Vision vs. strategy

Strategy & Metrics

LECTURE SUMMARY

Covered in this lecture:

What do vision and strategy mean?

- Vision is defined in the dictionary as: “a vivid mental image, especially a fanciful one of the future”
- Visionary is defined as: “(especially when referring to a person), a visionary is one who is thinking about or planning the future with imagination or wisdom.”
- People that are considered visionaries are people that have had opinions about the way the future could be or should be that turned out to be right - either by pure luck, or through the direct efforts of that person

- **When it comes to business, vision refers to imagining a far reaching future that could be possible and working towards making it happen**
- **Strategy is the series of actions you take to achieve your goal, and it’s usually planned out against an opponent/competitor**

VISION VS STRATEGY

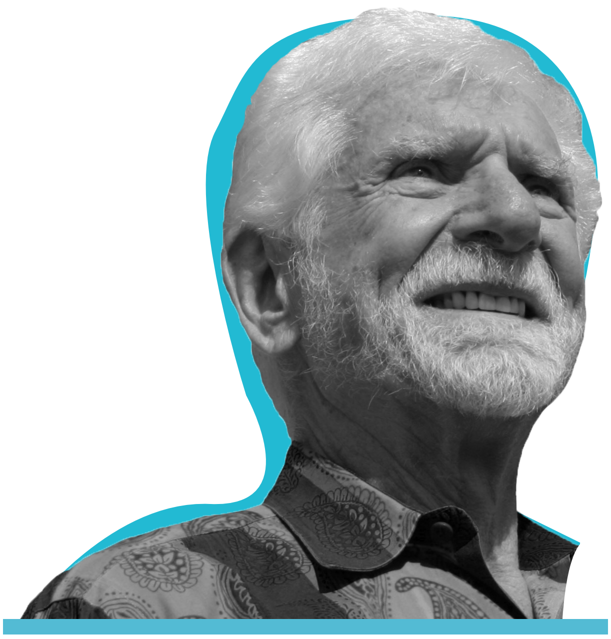
As noted in the lecture, the terms “vision” and “strategy” sound a bit vague and intimidating. But they’re really quite simple.

To have a vision,
you just have to be able to imagine a better future.

To have a strategy,
you have to be able to say which steps you think should be taken in order to get there.

In business, a visionary is someone who imagines a possible future, and then works to make that future happen.

Let’s look at some 20th century visionaries from the business and political worlds.



Martin Cooper

In the early 1970s, Martin Cooper was the head of Motorola’s communications systems division. Cooper had a vision of a world in which individuals had personal telephones. A phone number would be assigned not to a place, but to a person. It would be a phone that could be carried with someone. The better future that Cooper envisioned was one with the cellular phone.

Cooper convinced the higher-ups at Motorola to let him pursue this, and he set out developing the technology to do so. Within 90 days, his team had created the first cellphone, although it was quite large and could only be used for 20 minutes before needing to be charged for a whopping ten hours. But the promise of his invention shifted the telecommunications industry, and nowadays, Cooper is seen as the father of the cell phone simply because he had a vision of the future and worked to make it happen.

Arianna Huffington

In 2005, journalist Arianna Huffington started The Huffington Post, a website originally dedicated to aggregating news. Huffington had seen the success of The Drudge Report, and sought to create a left-of-center answer to this conservative site. Huffington had a vision of the future in which people were no longer beholden to papers to learn about what was going on in the world; readers no longer had to get all of their news from one or two sources, but could pick and choose articles from an incredibly large variety of outlets. Huffington believed that readers could and would go online to be directed to the best content of the day. Her creation of the Huffington Post helped make this vision a reality.

Her vision didn't stop there, though. Huffington pioneered a system in which anyone could contribute to her site. Aspiring journalists could publish articles for free with the hopes of gaining massive exposure. The website was also one of the early adopters of video blogging, and they sought diverse voices to contribute to their site. In 2011, AOL acquired The Huffington Post for $315 million, and by 2012, The Huffington Post was ranked the number one most popular political site based on global traffic. This all came to be because Huffington had a vision of what the media landscape would be in the age of the internet and sought to make that vision a reality.

Dr. Charles Drew

Dr. Charles Drew was an American physician who among other things improved methods for blood storage in the 1940s. Drew, along with a few other physicians, had a vision of a future in which blood could be easily stored and transported, thus allowing transfusions with greater ease. During the onset of World War II, he pioneered the use of refrigerated trucks specifically for the purpose of transporting blood—what are known today as bloodmobiles.

Moreover, he created a system for collecting blood at a central location, testing it, and sending it out to soldiers, which saved countless lives during the war. This system later evolved into the American Red Cross Blood Bank.

Drew ultimately resigned in protest from the American Red Cross over their policy of segregation in blood donations. The Red Cross changed the policy in 1950, the year of Drew’s death. Drew was therefore both a scientific and social visionary, as he had a view of what the future would be in terms of the science and organization of blood donations and in terms of the rights of African Americans. He took active steps to making both of these visions the reality they are today.

Understanding the product development hierarchy

Strategy & Metrics

LECTURE SUMMARY

Covered in this lecture:

The product development hierarchy

- The product development hierarchy looks like this:

  Goals > **Initiatives** > **Releases** > **Features** > **Epics** > **User stories** / **Tasks** > **Subtasks**

- **Goals**

  - what you want to achieve to meet your vision (short term or long term)
  - example: “increase the user base by 10% by next year”

- **Initiatives**

  - high-level efforts that will help you achieve your goals
  - example: “translate our app into 3 more languages”

- **Releases**

  - a release or delivery of a new customer experience at a high level
  - example: the release of our app with the 3 new language translations

- **Features**

  - one or several sets of capabilities delivered to the end user
  - example: the ability for the user to change the language the app is displayed in

- **Epics**

  - related bodies of work which can not be completed in 1 week, and or will take 1 sprint or more to complete
  - example: “prepare the interface to display the long German words”

- **User stories / Tasks**

  - a set of things to be done that deliver user value and come together to form the completion of an epic
  - example: prepare our back-end systems to handle inputs from 3 more different character types in the new languages

► **User stories are formatted like this: “As a USER, I want to DO X THING, so that I can SEE Y THING”**

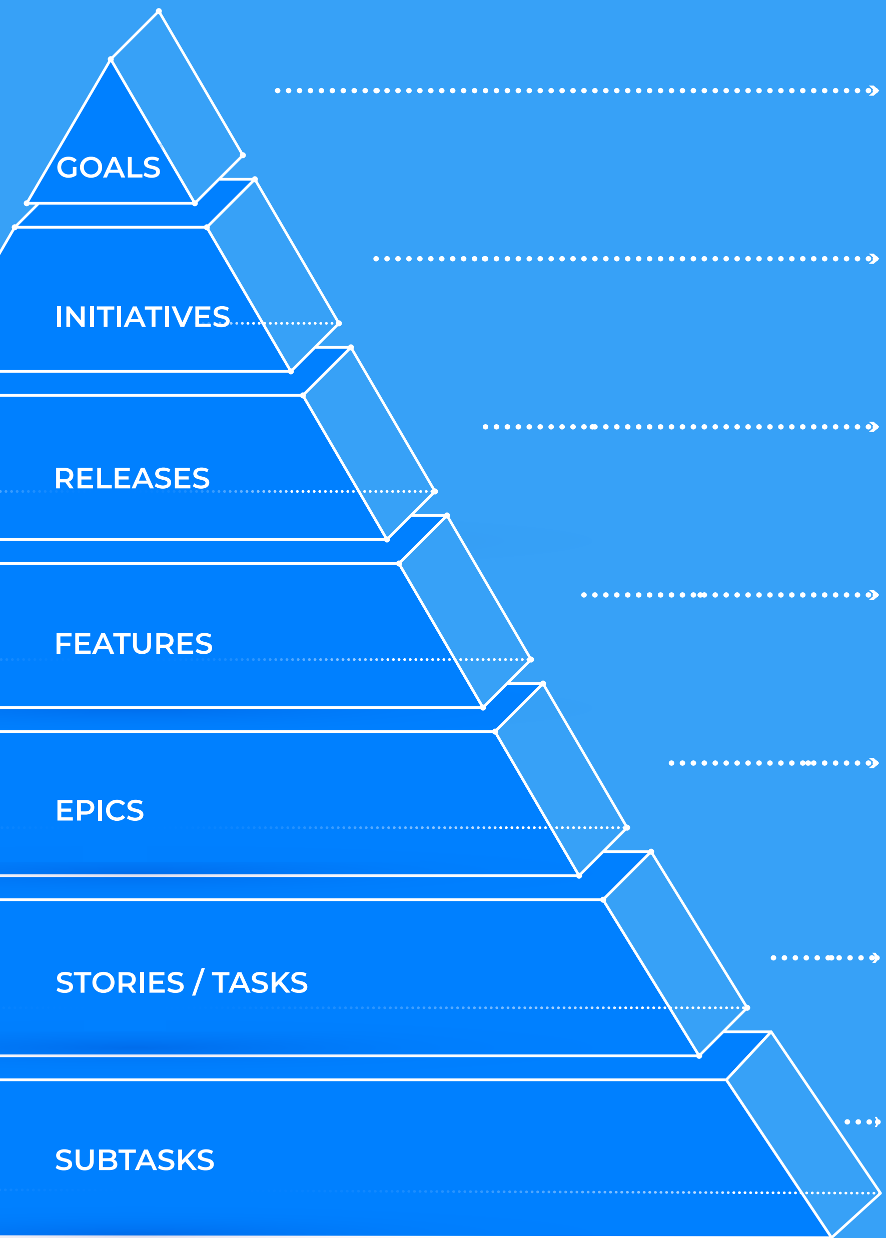
- **Subtasks**

  - one or many things that need to be done to complete a user story or higher level task
  - they are usually very granular and technical in nature

► **You must complete the smaller things in order to complete the larger things up the chain**

UNDERSTANDING THE PRODUCT DEVELOPMENT HIERARCHY

Let's say we're an online streaming platform.
Let's look at a possible goal we have in the context of the product development hierarchy.



What you want to achieve to meet your vision

Example:
Increase user retention by making the site more user friendly

High-level efforts that will help you achieve your goals

Example:
Create a dynamic movie categorization and recommendation system through which users can find content that suits their mood and tastesfriendly

A release or delivery of a new customer experience at a high level

Example:
The release of the dynamic categorization and recommendation system on the platform

One or several sets of capabilities delivered to the end user

Example:
Ability for users to create custom categories based on specific movies they enjoy.

A related body of work which can not be completed in 1 week, and or will take 1 sprint or more to complete

Examples:
1. Creating the user interface for the system
2. Creating a movie rating system individualized to specific users based on their viewing habits they enjoy.

A set of things to be done that deliver user value and come together to form the completion of an epic

Example:
Prepare backend system to include Rotten Tomatoes ratings to be used as part of the rating system

One or many things that need to be done to complete a user story or higher level task

Example:
Scrape data from Rotten Tomatoes

A deeper dive on the art of vision

Strategy & Metrics

LECTURE SUMMARY

Covered in this lecture:

History lesson about vision

- Famous quote attributed to Henry Ford (there's no evidence that he said this though):

  “If I had asked people what they wanted, they would have said faster horses”

- Consumers can’t always envision a future that’s too far ahead
- Ford Motor Corporation created the world’s first affordable mass-produced car
- Henry Ford envisioned a world where anyone could afford a car, and his strategy for making that a reality was to focus on only one model and make it better and cheaper over time
- In the 1920s, General Motors took the opposite approach and started making several models of cars at different price points for different purposes, and it soon became more popular than Ford

- **The lesson is that your vision has to be continuously checked against reality and adapted to how the world changes**

► There are two major types of vision:
- Global vision - how you think the world will look in the far future
- Company or product vision - how your company/product will look or what it will do in the future

- **A company vision is something you establish as a CEO or founder**

- **A product vision is what you establish as a product manager**

► To be a true visionary, you have to have strong opinions, big imagination, and know your market

► **You have to find a balance between listening to customer feedback and inventing things people don’t know they want yet**

A DEEPER DIVE ON THE ART OF VISION

IBM

For most of the 20th century, IBM was a technology titan. They evolved over the years—from selling commercial scales to tabulating equipment to personal computers. But by 1993, IBM was posting losses, and not small ones. Costs outweighed revenue that year by $8 billion, at the time the largest annual loss by any company in the history of America.

