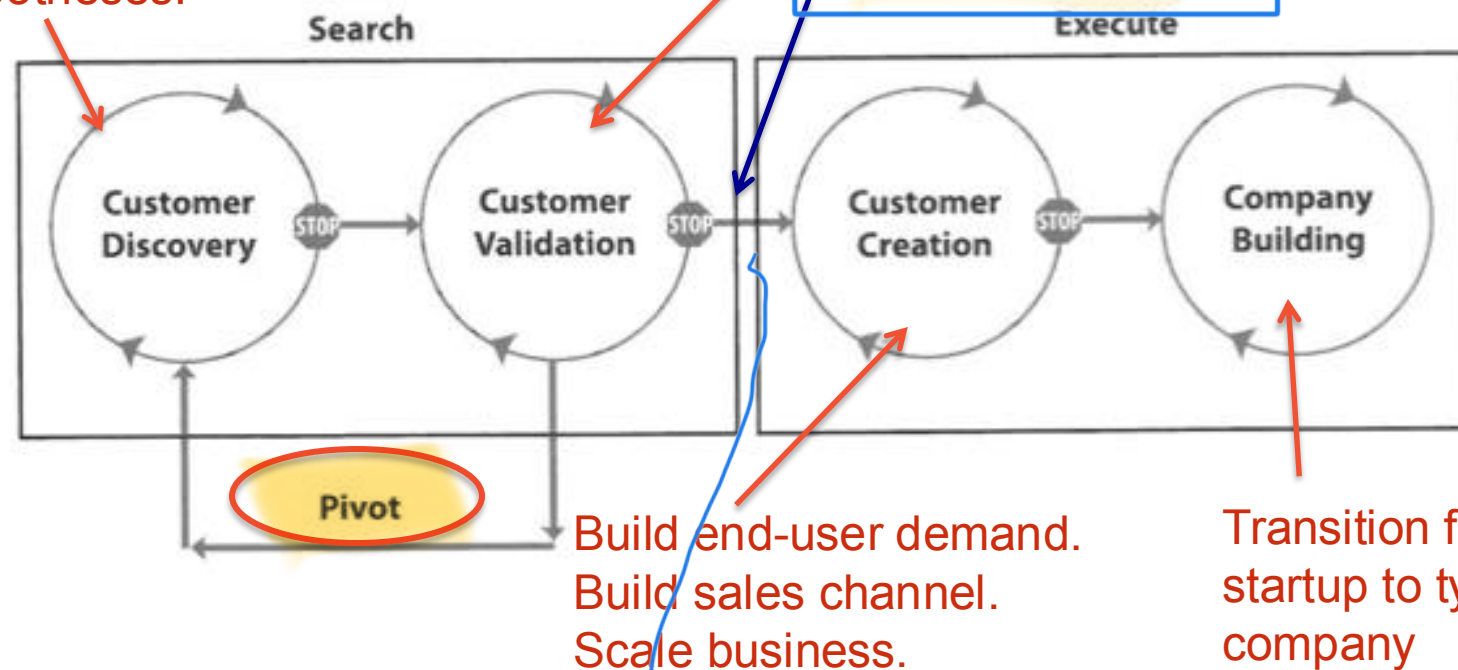*Source: Steve Blank and Bob Dorf, "The Startup Owner's Manual" (2012)*

Customer creation: turn prospects into purchasers (Apr'25)

Alternative approach for startups: Customer Development Process

Capture vision and turn it into business model hypotheses. Develop plan to test hypotheses with customers. Test hypotheses.

Test whether related business model is repeatable and scalable

Product-Market Fit

Search

Customer Discovery → STOP → Customer Validation → STOP → Customer Creation → STOP → Company Building

Execute

Pivot

Build end-user demand. Build sales channel. Scale business.

Transition from startup to typical company

Customer creation: turn prospects into purchasers (Apr'25)

Source: Steve Blank and Bob Dorf, "The Startup Owner's Manual" (2012)

Product-Market Fit

- A degree to which a product satisfies a strong market demand.

