

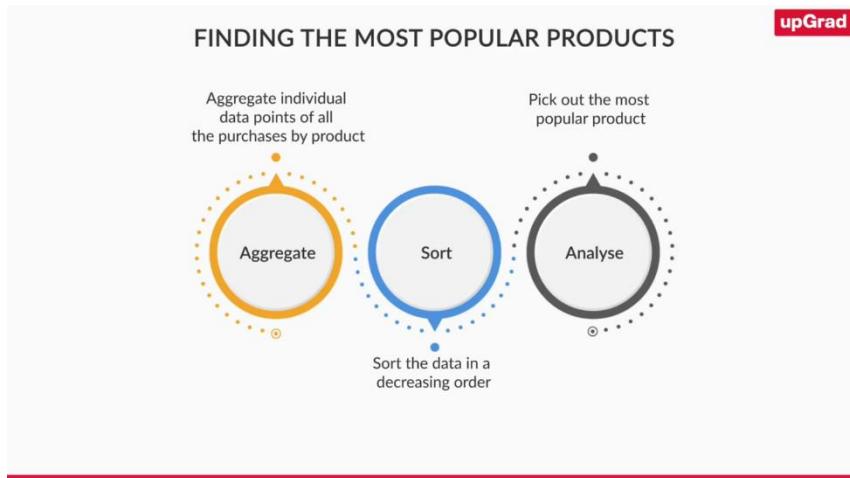
Transcription

Identifying Business Objectives & Key Metrics

The image shows a video call interface. On the left, a man with dark hair and a beard, wearing a grey t-shirt, is gesturing with his hands while speaking. On the right, there is a white diagram titled "DATA-DRIVEN DECISIONS". The diagram consists of two rounded rectangles connected by a curved line. The top rectangle is orange and contains the word "Scenario" at the top, followed by the text "You want to push the most popular products on your homepage". The bottom rectangle is blue and contains the word "Solution" at the top, followed by the text "Evaluate the data of the number of purchases for each product in the last month". The "upGrad" logo is in the top right corner of the slide.

Well, we need to use data to make all sorts of decisions about our product or our business. Let's say you're a product manager of a new eCommerce company, and you want to push the most popular products that the users purchase on your homepage. How will you do it?

Well, you can take a guess of course, but that really won't lead you very far. So, what can you do? Well, you can just simply look at the data of the number of purchases by product, for let's say last one month, and that's how you can select the most popular products.



So, what did we just do here? We might've had the individual data points of all the purchases made over the last month, but we aggregated this data by product, sorted it in a decreasing order, and then picked out the most popular products, right?

Product Analytics

It's **aggregating** all the data you have, **analysing** it to derive insights, and then making **concrete decisions** based on these insights. It helps an organisation to understand **what goes in the mind of users** when they are using their product.



This is exactly what is product analytics. It's aggregating all the data you have, analysing it to derive insights, and then making concrete decisions based on that. Product analytics helps an organization understand what goes in the mind of the users or a set of users when they're using your product. It really helps product managers and making measurable as well as logical decisions.

A video call interface featuring a man speaking on the left and a diagram on the right. The diagram is titled "CORE STEPS OF PRODUCT ANALYTICS" and lists three steps: "Data tracking" (represented by a database icon), "Data analysis" (represented by a chart icon), and "Data-driven decision making" (represented by a person icon).

upGrad

CORE STEPS OF PRODUCT ANALYTICS

- Data tracking
- Data analysis
- Data-driven decision making

The process of product analytics essentially consists of three core steps.

1. The first is data tracking, which is just capturing different data like visits, events, purchases, clicks, etc.
2. The second step is actually analysing this data, which is deriving insights through this data, either through visualizations or using tools such as Excel, Sequel etc., to find the answers that you're looking for.
3. And then finally, it's about making decisions based on this analysis of your data.

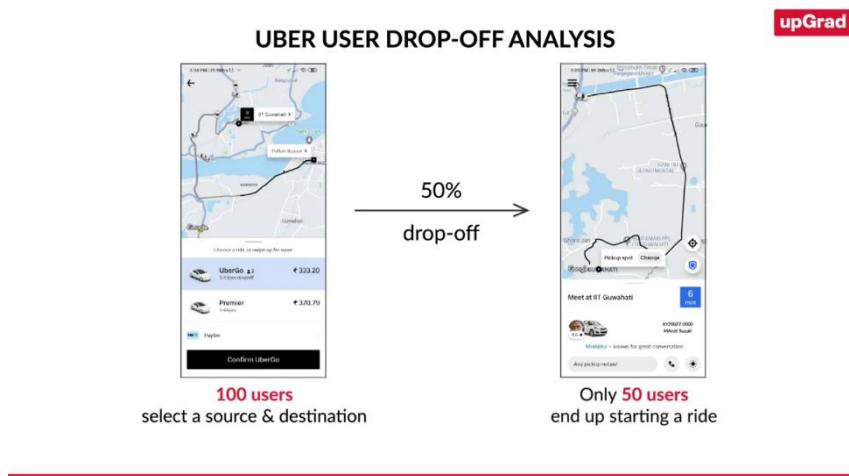
The image shows a video call from upGrad. On the left, a man in a grey striped t-shirt is speaking. On the right, there are five numbered callouts in colored circles (orange, blue, dark grey, green, teal) listing key decisions using analytics:

- 1 Uncovering user pain points
- 2 Marketing decisions
- 3 User segmentation
- 4 Improving the key objectives of the business
- 5 Understanding user interaction

Product analytics is used for making all kinds of decisions about your product and business. Some of the common ones that organizations use product analytics to make decisions are:

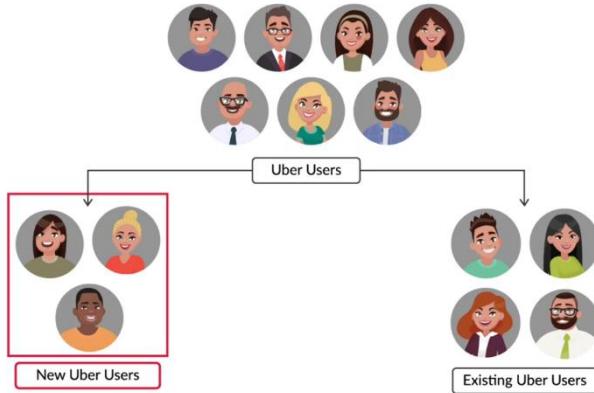
- Uncovering user pain points, which is essentially figuring out what to build as a product manager.
- Marketing decisions, how much money to spend on which users, on which channels, etc.
- Segmenting your users to understand their behaviours and characteristics. For example, figuring out who are your most engaged users, your segment of users that churn the highest, etc.
- Using it to improve key objectives for your business, like increase engagement, reduce churn, increase revenue per user, etc.
- And then finally, to build an overall understanding of how users are interacting with the product.

So, why is product analytics important for PMs. Well by now you probably realized that it's a very central part of the PM role. Your ability to understand data and take the right decisions for your users is a critical skill for being a good PM.



Let's take an example. Let's assume you're the PM of Uber and you work in the payments team. Let's say using the data, you have determined that of the hundred people who select a source and destination to order a cab, only 50 of them end up starting a ride, that is 50% of them drop off. And this number used to be only 25% earlier.

UBER USER DROP-OFF ANALYSIS



Now, if you had to diagnose this problem, you would have to rely on data and not guesswork. Now, let's see what could be the possible causes. Let's first break this into new users and existing users. If you see that the change is mostly due to new users, it could be that, you know, as Uber is growing, we're now attracting a different set of users for which this value proposition, that is like the price or the type of cab is not attractive enough.

UBER USER DROP-OFF ANALYSIS

Week by Week Conversion Analysis for April		
Week	Conversion Rate of New Users	Conversion Rate of Existing Users
Week 1	50%	73%
Week 2	48%	67%
Week 3	52%	55%
Week 4	50%	49%

Now let's say when we look at the data, we realize that the average conversion of the new users has not really changed week on week. So, then we can determine that the problem is actually with the conversion of existing users. Now what could be the problems, let's just think about it.

Well, the price could have become higher, the ETA, the average ETA of the cab could have become higher, or there could have been an issue with payments of the previous rides. So again, we'll dig further into the data.

UBER USER DROP-OFF ANALYSIS

Average Price per Ride & ETA Analysis for April		
Week	Average Price per Ride (₹)	Average ETA (minutes)
Week 1	320	5
Week 2	376	6
Week 3	337	4
Current Week	350	5

Let's compare the average price per ride for this week versus the past weeks, as well as the average ETA that the users are seeing for cab this week versus, you know, of the past week. Now let's assume we find that both of these are the same, so that cannot be the problem. So, let's further dig into further data.

UBER USER DROP-OFF ANALYSIS

Payment Analysis for April			
Week	Total Payment Attempts	Failed Payment Attempts	% Failed Payments
Week 1	10,566	450	4.3
Week 2	11,542	770	6.7
Week 3	9,658	580	8.8
Week 4	12,009	1200	10.0

Now looking at the data, we see that the payment for the previous ride for a lot of users has actually been failing. And this is what is leading them to drop off because they're not being able to pay for the last ride before starting a new ride.



Well, then we can go in and see which payment option might be actually causing the struggle. When we see the data, let's say we discovered that actually there's been a problem with UPI. Most users who are trying to use UPI to make the payment, there payment is failing, they're getting frustrated and then they're dropping off. So, by digging into data, we were able to discover or diagnose the problem, which is affecting our overall business, right?

So, you know, if we were a PM, what we would do is then we will work on quickly resolving this UPI payment issue. And in the meanwhile, show a message in the app to the users that look, UPI is experiencing difficulties. Please use alternate payment methods. This would ensure that the users do not go down the path of trying the entire payment cycle with UPI, then failing and then dropping off.

Well, this was obviously a very simplistic example, right. In a large organization like Uber, they will have automated systems, which track the payment success rates of different payment methods. And if anything is failing, automatically an alert would be out of the app for the users that please avoid these payment methods.

But it does give you a good sense of how, you know, here we were able to use data and product analytics to really diagnose the problem which was affecting our overall business.



So, let's continue with the same example. Let's assume you are a PM at Uber, let's look at some of the decisions that you can make using analytics in your organization. Note, this is by no means an exhaustive set, but it's just to give you

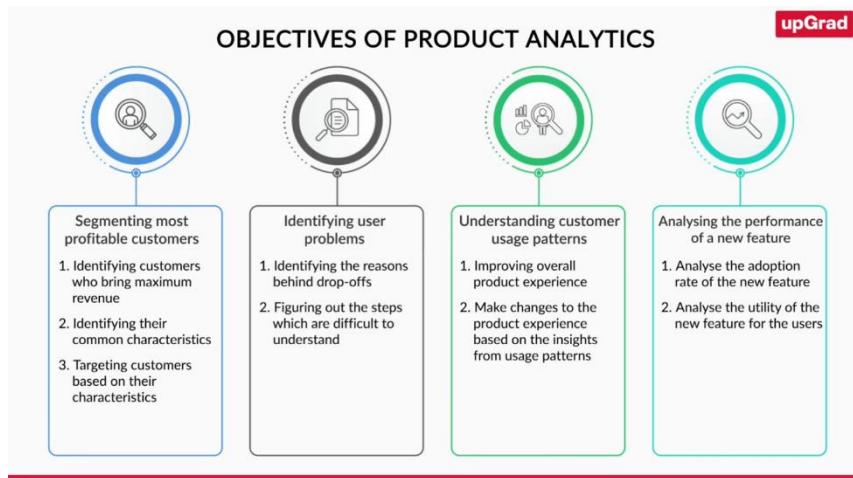
an idea of how data and analytics can really empower you to make critical decisions. So, let's see, what can you do at Uber with data.



So, product analytics of the get go, it gives you an opportunity to improve your core business metrics, let's say like customer retention or engagement.

- So, you can find out like, what are the opportunities to reduce churn. How can you increase revenue per user? Why are some users, you know, stopping to use Uber? Are they switching to a competitor, is pricing a factor? You know, when pricing goes up, how many users drop off, etc. So, all these decisions around engagement, retention, revenue, you can make using product analytics.
- Another thing you can do is you can segment your most profitable customers. You can see who are the customers who are doing the most rides, bringing in the most revenue. What are their common characteristics? You can then choose to target such customers with your marketing campaign so that more of these customers become part of Uber.
- It can also help you identify user problems. You know, like we saw in the last example with the payments. See steps in the app where there are higher drop-offs. Is there a step which is difficult to understand, is there a step which is failing for most users? Can users not choose the cab type, can users not make a payment for the previous ride, etc.