Whereas Apple famously created a closed system, building every piece of hardware and writing every line of code, IBM constructed computers from other manufacturers' parts and loaded these computers with Microsoft's software. This business model was easily replicated and IBM was slow to change. In the 1990s, though, they checked their vision against reality and changed course. They acknowledged that they were not going to be able to dominate the PC market as they had in the 1980s and recognized that the increasing ubiquity of computers in modern life meant the creation of a new service industry. IBM pivoted entirely toward IT services, providing their expertise in the area to other businesses. By reevaluating their industry and considering the direction technology was going, they revitalized their company and became the force they are today.

SEARS

Like IBM, Sears was a titan of the 20th century. They started as a watch company in the 1880s, and quickly grew to have hundreds of stores and a popular print catalog through which customers could order products. Their offerings grew. They not only sold watches, but also clothing, appliances, and even "pre-cut" homes (They would send you thousands of pieces in a shipping container, and you would assemble the home yourself from an instruction manual. Think of it as a high stakes Lego set.)

From the 1980s on, though, Sears' power began to wane. Target and Walmart became major competitors, and Sears did little to change its brand or business model, both of which were successful in the first half of the 20th century but were becoming increasingly dated. After the great recession, consumers became more price-conscious and began to increasingly prefer online retailers. Sears never checked its vision against reality. They never changed course, and after years of decline finally filed for bankruptcy.

NETFLIX

When Reed Hastings and Marc Randolph started Netflix in 1997, they wanted to create an online DVD rental store. At first, this is exactly what Netflix was. They developed a network for quickly shipping DVDs to customers and created an innovative subscription system that moved the industry away from the traditional pay-per-rent model. In 2003, Netflix had their first profitable year, but they never stopped looking to the future.

Netflix was constantly checking their vision against reality, and in the early 2000s, they recognized that online streaming was going to massively disrupt their business. They quietly began collecting the rights to stream content, and by 2005 had begun creating a system to distribute this content online. Today, Netflix is worth more than $115 billion, and they're no longer just disrupting the distribution market—they're going to head to head with the major studios as a content creator. And all of this was possible because they successfully altered their vision and adapted to changing times.

How to set vision as a leader, CEO, or PM

Strategy & Metrics

LECTURE SUMMARY

Covered in this lecture:

Benefits of having a clear vision

- The ability to set a vision for a product, team, or entire company is a key responsibility of any product manager
- **Having a clear vision:**
  - allows you to work backwards and understand which goals you need to achieve in order to get there
  - allows everyone in your team or at your company to make the right decisions autonomously
- Don't be a micromanager, let people do the jobs they were hired for

- After we add vision, the product development hierarchy is now complete:

  Global vision > Company / Product vision > Goals > Initiatives > Releases > Features > Epics > User stories / Tasks > Subtasks

- The global vision is an informed opinion on what the world, technology, and industry will be like in 3, 5, 10, or 20 years
- The company or product vision is how you want your product or company to fit into the world you described in the global vision

KEYS TO SETTING A VISION

Having a clear and consistent vision allows your team to make the right decisions. A vision helps you understand which goals you have to achieve to get there.

1. GLOBAL VISION

An informed opinion about what the world, industry, or technology will be like in the future

Tip: Don’t worry about being wrong. You probably will be. The odds of predicting the future with 100% accuracy are very low.

2. PRODUCT/COMPANY VISION

How you want your product/company to fit into the world you described in the global vision

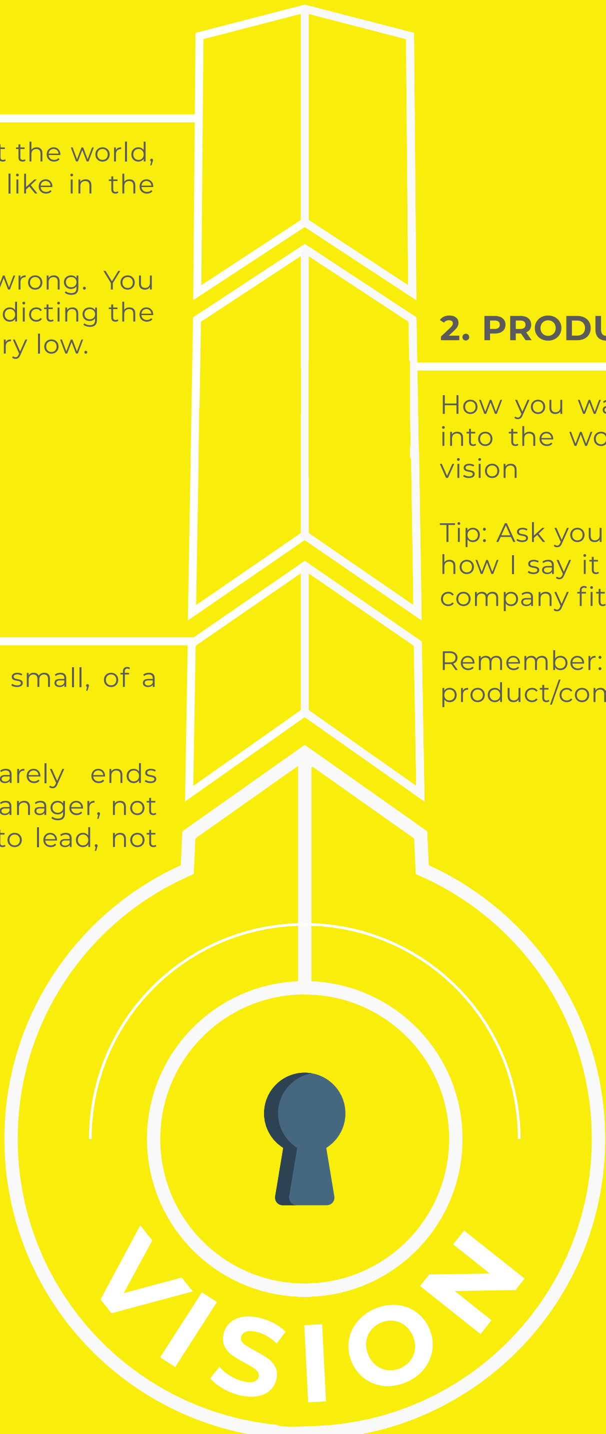
Tip: Ask yourself the question, “If the world is how I say it will be, how does my product or company fit into this world?”

Remember: From a global vision comes a product/company vision.

3. MICROMANAGING

Controlling every part, however small, of a company, job, or task.

Remember: Micromanaging rarely ends well. You are a CEO or Project Manager, not a graphic designer. Your job is to lead, not do other people’s jobs.



Real world examples of great vision

Strategy & Metrics

LECTURE SUMMARY

Covered in this lecture:

Examples of great vision using the framework

- **#1 Facebook**

► Global vision:
- In the future, every single person on the planet will be connected to the internet
- Artificial intelligence will be good enough that we can talk to computers like humans
- VR / AR will be a vital part of daily life for most people

► Company vision:
- By 2026, every single person on the planet will be connected inside some part of the Facebook ecosystem - over a billion new users - with the majority of these new users enabled via the internet.org operation (drone internet)

► Goals:
- Continue expanding and improving the portfolio of Facebook products over the next 3 years to:
1) increase the number of connections between users and
2) increase the amount of time spent within the Facebook ecosystem, thus increasing the amount of data collected from them in various contexts

- Connect the rest of the world by 2026 - people in areas of the world where they currently do not have internet access.
- Be a foremost provider of VR / AR hardware as well as experiences and content for it

- Initiatives:
  - Build the technology necessary (their drone and other initiatives in internet.org) to give people in developing nations network access where it did not exist before
  - Establish relationships with the governments of all nations, but especially developing nations, to enable citizens to use the technology above
  - As time goes on, invest increasing amounts in connectivity, AR / VR, and AI

#2 SpaceX

- Global vision:
  - In the future, due to a combination of necessity and curiosity, humans must be / will be a multi-planetary species to ensure our survival
  - One big reason this global vision is able to be backed up is that Elon Musk publicly stated that he and SpaceX believe that "A future where humanity is out exploring the stars is fundamentally more exciting than one where we are not"
  - Mars will be the first extra-terrestrial location to establish human life on, given our current understanding. By eventually terraforming it, humans could establish a civilization there indefinitely

- Government-led programs to accomplish this are much less effective and will not produce the desired results in time

► Company vision:
- By the year 2030, SpaceX will have developed and be the primary provider of technologies to make interplanetary travel and inhabitation for all humans possible, with the ultimate goal of enabling human life on Mars
- We will revolutionize re-usable vehicles as opposed to developing propulsion technology, as we know that this the biggest key to rapid cost reduction in space travel

► Goals:
- By the year 2030, improve the cost and reliability of access to space, ultimately by a factor of ten (making it cost $500 per pound / $1,100/kg or less). This means the average cost of a Mars trip would be about $200,000 and decrease rapidly from there
- SpaceX should be the largest and most reliable contractor for governments to deliver goods to space
- By the end of 2018, further increase profitability by securing contracts with governments to fly humans to the ISS cheaper than they can
- By mid-2019, launch our first unmanned mission to Mars - a robotic test flight with a modified Dragon capsule
- Each year, the SpaceX business should be profitable enough to fund and develop the technology necessary to send humans to Mars on the side

- Initiatives:
  - Fund the goals and vision by continuing to make a profit delivering satellites and cargo to space for governments and other entities
  - Build and make reliable a re-usable first stage rocket to reduce costs and increase profitability
  - Build an autonomous sea-going landing vehicle to intercept the reusable rocket (drone ship)
  - Build spacecraft with progressively heavier payloads to land higher value contracts and gain knowledge for payload capacities that will be necessary for Mars missions
  - Prepare our rockets for human cargo in mid-2019 (and thus more government contracts) by building human safety features. Firstly, we will build a launch abort system to allow humans to safely escape a Falcon 9 rocket in the event of a launch failure

REAL WORLD EXAMPLES OF GREAT VISION

When you think of Disney, you think of Mickey Mouse and a family friendly experience. You think of animated movies and theme parks. Recently, though, Disney has been quietly expanding, and much of it has to do with their vision of the future. Let's look at what their new global vision is, and what they're doing to make sure they're a part of it.

1

Global vision - For the better part of a decade, many have suggested that cable as we know it is on its way out. Young people have taken to their computers to stream content, and cost-conscious folk across generations are wondering why they're paying for large bundles when they only watch a handful of channels. Disney believes that in the future consumers will not have cable packages, but instead have their own personal bundle of streaming services to which they individually subscribe.

2

Company vision - In the near future, there will be anywhere from 3-5 major subscription services, and Disney will be one of these major streaming players.

3

Goals - Disneys major goal is to create a substantially large and diverse library so that they can remove the middleman and bring content directly to consumers.

4

Initiatives - Numerous initiatives have been undertaken to make Disney's vision a reality, primarily centered on acquiring content, freeing up the streaming rights of content they already own, and creating a streaming service. Disney already owned ESPN, Lucasfilms, Marvel, A&E, and ABC, but they also recently acquired Fox, which greatly expands Disney's library of original content. They've also begun the process of removing their content from Netflix so that they will have exclusive streaming rights when they launch their service. They're nearly done creating the platform as well, as it's set to launch in late 2019. Perhaps their biggest initiative going forward will be creating awareness of their new service so that they can begin gaining subscribers and rivaling Netflix.

Product strategy 101

Strategy & Metrics

LECTURE SUMMARY

Covered in this lecture:

What strategy means

- **Strategy is the series of actions you take to achieve a goal, based on your vision of the future**

- Michael Porter's 3 generic competition strategies:

- #1 Cost
  - provide a product that is cheaper than anyone else in your industry

- #2 Differentiation
  - provide a different experience or feature set than anyone else in your industry

- #3 Focus
  - focus on a very narrow market while ignoring the rest, as opposed to the first two which are focused on broad ones
  - the focus strategy has two subsets: cost & differentiation

- Unfortunately, there is no definition or guide to being strategic, but there are 2 things you should keep in mind:

- **#1 Strategy is something that you do to achieve a goal of some kind, and it's necessary primarily because there are competitors, potential competitors, or some other force that are likely to impede you from achieving your goals**

- **#2 Strategy is something that takes place in any level of a business, everywhere from the tiniest product details to the biggest market entrances**

- To be a good strategist, you have to know more about your market, technology, and trends, and be cleverer than your competitors

PRODUCT STRATEGY

What is strategy?