- A step in between customer validation and customer creation

- Steve Blank

The Process To Product-Market Fit

https://fourweekmba.com/product-market-fit/
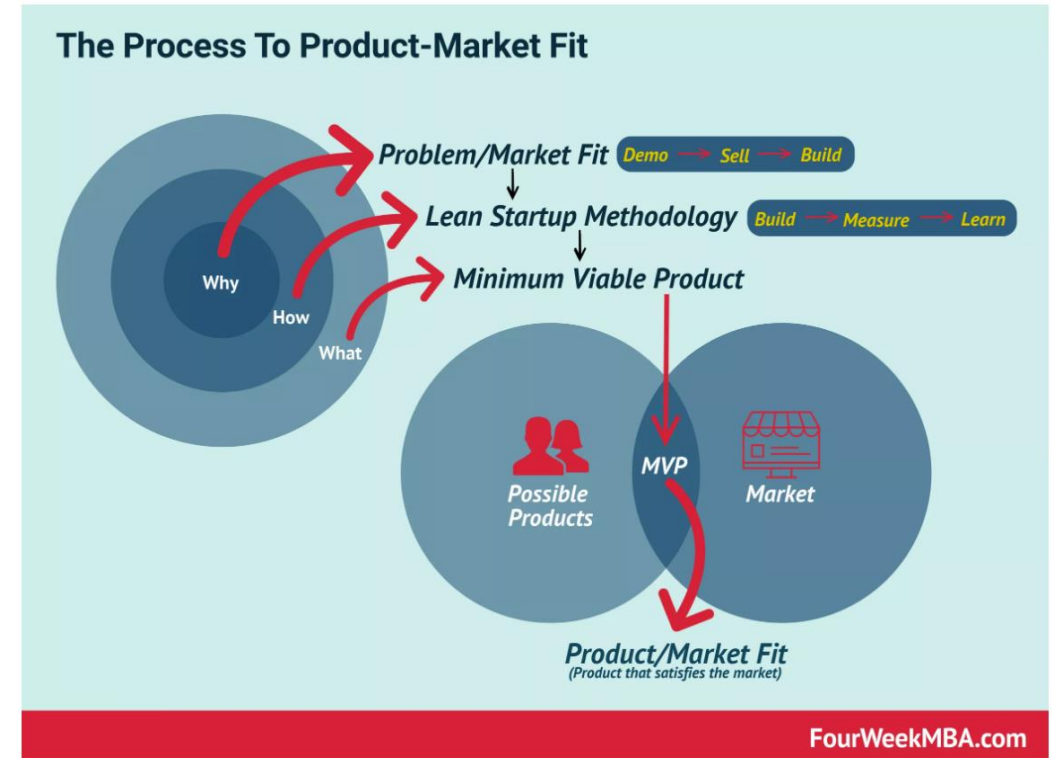
Introducing new products to a market: Traditional model

New Product Introduction model (Traditional):

Works where customers are known, product features can be specified in advance, the market is well-defined, and the basis of competition is understood

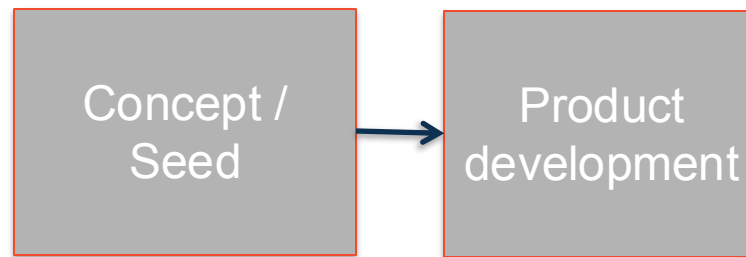# Introducing new products to a market: Traditional model

New Product Introduction model:

Concept / Seed
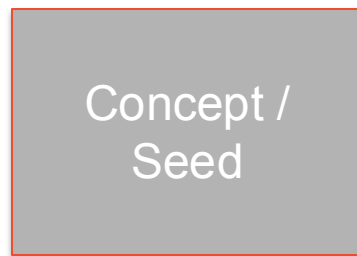
Come up with concept
Define product and product features
Determine customers
Do market research (statistical and some interviews)
Develop business plan

Created by Bill Simpson-Young based on Steve Blank and Bob Dorf "The Startup Owner's Manual" (2012)