Looking at data and analysing it will give you answers to all of these questions where users might be experiencing problems. And hence, you can work on the product to address them.



- Product analytics also gives you an opportunity to actually understand usage patterns that allows you to finally improve the product experience.

For example, let's say on weekdays in the morning, you see using the data, that most users go to the same destination, which for a lot of people might just be their workplace. You can then change their product experience such that in the morning, that destination is just selected by default for most users.

They can still change it, but for the 90% of users who are just using their destination, can you just make it one step less and easier and faster for them to get to their destination, and hence improving their experience of the product.

- You can also use analytics to really analyse the performance of a new feature. So, let's say you have launched a split fare feature at Uber that users can split it with the people that, you know, they're taking the ride with.

Now, how will you know that this is useful after you've launched it. You can go into the data and you can analyse the percentage of rides in which the split fare is actually being used. If a significant percentage of people have started using this split fare feature, then you know that this is adding value.

Otherwise, you might have to go in and, you know, rethink the feature or how it's positioned, depending on the data to see how it can be beneficial to users.

So, as we saw, there are multiple use cases of using product analytics, in any, especially in today's organizations where you can collect any and all data about your users, it's very important to be able to rely on the right data to make the right decisions and the right objective decisions in your organization.

The image shows a video call in progress. On the left, a man in a grey striped t-shirt is speaking. On the right, there is a slide titled "COMPONENTS OF PRODUCT ANALYTICS". The slide features two numbered items: "1 Data points" (in an orange circle) and "2 Events" (in a blue circle). The upGrad logo is in the top right corner of the slide.

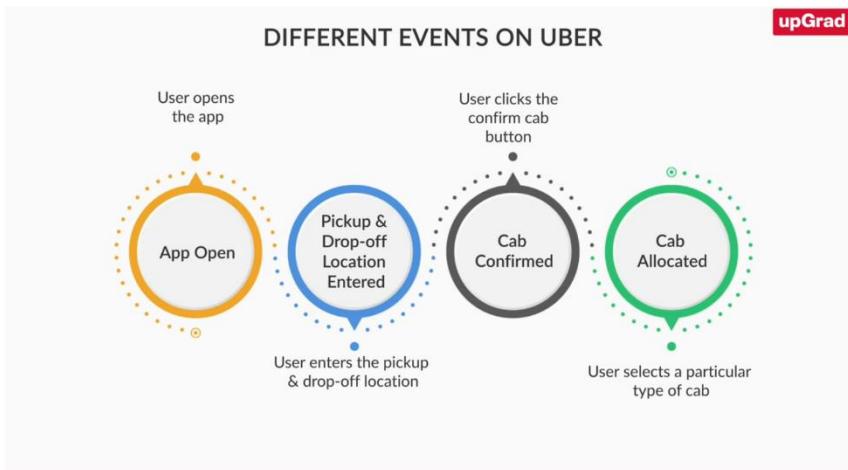
So, let's understand some of the key components and terminologies of product analytics that you will leverage to make informed decisions as a product manager. We continue to take example of you being a PM at Uber to explain this.

1. The first thing or the first terminology you will come across is just data points. So, data points are just individual pieces of information which are collected about your business.

For example, revenue for a particular day is a data point, or price for a cab ride is a data point. Data points usually when taking an aggregation allow us to plot trends, or you know, they allow us to make certain measurements about our business.

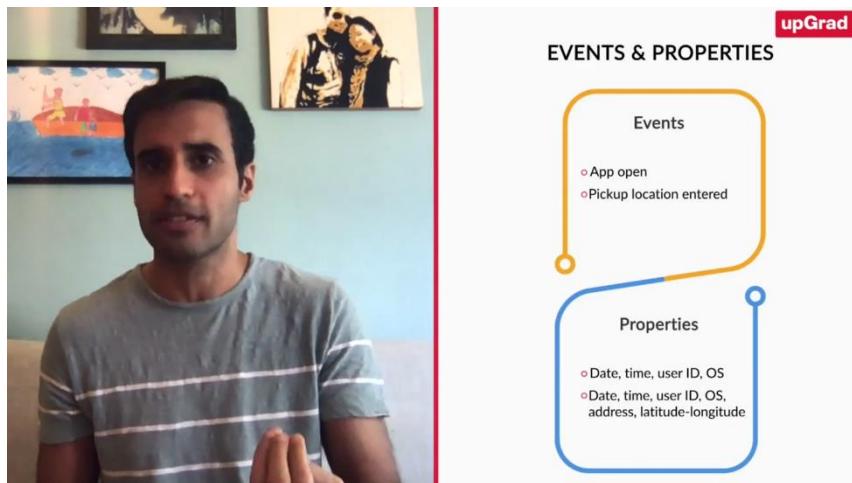
2. The next key component or the term that you will see in product analytics is events. Events are specific things that happen in a product usually because of some user interaction. Events are very, very important in understanding how users are interacting with your product.

For example, when you visit any website, let's say amazon.com, a page view event is always registered. When you log in, an event called user login would be registered. When you, let's say click on add to cart for a product, an event called add to cart will be registered.



Let's go back to the example of Uber and the process we follow to order a cab. When the user opens the app, an event called app open is registered in the analytics toolkit. When we add a pickup location, similarly an event card pickup location entered will be registered.

Similarly, when we add a drop off location, an event called drop off location will be entered. And then it will be followed by confirm cab once we click on that button. Now when a specific cab is selected and shown to the user, another event called cab displayed or cab allocated can be registered in your analytics software.



Now, events usually have two broad components, a name and certain properties associated with the event, which further define this event. In this example, app open would be the name of the event, but it can have properties associated with it, like date, time, user ID, which smartphone, which OS, you know, Android or iOS, etc.

Similarly, pickup location as an event can also again have properties like date, time, user OS, but also additional properties like what is the actual address of the pickup location or the lat-log of the pickup location, and this is similar for other events.

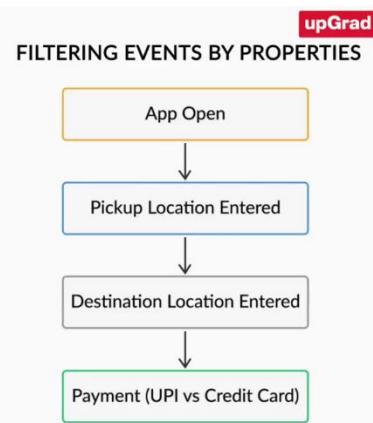
Now, usually when we are tracking events, there are certain default properties that are attached to every event. So, the common properties that I talked about, like the date, the time, the user ID, what device, what OS, these are just common properties which can be associated with every event, but each event but also have specific properties that help define that event better.



So, in our Uber example, like the pickup location entered event can have the address and the lat-log of the pickup location. The cab allocated event can have the type of cab, the price, and the ETA as specific properties associated with that event.

Now, looking at events can really help you understand how the users are using the product. So, if you look at, let's say for a user ID that represents me, Ravi, if I look at the sequence of events, I can really plot what the behaviour has been. So, first it could be an app open event followed by a cab select event, followed by payment event, etc.

The properties of the event can actually be used for further analysis. So, for example, if you want to know how many cabs were called to HSR layout in Bangalore in the morning, you can just calculate the number of cab hailed events and filter by the property where the location is within HRS Layout. So, this is like a simple example.



You can also look at, like for example, if you want to know after app open, and pick up location entered, destination location entered, how many people use, you know, UPI as the payment step versus credit card as the payment step. You can again, filter these events by properties.

We learn more about how to use events in analytics tools when we learn about tools such as Google analytics and Mixpanel, etc. But it's important for you to know that just looking at the individual events really paints a picture of how users are interacting with your product and in what order.

The slide has a title 'COMPONENTS OF PRODUCT ANALYTICS' and three numbered points: 1. Data points, 2. Events, and 3. Metrics.

The next concept we're going to talk about is metrics. So, let's say we've all heard of GDP. But what is GDP and why is it used so much? Well, GDP is just a way to measure the economic activity of a nation. So, if someone asks, if the country is growing, you immediately check the growth rate of the GDP of a country and you're able to answer this. There's no guesswork, there's no like my answer different from your answer.

Metrics
Metric is a **quantifiable** measure that allows businesses to define and **track the success** of their **product** or their business activity.

The illustration shows two people interacting with a large smartphone-like screen displaying various charts and graphs. One person is climbing a ladder to reach the top of the screen, while the other stands below, pointing at the data. A lightbulb icon with a question mark is also present near the screen.

So, here GDP is a metric. This is what metrics do. Metric is a quantifiable measure that allows businesses to define and track the success of their product or their business activity.



Let's say you are an eCommerce company and you have a checkout process; how will you measure that it's working well? Now if you think about it, the role of the checkout process is to take the users once they've added something to the cart, to eventually, you know, select their address, delivery option, payment, etc., and finally make that purchase.

Now as a PM, it's going to be an important part of your role to identify whether this particular process or this particular flow is working well or not. So, what's a good metric to look at?



Well, if you think about the flow we just talked about, a good metric might be looking at the percentage of users who went from adding something to the cart to eventually making that purchase. This percentage then becomes your metric to judge the efficacy of your checkout process.

If this percentage is going up, that means your checkout process is working well, and most users are able to make that purchase. If this percentage is falling, that means that there's something wrong at some point in the checkout process and that's where you can go in and step in, and make an improvement to your product.

It's important part of your role as a PM to be able to select the right metric and then optimize it to meet the overall goals of the product or the organization. We learn more about metrics, their importance, etc., in the next segment.

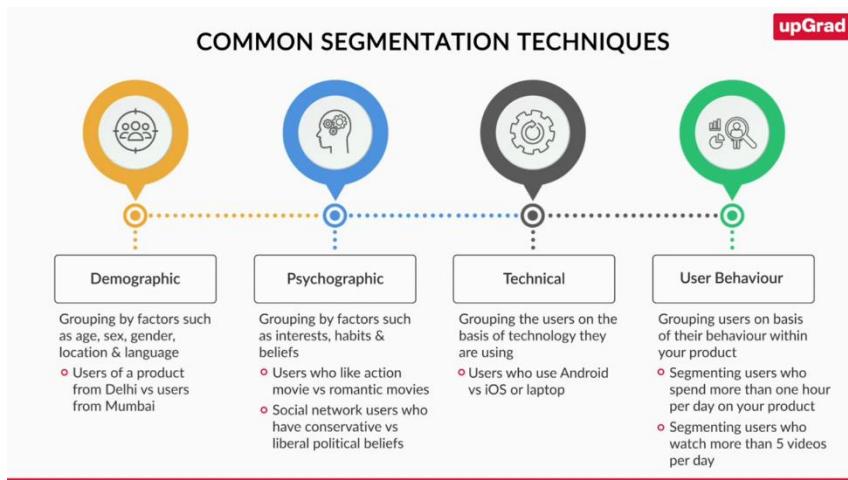
The diagram on the right is titled 'COMPONENTS OF PRODUCT ANALYTICS' and lists four components in a vertical sequence:

- 1 Data points
- 2 Events
- 3 Metrics
- 4 Segments

Now does it make sense to look at all metrics for all your users? For example, if you're looking at revenue at Uber, does it always make sense to look at the entire revenue? You may want to look at average revenue per user for say Delhi and Mumbai differently to make some comparisons.

Let's say you are a PM at Swiggy. You may want to analyse the type of food ordered by people under 25 versus people over 40, so that you can personalize the product experience or offer different campaigns to for these users.

Well, this process of grouping users by common characteristics that they share is called segmentation. This is a very important concept because often different groups of users share common preferences and hence it makes sense to, you know, analyse their behaviour or their pain points separately. These common characteristics can be any defining factor which joins those users together.

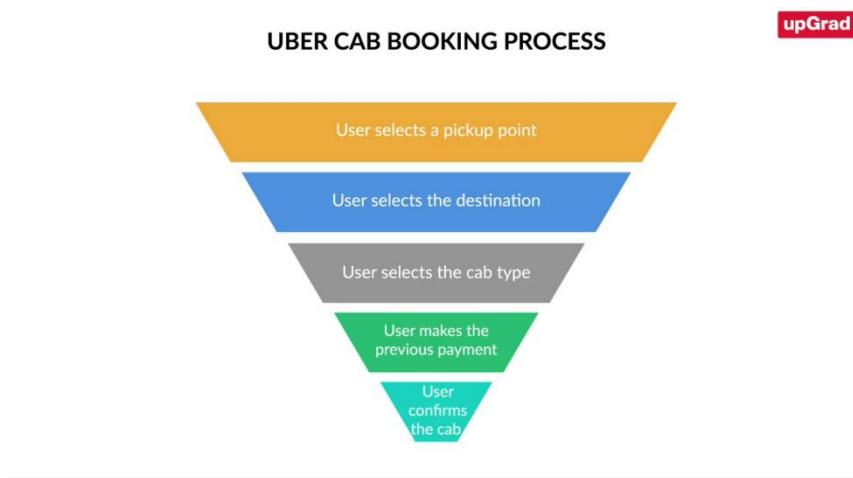


Let's take some common ways that people are usually or users are usually segmented:

- Well, the first one is demographic, which is just grouping by age, gender, location, language, etc. So, for example, users from Delhi versus Bombay or you know, different age groups, etc., these are all demographic classifications.