STRATEGY
is what action you take. There is no definitive definition or guide to being strategic.

STRATEGY
is something that you do to achieve a goal of some kind, and it's necessary primarily because there are competitors, potential competitors, or some other force that are likely to impede you from achieving your goals.

STRATEGY
is something that takes place in any level of a business, everywhere from the tiniest product details to the biggest market entrances.

Note: This means that strategy can take place at any point in the product development hierarchy, from global vision all the way down to subtasks.

3 GENERIC COMPETITION STRATEGIES

COST

When you strategy is to provide a product at a lower cost than anyone else in your industry

Example: Let's say we're a company that produces toilet plungers, and that we've found a way to reduce the cost of production. There are two ways that we could use the cost leadership strategy. First, we increase profits by continuing to sell our toilet plungers at market price. Second, we could sell below market price but still at a profit in order to increase market share. In both of these scenarios, we would be providing our product at a lower cost than anyone else in the industry.

DIFFERENTITATION

When your strategy is to provide a different experience or feature set than anyone else in your industry

Example: Let's say we're a video conferencing application for businesses. There are a number of competitors in the market, all of which have similar features—the ability to have numerous parties on the call, the ability to record your calls, and high quality encryption. Our company has recognized that what bothers consumers most, though, is when the quality of the call sours, so our company has added features that reduce both packet loss and background noise on calls. This different feature set allows us to attract more customers by differentiating ourselves from the competition.

Tip: To use this strategy, listen closely to or predict customer needs and address those needs when no one else is.

FOCUS

When your strategy is to focus on a very narrow market while avoiding the rest

Example: Let's say we're a company that manufactures wheelchairs. Instead of creating a wide variety of wheelchairs, though, we focus only on sport wheelchairs, specifically those used for wheelchair basketball. Moreover, we've developed technology that allows for lighter, stronger wheelchairs with better turning ability. Not only are we focused on a very narrow market, but we've also used a differentiation strategy within that market.

Note: Within the focus strategy there are two subsets: cost and differentiation. You can focus on a narrow market while also providing your product at a lower cost or differentiating it in

Real world examples of strategy

Strategy & Metrics

LECTURE SUMMARY

Covered in this lecture:

Examples of great strategy

- **#1 Cole's friend**

► Global vision:
- oil is going to be less common and more expensive
- transportation will still be needed
- electric vehicles won't be effective enough to replace all vehicles

► Research findings:
- less than 10% from the energy coming from a car's engine is actually used in moving the car forward
- no one was doing anything about all of the energy lost in the suspension of a car via the shocks moving up and down while driving

► Strategy:
- he made a shock absorber prototype that used the shock energy to power the radio and other things in the car
- the invention is only worth it for large, heavy vehicles but could save shipping companies a fortune

- **#2 Amazon**

- Goal:
  - gather valuable information about a series of cities and their inhabitants

- Strategy:
  - they said they were going to have a new headquarter in one of the cities
  - they collected a lot of information about all the cities, including how much money they were willing to spend on Amazon
  - in the end, they only ended up with 2 additional headquarters, but got all the information they needed

- **#3 Bill Gates & Microsoft**

- Global vision:
  - everyone will need a software to run their computers

- Strategy:
  - he built MS-DOS for IBM, based on QDOS, an operating system created by Seattle Computer Products
  - he purchased all the rights to the QDOS operating system
  - when other hardware makers started copying IBMs computers, he licensed MS-DOS to all of them (which later became Windows)

- **Another great example of strategy is when Steve Jobs started making Apple computers and he decided to make their own operating system instead of buying it from Microsoft**

#4 Airbnb

- Global vision:
  - people will rent air mattresses in someone else's house

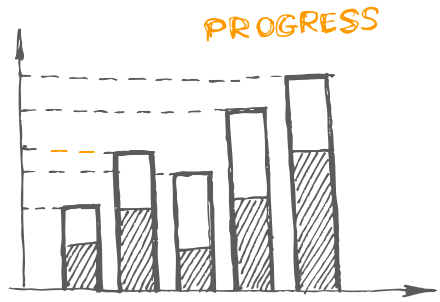
- Strategy:
  - at first, the website wasn't very successful because people uploaded poor quality photos of their spaces
  - the founders decided to send professional photographers to people's houses and take better quality photos to put on the website

- Result:
  - sales increased exponentially

REAL WORLD EXAMPLES OF STRATEGY

AMAZON

Amazon, which started as an online bookstore, has become a multifaceted technology and entertainment company that dominates nearly every market it chooses to enter. Two of the reasons that they've been so successful are that they've prioritized efficiency in order win on margins and that they've never stopped looking to gain a technological advantage over competitors.

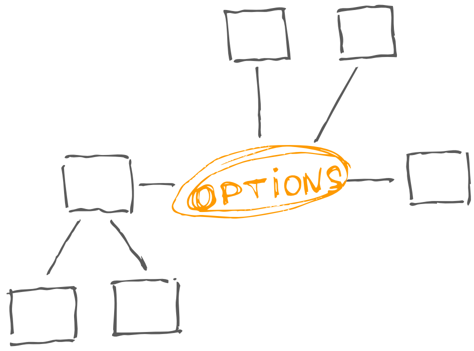


This strategy of prioritizing efficiency and looking to gain technological advantages is evident in their recent investment in drone technology. In 2013, Jeff Bezos announced Amazon Prime Air, a drone-based delivery system that can bring small products weighing less than five pounds to customers in 30 minutes. At first, this may seem outlandish. Amazon already has an incredible delivery system. Why do they need to improve it?

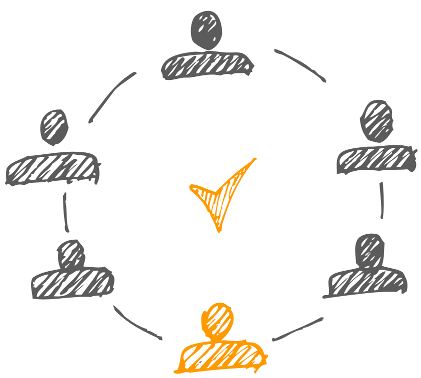
What Amazon recognized was that 86% of the packages that they were shipping weighed under 5 pounds. Moreover, there were many areas—specifically rural areas—that were difficult to reach with traditional forms of transportation. Drones allowed quicker access to not only these areas, but also congested urban centers. By utilizing drone technology, Amazon could make shipping even more efficient, thus gaining an advantage over competitors still relying on inefficient ground technology.

COCA-COLA

Lots of businesses reinvent themselves. As noted in a previous lecture, it's important to check your vision against reality and reevaluate when necessary. The Coca-Cola Company has done that over the years, introducing products like Coke Zero and Sprite and entering the health beverage market. Coca-Cola even once ventured into entertainment, owning Columbia Studios in the 1980s when they released movies like Ghostbusters and The Karate Kid.



Nonetheless, Coca-Cola has focused extensively on creating brand value. Despite slight changes to their offerings, Coca-Cola's strategy has been focused on consistency. When you open a can of Coke, you know exactly what you're getting, and when you see a Coca-Cola product, you know it's of a certain quality. For this reason, their logo is recognized worldwide and their brand name alone has been valued at $80 billion. Instead of being a massive conglomerate with countless products and little brand recognition (e.g. Unilever), Coca-Cola focused on building its brand so that consumers identify a certain quality and experience with everything that falls under their corporate umbrella.



7 POWERS

of Business Strategy Activity

What are the 7 Powers of Business Strategy?

The 7 Powers is a framework for finding your business's true north – that is, your larger vision and how you will achieve it. The 7 Powers model is best embodied by Netflix during its own do-or-die moments when it made significant product and delivery changes over time, beating out much bigger competitors like Blockbuster and Amazon.

Who came up with these 7 Powers?

Practicing business strategist Hamilton Helmer defined the 7 Powers for modern entrepreneurs, once considered the Holy Grail of business since it was much-desired yet near-unattainable. For three decades, he has guided companies such as Adobe Systems, Hewlett-Packard, Spotify, and of course, Netflix, among many others, turning his theories like the 7 Powers of Business Strategy into real world action so businesses thrive and surpass the competition.

How can having these 7 Powers help me?

Your business should have at least one of the 7 Powers in order to succeed; without a solid strategy, you are vulnerable to your competition. Building a business with these powers as strategies will set the conditions for persistent differential returns – you can make more money than your competitors over the long-run.

Which companies who successfully harnessed these powers?
Read on!

Let's review the 7 Powers of Business Strategy along with some real-world examples!

Power #1:

Scale Economies

What is it? This strategy utilizes a business model in which per unit cost decreases as production volume increases. When your scale is large, you can produce and sell at lower costs, thus undercutting your competition by offering a cheaper product to consumers.

Example: Trader Joe's, the popular grocery store brand, has utilized several strategies that support its success. One way that they offer groceries at relatively low prices is by lowering their per unit production costs. A central way they do this is by producing ~80% of products in-house as opposed to selling well-known brands, thus reducing supply chain costs and providing a "you-can-only-find-it-here" product.[1]

Image from https://www.nydailynews.com

Power #2:

Network Economies

What is it? When more people use your product, it gains more value for a potential new customer. The ubiquity of your product then means that consumers will no longer have a reason to switch to another similar product, even if your competition is doing it better or with a new twist.

Example: Yelp is a crowd-sourced review forum where users can post and search reviews on businesses, ranging from restaurants to service providers. As more people used Yelp to provide reviews on businesses they had frequented, the platform became more valuable for potential new customers looking to see if the place was well reviewed. Even if another business started a similar platform, the sheer number of Yelp's users still make it the go-to place to search to ensure reliability.

Power #3:

Counter-Positioning

What is it? If you are a newbie with a better business model that outshines your incumbent competitor, the incumbent cannot copy you without damaging their current business.

Example: Bonobos created its brand on doing one thing extremely well – making exceptional men's pants. They perfected men's pants and made theirs a desirable product with a singular focus, at least at the outset – for a larger retail company, it would have been impossible to focus so intensely on one particular clothing item without sacrificing other parts of their business and losing other customers. This enabled Bonobos to build out its brand further after making its name in men's pants.[2,3]

Image from https://gearpatrol.com/2008/10/29/bonobos-your-new-favorite-pants/

Power #4:

Switching Costs

What is it? When your customers choose to stay with your product because it will cost them too much to switch to your competitor.

Example: Amazon Kindle is an e-reader device directly synced to a customer's Amazon account. If s/he were to switch to a different type of e-reader device, they would lose access to the data and products they had purchased with Amazon. This cost deters customers from switching because too much is already invested.

Power #5:

Branding

What is it? If your brand has longstanding reputation and renown, consumers will trust and seek out your brand and pay more for an identical product.

Example: When we say, "motorcycle," you likely think of Harley Davidson. The company has been in business for over 100 years and has an excellent reputation; customers have longstanding affinity for the brand and continue to buy into a paid membership program and events around the country.[4]

Power #6:

Cornered Resource

What is it? When your company has an exclusive resource to a coveted resource that your competitors don't have, such as a patent.

Example: Though controversial, once could argue that Tesla has access to a coveted resource in the form of a person; Elon Musk, who is considered to be uniquely brilliant and forward-thinking in contributing to sustainable automotive products. You could also argue that Tesla has hired all of the best electric car engineers in the world, limiting access that other potential competitors might have in the future.

Power #7:

Process Power

What is it? If your company has a unique process or activity that your competitors can't successfully copy that enables you to lower costs or provide a superior product, this gives you a huge advantage.

Example: Dropbox was one of the cloud consumer storage solutions, and it's both simple and available on multiple platforms. Though many competitors have attempted similar solutions, none have been able to replicate Dropbox's unique overall model and draw away a significant share of customers.[5]

The 7 Powers starring...Netflix!

Today, Netflix is the global leader in entertainment streaming media services with almost 137 million subscribers (58.46 million in the United States) in over 190 countries. However, its original business model was DVD rental by mail before introducing streaming media in 2007, which now includes offering movies, TV shows, and original self-produced programs. By 2016, Netflix surpassed TV network and cable channels in number of original series and films produced.