Introducing new products to a market: Traditional model

New Product Introduction model:
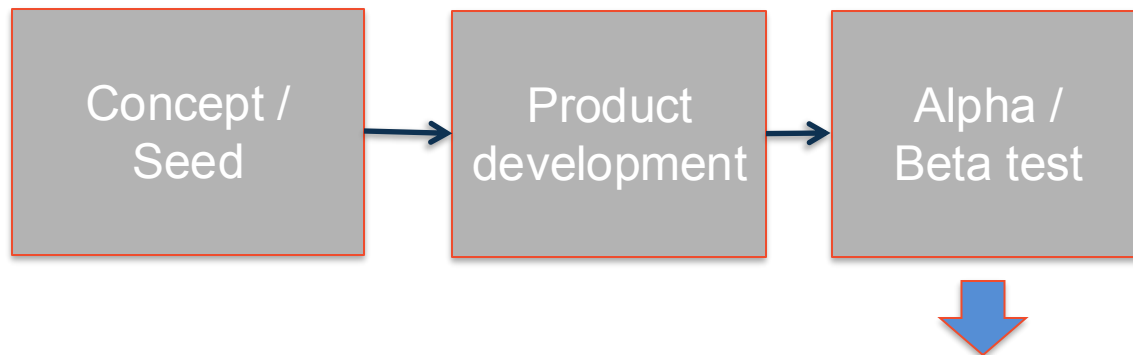

Specify market requirements
Develop product/service - typically using the **waterfall model**:
Requirements, design, implementation, testing, maintenance
Promote future product/service

Created by Bill Simpson-Young based on Steve Blank and Bob Dorf "The Startup Owner's Manual" (2012)

Introducing new products to a market: Traditional model

New Product Introduction model:
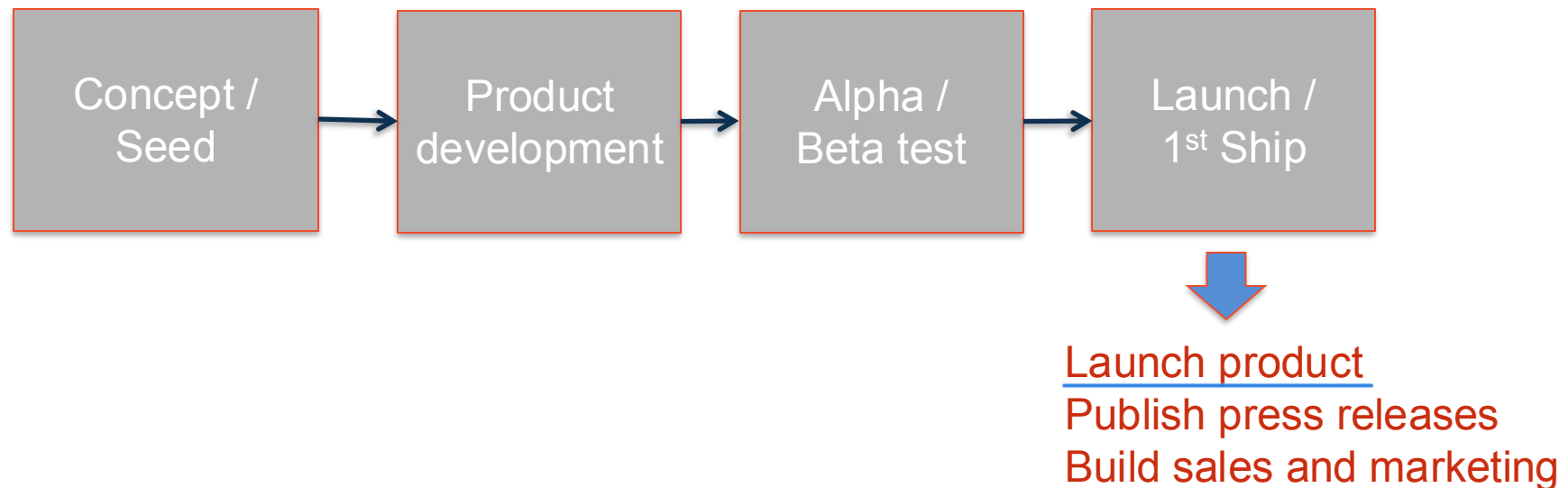

Concept / Seed → Product development → Alpha / Beta test

Sign up alpha/beta customers
Run alpha/beta trials
Develop sales and marketing materials
Get channel partners and build sales organisation