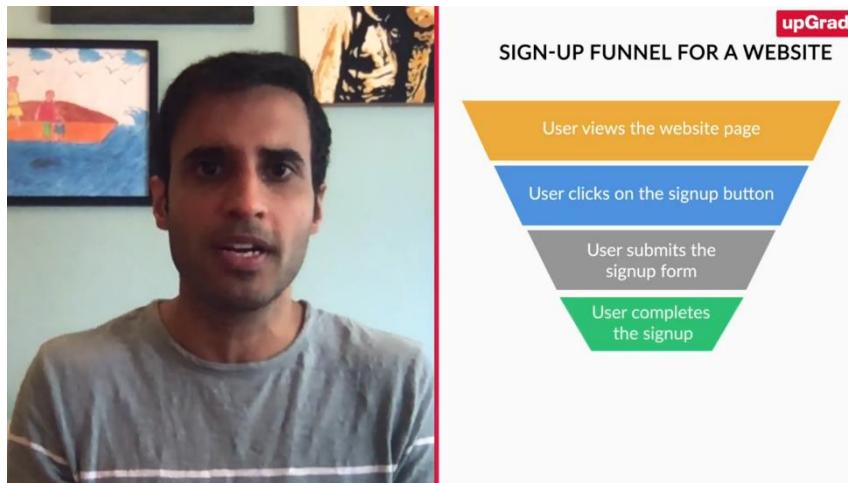
- The next way to segment users is psychographic, which is based on the things like interests, habits, beliefs. For example, for users who like action movies versus romantic movies. Or, you know, for a social network, it could be users who have like conservative versus liberal political beliefs.
- Then there's another way to group users which is technical grouping, which is by the technology that they're using, like the browser, the type of smartphone, the OS, iOS, Android, the laptop, etc.
- The other way to segment users often used is actually based on the behaviour within your product. So, for example, segmenting users who spend more than one hour per day on your product. Or let's say if you're a media company, segmenting users who watch more than five videos a day. These are important ways to kind of segment your users.

Because these user segments share common characteristics, behaviours, etc., they may display common preferences or have common pain points. And hence, segments are pretty important for you to understand user behaviour better and make specific decisions related to those particular segments.



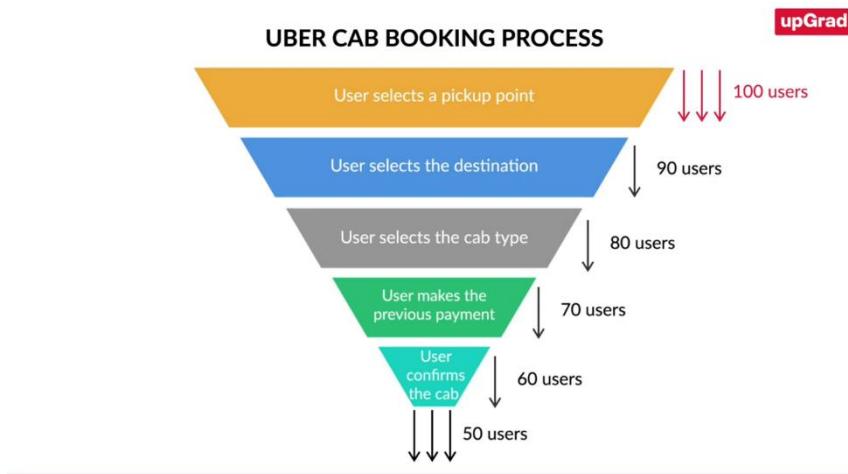
Let's think about the cab ordering process at Uber once again. As we discussed, you first select a pickup point, destination, cab type, you have to then pay for your previous ride in most cases, and then you confirm the cap.

So, this is a series of steps that you have to be able to do to achieve the goal of calling a cab. So, this series for any goal in a product is what is called a funnel. It's a very common term that you'll hear product managers, marketers use quite often. Funnels are nothing but series of actions that a user does in a particular product in order to achieve a goal.



Another common example is that for, let's say a sign-up funnel for any website. So, the steps on the funnel would be page viewed, to click on the signup button, to submit the sign-up form, to eventually complete the sign up.

Now, why are these things called funnels? It's actually just a series of steps. They are called funnels because at every stage, you usually have some loss or some drop off. So, not all users who start the first step end up completing till the end step.



So, let's say if you started with a hundred users who wanted to call a cab and then ten drop off at every stage that we talked about, and if there are five steps, then there only be 50 users left at the end.

Now funnel is a good way to visualize it, that it begins with a larger sort of at the top and then kind of narrows down and there's eventually at the end there are fewer users left. So, because of this way of visualization, you know, the series is usually called a funnel.

COMPONENTS OF PRODUCT ANALYTICS

- 2 Events
- 3 Metrics
- 4 Segments
- 5 Funnels
- 6 Cohorts

The term segment or cohort is often used interchangeably, in that these are group of users combined by a common characteristic. Usually, the term cohort is also used for groups that are typically time-bound or funnel bound.

EXAMPLES - COHORTS

- Signup month
Users who signed up in Jan vs users who signed up in Feb
- Year of graduation
Students who graduated from the university in 2018 vs the students who graduated in 2017

For example, users who signed up in Jan versus users who signed up in Feb could be two different cohorts. Or students who graduated from university in 2018 versus 2017 are two different cohorts. So, where time is an important grouping characteristic that actually determines behaviour, that's where the term cohorts is used.

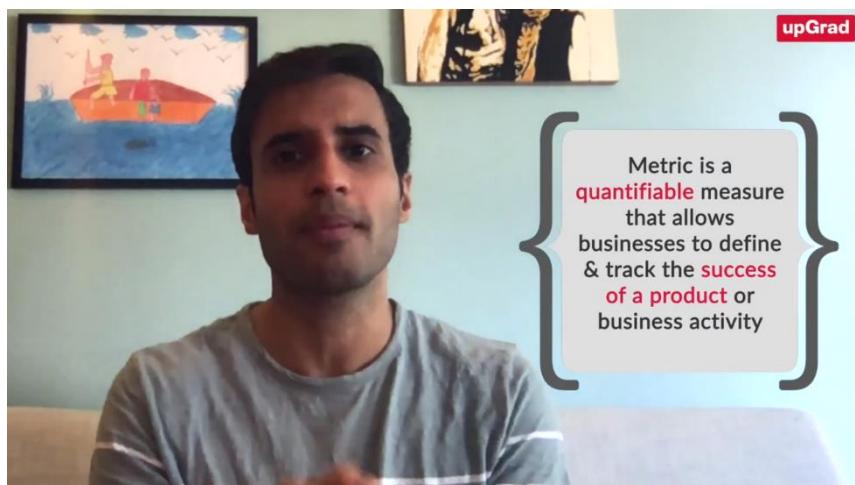
COHORT ANALYSIS

- 30% of total users
Weekly active users for your product
- 20% of total users
Users who signed up in Jan 1st week & are active by week 8
- 30% of total users
Users who signed up in March 1st week & are active by week 8

Cohorts which are grouped by time are usually important in analysing retention. For example, your overall weekly active users for your product, maybe 30% of your total users. However, if you look at users who signed up in Jan first week, and then look at week on week retention, you may see that by week eight, only 20% of your users are active.

So, you start making changes to your product to improve this. And then you notice that the users who signed up in the first week of March, once they complete their eight weeks, actually 30% of them are still active. So, you know, by doing this cohort analysis of users, you know, from a different timeframe, whether the improvements that you've done on product is working in order to achieve your goals or not.

But again, the term segment or cohort is used very interchangeably. And I think the important thing for you to remember is just, again, it's just a grouping of users by a common characteristic. When that common characteristic is related to time, people tend to use the term cohort more often.



In the last session, we briefly touched upon the concept of metrics. We spoke about how GDP is a metric to measure the growth of a country. We also learned that metric is a quantifiable measure that allows businesses to define and track the success of a product or a business activity. Now, this word quantifiable or objective is very important.

Let's take a couple more examples. Let's say you are PM at Instagram, and let's say the team says that you need to work on improving engagement within Instagram. Now, what does engagement mean? How would you measure it? It could mean different things to you, to me, to other people. So, how will you make sure that everyone is focused on improving the same thing when we say our goal is to increase engagement. This is where metrics are super useful.

INSTAGRAM - ENGAGEMENT METRICS

% of Daily Active Users
Determines what % of users are active on a daily basis

Time Spent per Day per User
Determines how much time each user spends on the product in a day

There are many common metrics to measure engagement. In case of Instagram, it could be percentage of daily active users, which means that, you know, what percentage of the users are active on a daily basis. Or it could be time spent per day per user, which is a different metric.

Now, it's important for you to choose that one metric that then everyone can kind of align to when they say that we want to improve engagement. Let's say we choose the latter, now you have an objective measurable number that you can look to improve and everyone can be aligned on that same objective.

METRICS FOR A B2B PRODUCT

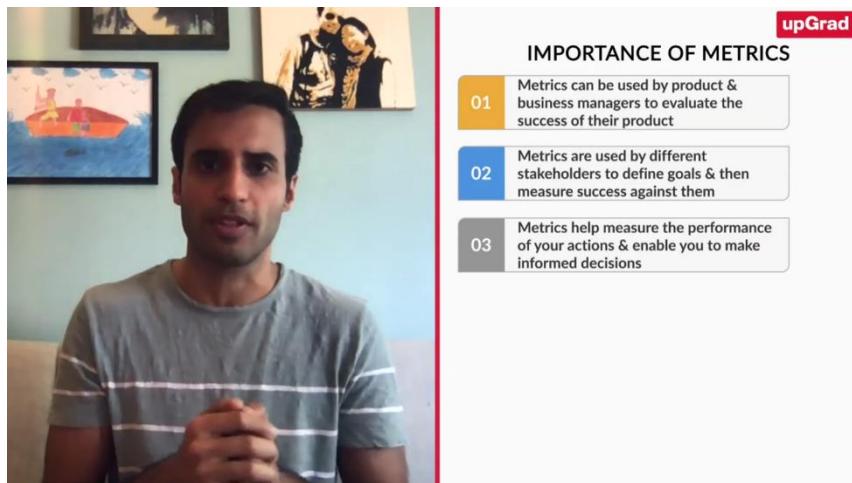
Objective
You want to improve the overall sales efficiency

Key Metric
Total revenue per sales person

Let's take another example of a B2B product. Let's say when you want to improve your sales efficiency. Again, what does it mean? How will you measure it? Now, a common way to measure sales efficiency would be revenue per sales person. So, if the same person is able to bring instead of a 100, 130 amount of revenue, then you know that the efficiency has gone up.

Now, this is a metric, it's objective. You can tell your sales team or you can work with your sales team to say that, look, we want to increase the average revenue that a sales person is bringing in and it's very clear to people on what they need to do.

There are a lot of key metrics at different stages of a user journey which a PM needs to be aware about. We learn about all these common key metrics by different user journeys, later in the session.



The image shows a video call in progress. On the left, a man with dark hair and a beard, wearing a grey t-shirt with white stripes, is speaking. He is gesturing with his hands clasped together. On the right, there is a slide titled "IMPORTANCE OF METRICS" in bold black text. The slide has a red header bar with the "upGrad" logo. Below the title, there are three numbered points in colored boxes: 01 (yellow), 02 (blue), and 03 (grey). Each point has a corresponding text description.