*Netflix currently reaches over **73%** of all U.S. households.*

Notable Product Developments at Netflix:

April 14, 1998: Netflix launched its DVD rental website in the U.S. with 925 titles in a traditional pay-per-rental model.

September 1999: Netflix introduced a monthly subscription model.

January 15, 2007: Netflix announced its new streaming video-on-demand service and quickly transitioned from its original DVD rental by mail business model.

September 15, 2010: Netflix goes global, with Canada as its first new country to access streaming service outside the U.S.

September 18, 2011: Netflix split its DVD rental (now called Qwikster) and streaming service. However, after only a month, this decision was reversed.

February 1, 2013: "House of Cards" premiered as the first Netflix Original content to stream.

November 30, 2015: Netflix launched an offline playback feature that was much-demanded by subscribers.

October 2017: the number of Netflix subscribers became equal to the number of all cable subscribers combined.

Applying What We've Learned

As you've seen, Netflix has seen tremendous growth in the past decades and demonstrated great staying power. Consider the following questions about how Netflix has and may continue to execute a successful business strategy:

1. What were some of Netflix's earliest challenges, and how did they approach solving them?

2. Which of the 7 powers strategies did Netflix utilize to beat Blockbuster in video rentals and DVD by mail?

3. Which of the 7 powers do you think Netflix is currently using against streaming competitors like Hulu, Amazon Video, HBO?

4. If you were a Product Manager for Netflix, which strategies would you consider to be most valuable in setting the long-term vision for company and product growth? Think specifically about how your approach would increase revenue and/or encourage company growth or improvement.

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Putting it all together

Strategy & Metrics

LECTURE SUMMARY

Covered in this lecture:

Vision as a PM vs. a CEO

► **Important things to keep in mind:**

- #1 You can't create any good products or lead any company well without having clear, defined, transparent goals that are visible to everyone
- #2 You can't have good goals without first having a vision for where your product or company fits into the world in the future
- #3 You can't have a good product or company vision without having a global vision, which is your prediction for how the world will be in the future
- #4 To have the best global vision possible, you've got to be as knowledgeable as possible about your industry, technology, global events, and trends
- #5 Re-assess your global and company vision on a regular basis
- #6 Strategy isn't limited to one part of the development hierarchy - it can happen in any part of it

- If you’re a CEO, founder, or entrepreneur of any kind, you need to have a global vision and company vision

- **If you’re a PM inside a company and the CEO already has a global vision, company vision, and clear goals, you STILL need to have a vision for your product or feature set - even a global vision, but a narrower one**

- Example: PM at Facebook, in charge of the photos feature

  - global vision: the role photos will play in the world in the future
  - product vision: how your photo features at Facebook will play a role in that future

PUTTING IT ALL TOGETHER

Let's look at the five rules laid out in the lecture and think about how they may apply to an online T-shirt company.

1

You can't create any good products or lead any company well without having clear, defined, transparent goals.

Example:
Our goal is to increase the number of repeat customers.

2

You can't have good goals without first having a product/company vision.

Example:
In the future, our T-shirt company will have a large and loyal following of individuals who buy five to ten shirts annually through our website.

3

You can't have a good product/company vision without having a global vision.

Example:
In the future, the majority of individuals will do their clothes shopping online. Customers will know their sizes in a select number of brands and will have greater loyalty to these brands, ordering shirts directly from these companies' websites.

4

To have the best global vision possible, you’ve got to be as knowledgeable as possible about your industry, technology, global events, and trends.

Example:
In order to have the above global vision, we would have to be knowledgeable about e-commerce, fashion, and general consumer trends. For instance, we may have noticed that that individuals are now showing greater brand loyalty in fashion than they did in the past and that consumers are less inclined to go try on clothing at physical locations than they used to be.

5

Reassess your global and company vision on a regular basis

Example:
We have a clear global and company vision for our online T-Shirt company. Nonetheless, we want to reassess regularly. Perhaps in six months, consumers will begin to prefer more brand diversity in their wardrobes. We want to continue taking note of changes in both our industry and in the world so that we can have a well-informed opinion about what the future may hold.

6

Strategy isn’t limited to one part of the development hierarchy.

Example:
Assuming that as a PM or CEO we’ve been clear about our global and company vision, everyone on our team should make strategic decisions. With the above vision about how consumers shop for t-shirts in mind, our back-end developer will create a product recommendation system to improve the customer experience and our marketing team will develop a strategy for creating customer loyalty.

Recap: Roadmapping

Strategy & Metrics

LECTURE SUMMARY

Covered in this lecture:

Reasons why we do roadmaps and alternatives

- Every company does roadmapping differently
- **Roadmaps are usually inaccurate, but they are good to have as a general guide**
- **Why do companies do roadmaps?**

  1. Executives and investors like to see quarter-based maps
  2. You could be against an actual deadline

- The alternative is to sort things depending on priorities
  >> Near-term, Mid-term, Long term
- This method keeps everyone in line but doesn't impose strict deadlines

Agile roadmapping using vision and OKRs

Strategy & Metrics

LECTURE SUMMARY

Covered in this lecture:

What OKRs are and how they're used

- Roadmaps are documents that tell people like executives or investors what features or products will be launching at what times
- In Agile product development, roadmaps are almost always inaccurate
- In order for a roadmap to be useful, you need to have clear goals, which come from a clear global and product/company vision
  - PMs establish goals for their products that help the company accomplish the larger company goals
  - Executives or CEOs establish company goals that help move the company towards their company vision
- **Instead of traditional roadmaps, it's better to use OKRs - Objectives and Key Results**

- According to John Doerr, who came up with the OKR method, the proper way to write an OKR is like this:

  “I will X as measured by Y”

  - X is the objective
  - Y is the set of key results you’re looking to achieve

- A roadmap based on OKRs shows everyone what user needs everyone else is working on without committing to any specific way they’ll be solved

REAL COMPANIES, REAL OKRs

OKRs sound great, right? But how do real companies with real challenges – deadlines, revenue goals, competitors – put OKRs into practice? Almost every company sets goals in one way or another, with varying degrees of success, so we'll take a look at a few real examples of how companies can create OKRs to define and meet their goals.

But first, let's refresh ourselves on the structure of an OKR:

"I WILL (OBJECTIVE) AS MEASURED BY (THIS SET OF KEY RESULTS)."

Feeling refreshed? Ok, let's do it:

Example #1: Buffer

Buffer's marketing team created a quarterly OKR for its goals on Medium:

Objective:

When people think of companies that are some of the best on Medium, they should name Buffer as the #1 brand that comes to mind.

Key Results:

1. Grow our monthly reads **by 60%** MoM

2. Create a content calendar via Trello of 3 posts published a week with having content scheduled 2 weeks in advance at end of May

3. Run a new experiment on Medium every 2 weeks **and track progress** in a spreadsheet (e.g. trying to increase recommends, shares, more publications to get into, etc.)

4. Secure an active domain and make designs and landing page improvements by May 15

Buffer's marketing team does a nice job of outlining quantifiable and measurable results that would demonstrate to they've met their objective. The full list of the marketing team's Q2 OKRs can be found here.

Example #2: Upserve*

Upserve, formerly Swipely, enables restaurants to better streamline their services to serve more customers. They provided an example of an OKR from an engineering team member:

Objective:

Ship [X] feature to increase engagement.of the best on Medium, they should name Buffer as the #1 brand that comes to mind.

Key Results:

1. **Deliver alpha version** to targeted audiences **for alpha testing feedback** from 10 early customers by [insert date]

2. **Provide screenshots / screencase** to support marketing launch of the app by [insert date]

3. **Release beta version** by [insert date]

4. **Achieve engagement** DAU/MAU metric of [x] with beta audience

This OKR names specific target dates for key results – an excellent way to keep yourself on track and accountable!

Example #3: Uber (fictional example)**

You can probably envision some of Uber's goals – more rides for more stranded (or lazy) people. Let's see how that might translate into a few fictional OKRs:

Objective #1:

Increase Drivers in System

Key Results:

1. **Increase driver base** in each region by 20%

2. **Increase driver average session** to 26 hours / weekly in all active regions

Example #3: Uber (fictional example)**

Objective #2:
Increase Geographic Coverage of Drivers

Key Results:

1. **Increase coverage** of SF to 100%

2. **Increase coverage** for all active cities to 75%

3. **Decrease pickup time** to < 10 mins in any coverage area during peak hours of usage

Objective #3:
Increase Geographic Coverage of Drivers

Key Results:

1. **Define and measure** driver happiness score

2. **Increase driver happiness score** to 75th percentile

*Cited from https://firstround.com/review/How-to-Make-OKRs-Actually-Work-at-Your-Startup/

**Cited from https://github.com/domenicosolazzo/awesome-okr/blob/master/examples/Uber.md

AGILE ROADMAPPING USING VISION AND OKRs

Let's look at three more examples of agile roadmapping using vision and OKRs.

EXAMPLE 1

Portland Doggy Delicious

Company Vision: To be the most popular local dog food brand in the Portland area

Goal for next year: To increase customer satisfaction

Metrics goal as PM: To decrease support tickets created related to packaging by 20%

What would this same roadmap look like using OKRs?

We will increase customer satisfaction as measured by support tickets created related to packaging.

EXAMPLE 2

Ad Copy Collective

Company Vision: To be the #1 online marketplace for ad copyrighting services

Goal for next year: To decrease fragmentation in the marketplace

Metrics goal as PM: To increase the overall number of sellers by 30% in order to decrease the ratio of buyers to sellers

What would this same roadmap look like using OKRs?

We will decrease fragmentation in the marketplace as measured by the ratio of buyers to sellers.

EXAMPLE 3

Conscious Investments

Company Vision: To be the top application and industry leader for socially conscious investing

Goal for next year: To increase lifetime customer value by 10%

Metrics goal as PM: To increase average portfolio size by 7.5%

What would this same roadmap look like using OKRs?

We will increase lifetime customer value as measured by average portfolio size.

Intro to metrics

Strategy & Metrics

LECTURE SUMMARY

Covered in this lecture:

Why we need metrics

- **Metrics are numbers we use as a barometer of how our overall product strategy is going**
- As a product manager, you're responsible for being the interpreter of this data

- **Make sure you are data informed and not data driven**

- Data driven: you make decisions solely based on data
- Data informed: you only use data as one source of information to make decisions
- There are factors that can and should go into your decision making that are not easily measured (example: timing and resource availability)
- Data is just raw information

- **In order to be useful, data has to be translated into a story that's easy to understand and that clearly indicates what action should be taken**

How to better tie metrics to product strategy

Strategy & Metrics

LECTURE SUMMARY

Covered in this lecture:

Understanding metrics better

- Metrics let you know if your product strategy is working and how a change has affected your product

- **Example #1: PM at Reddit**

- Goal: Get more people to contribute content (because more content means more people come to the website)

- Law of the internet: for every 1 person that comments or actively participates, there are 99 others that passively lurk and don't contribute

- Strategy: You made changes to the system (easier submission process, social rewards, email sequences that ask people to contribute)

- User segmentation: User that contribute vs. Users that do not contribute

- Metric: Number of submissions/conversions from lurker to poster over a comparable time period

- **The role of strategy is not only to determine what metrics we select to passively monitor, but also what metrics we choose to actively optimize for**

- **As a product manager, one of your most important roles is to prioritize what needs improvement**

- One way to prioritize what metrics you care about is to directly tie them to your overall business goals and product strategy

- **Baseline metric: the metric that tells you if you're succeeding**

- **Target metrics: metrics that when change make the baseline metric change**

- **Example #2: Subscription software tool**

- Goal: In the next 6 months, you need to increase the total number of users that convert from a trial to being a paid customer

- Baseline metric: % of new users that convert to paid over a specific time period

- Target metrics:
  - % of trial users that log in every day
  - % of trial users that access a specific feature (or access it within the 48 hours of their trial)

- **Example #3:**

- Goal: To increase the amount of money each customer gives you

- Baseline metric:
  - individual purchases: ARPU (Average Revenue Per User)
  - subscription model: LTV (Lifetime Value)

- **Example #4: E-commerce business**

- Goal: To increase cart size
- Baseline metric: Average Cart Size
- Target metrics:
  - Average Session Duration
  - % of users that interact with your product suggestions

HOW TO BETTER TIE METRICS TO PRODUCT STRATEGY

Let's take a look at two more examples of tying metrics to product strategy.