Created by Bill Simpson-Young based on Steve Blank and Bob Dorf "The Startup Owner's Manual" (2012)

Introducing new products to a market: Traditional model

New Product Introduction model:

Concept / Seed	→	Product development	→	Alpha / Beta test	→	Launch / 1st Ship

Launch product
Publish press releases
Build sales and marketing

Created by Bill Simpson-Young based on Steve Blank and Bob Dorf "The Startup Owner's Manual" (2012)

Problems with the traditional model

- It is impossible to know all requirements in advance
  - The project takes time, so the requirements at the time of capture may be different from those at the time of delivery
  - Some requirements are only apparent when users are using the product
  - It takes too long to get customer validation of the product

Capture requirements

Specify functionality

Specify design

Implement

Test / Maintenance
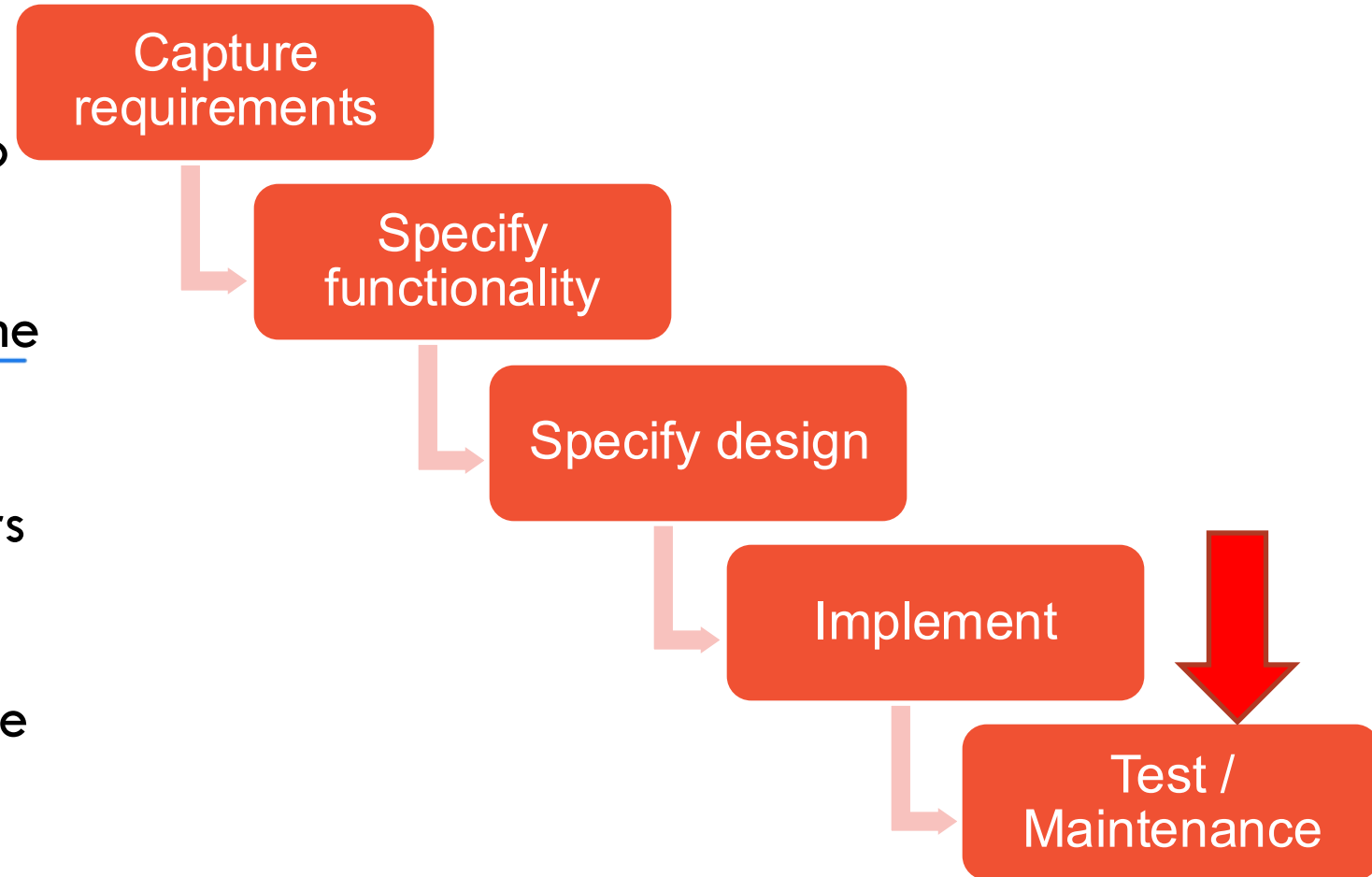
Agile development

- Iterative, incremental and evolutionary
- Efficient and face-to-face communication
- Very short feedback loop and adaption cycle
- Quality focus
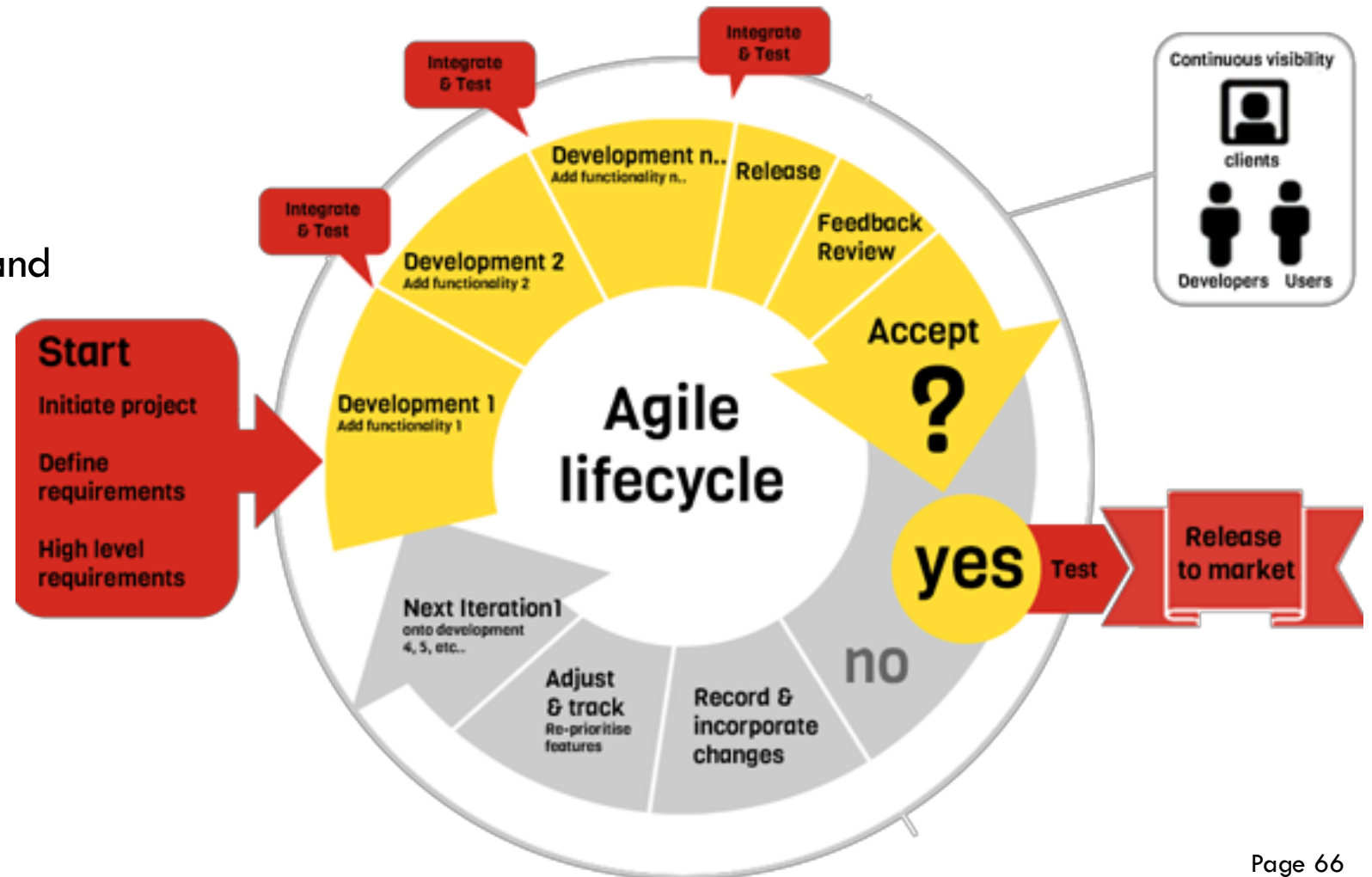
Agile Alliance – Key Agile Concepts (Management)