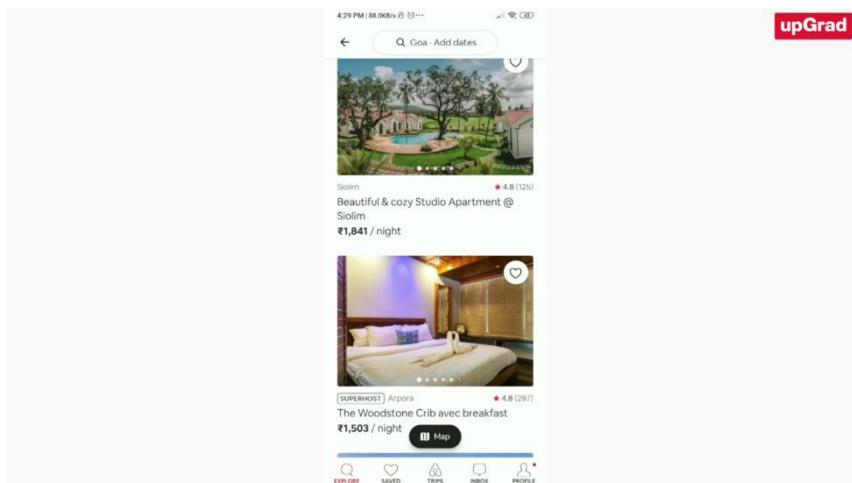
- 01 Metrics can be used by product & business managers to evaluate the success of their product
- 02 Metrics are used by different stakeholders to define goals & then measure success against them
- 03 Metrics help measure the performance of your actions & enable you to make informed decisions

As we saw, metrics are very important to make sure that the entire organization speaks the same language. Metrics can be used by product and business managers to evaluate the success of their product. Common measure ensures objectivity as well as alignment between different teams at the organization. Metrics are also used by different stakeholders to define goals and then measure success against them.

For example, your product may be focused on improving conversion, increasing engagement or growing in revenue. Now these goals are meaningless as just as word unless there are metrics assigned to measure them, and then target set for those metrics.

So, instead of saying that, okay, this year we want to increase conversion, an organization can set a goal that we want to increase the conversion from free to paid users from 2 to 3%. This is not an objective metric that has been assigned to this goal of improving conversion.

Metrics also help measure the performance of your actions, and enable you to make informed decisions based on that.



The image is a screenshot of a mobile application displaying two Airbnb listings for studio apartments in Goa. At the top, the search bar shows "Goa - Add dates". The first listing is for a "Beautiful & cozy Studio Apartment @ Siolim" with a rating of 4.8 (125) and a price of ₹1,841 / night. The second listing is for "The Woodstone Crib avec breakfast" with a rating of 4.8 (287) and a price of ₹1,503 / night. Both listings include a small photo of the apartment and the host's name. At the bottom of the screen, there are navigation icons for EXPLORE, SAVED, TRIPS, INBOX, and PEOPLE.

Now, let's say you were at Airbnb and you made a change to the default order in which properties are displayed after someone searches for a property at a particular location. Now, how do you know whether this change actually helped or harmed the business?

If you think about it, the key goal at this step is from taking the user from the list of properties to a particular property that they can select. So, if you assign a metric that is, we look at the conversion, which is the percentage of users who are going from this property listing page to a particular property, that's a great objective measure to see whether the changes that you made in the product are working or not.



If this percentage has gone up, that means you know, your product change has been successful. If this metric goes down, then you know, you need to re-look at what you did and potentially think about other ways, which you can improve this metric.

Now, as you can see, in our discussion different products have different metrics for different goals. Different features or steps within a product can also have different success metrics. So, it's really important that you choose the right metric for your desired goal that will guide all of your decisions. Optimizing for the wrong metric will obviously lead to, you know, not being able to achieve your desired goal because it will lead you to a wrong path, which is not aligned with the goal that you set up.

IMPORTANCE OF CHOOSING RIGHT METRICS

- 01 Ensures alignment amongst different teams on achieving the goal
- 02 Ensures focus so that everyone is working towards the same thing
- 03 Maintains an objective measure of success
- 04 Creates a transparent picture of the health of a product

As we learned, it's very important to choose the right metric which is aligned with the goals of the particular product or feature that you're working on.

- While choosing the right metric ensures alignment amongst different teams or on achieving this common goal, it ensures focus so that everyone is working towards the same thing.
- It maintains an objective measure of success, and hence is able to effectively guide decisions. There's no subjectivity when you're looking at a particular specific metric to guide your success.
- It also creates a transparent picture of the health of a product or business. There's no talk of good, great, bad. You can objectively define whether your business or your product is doing well or not.

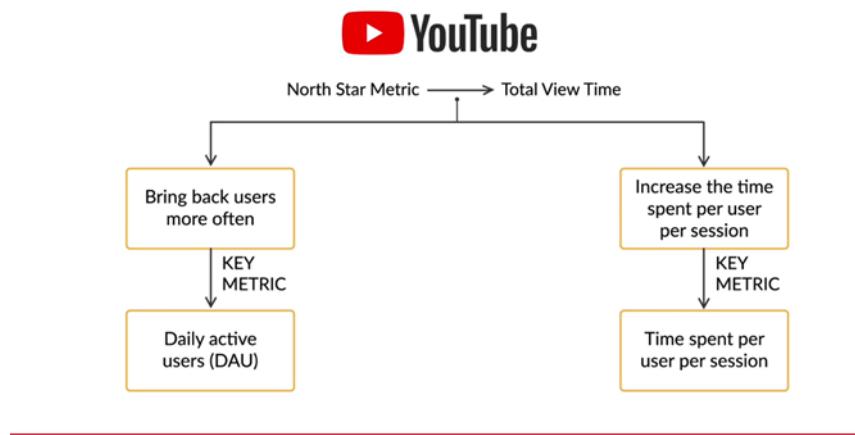
Often businesses or products have key metrics which are aligned to the overall growth or the overall objectives of the business. You must have heard a term called north star metric or the one metric that matters. This is usually the most important metric for the organization.

The image shows a video call interface. On the left, a man with dark hair and a beard, wearing a grey striped t-shirt, is speaking. On the right, there is a slide titled "EXAMPLES - NORTH STAR METRICS". The slide features two examples: YouTube, represented by a yellow rounded rectangle, and SaaS Company, represented by a blue rounded rectangle. Both examples include a brief description of their respective north star metrics.

Example	North Star Metric Description
YouTube	North star metric can be the "Total view time"
SaaS Company	North star metric can be the "Monthly recurring revenue"

For example, for YouTube, the north star metric may be the total view time. For a SaaS company, it may be the monthly recurring revenue, which is the monthly subscription revenue that they get from their clients.

While north star metrics are very important, don't let the focus just on north star metrics deceive you. North star metrics are usually output metrics. They are usually a result of different inputs. So, it is important to measure the inputs with the right metrics.



So, for example, for YouTube, the total view time, maybe the North star metric, but to improve it, YouTube can do two things. Either they can bring back users more often or they can increase the time spent per user session.

Both these inputs will be measured by their own metrics. Daily active users could be a measure of, you know, the first how many times, how often users are coming back. Time spent per session will be a metric to measure the second thing. Now optimizing for these two metrics will actually optimize that North star metric for YouTube.

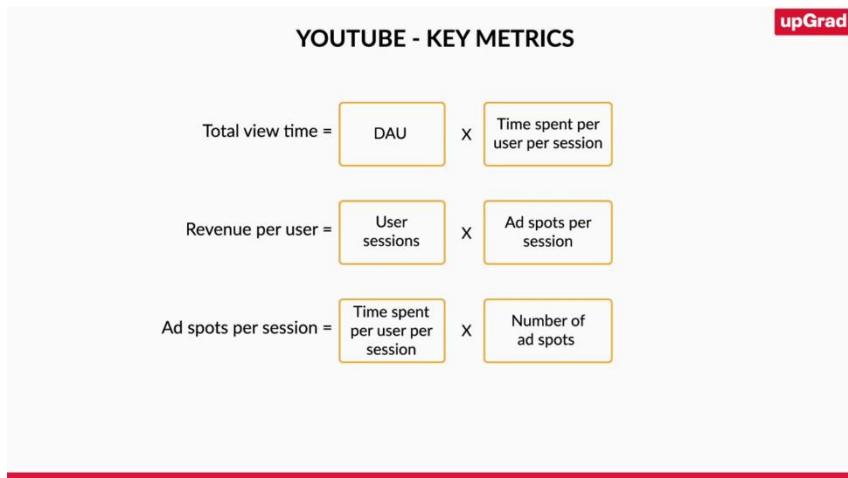
North Star metrics also may only cover just one aspect of the business. So again, for the example of YouTube, the total view time maybe a North star metric for engagement, but revenue or revenue per user, maybe the critical metric for monetization. So, if you just look at one, you will not get the entire picture of the business.

North Star metrics or just focusing on North Star metrics also don't allow for you to look at trade-offs between different metrics.

For example, for a social network, a revenue per user and engagement may actually be competing metrics, right? If you keep increasing add spots let's say in Facebook, you may see a bump up temporarily in the revenue per user, but you would also see a decrease in engagement because people want actual user generated content.

So, if you just focus on that one North star metric, you will not be able to understand the nuances of this, you know, sometimes competition and interdependence between metrics.

So, then what is the right way to define metrics in an organization. Well, the right way is that you define a set of key metrics, which you can call focus metrics, key metrics, whatever you want to. This is the set of metrics which are the most important for your business. Then each of these focus or key metrics should be broken into a set of input metrics that directly constitute the growth of these focused metrics.



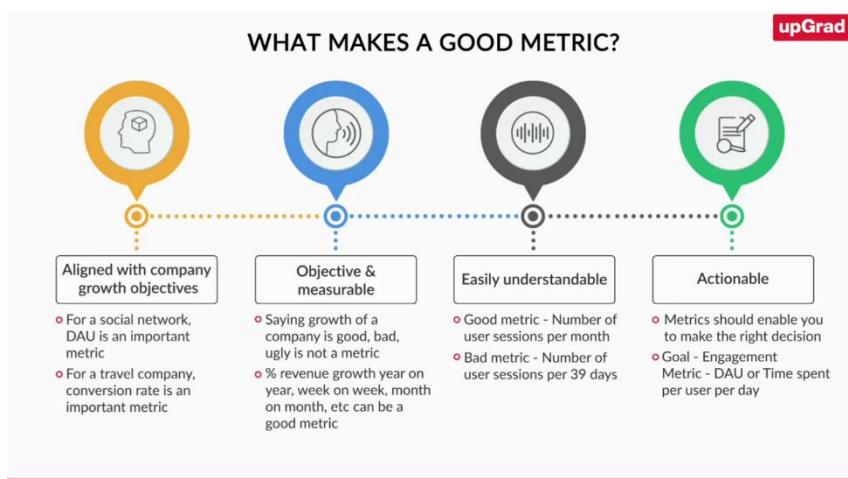
Let's go back to the YouTube example. View time, total view time can be a focus metric, which can be further broken down into active users, multiply it by the time spent per user per session. Similarly, revenue per user can be a focus metric for monetization for YouTube, but it can be again broken down into, let's say, the user sessions into the ad spots per session.

Now again, add spots per session can be further broken down into the time spent per user, per session, multiplied by the number of ad spots that are shown every minute for example. Optimization of these input metrics will lead to optimization of the output metric automatically because the output metric is composed of these next level metrics.

One important thing to keep in mind when you break your focus metrics or output metric into these next level metrics is the interdependence of metrics as we talked about.

So, in our example, let's say, an increase in number of ads shown per minute might actually end up reducing engagement. So, which could mean that eventually the time spent per user per session actually comes down.

So, you need to be mindful of this, that you know, sometimes you will have to maintain a healthy balance between different competing metrics in order to ensure that your overall business goals are met.



So, now that we've looked at how you can define focus metrics and then, you know, break them into next level metrics, let's talk about what actually makes a good metric. Like what are the characteristics of a good metric?

- Well, the first and foremost characteristic is that metrics should be aligned with your overall company objectives. For example, if you're a social network, daily active users is a very important metric.

Versus let's say if you're a travel company, which, you know, people might only use two or three times a year, then tracking daily active users is pretty much a meaningless metric for you. For you then as a travel company, conversion rate, which is like how many people are actually able to make a booking, average transaction price are much more important metrics than daily active users because they sort of reflect what are your overall business goals.

- Next key component of a metric is obviously that it should be objective and measurable. For example, saying, you know, growth of a company is good, bad, ugly, that's not really a metric. But keeping revenue growth or percentage revenue growth year on year, week on week, month on month, etc., that's an objective metric, because you can say that, look, our growth rate is 20%, 30% minus 10%. This is an objective metric.
- A metric should be easily understandable. So, let's say number of user sessions per month is a good metric of engagement, but number of user sessions per 39 days is a weird way of measuring engagement because it's not intuitive or easy to understand for anyone.
- Finally, metrics should be actionable. You know, you should choose metrics that actually enable you to make the right decision. So, if engagement is a goal for you, you know, a metric like daily active users or time spent per day are actionable metrics.

If you see your daily active users falling, you can take immediate actions to figure it out and to diagnose this and then try and bring back more users. If your average time spent per day is falling, again, you can use this information to take very targeted actions in your product. So, always pick metrics which are actionable, that allow you to make your decisions.