Product:
An online flashcard system for memorizing multiplication tables

Business Goal:
To increase revenue by having customers stick around longer under paid subscriptions

Product Strategy:
We've decided to "gamify" our application in order to make the experience more enjoyable for our customers, thus increasing the average lifetime of our customers. By adding incentives, rewards, daily goals, and a competitive element to our memorization system, we hope that customers will enjoy the learning process more and remain customers for a longer period of time.

Baseline Metric:
Churn. We can calculate churn by dividing the number of customers lost by the total number of customers.

Target Metric:
Perhaps we notice that users who spend just fifteen minutes per day on the application have longer lifetimes than those who spend an hour on the application once per week. We can thus use the percentage of users who use the application daily as a target metric, and use our "gamified" system to incentivize users to dedicate a small chunk of time each day to using our application. Hopefully, by increasing the percentage of users who use the application daily, we'll see churn decrease as well.

Product:
Precut wood furniture that can be assembled by the customer in under 20 minutes

Business Goal:
To increase revenue by decreasing the number of returns

Product Strategy:
Our company has recognized that returns are often a result of customers becoming frustrated with the assembly process. In order to make this process easier, we've created a website dedicated to the assembly process, which includes video tutorials for all of our products.

Baseline Metric:
Percent of purchases that result in a return

Target Metric:
We've recognized that there is a strong correlation between the number of support tickets created and the number of returns. For instance, one of our products that is more difficult to assemble has both our highest number of support tickets created and our highest number of returns. By creating a website with video tutorials, we hope to decrease the number of support tickets created and in turn see a decrease in the percent of purchases that result in a return.

Recap: How to pick good metrics

Strategy & Metrics

LECTURE SUMMARY

Covered in this lecture:

What characteristics your metrics should have in order to get real feedback

- ► Even if you're not tracking the exact metric that the company is targeting, you might notice that improving other metrics might lead to achieving the company's goal

- **Exploratory metrics - you're not always tracking them, but they're there and you can analyze them to see what's happening**

- **Reporting metrics - you're tracking them on a long period of time to make sure your product is headed in the right direction**

- ► What makes a good metric? Your metrics should be:

1. Understandable
2. Rate or Ratio
3. Correlated
4. Changeable

Leading vs. lagging metrics

Strategy & Metrics

LECTURE SUMMARY

Covered in this lecture:

The relationships between metrics

- Metrics are almost always interdependent

- **A leading metric is a metric that when changed results in a change of another metric**

- **A lagging metric is a metric that changes because of changes to other metrics in the past**

- Example: Losing weight
- Weight is a lagging metric
- If you want to change it, you have to make changes in other (leading) metrics:
  - calories consumed over a period of time
  - calories burned over the same period of time

- It's important to identify the relationship between your metrics and monitor all of them to get a more realistic idea of what's going on

- Always find and track your leading metrics

- Keep in mind, it's not always obvious how the relationships between metrics work, but that's fine

LEADING VS LAGGING METRICS

Let's take a look at some more examples of leading and lagging metrics.

PRODUCT: A mobile app for tracking one's personal finances

Lagging Metric
Support tickets created

Leading Metric
Let's say there's an uptick in support tickets created. There could be many reasons for this, and thus many different leading metrics. One leading metric may be the number of outstanding bugs. By fixing these bugs, we would likely see a decrease in the number of support tickets created.

COMPANY: A taco truck in Santa Monica, California

Lagging Metric
Sales

Leading Metric
Let's say we want to look retroactively at how our marketing has affected sales. Number of posts on Instagram and Facebook may be leading metrics, as they may drive people to our truck. Likewise, if we like to go old school and post fliers around the neighborhood, the number of flyers posted in a given week or time since flyers were last posted may function as a leading metric.

PRODUCT: A subscription online financial news service

Lagging Metric

Customer churn

Leading Metric

Let's say we want to decrease the number of users that leave the service each month. Some level of customer churn is inevitable, but there may be some leading metrics that are directly tied to it. For instance, the month's change in the S&P 500 may be a leading metric, as people may be more inclined to leave the service if the stock market is tanking and the news is negative. There are other metrics more in our service's control, though. The number of emails sent to subscribers in a given month may affect whether individuals choose to stick around. The amount of engagement with our articles on Facebook, which could serve as an indicator of the quality of the month's articles, may act as a leading metric as well.

Metrics by cohort

Strategy & Metrics

LECTURE SUMMARY

Covered in this lecture:

What cohort means

- **A cohort is a group of users or customers that are segmented by when they first interacted with your business**

► Users have different behaviors based on when they joined

- **Example: PM in charge of mobile app at Yelp**

► Status: You rolled out new changes to the app on Aug 1

► On Sep 1, you notice the Average Time in App metric is down 40%, and the Average Business Interactions Per Session is down 30%

► At first glance, you might think you made a mistake with the new changes, but to really be sure, you'd have to do an analysis by cohort

► Maybe the users that joined before the change hate it, while the new users don't have anything to compare it with so they're fine with it

- **To do a cohort analysis, you take users that joined at a certain time and compare their behavior on key metrics to users that joined at a different time**

METRICS BY COHORT

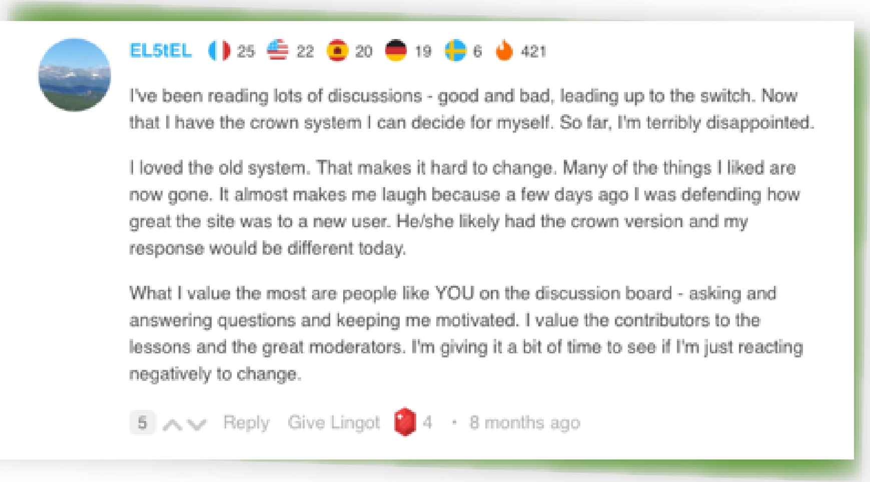
Duolingo: A Case Study

In April of 2018, Duolingo—a website and application for learning foreign languages—completely revamped its system. Here is what the old system looked liked.

Previously, users completed skills, such as “Basics” or “Food.” After completing a skill, you could move down your ***“language tree”*** or go back over what you had already learned. The longer you went without reviewing a certain skill, the lower a bar associated with the skill would go. This user had Basics at full strength, but needed to review other skills, such as Basics 2, Phrases, and Animals. By practicing these skills, the user could have got the bars back to full strength. This system was popular amongst many users, as it let people know when they needed to review something.

Duolingo did away with this system, replacing it with a ***“crown system.”*** Here is what the new interface looked like.

After completing a skill, one would receive a single crown. This user had three crowns for Intro, two for Phrases, and two for Family, but still needed to complete Travel, Restaurant, and Shopping. They could have either moved onto these new skills or continued with the ones they had already completed in order to acquire up to five crowns. The logic was that users could go deeper into certain skills and do more advanced lessons as they earned more crowns.



EL5tEL 25 22 20 19 6 421

I've been reading lots of discussions - good and bad, leading up to the switch. Now that I have the crown system I can decide for myself. So far, I'm terribly disappointed.

I loved the old system. That makes it hard to change. Many of the things I liked are now gone. It almost makes me laugh because a few days ago I was defending how great the site was to a new user. He/she likely had the crown version and my response would be different today.

What I value the most are people like YOU on the discussion board - asking and answering questions and keeping me motivated. I value the contributors to the lessons and the great moderators. I'm giving it a bit of time to see if I'm just reacting negatively to change.

5 Reply Give Lingot 4 · 8 months ago

There was an immediate backlash. If you read Duolingo's message boards, you would think that Duolingo had ruined their entire system.

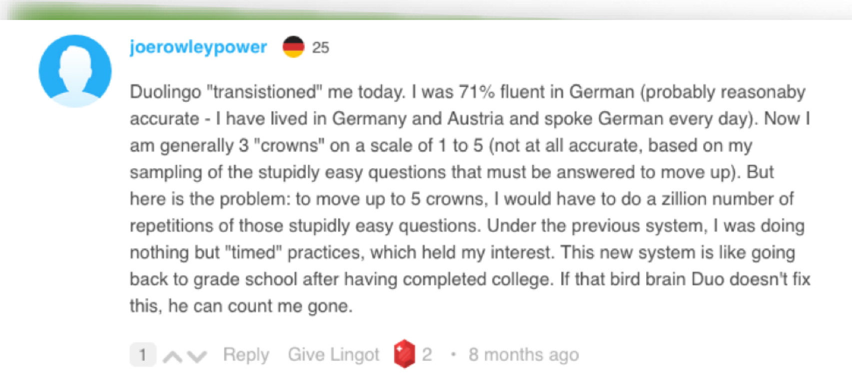
Here's a user that had a negative initial reaction, but said that they would give the new system a chance.

Cohort Analysis

Duolingo did not change course, though. Let's consider what a cohort analysis may have shown them.

First, let's think of three different cohorts: those who had been using the application for more than six months, those who had been using the application for less than six months, and those who were brand new users.

The majority of the outrage seemed to come from the long term users, who felt that the ability to know when a skill needed review was essential to their learning experience. Moreover, users prided themselves on having completed language trees, and suddenly there was much more work to be done on previously completed courses.



joerowleypower 25

Duolingo "transistioned" me today. I was 71% fluent in German (probably reasonaby accurate - I have lived in Germany and Austria and spoke German every day). Now I am generally 3 "crowns" on a scale of 1 to 5 (not at all accurate, based on my sampling of the stupidly easy questions that must be answered to move up). But here is the problem: to move up to 5 crowns, I would have to do a zillion number of repetitions of those stupidly easy questions. Under the previous system, I was doing nothing but "timed" practices, which held my interest. This new system is like going back to grade school after having completed college. If that bird brain Duo doesn't fix this, he can count me gone.

1 Reply Give Lingot 2 · 8 months ago

This individual likely fell into this first cohort of long-term users. Clearly they were not pleased with the changes.

Although we can't be certain, it's likely that the second cohort, those who had been using the application for less than six months, had less strong opinions. They were less likely to have either completed a tree or developed strong attachments to certain features. Analyzing this cohort alone may have shown that users were largely indifferent to the change.

The last cohort, those who just joined the application, is perhaps the most important, though. If growing the user base was essential to Duolingo's business plan, then this may be the group of users they prioritized. Since these individuals had no affinity for older features, it's possible that data showed that new users preferred the crown system.

This is all speculation. Nonetheless, Duolingo almost certainly performed a cohort analysis of this sort. It's clear from the forum that many (if not most) older users disliked the changes, but in its announcement of the new feature, ***Duolingo stated, "Students are doing more sessions, sticking around for longer, and doing harder types of exercises."*** It seems that their analysis showed that other cohorts preferred the new system, and it appears that Duolingo prioritized their preferences over those of the older users.

How to design a cohort analysis

Strategy & Metrics

LECTURE SUMMARY

Covered in this lecture:

Parameters for cohort analyses

- When you run a cohort analysis, you have to first set up 3 "anchors" or parameters:

- **#1 Time**

  - pick what time period you want to observe the users from (all users who joined/bought at a certain date)

- Example: All users who bought your product on Black Friday with a 40% discount are going to have a totally different behavior than customers who buy at full price

- **#2 Lagging period**

  - pick the amount of time you want to observe the cohorts behavior for

- **#3 Termination date**

  - this is the date that all data is collected and can be analyzed
  - it's the last day that the last person in your cohort could have completed their prescribed lag period

- Example:
  - Time: Aug 1 - Aug 7
  - Lagging period: 1 month
  - Termination date: Sep 7

- **Cohort analyses can be done either as retrospectives, if you want to see how users behaved in the past to examine past changes, or in ongoing calculations**

HOW TO DESIGN COHORT ANALYSIS

As stated in the lecture, running a cohort analysis is simple and something that you shouldn't feel weird about doing, but you need to design the test appropriately and have the right parameters.