- **User Stories**: In consultation with the customer or product owner, the team divides the work into functional increments called "user stories." Each user story is expected to contribute to the overall product's value. E.g., "*As a shopper, I want to be able to search for products on the website so that I can easily find what I am looking for*"

- **Daily Meeting**: Each day at the same time, the team meets to bring everyone up to date on the vital information for coordination: each team member briefly describes any "completed" contributions and any obstacles that stand in their way.

- **Incremental Development**: Nearly all Agile teams favour an incremental development strategy; in an Agile context, each successive version of the product is usable, and each builds upon the previous version by adding user-visible functionality.

Agile Alliance – Key Agile Concepts (Management)

- **Iterative Development:** Agile projects are iterative as they intentionally allow for "repeating" software development activities and potentially "revisiting" the same work products.

- **Team:** A "team" in the Agile sense is a small group of people assigned to the same project or effort, nearly all of them on a full-time basis. A small minority of team members may be part-time contributors or have competing responsibilities.

- **Milestone Retrospective:** Once a project has been underway for some time, or at the end, all of the team's permanent members (not just the developers) invest from one to three days in a detailed analysis of the project's significant events.

- **Personas:** When the project calls for it - for instance when user experience is a major factor in project outcomes - the team crafts detailed, synthetic biographies of fictitious future product users; these are called "personas."

Three common forms of Agile development

− There are at least a dozen agile innovation methodologies, which share values and principles but differ in their emphases. Experts often combine various approaches. Here are three of the most popular forms and the contexts in which each works best.

|	**SCRUM**	**KANBAN**	**LEAN DEVELOPMENT**
Guiding Principles	Empower creative, cross-functional teams	Visualize workflows and limit work in process	Eliminate waste from the system as a whole
Favorable Conditions for Adoption	Creative cultures with high levels of trust and collaboration, or Radical innovation teams that want to change their working environment	Process-oriented cultures that prefer evolutionary improvements with few prescribed practices	Process-oriented cultures that prefer evolutionary improvements with overarching values but no prescribed practices

Common Agile methodologies

- **Lean Methodology** eliminates waste by selecting only the valuable features for a system, prioritising those selected, and delivering them in small batches. It emphasises the speed and efficiency of development workflow and relies on rapid and reliable feedback between programmers and customers.
    - Lean uses the idea of work product being "pulled" via customer request.
    - It focuses decision-making authority and ability on individuals and small teams since research shows this to be faster and more efficient than a hierarchical control flow.
    - Lean also concentrates on the efficiency of the use of team resources, trying to ensure that everyone is productive as much of the time as possible.
    - It concentrates on concurrent work and the fewest possible intra-team workflow dependencies.
    - Lean also strongly recommends that automated unit tests be written at the same time the code is written.

https://www.atlassian.com/agile

Common Agile methodologies

- **Scrum** is a process framework for managing product development and other knowledge work. Scrum is empirical in providing a means for teams to establish a hypothesis of how they think something works, try it out, reflect on the experience, and make appropriate adjustments.

- Organisations use **Kanban** to manage the creation of products with an emphasis on continual delivery while not overburdening the development team. Like Scrum, Kanban is designed to help teams work together more effectively.

https://www.atlassian.com/agile

The Minimum Viable Product (MVP)
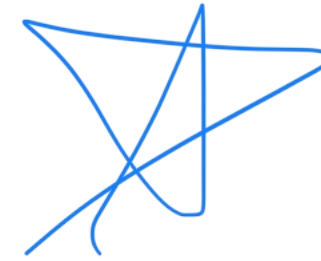
– Definition (from Eric Reis):
"the minimum viable product is that version of a new product which allows a team to collect the maximum amount of validated learning about customers with the least effort."

– The MVP is a crucial solution for new product releases, balancing the need for essential features with the risk of overwhelming complexity.

"*Customer discovery in the quickest time frame with minimum effort*"

Product Market Fit

- Definition (Marc Andreessen): "Product-market fit means being in a good market with a product that can satisfy that market."