Next, we will look at different stages of a user journey and some frameworks that you can use to actually pick the right and key metrics, which affect different stages of the user journey. We'll also look at overall metrics, overall business level metrics that product managers should be aware of because it's a very important part of the toolkit of a PM.

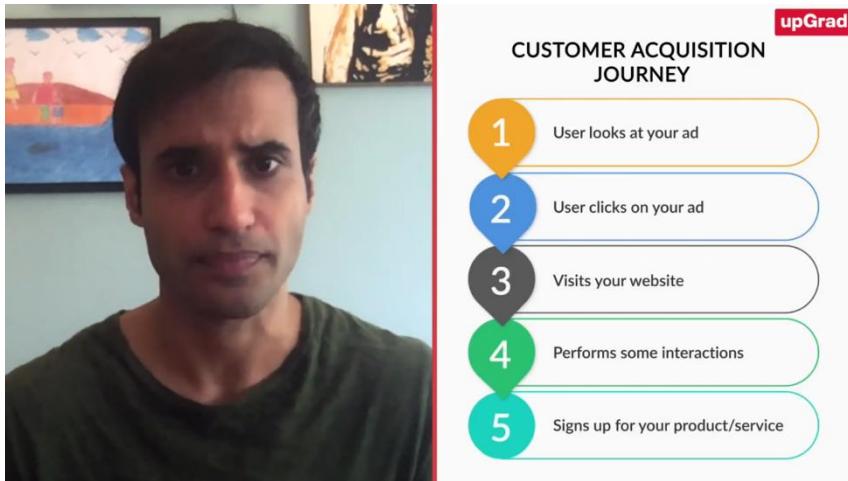
The image shows a video call interface. On the left, a man in a green t-shirt is speaking. On the right, there is a diagram titled "AARRR FRAMEWORK" with five colored circles (orange, blue, dark grey, green, and teal) each containing a letter "A" or "R" and corresponding text: "Acquisition", "Activation", "Retention", "Revenue", and "Referral". The "upGrad" logo is in the top right corner of the slide.

Now that we've learned about what constitutes good metrics, let's look at a framework for key metrics at different stages of a user journey. A very common framework is the double A triple R framework, which was proposed by Dan McLaurin. AARRR which stands for acquisition, activation, retention, revenue, and referral are different stages of a user's journey through your product.

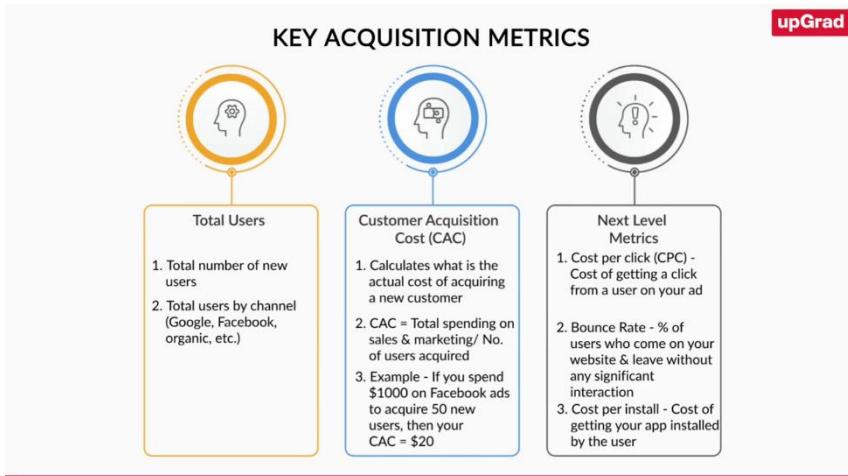
We will look at each stage, what it means and the common metrics that product managers working on that stage of the journey usually look at. In later module, we'll also look at growth strategies for each of these stages.

The image shows a video call interface. On the left, a man in a green t-shirt is speaking. On the right, there is a callout box with the text: "The acquisition stage deals with **acquiring new users**". The "upGrad" logo is in the top right corner of the slide.

As the name suggests, the acquisition stage deals with acquiring new users. At this stage, you're trying to answer questions such that how many new users has your website or app got, which channels are giving you the newest users, what is the cost of acquiring a new user.



Let's look at a very simple customer acquisition journey. User looks at your ad, user clicks on your ad, visits your website, does some interactions, and finally signs up for your product or service.



The key metrics that you'll be looking at this stage are total number of new users, total as well as by channel, let's say by Google, Facebook, organic. Customer acquisition cost or CAC as it's called. This is a very important metric which calculates what is the actual cost of acquiring a new customer. You calculate your CAC by taking your total spending on sales and marketing in a given period, and then dividing it by the number of users you've been able to acquire in that period.

So, let's say you spend a thousand dollars on Facebook ads and you acquire 50 new users who signed up to your website. Then your CAC would be thousand divided by 50, which is 20. Normally, you look at CAC by channel.

So, in this case, your CAC for Facebook was \$20. Similarly, your CAC from Google might be \$50, your organic CAC by definition will be zero, etc. And then you can do an average to calculate what is your average customer acquisition cost.

You may further breakdown this CAC metric into the next level metrics. These metrics are usually also especially important when you're working with marketing teams. So, one common metric that you'll hear about is CPC, which is cost per click.

So, for example, on ad channels like Google and Facebook, how much does it cost for you to get a click from a user on your app. Bounce rate, this is the percentage of users who come on your website and then leave without any significant interaction. A high bounce rate suggests that most of the users you're requiring either are not relevant or they're not finding the product value proposition compelling enough to actually sign up for your product or service.

For apps, a common metric that you also track is cost per install, especially for paid campaigns, right? It's like CAC, but instead of calculating for signed up users, you're calculating how much does it cost for you to get a user to install your app on their phone.

One common misconception right at the stage that I want to clarify is that acquisition is not equal to growth. If you're just spending money to acquiring more and more new users and new user signups, but they're not engaging with your product, they're not staying with your product, they're not signing up for paid revenue plans, then all those new users are meaningless and just acquisition is not equal to growth.

We will learn more about how retention and engagement have a huge levy on your growth in the subsequent sessions.



Activation is the stage of the user journey when a user has had that aha moment, that is, they do a core action or a set of actions which demonstrates that they've achieved success or have been able to get value out of the product. This is often overlooked, but it's a very important stage of your journey, that is huge downstream effects.

DIFFERENT ACTIVATION METRICS

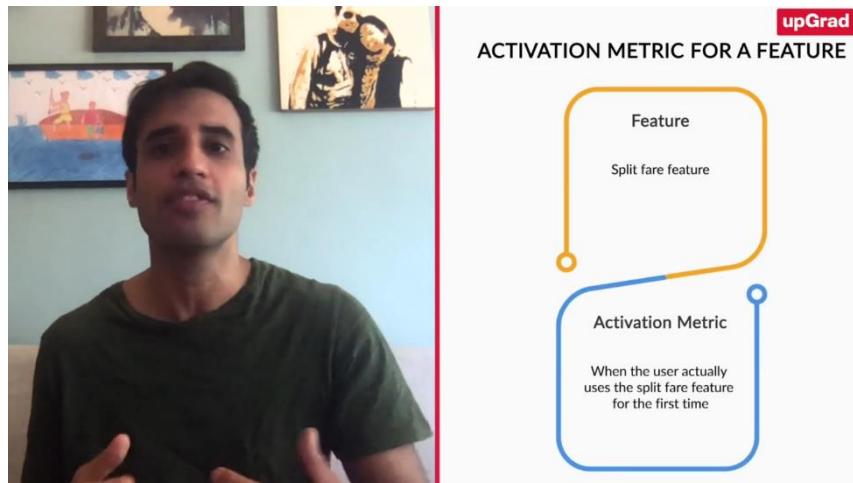
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Company	Activation Metric
Twitter	User follows 4-5 other users or sends 2 tweets
Pinterest	User creates first pin
Transaction/E-commerce Company	User makes first booking/first purchase
Uber/Ola	User takes first cab ride
Mixpanel	User tracks the first event
Salesforce	User logs the first lead

Different companies define activation metrics differently. For Twitter, activation was defined by when you follow four or five users or send two tweets. For Pinterest, it may be when you create your first pin. For a transaction or an eCommerce company, it might be when you make your first booking or your first purchase. For something like an Uber or Ola, it'll be when you take your first cab.

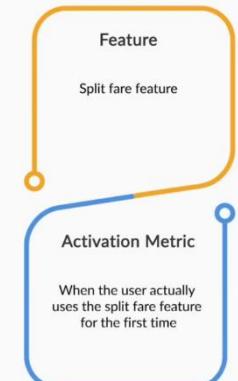
Similarly, for a SAS company, it would be when you do your first core action. Like let's say if you're a product analytics SAS company like Mixpanel, it would be when you start tracking your first event or if you're Salesforce, it will be when you know your user logs your first lead or your prospect on Salesforce.

As you can see, all of these are core actions, which when the user does, they demonstrate that, okay, they understood what the value of the product is and they've started using it in a meaningful manner. That's when the user has become valuable to the product.



ACTIVATION METRIC FOR A FEATURE

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Activation can also be specific to a feature. It doesn't have to be for the whole product. So, let's say if you're a PM at Uber and you introduce the split fare feature that we talked about earlier. Now the activation step for the split fare feature would be when someone actually uses it for the first time.

It is important that you define your activation metric properly. As an eCommerce company, if you're defining your activation metric to be when someone has viewed a product, then that user has still not experienced your core value

and you can't really consider them as an activated or valuable user. Once they make their first purchase is actually when you can say that they've been activated.



The key metric that's monitored at the activation stage is something which is called the activation rate, which is just the percentage of new users who sign up to your product, who then end up doing this core activation action.

A lot of products lose users before this first core activation, before they're able to experience their true value of the product. So, investing in a good activation experience is very crucial for products if they want to retain their users downstream. We will learn about more about activation strategies in the next module.



The next stage is R, which stands for retention. But we're going to look at retention and engagement together because they're complimentary to each other. Retention answers the key question of how many of your users are continuing to use your product after a period of time. That is, how many are being actually retained by your product over time.

Retention has become a core priority of growth teams around the world. So, retention is essentially a measure of how many of your users are still active.

EXAMPLE - RETENTION

Month	Active Users	Retention Rate
Month 1	1,000	-
Month 2	500	50%
Month 3	400	40%
Month 4	300	30%
Month 5	250	25%
Month 6	250	25%
Month 7	250	25%

Let's assume you acquired thousand users in your first month. After month one, you left with 500 active users, 400 active users after month two, 300 after month three and month four onwards, you're left with 250 active users and it stabilizes at that. So, then your month one retention is 50%, month two is 40%, month three is 30% and then your retention has levelled off at 25%.

Retention is critical because if you keep just adding or acquiring new users, but they keep dropping out, then you'll just be blowing a lot of money in adding users, but they're not actually helping you grow your business. Apart from this obvious benefit that you should lose fewer users than you're adding, retention also really affects the other key metrics or key stages as well, right? Let's look at how?

IMPACT OF RETENTION ON OTHER STAGES

- Monetisation**: Retention improves monetisation (Icon: Money bag)
- Referrals**: Retention increases referrals (Icon: Person icon with a speech bubble)
- Acquisition**: Retention improves acquisition (Icon: User icon with a speech bubble)

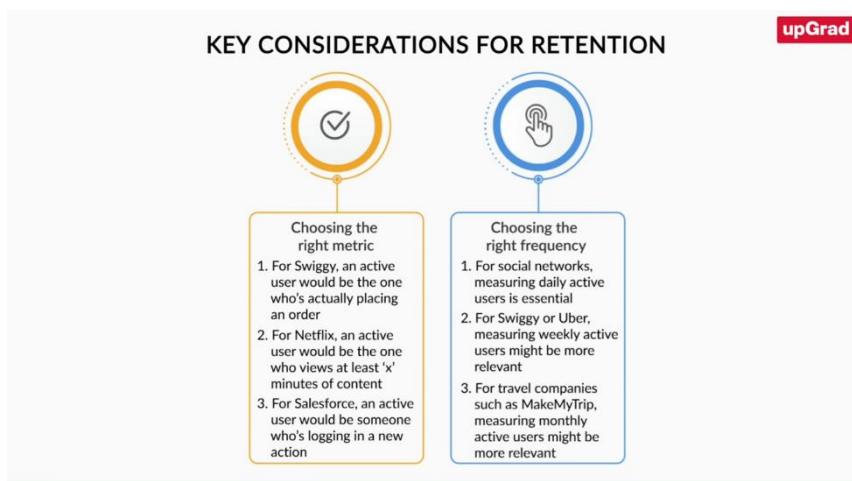
- Referral. So, the longer your users are retained with you, the longer that they continue to use your product, the higher chance that they actually spread good word of mouth about your product or actually use any formal referral scheme that you may have within your product.
- Retention also improves monetization. So, let's say if you're a freemium product like a Spotify, the longer the users are retained with you, the higher it is actually the chance that they'll subscribe to a paid plan of your product or you know, they can upgrade to a higher paid plan of your product. So, the longer the users stay with you, the more chances you have of making money of your users.