Let's say we're an umbrella company, and we would like to do a retrospective analysis on support tickets created. Specifically, we would like to look at different cohorts and see how time of year of purchase affected whether customers requested help with the product.

Let's see what our three anchors may be.

3 ANCHORS

1. TIME

The date range by which we classify a cohort (typically one week or month)

Example:

In this case, since we're interested in knowing how time of year of purchase affects whether customers requested help, a one month time period makes sense. That way, we can know if someone who purchased in January in the midst of winter was more likely to request help than someone who purchased in sunny July.

2. LAGGING PERIOD

The amount of time for which we want to observe the cohort's behavior

Example:

Let's say we use a lagging period of one week. That means that we're interested in knowing whether a customer requested help only in the week after they made the purchase. If we were interested in looking at a longer period, we could go with one month.

3. TERMINATION DATE

The date by which all data is officially collected and can then be analyzed

Example:

This is typically the last day when the last person in our cohort could have completed their prescribed lag period. If we're doing this retrospective analysis at the end of the year, and we went with a one month lag period, then our termination date would be at the end of January.

Here is what the cohort analysis looks like.

2. The first column shows the number of sales in a given month.

3. The following columns show the number of support tickets created as a percentage of sales for each of the subsequent months.

1. The rows show our different cohorts — the twelve months of the year.

Number of Support Tickets Created as a Percent of Sales

Cohort	Sales	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12
January	1215	3.95%	1.90%	1.06%	0.55%	0.23%	0.21%	0.26%	0.18%	0.16%	0.15%	0.14%	0.11%
February	1101	3.81%	1.83%	1.02%	0.53%	0.22%	0.22%	0.21%	0.15%	0.11%	0.13%	0.10%	
March	1048	3.33%	1.73%	0.97%	0.41%	0.17%	0.16%	0.14%	0.13%	0.12%	0.10%		
April	1109	3.07%	1.23%	0.69%	0.36%	0.18%	0.20%	0.09%	0.09%	0.09%			
May	958	2.82%	1.13%	0.54%	0.28%	0.14%	0.12%	0.11%	0.09%				
June	699	2.58%	1.29%	0.62%	0.63%	0.13%	0.11%	0.10%					
July	650	2.46%	0.98%	0.47%	0.29%	0.13%	0.11%						
August	450	2.22%	1.07%	0.51%	0.31%	0.15%							
September	498	2.01%	0.96%	0.58%	0.24%								
October	789	2.53%	1.27%	0.76%									
November	935	2.99%	1.44%										
December	1198	3.42%											

For instance, Month 1 of May is 2.82%. This means that of the 958 sales in the month of May, 27 resulted in a support ticket being created within one month of purchase.

If our lagging period was only one month, we would really only be looking at the Month 1 column. From this, we can see that the percent of sales that resulted in a support ticket created was higher during the winter months, and lower during the summer months. The percent of sales that resulted in a support ticket created peaked in January at a whopping 3.95% before decreasing to 2.01% in September.

So what can we take away from this?

Come the winter months, if we begin to see an uptick in the number of support tickets created, we shouldn't be alarmed. First, these are the months during which we have the highest number of sales. Second, a higher percentage of these sales result in support tickets created. This makes sense. You're more likely to use your umbrella during the rainy months, and thus more likely to request help. The naive CEO or PM would panic as they saw this increase, but the cohort analysis shows that this is just a seasonal trend.

Metrics with origin source sorting

Strategy & Metrics

LECTURE SUMMARY

Covered in this lecture:

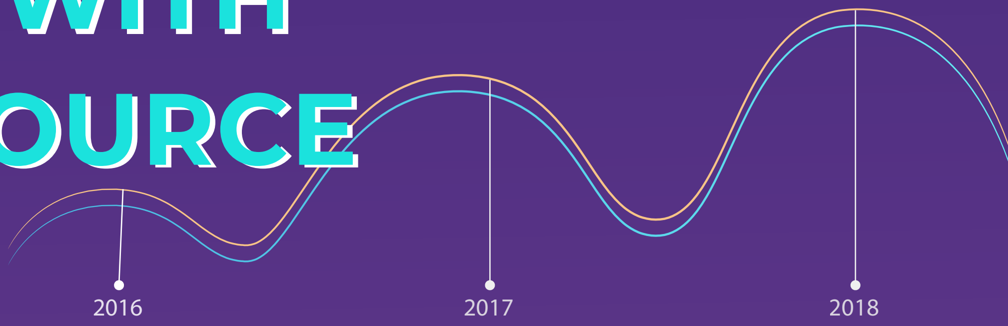
Sorting users by source

- Your customers come from different sources, and they have different behaviors based on that
- For example, a customer that comes from Facebook is considered a low intent lead, whereas a Google search is considered a high intent lead
- You need to sort your customers by source in order to accurately measure & understand changes

- **Example: PM in charge of financial service products at Simple (online bank)**

- One day you notice conversion rate decreases, while the average value of each converted customer increases
- You find out that the company started running social media ads & did income segmentation
- Once you know that, you realize:
  - The increase in average value comes from the fact that they only targeted higher income individuals
  - The decrease in conversion rate is a symptom of paid advertising in general

METRICS WITH ORIGIN SOURCE SORTING



EXAMPLE 1

Let's say we're an online shoe retailer and we see some changes in the past month's key metrics. *Specifically, we see that website traffic has decreased by 20% and sales conversion rate has increased by 15%.* At first glance, we aren't able to figure out why this would be the case.

After sorting by origin source, we see that *while traffic from search engine marketing has remained stable, traffic from social ads is down 30%.* Upon further review, we realize that individual sales conversion rate for each channel has not changed from the previous month. The sales conversion rate for social ads was notably lower than that for search engine marketing. Since traffic from social ads made up a lower percentage of overall traffic in the past month, the overall sales conversion rate was higher.

Looking at it from the other direction, since traffic from search engine marketing made up a higher percentage of overall traffic, the higher conversion rate from this traction channel had a larger impact on the overall sales conversion rate.

So what does this mean for our online shoe retailer? First, we have to ask why traffic from social ads went down. It may simply be that the marketing department pulled money from this channel. Second, we have to ask what our goals are. If our goal is to maximize profit, and money was in fact pulled from social ads, then we have to ask whether the decrease in revenue from social ads outweighed the change in cost of the social ads. If the cost of social ads was relatively low, we may not care that they have a low sales conversion rate. They may be relatively ineffective, but nonetheless profitable.

EXAMPLE 2

Let's say we're a company that sells lipgloss. Come January, we look back on the year and notice that customer lifetime value decreased over the course of the year, but that average order value increased significantly. At first glance, we aren't able to understand why these changes took place and whether they're interrelated.

After sorting by origin source, we see that most traction channels saw only marginal changes in customer lifetime value and average order value. Individuals who came to our store through email marketing, though, had significantly different behavior that affected both of these metrics.

Our company had taken to emailing individuals coupons—30-40% off one's entire purchase—around major holidays. Customers that came to our business through this traction channel stocked up on products and had a lower rate of return.

What should our company do? It depends whether we believe the benefit of increased average order value outweighs the cost of decreased customer lifetime value. If we believe that it does, we should continue with our current marketing strategy of offering coupons via email marketing around major holidays. If we're worried by the decrease in customer lifetime value, we could scale back this marketing strategy.

Example - Origin source sorting

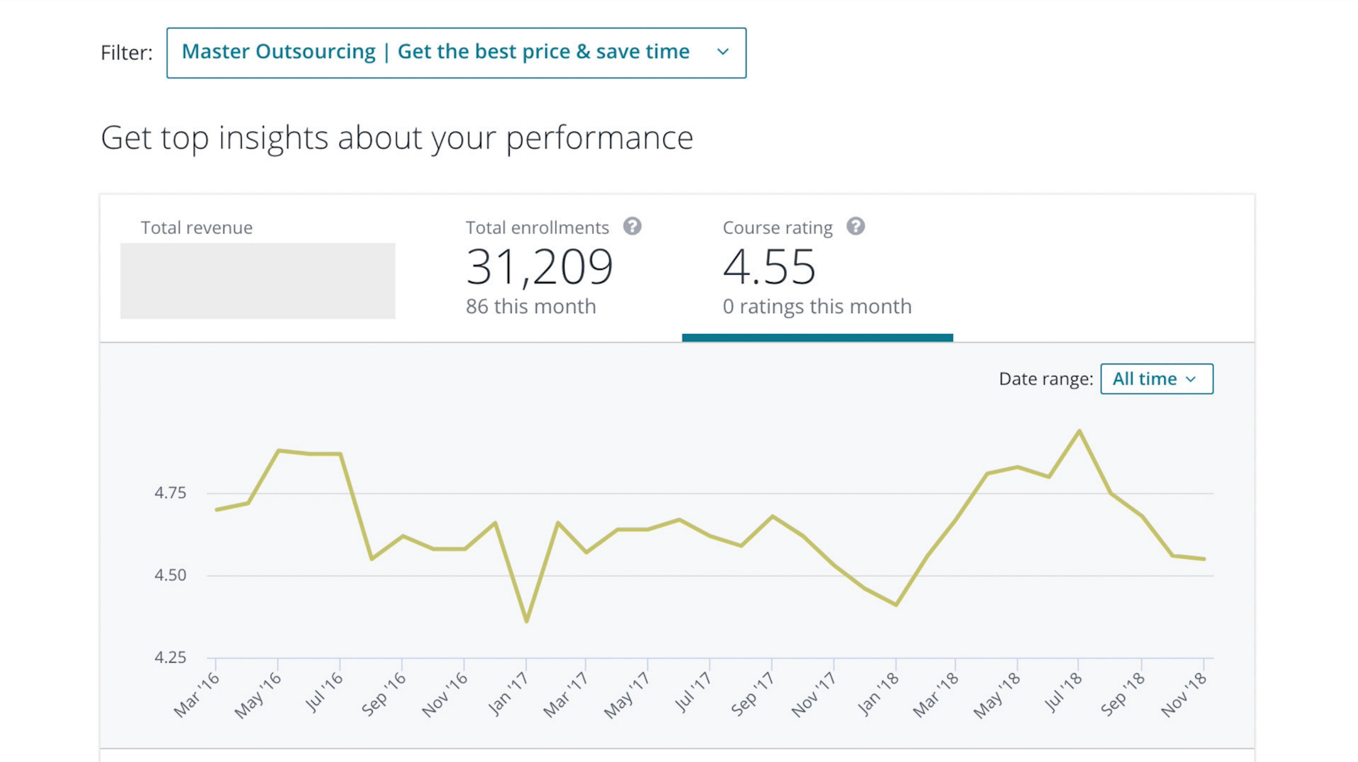
Strategy & Metrics

LECTURE SUMMARY

Covered in this lecture:

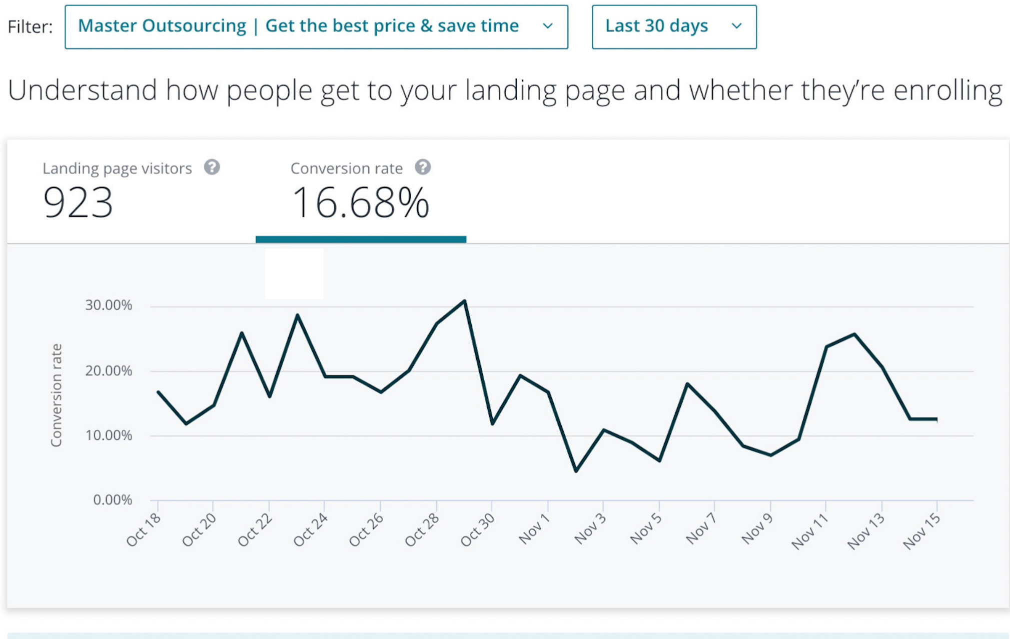
Looking at Udemy metrics

- My Udemy courses are video series that are designed to meet a need - they're a product
- **Key metrics that I care about: revenue, average review rating, average minutes consumed, quarterly student grow rate, and course landing page conversion rate**
- **Course #1 Master Outsourcing**
- Average Course Reviews