- You can always feel when product-market fit is not happening.

  - The customers are not quite getting value out of the product, word of mouth is not spreading, usage is not growing that fast, press reviews are kind of "blah", the sales cycle takes too long, and lots of deals never close.
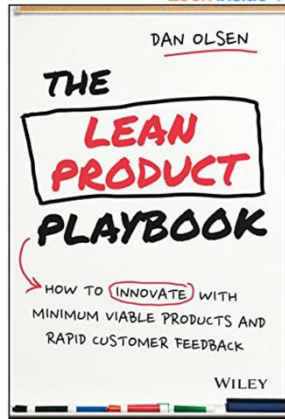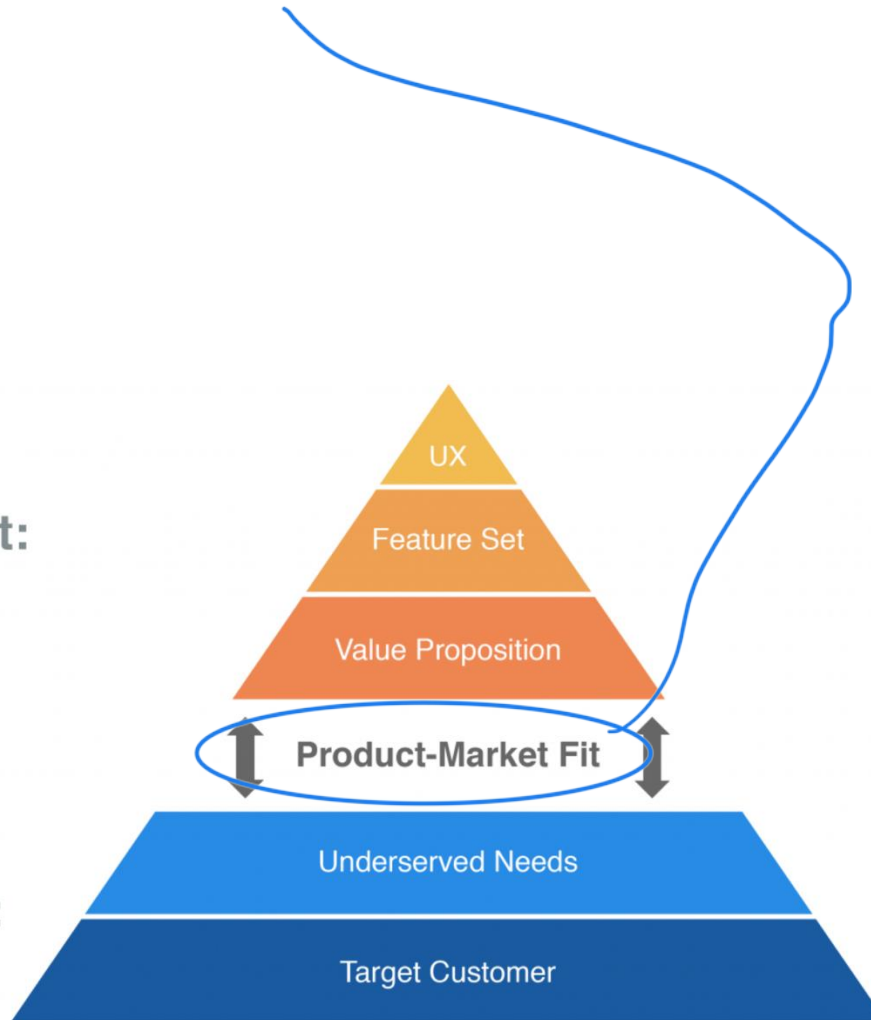
Marc Andreessen

https://youtu.be/zfOsP3PmI1U

http://web.stanford.edu/class/ee204/ProductMarketFit.html (Apr'25)

Product-Market Fit Pyramid for Lean Product Process

Product:
- UX
- Feature Set
- Value Proposition

Product-Market Fit

Market:
- Underserved Needs
- Target Customer

The Product-Market Fit Pyramid

- Test your MVP with customers
- Create your MVP prototype
- Specify your Minimum Viable Product (MVP) feature set
- Define your value proposition

- Identify underserved customer needs
- Determine your target customer