- C. Retention actually also improves acquisition. So, if you're making more money off the same user, that means you have more money to spend now on acquiring new users, right? So, you can really outspend your competition in acquiring new users if you're able to retain your users and make more money off of them.

There is a term called churn rate, which you'll hear often, which is just the opposite of retention. Churn rate is especially used a lot by subscription businesses like SAS products or other, you know, like Netflix, Spotify, etc.



So, let's say your month one retention is 75%, then your churn rate is just the opposite, with just 25%. So, it means that 25% of your users drop out after month one. This is a key metric that SAS businesses and subscription businesses really look at and really work hard to keep low because it has a massive impact on their revenue and their business.



Now, some key things to look at while looking at retention are:

- Firstly, choose the right metric. When you say active users, when you say X percentage of your users are still active, what do you actually mean by active users?

For example, for Swiggy, you would count someone who's actually placing an order as an active user, and not just someone who's just opening an app, right, because they're not really valuable to the product. Similarly, in case of Netflix, an active user would be someone who views at least some defined minutes of content. For a

SAS company like Salesforce, an active user would be someone who's logging in a new action on Salesforce, right?

So, defining this right core action, which determines whether your user is active or not is critical because otherwise you may just be choosing vanity metrics. You may be saying that, oh, 90% of my users are still active, but they're just opening your app or browsing and actually not doing that core action that from which you as a product get value out of them.

- Choosing the right frequency for your product while looking at retention is critical. Should you look at daily active users, weekly active users, monthly or longer? Now for some companies like ad supporter social networks like Facebook or Twitter, etc., measuring daily active users is essential, right, because that directly has an implication on how much ad money that they're able to make.

Now for something like a Swiggy or an Uber, weekly might be more relevant, because you may not be taking a cab or you may not be ordering food every day. For travel companies like MakeMyTrip, you know, monthly might be more relevant because you may only be making booking once a month.

For more episodic companies like Airbnb, you know, even looking at six months retention, that how many, what percentage of users come back and make a booking within a six-month period might be more relevant, much more relevant than looking at daily, monthly, weekly, etc.

So, essentially if you're at Uber, you are measuring what percentage of users that signed up are still making a booking one week, two-week, three-weeks from signing up. If you're at Facebook, you're looking at what percentage of users who signed up are coming back as daily active users on day one, day two, day three, day four and so on. And that's how the right retention metric gets calculated.

Retention by itself does not give you a complete picture of the health or the growth of the product. You can think of retention measuring as the breadth of how many users are still active, but it's engagement, which measures their depth of usage of your product by its users.

RETENTION ANALYSIS		
Parameters	Company A	Company B
Active Users	1 million	1 million
Orders per User	3 cabs/week	1 cab/week
Revenue	3X	X

Note: Assuming acquisition & retention rate for both companies are same

Let's take an example. Let's say there are two cab companies, company A and company B. Both companies acquired the same number of users and also have the same retention rate. So, let's say they both have 1 million active users.

However, company A users order three cabs a week, but company B users only order one cab a week. Now with the same acquisition and the same retention rate, company A is actually making three X more money because the users of company A are three X more engaged or are using the product three X the amount of time than company B.

So, it's engagement that measures the depth of usage of the product by the products users. So, engagement metrics that measure this depth of usage completely depend on the product.

The image shows a video call interface. On the left, a man with dark hair and a beard, wearing a green t-shirt, is speaking. On the right, there is a list titled "DIFFERENT ENGAGEMENT METRICS" with the following items:

- 03 Airbnb
- 04 Salesforce
- 05 Mixpanel
- 06 Google Sheets
 - a. Number of new spreadsheets created/modified per user per week

So, let's take a few examples. Now for Netflix, engagement may be defined as the number of minutes of programming which are being viewed per week, per month. For Facebook, it would probably be time spent per day on the Facebook family of apps or the number of user sessions per day, right?

For Airbnb, it'll probably be purchase frequency that the number of bookings made per year per user. For SAS companies like Salesforce, it would be the number of leads per week or number of prospects per week logged by its users.

For Mixpanel, it could be the number of tracking events being sent per customer. For something like Google sheets, it may just be the number of new spreadsheets created or modified per user per week. It totally depends on your product on what the key engagement metric is that you should be monitoring.

Retention and engagement go hand in hand to determine the health of your business. Many businesses when they think of growth, as we said, they only think of acquisition, but that's a big mistake.

If you're acquiring new users, but you're not retaining them or they're not engaged with your product, you're doomed to fail. This is why retention and engagement are so core to any growth strategies for your business. What are some of the strategies we can use to increase retention or engagement, we will look at it in later module.

A video call interface featuring a man in a green t-shirt speaking. To his right is a slide titled 'COMMON REVENUE METRICS' with a yellow speech bubble containing the number '1' and the text 'Average Revenue per User (ARPU)'. The slide has a red border.

So, under revenue, we'll look at a common monetization metrics for your users, and just measuring how much money are you actually making from your users?

Apart from total revenue, which is like an obvious metric, a common metric that companies look at is average revenue per user or RPU. You'll hear this term a lot, which is basically, as the name suggests, what is the average revenue you're making per user over a given period of time.

A video call interface featuring a man in a green t-shirt speaking. To his right is a slide titled 'ARPU FOR NETFLIX' with a table showing monthly plans and user distribution, and a formula for calculating ARPU. The slide has a red border.

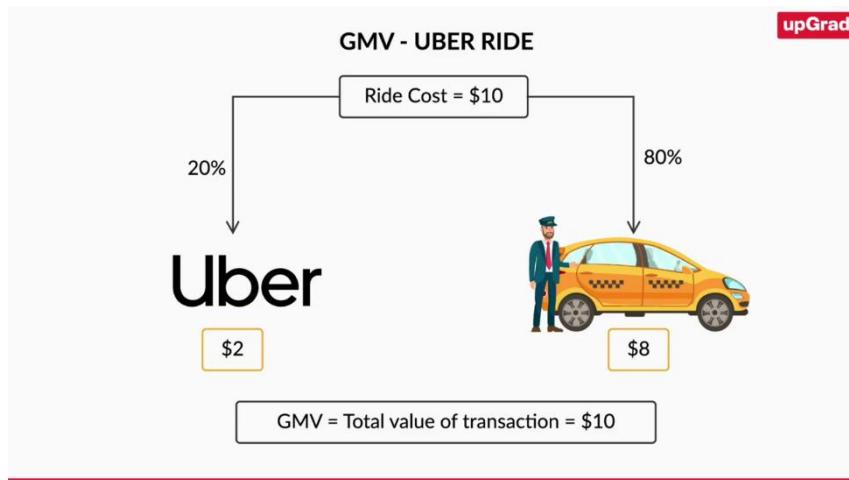
Monthly Plans	% Users
\$5	50%
\$10	50%

$$\text{ARPU} = (\$5 * 0.5 + \$10 * 0.5) = \$7.50 \text{ per month per user}$$

Let's take an example of Netflix again. Assuming they have two plans, \$5 and a \$10 month plans. And let's assume for simplicity that 50% of their users are on one plan and 50% of the users are on the other plan. So, their average revenue per user would be seven and a half dollars per month per user.

Similarly, B2B products like SAS companies, other B2B products, would track average revenue per customer or company account and try to increase it by upselling them to a higher plan.

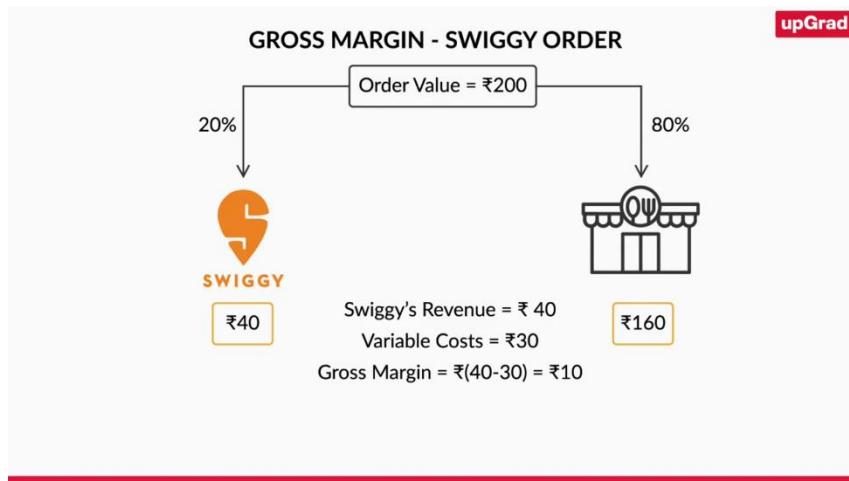
A common metric related to revenue that you would hear, especially eCommerce companies use is GMV, which is the gross merchandise value. It's basically just the total amount of the transactions that are happening through the eCommerce platform. But it's important to note it's different from revenue.



Let's take an example of Uber again. Let's say you've taken a ride which costs you \$10. Now Uber, given their business model would keep 20% of that to themselves and 80% of that would go to the drivers. So, Uber's revenue from this ride is actually just \$2, but the GMV of this is \$10, because the total amount of the transaction was \$10.

GMV could be a vanity metric because it does not reflect the true value, the transaction is adding to the business, which is why you would see nowadays, like a lot less companies talk about GMV than you know, in the funding heydays of 2015-16, when everyone was just out in GMV. If you want to look at the health of the business, revenue is the right metric that you need to maximize and not GMV.

Another common metric that is used is gross margin or gross profit. This is revenue minus all the variable costs that are needed to service the customer. What does variable cost mean? Variable cost means that costs which is specific to service that particular order or particular transaction.

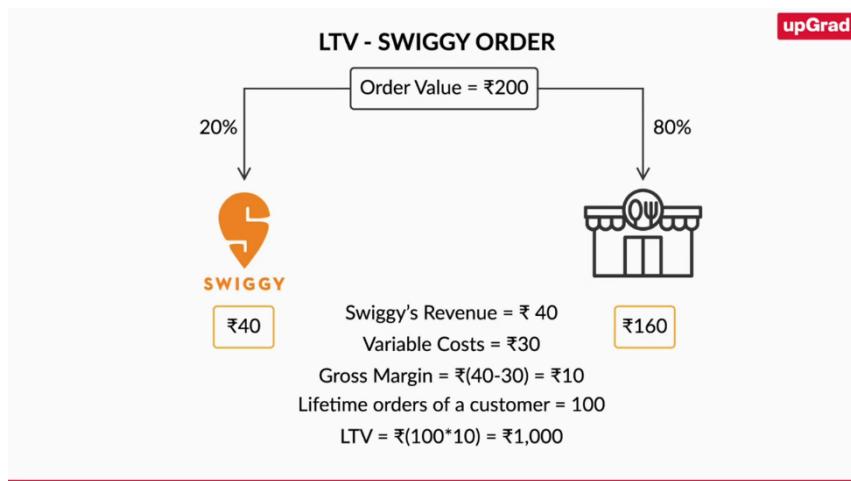


Let's look at an example, let's say at Swiggy you order food, for 200 rupees. Swiggy, let's say keeps 40 rupees and the rest goes to their restaurant partner. So, Swiggy's revenue from this transaction is 40 rupees.

Now, if you take variable costs, which are the costs to Swiggy to actually service just that particular order, you have delivery fee, you have payment gateway fees, you may have customer support fee that they have to do per order. And let's say all of this was 30.

So, the gross margin on this order for Swiggy was 40 minus 30, which is 10 rupees. Not every business also has fixed costs like rent, salaries, etc. That is not part of your gross margin, right. Here, you're only looking at variable costs, which are specific to service a particular order or a transaction.

Another key metric that you'll hear about is LTV, which is the lifetime value, that is how much money do you expect to make of a user over the lifetime that they use your product. Now, when you say how much money, usually LTV refers to how much gross margin or gross profit that we talked about, that you expect to make of a user in the lifetime.



So, let's say as a Swiggy customer, you expect the customer to make a hundred orders in their lifetime that they use Swiggy. So, the lifetime value of this customer would be a 100 into 10 rupees, which was the gross margin that we calculated, which is thousand rupees.