- Over the last 2 years, reviews ranged from 4.36 average to 4.98 average

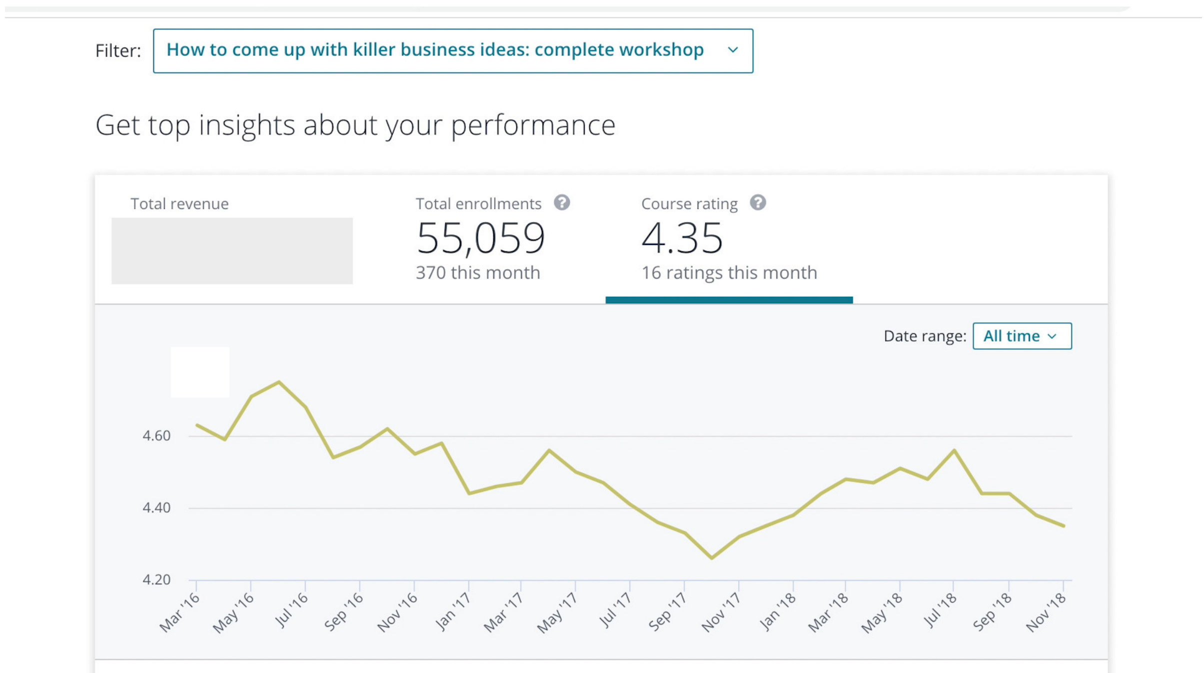
► Average Conversion Rate



► Over the last 30 days, it ranges from 4.44% to 30% on any given day

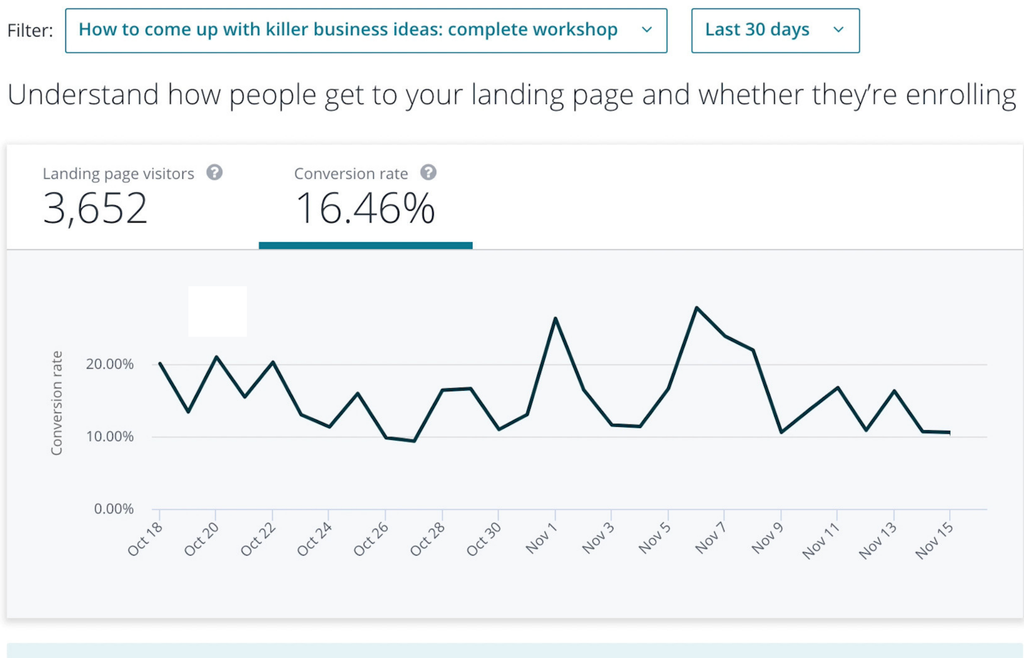
- **Course #2: How to come up with killer business ideas**

► Average Course Reviews



► - In the first 3 months it ranged between 4.5 to 4.7
- Over the following year, there was a consistent slide in ratings until it got to 4.26
- Then, for 10 months, there was a consistent increase up to 4.56

► Average Conversion Rate



► Over the last 30 days, it ranged from 9% to 27%

- **Keep in mind, I didn't make any changes to any of these courses since they were launched**

► **The variations are caused by where the courses get their students from:**

- free organic enrollments - students that found the course through Google or some other means and used a promotional coupon to enroll for free
- paid acquisition students - come from Google AdWords or Facebook ads
- organic acquisition students - come from Udemy's promotional emails that they send out to their email base
- search acquisition students - they search for either my course or the topic of my course through Udemy's search box
- affiliate acquisition students - come from affiliate promotions, (example: when another website promotes Udemy and includes coupons)

- **Explanation of the variation in metrics:**

- In the first 2-3 months, the average ratings are higher because when I first launch a course I promote it to my list of existing students

- After that, we start to see overall ratings decrease because Udemy has started to promote the course and the audience has switched from my student list to theirs - when they see a discount, people might buy a course without being very interested in it

- When we start seeing an increase in ratings again, that means Udemy's promotion system has turned off because it thinks the course is not very good (ratings went down), and the primary source of sales switches to search acquisition students & word of mouth

Intro to T-testing

Strategy & Metrics

LECTURE SUMMARY

Covered in this lecture:

How to do a T-test

- T-testing is a quick test you run on cohorts to determine whether or not their metrics are actually different
- It's usually not enough to compare the average data for each of your cohorts
- **With a T-test, you can check two things:**

  #1 Are the cohort values meaningfully different?
  #2 Do you need to wait until you have more data?
- A T-test is looking at what we call variance - the difference between users within a group
- The higher the variance, the lower the accuracy of the average
- A T-test ends up being a score with a single digit

  - The higher it is, the more likely that the differences you see in the two cohorts is actually a difference
  - If the number is low, that means the change is more likely due to inter-group differences and you can't say for sure that one cohort behavior is different than another

- The T value ranges from 0 to 2.5 and a score over 1 means there's a strong likelihood that the two groups are different

Steps for doing a T-test:

- #1 Collect samples from your data set (usually, 20-30 from each group - the groups can be uneven)
- #2 Apply the T-test formula:

$$\frac{\left|\overline{X}_1 - \overline{X}_2\right|}{\sqrt{\frac{S_1^2}{n_1} + \frac{S_2^2}{n_2}}}$$

  - X1 - X2 represents the difference between the mean or average of each sample
  - S1 and S2 represent the standard deviation for each group (standard deviation is a number that tracks how close numbers in a data set are to their average, assuming we're working with a normal distribution)
  - n1 and n2 represent the sample size for each data set

- #3 After you input your data in the formula you will get a number (T value). In order to know what the number means, you have to use a T table

- The T table tells you, based on your sample size and the degree of certainty you want out of your test, what your T-value should be

- This is called the critical value, which is the line in the sand that tells you if the data is different or not

- A T table looks like this:

Degrees of Freedom	p=0.05	p=0.025	p=0.01
1	12.71	25.45	63.66
2	4.30	6.20	9.92
3	3.18	4.17	5.84
4	2.78	3.50	4.60
5	2.57	3.16	4.03

- Formula for calculating the degrees of freedom: (Size of sample 1 + Size of sample 2) - 2

- The p value is the degree of certainty of the test - scientists usually use a p value of 0.05, which means there's a 95% chance that there is a difference in your groups

- Example:
  - T value = 2.1
  - Degrees of freedom = 40
  - p = 0.05

Degrees of Freedom	p=0.05	p=0.025	p=0.01
40	2.02	2.33	2.70
60	2.00	2.30	2.66
120	1.98	2.27	2.62

- Looking at the T table, we see that the critical value is 2.02, so a T value of 2.1 means that we do have a statistically significant difference in the two groups, and we're 95% sure that we're right

When to use data vs. intuition

Strategy & Metrics

LECTURE SUMMARY

Covered in this lecture:

When to choose intuition over data

- As a PM, you are trained to analyze and use data at all times
- Sometimes, it might be better to use your intuition or gut instinct instead
- **When you're creating something that's never been done before, there will be no data available to analyze**
- **In some cases, even if you find data on similar products, it might not be that relevant to how your specific product will be received**
- **Data methods are more about optimizing user engagement rather than getting the user involved in the first place**
- You should use data when it's readily available and it's accurate
- **If you want to make a large strategic change, you can't always rely on data, sometimes you've got to take the chance**

- Thinking about metrics might take more effort than just doing it and then measuring the results

- **As a CEO or PM, the following tools might be more valuable than data in making a product successful:**
  - vision
  - experience
  - intuition
  - intelligence
  - knowledge

- Data is only one tool in your toolbox, you don’t have to use it all the time

E-commerce metrics

Strategy & Metrics

LECTURE SUMMARY

Covered in this lecture:

What to track in e-commerce

- **E-commerce means selling goods online from an online store**
- In e-commerce, product managers operate more similarly to marketers
- E-commerce metrics are divided into 4 sections:

- **#1 Acquisition metrics (based on paid ads)**

  - CPC - cost per click (user clicks your ad)
  - CPM - cost per mille (1,000 users view your ad)
  - Saturation - how many times they saw the ad before they engaged with it

- **#2 Conversion metrics (the % of people that purchased)**

  - Conversion rate by origin source
  - Conversion rate by device type - 61.7% of all traffic to e-commerce stores are from mobile devices
  - Conversion rate by product / SKU (stock keeping unit)
  - Conversion divided by new & returning user
  - Funnel abandonment metrics - cart abandonment phenomenon: 70% of people that fill out a shopping cart abandon it before they buy

- **#3 Repurchase metrics / Retention**

  - % of users that returned (x amount of times / within x amount of days)

- These metrics help you figure out your idea type of user
- Companies that have more returning users have more revenue

- **#4 Size metrics (cart size)**

  - AOV - Average Order Volume - how much a user buys on average
  - you need to track AOV by device type, by source, by returning vs. new user, and by product

E-COMMERCE METRICS
PART I

As noted in the lecture, e-commerce companies track

CPC, CPM, SATURATION, AND ENGAGEMENT

when it comes to paid ads.