Now often it is difficult to know the lifetime that the user will stay with you. Now as Swiggy, how do you know if the user's going to stay with you for four years, five years. So, you usually take a reasonable period of time.

Let's say you assume two years and you can think how many orders, not think actually you will have data on the average number of orders per week, per month. So, you calculate how many orders do you expect a user to do in two years, multiply it by the gross margin per order and that's the lifetime value of that customer to you.



Now, in places, revenue and gross margin is used interchangeably while calculating lifetime value. I think gross margin is a much better representation because it really reflects the true value that the customer is bringing into the business in terms of profit. So, I would say stick to gross margin and calculating LTV.

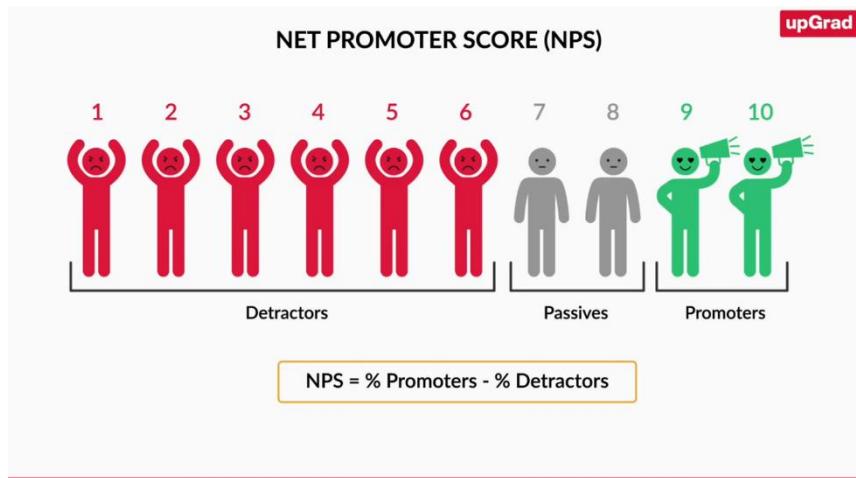


Another metric that is looked at, at the revenue stage, especially for freemium products is the conversion rate from free to paid users. Like Spotify, Hotstar or SAS products which have a fee plan, this is a very important rate or a very important metric that they monitor, and try to increase to improve their revenue.

Another revenue metric common with, you'll hear with, you know, especially B2B, SAS subscription companies is monthly recurring revenue. It's basically just the monthly subscription revenue, which is guaranteed as because users have signed with their subscription, those subscription plans already.

So, let's say if you have 10 users and they've signed up to a \$10 a month plan, your monthly recurring revenue is a hundred dollars, because those users are already subscribed.

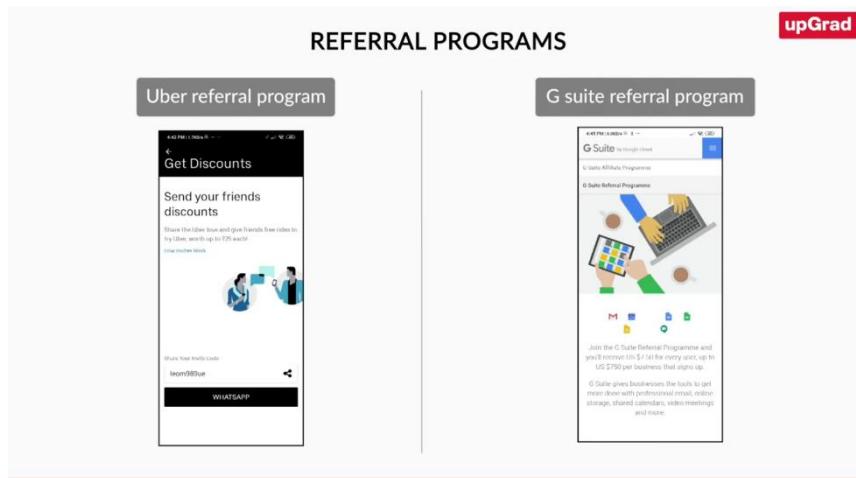
Last stage is referral. This is the stage where you're asking questions like how can you turn your current users into promoters such that they can help you in getting more new users. Now, one of the best ways to drive growth is actually through search referrals. Now, key leading indicator of referrals is customer satisfaction. And companies usually measure it, using either a CSAT score or an NPS, which is like a net promoter score.



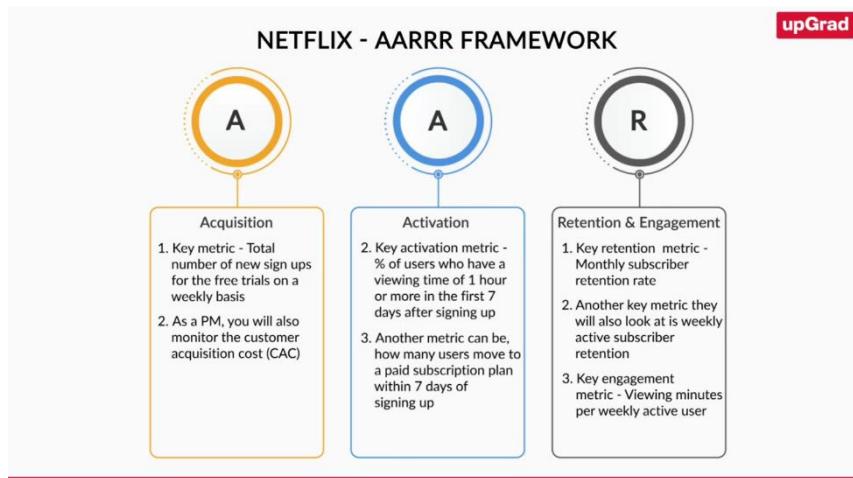
In the NPS, you ask your customers on a scale of 1 to 10 on how likely are they to recommend your product to a friend or a colleague. People who answer 9 or 10 are called promoters. They're going to actively go and promote your product. People who answer seven or eight are passives that you know, they're neither here nor there. They're indifferent. And people who answer zero to six are called detractors, that they're going to actually actively discourage other people from using your product.

Now, the NPS is basically just percentage promoters minus percentage of detractors. A positive NPS score indicates that a net level, your product will be promoted by your users. Average NPS varies a lot by industry, but in general, an NPS greater than 30 is considered a very, very good score for a product.

Now, a lot of products have inbuilt virality. You know, like a Twitter or Facebook where you share things with your friends on different networks and thereby you attract more users. Other products build specific referral programs.



For example, Uber has a referral program where you, if you refer a friend once they take their first ride, both you and your friend end up getting some credits. Or in B2B businesses, they have referral programs where if you refer a new company, both you and the new company get, let's say one month free of the subscription.



Let's look at another example of, you know, metrics for a product using the AARRR framework. Let's take Netflix. Let's assume Netflix offers a one-month free trial to new subscribers and then you have to sign up to one of their subscription plans to continue using the product. Let's look at some of the key metrics for Netflix.

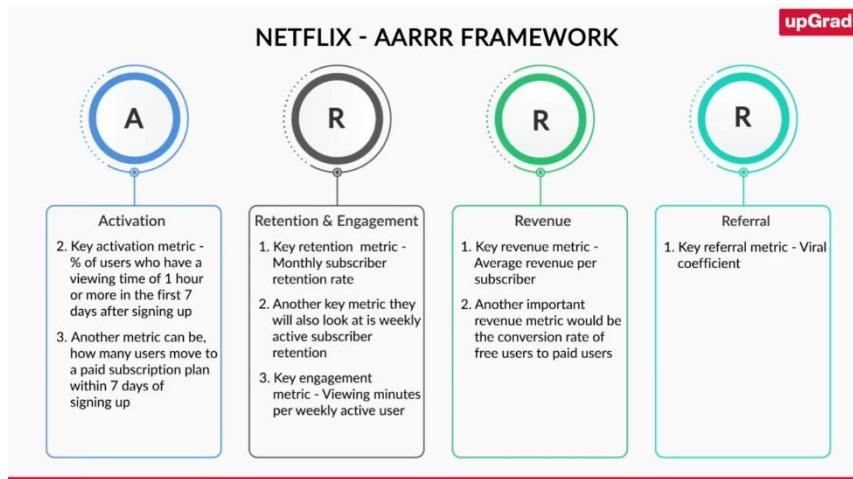
- I. Acquisition. So, the key metric for acquisition stage for Netflix would be the total number of new signups for the free trials, let's say on a weekly basis. This would be a leading indicator of how many paid users they can expect later. So, as a PM at Netflix, you will also monitor your customer acquisition cost, that is cost of acquiring new user by the different marketing or promotion channels that you're using at Netflix.
- II. Activation. Activation tracks the new user cohort, and whether they do the core action of your product after signing up. So, based on data, Netflix can define what is, you know, that core action. So, let's say what is a critical watch time that the user, when they're able to do, then they're likely to stick around as a valuable user for the product.

Now let's assume Netflix has calculated this as one hour within the first one week. So, as a PM looking at activation at Netflix, you will be then monitoring the activation rate, which is the percentage of users who actually have a viewing time of one hour or more in the first seven days after signing up. Since subscription is also core action, another activation metric Netflix can measure is the percentage of users who move on to a paid subscription plan within seven days of signing up.

- III. Let's now look at retention and engagement. For retention, a key metric for Netflix to track would be the monthly subscriber retention rate because that's, you know, directly what the revenue is. However, that would just be an output of users, you know, engaged users using Netflix. So, key metric that they would also look at for retention is just weekly active subscriber retention, to track what percentage of the users still stay active on a weekly basis. Right? Because that's going to be a leading indicator.

If your users are, the percentage of users that are staying engaged on a weekly basis is going down, it's highly likely that they'll unsubscribe in the near future. You can also look at show wise retention as Netflix. That what percentage of users, who start a program go past episode one, episode two, episode three, etc. This can help you measure the efficacy of the new shows that you're producing for your audience.

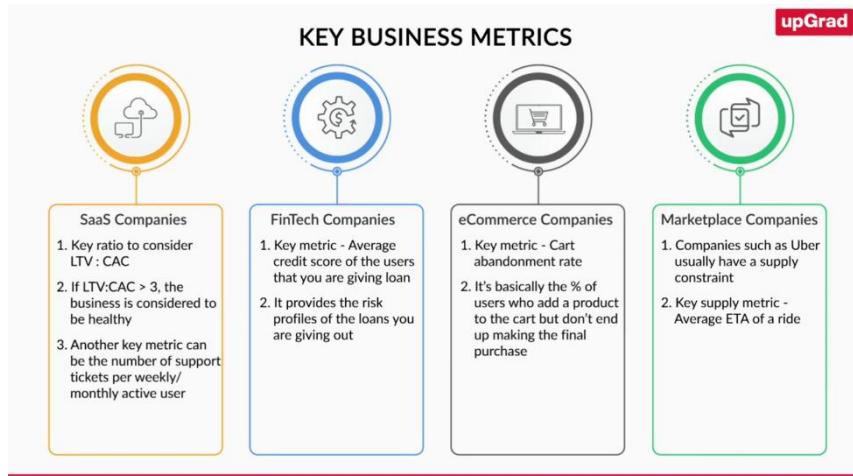
For engagement, that is to measure the depth of usage of Netflix product, as a media company, just the viewing time is, you know, the best metric. So, the key engagement metric Netflix would be measuring is the viewing hours or the viewing minutes per weekly active user. If it goes up, it means that users are being more engaged, they're watching more programming and hence, you know, they're deriving more value out of the product



- IV. Revenue. So, for revenue, the key metric at Netflix would again be, A, average revenue per subscriber. So, Netflix in its interest would want more and more subscribers to sign up for the higher paid plan. So, an average revenue is a good indicator of, if more users are signing up for the higher paid plan.

Another metric of course, you know, since they have the first free month would be the conversion rate of free users to paid users within that one-month free trial period. Right. And that'd be a key metric that Netflix would want to improve to increase its revenue.

- V. And finally, the referral. If Netflix has a formal referral program in the viral coefficient or the key factor that we talked about, it is the key metric that Netflix would want to track, to judge the effectiveness or efficacy of the referral programs that they have.



Now we've talked about a lot of common metrics that are used by PMs for different stages of a user journey. There might be other metrics that you focus on which are specific to the business or the specific goals or objectives of your product or your team.

1. Let's look at a few examples. For SAS companies, CAC or customer acquisition costs that we talked about is a large cost that they look to optimize. So, key ratio that they look at to judge the health of the business is the ratio of the LTV, which is the lifetime value to CAC, the customer acquisition cost.

In general, if as a thumb rule, if the ratio of LTV to CAC is more than three to one, it is considered healthy such that the business can support the other costs of running the business after paying off the customer acquisition cost.