Let's say we're a life insurance company, and we're running a Google Adwords campaign. The campaign was started seven days ago and features basic ads shown on Google's search engine.

CPC

Our average cost per click is $65.73. When setting up Adwords, we set a maximum cost-per-click. Google Adwords then uses an auction system to determine where your ad is placed and what the actual cost per click is. Here, our cost per click is high, as insurance ads tend to be quite expensive. This makes sense, though, since the value of a single insurance customer is much higher than say the value of a customer at an online poster store.

CPM

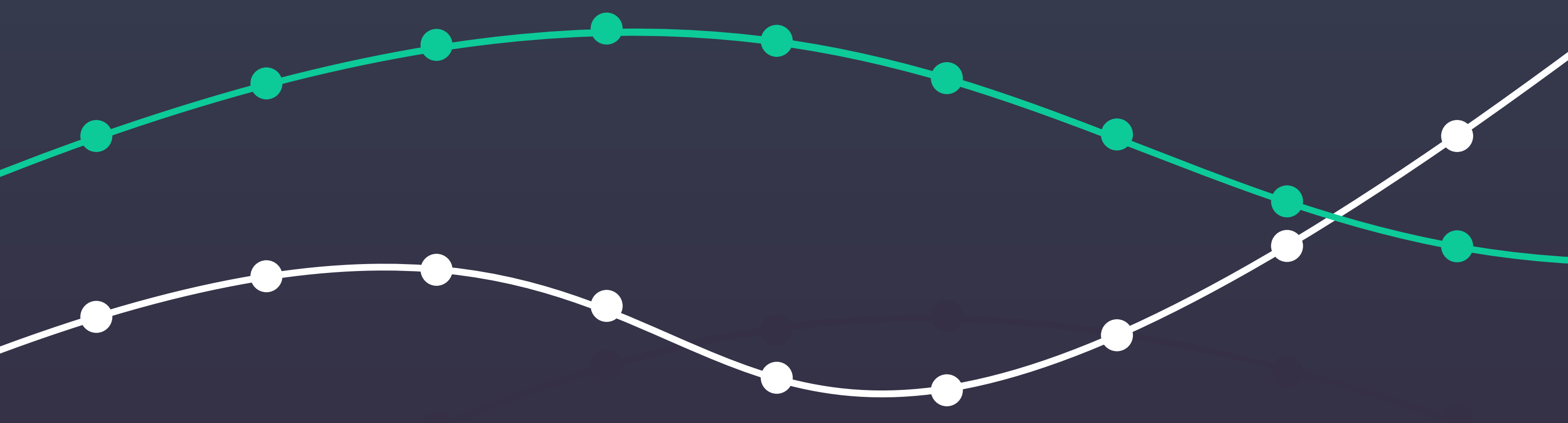
Our cost per mille (also known as cost per thousand impressions) is $195.87. This means that we'll pay $195.87 for an ad to be seen one thousand times, regardless of how many times the ad is clicked on. Whether we decide to buy ads based on CPC or CPM simply depends on which we believe will have a higher return on investment. If we have an exceptionally well designed banner that we believe will convert at a high rate (here, more than three times per one thousand impressions), then it would make sense to purchase ads using the CPM model.

SATURATION

There are a number of different metrics that we use to track reach and frequency (more technical terms for saturation). Two of the main metrics that Adwords tracks are unique users and average impression frequency per user (the average frequency at which an ad is seen by unique users during the reporting period). For the seven days that our campaign has been active, we have had 95,827 unique users and an average impression frequency per user of 2.6.

ENGAGEMENT

Basic search engine ads don't really have engagement in the same way that Facebook or other types of ads do. In short, either people click or they do not click on a search engine ad. Newer types of Google ads do have engagement metrics, though. For instance, for Lightbox ads, Google tracks both how many people expand your ad and the percent of people that expand your ad. For video ads, Google tracks how many people interact with a part of the ad that does not take them to an external site, such as clicking a teaser or icon to expand a card. Although there aren't engagement statistics for our basic type of search engine marketing, there are countless types of engagement metrics for other types of ads.



E-COMMERCE METRICS
PART II

Let’s look at an example of a company breaking down average order value by different segments. Let’s say we’re an online toy company. Our AOV is $52.33. Let’s dig into that number a bit and see what we can learn.

DEVICE TYPE

When we track AOV by device type, we see that mobile users have an AOV of $47.19, tablet users have an AOV of $49.96, and computer users have an AOV of $54.12.

SOURCE

After analyzing AOC by source, we see that customers who come to us by social media have an AOV of $39.58. Customers who come to us by search engines have an AOV of $65.93. Those who come to us by email marketing have an AOV of $51.02.

RETURNING VS. NEW USERS

Returning users have an AOV of $56.19 and new users have an AOV of $50.78.

WHICH PRODUCT THEY FIRST SAW

Unsurprisingly, those who first see less expensive products tend to have lower AOV’s. For example, those who first see packs of playing cards have an AOV of $16.98. Those who first see the Millennium Falcon Lego set, which costs a whopping $799.99, have an AOV $431.84.

ANALYSIS

So what does this mean for our toy company? There are a lot of conclusions that we can draw from this data. Let's focus on the most striking numbers. First, there is a major difference in AOV when we track by source. Since, AOV for customers who come to us through search engines is much higher than through social media, it would appear that we should focus more on this traction channel. Search engine marketing is typically more expensive, though, so we would have to weigh this higher cost with the benefit of a higher AOV.

Second, the difference in AOV when we track by which product they first see is staggering. Based on this data, it probably makes more sense for us to market our more expensive products. If all other variables and costs are the same, we would rather have an ad that brings a potential customer to the Millennium Falcon product page than to the deck of cards product page. With that being said, we would have to weigh the other variables. Individuals purchasing cards may have a much lower abandonment rate, or it may be more costly to advertise a Star Wars Lego set.

AOV is a great metric and is essential to e-commerce, but it has to be contextualized. Our online toy company has some clear differences in AOV when we track by various segments, but we have to consider other factors in order to make informed decisions.

Mobile app metrics

Strategy & Metrics

LECTURE SUMMARY

Covered in this lecture:

What to track for a mobile app

- In mobile, you track metrics very closely to the AARRR metrics framework: Acquisition, Activation, Retention, Referral, & Revenue
- The most important metric for mobile is engagement rate
- **On average, mobile apps lose 80% of their users in the first 3 days - you should keep that in mind as a baseline**
- Retention is hard on mobile because about 90% of mobile phone app usage goes to only 5 apps on average (which are probably your email, your bank app, Facebook, etc.)

- **#1 Retention metrics**

  - DAU: Daily Active Users
  - MAU: Monthly Active Users
  - N Day Retention: on any given day, what percentage of your total users launch the app
  - Clickthrough Rate on your push notifications, email campaigns, or other messaging campaigns
  - Churn - "dead" or inactive users
  - App Uninstalls

- **#2 Acquisition metrics**

  - Download attribution - where downloads come from
  - CPI - Cost Per Install

- **#3 Activation metrics**

  - % of downloads that launch the app
  - % of launches that result in signups
  - % of signups that result in being a regular user

► It's common to track each of these stages and apply a cost for it

► **There are 3 type of apps when it comes to revenue metrics:**
- Free - they make money through ads
- Freemium - that make money from in-app purchases or subscription tiers
- Paid - they make their money from downloads

- **#4 Revenue metrics**

► Free apps:
- ARPU (Average Revenue Per User)
- CAC (Customer Acquisition Cost)

► Freemium apps:
- Subscription: % of upgrade users, % of upgrades by acquisition source
- One-time purchases: % that buy each one, % users that buy multiple types of one-time purchases, # of purchases per month

► Paid apps:
- # of people that pay for downloads
- your main efforts will be focused on optimizing price

Marketplace metrics

Strategy & Metrics

LECTURE SUMMARY

Covered in this lecture:

What to track for a marketplace

- **A marketplace is anything that has dual sided customers that purchase or interact with one another (examples: Etsy, eBay, Airbnb, Udemy, Uber)**
- Marketplace businesses can push their market in a certain direction or let their users post what they want
- Marketplaces track all the basic metrics that any other business tracks, but we're focusing on the ones that are more specific

- ***#1 Revenue metrics***

  - GMV (Gross Merchandise Value) - the total amount that's sold in the market on any given period
  - if your marketplace is a service, you'll divide GMV by Contracted GMV and Delivered GMV, because the buyer won't be charged until the service is delivered
  - Take Rate - the percentage out of the total merchandise value that the platform takes
  - AOV (Average Order Volume) - it shows how valuable users find the items being sold

- Contribution Margin - the total value of the take rate for any given transaction minus any variable costs associated with it
- Unit economics

- **#2 User activity metrics**

- Liquidity - in the context of a marketplace, it refers to how much of each other's products/services are each of the customer groups buying
- Provider Liquidity - the frequency with which a listing creates a sale or transaction for the listing owner
- Customer Liquidity - the odds that any given user buys something when they come to a page
- Cohort Consistency - it tracks whether any change in one side of the market is complemented by a change in the other
- Fragmentation:
    - high fragmentation (more users are doing less) means that the marketplace is more likely to stay useful
    - low fragmentation (a few users doing a lot) could jeopardize the marketplace's competitive advantage, as fewer sellers would have an upward price pressure on goods

- **#3 Customer Satisfaction metrics**

- % orders fulfilled
- Average time for fulfillment

► **As a PM at a marketplace, you'll be trying to relieve imbalance in your marketplace while simultaneously deciding what an appropriate level of imbalance should be**

MARKETPLACE METRICS

Let's say we're an online marketplace for sneakers.
Below is an example of what our marketplace metrics may look like.

REVENUE

GMV - The GMV for our marketplace in the previous fiscal year was $22.3 million. This means that the total value of all merchandise sold on the marketplace was $22.3 million.

Contracted GMV & Delivered GMV - The contracted GMV was $22.7 million and the delivered GMV was $22.3 million. This means that $400,000 worth of merchandise was initially sold but not ultimately delivered.

Take Rate - The take rate for our marketplace is 10%. The rate does not change as lifetime billings with a client increase.

AOV - Average Order Value is $148.72.

Contribution Margin - Contribution Margin is the total value of the take rate for any given transaction minus the variable costs. Variable costs for our marketplace are relatively low, since sellers are handling inventory themselves. Nonetheless, variable costs that must be taken into account are marketing (i.e. the cost to acquire each customer), data-warehousing, and customer service. We've calculated the following:

– Cost to acquire each customer: $1.89

– Cost of data-warehousing per transaction: $0.13

– Average cost of customer service: $0.87

– Take Rate: 10%

– AOV: $148.72

Contribution Margin for Average Order =
(148.72 x .10) - (1.89 + .13 + .87) = $11.98

Represented as a percentage of revenue, our contribution margin is 80.56%.

USER ACTIVITY

Liquidity - On average, 22.4% of items (sneakers) listed on our marketplace are sold within a given week.

Cohort Consistency - Cohort consistency has not been a problem for our marketplace. For instance, our repeat orders tend not to be generated by the same cohorts of buyers and sellers. Moreover, although we see a spike in demand during December as the holidays roll around, we also see a spike in supply since many individuals are trying to offload sneakers in order to free up cash.

Fragmentation - Fragmentation is also not a problem in our marketplace. Buyer to seller ratio is 1:3.5, which is a healthy ratio.

CUSTOMER SATISFACTION

Net promoter score - Net promoter score is based on one question and one question only: How likely is it that you would recommend our marketplace to a friend or colleague?

Typically, questionees can respond with a score from 0 to 10, and net responder score is then calculated on a scale of -100 to 100. Anything above zero is typically considered good, with a score above 50 being considered excellent. Our company has a very loyal following and a net promoter score of 46.

Product Reviews - The average product review out of five stars is 4.6, meaning that customers are generally satisfied with the sneakers that they purchase through our marketplace.

Refund Rate - Our website only allows refunds within 30 days of purchase, thus we only track refund rate for a 30 day period. Our refund rate is 4.3%, meaning that 4.3% of orders are refunded.

Order fulfillment - Order fulfillment has not been a problem for our marketplace either. Our order fulfillment rate is 98.3%, meaning that 98.3% of orders are fulfilled. When calculating order fulfillment for our marketplace, we only include orders that were placed but not shipped (i.e. failure of fulfillment fell on the seller). We exclude