A lower ratio than three to one for LTV to CAC usually indicates that your CAC is too high and the growth might be unsustainable because you're just spending too much money on acquiring your customers. This is a very common metric that you'll see all SAS businesses are keeping tabs on.

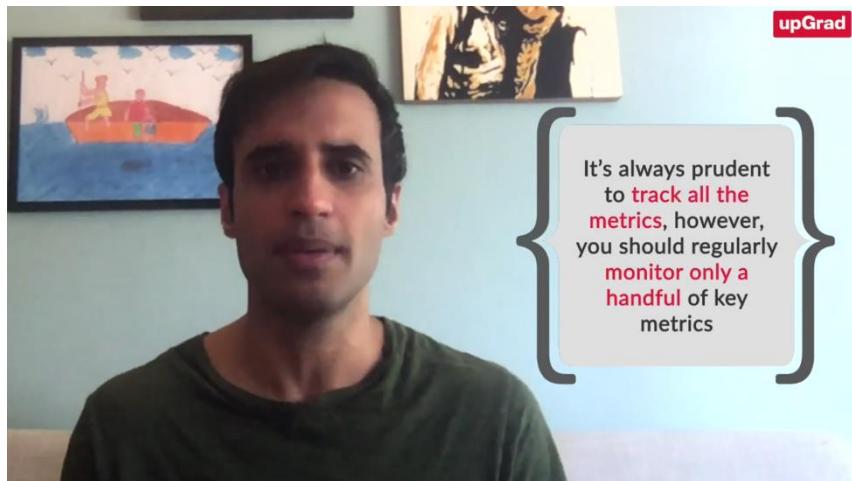
Another key metric in SAS businesses could be the number of support tickets that you're getting per, you know, weekly or monthly active user depending on your product. This is a way for you to measure, a leading indicator for you to measure the customer satisfaction or how easy are customers finding, you know, using your product. Customer service teams, for example, would monitor the average turnaround time or TAT on a customer support query to measure the effectiveness of the customer support that they're providing.

2. Let's take an example of a consumer FinTech start-up. So, as a PM of a consumer FinTech start-up, you may be monitoring the average credit score of the users that you're giving out a loan to because that's a key metric that would give you an indication of the risk profile of the loans that you're giving out to.
3. For an eCommerce company, something called the cart abandonment rate is a very key metric that, you know, they regularly monitor. It's basically just the percentage of users who once adding a product to cart, do not end up actually making the final purchase. So, that's the checkout part of the experience is something eCommerce companies spend a lot of time optimizing, such that to reduce this cart abandonment rate.
4. For a marketplace, you know, let's say like an Uber which connects users with available cabs and drivers, marketplaces sometimes are supply constraint like Uber. You have a lot of demand, but Uber's growth right now is constrained by the number of cars on the road. So, supply metrics, like what is the average ETA of a ride shown to the user would be a very key metric that, you know, a PM at Uber would be monitoring to measure the health of the supply.

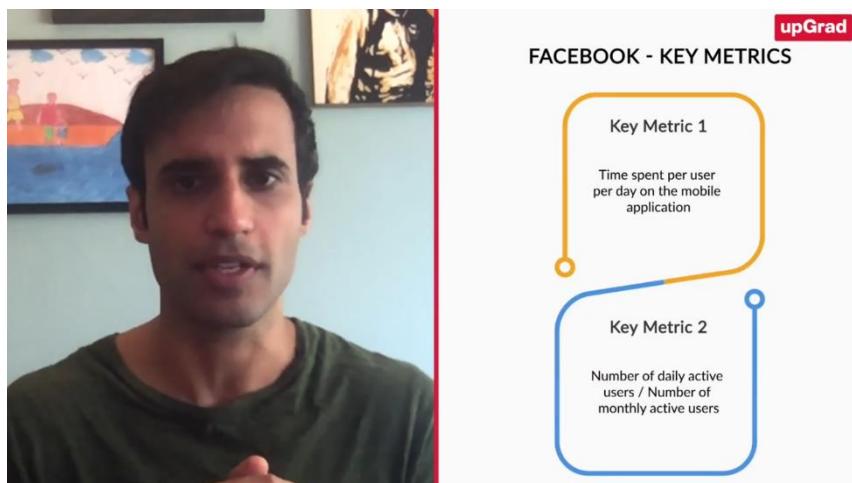
So, let's say if in Bombay, the average ETA used to be five minutes, but now when a user is looking at a cab, the average ETA has gone up to for 10 or 15 minutes, that means there's not enough supply to meet this demand, and that could lead to users actually dropping out because of the ETAs are too high.

So, all of these metrics that we've looked at are very specific to the business or the product that you're working on, right. Depending on your specific goals, you may have focus metrics that you will monitor regularly, which helps you judge the health of your business or the product that you're managing.

One of the key things for PM's to decide is which metrics they should focus on. This is where it's important to understand the difference between tracking and monitoring. As a general principle, you would want to track almost all events and metrics that you can, even if you feel you do not need them right now. The reason being that later on you may want an analysis which requires that data to be there.

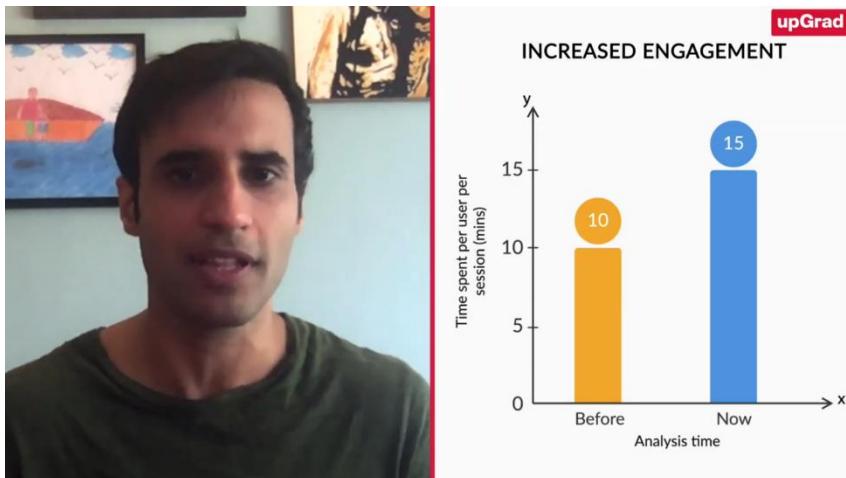


So, it's always prudent to track all that you can to measure the performance of your product. However, you will regularly monitor only a handful of key metrics, that allow you to make key product decisions.

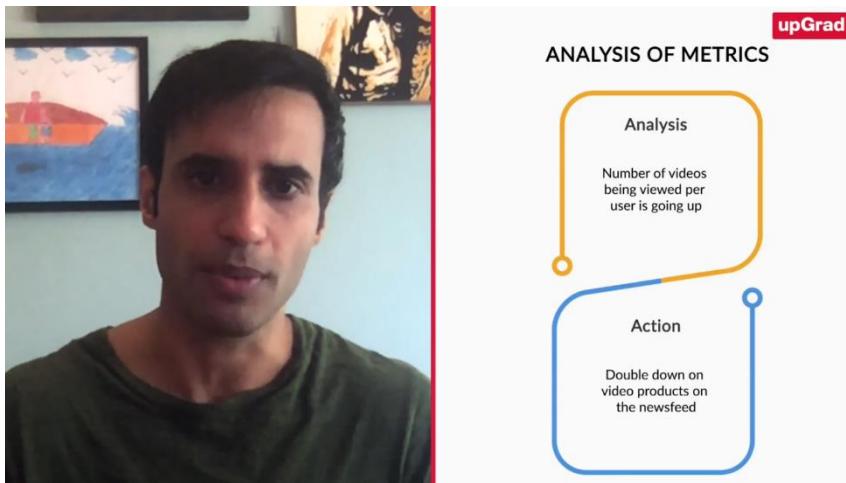


For example, let's say you're a social media like Facebook and you're the PM responsible for engagement at Facebook. Now, a couple of key metrics that you'd be monitoring would be time spent per day per user on the app, or the number of daily active users divided by monthly active users, which kind of is a reflection of how sticky your app is or how regularly it's used.

These metrics would allow you to make core product decisions as they reflect the health of engagement of your product. And if you want to increase your engagement, you are likely to improve one of these two, three metrics.



But let's say one day you want to dig deeper to understand what is actually driving engagement on the app, what are the users doing? How are they spending their time? Let's say the time spent per user per session is actually going up. You know it used to be 10 minutes, now it's 15 minutes and you want to know what is actually driving that.



Now for this particular analysis, let's say you look at, you know, the average number of posts being viewed, photos being viewed, videos being viewed per user, and you find out that actually the number of videos being viewed per user on average is what is going up and what is actually driving the increased engagement and Facebook. So, as a PM, you can then decide to double down on video products on the newsfeed of Facebook since they seem to be the ones that are really improving engagement.

Now you were only able to do this analysis because you had this data. You were tracking this data of number of photos viewed, the number of videos viewed on average per user, even though these may not have been the focus metrics that you are monitoring regularly.

MECE PRINCIPLE

- M Mutually Exclusive
- E Collectively Exhaustive
- E

While tracking different data points, events or metrics, we follow a simple principle which is called MECE, which is mutually exclusive, but collectively exhaustive. What this means is that we track everything that covers the performance of your product, but we make sure that each event or metric being tracked is mutually exclusive, that is, there is no redundancy between two metrics that are measuring the same thing.

For example, if you're measuring page views, then there should be one event called page view that you're tracking. If you have two events called page view and page opened, that means you're not following the MECE principle. Similarly, if you're tracking photos viewed for each user, then there should be only one metric measuring them that everyone can use for their analysis.

DEPENDENCE OF METRICS ON BUSINESS GOALS

- PM - Overall Engagement
 - Time spent per user per day on the mobile application
 - Number of daily active users / Number of monthly active users
- PM - Video Products
 - Average number of videos viewed
 - Average video view time per user

Now, which metric to monitor regularly really depends on the product and your business schools. Now in the above example, if you were a PM at Facebook responsible for overall engagement, you would monitor the metrics that we talked about.

But let's say if you were working just on the video products of Facebook, then the key metric that you would monitor regularly is probably the average number of videos viewed or you know, the average video view time per user to measure engagement specifically for the video product because that's the product that you're responsible for.

While choosing which metrics to monitor, it's important to remember that what you monitor regularly is what your team will focus on to improve and that's where they'll dedicate their efforts and attention.

The image shows a video call interface. On the left, a man with dark hair and a beard, wearing a green t-shirt, is speaking. He has his hands clasped in front of him. On the right, there is a sidebar with a red header that says "upGrad". Below the header, the title "CHOOSING METRICS TO MONITOR" is displayed. There are three numbered items in boxes:

- 01 Role - PM of homepage at an eCommerce company
- 02 Goal - Improve the conversion from the homepage
- 03 Key metric to monitor - % users who click on one of the products showcased on homepage

So, let's say now you are a PM of a homepage of an eCommerce company like a Flipkart or Amazon, right? And let's say your major goal is to improve the conversion from the homepage. Now conversion can be measured by percentage of users who actually click on one of the showcased products, from the ones that are being shown on the homepage.

Now, if this percentage is the metric that you're monitoring regularly, your team will dedicate efforts to improve it. You know, change the products being recommended, change layout, etc., all efforts to kind of improve this conversion rate from the homepage.

However, imagine that instead of this, you were actually regularly monitoring only the number of page views on the homepage, right? You may want to track this metric for an analysis later, but this metric is not aligned to your overall goal of improving conversion.

So, that's the metric that you're monitoring. You know, the team will also just focus on, okay, how can we get more and more page views. And the conversion rate would just be ignored and that would be contrary to what your goals of your business and your teamwork.

The image shows a video call interface. On the left, the same man in the green t-shirt is speaking. On the right, there is a callout box with a black border and a light gray background. Inside the box, the text reads: "Product analytics helps to understand what are the improvement opportunities & then measure the success of that improvement".

Well, by now you would have started to get a hang of how analytics is the key to driving growth decisions in your organization. The key metrics that you choose to focus on will be the ones that you and your team will align on improving. Product analytics enables you to understand what is affecting those key metrics, what opportunities you have to make an improvement and then measure the success of that improvement.



Let's build on a previous example. Let's assume you're the PM for monetization in Facebook. So, one of your key metrics will be the ARPU or the average revenue per user and this is what you will want to increase.

Now at Facebook, engagement is directly correlated to revenue. Higher the engagement means more time spent per user, means more ad slots, means more revenue. Now as in the previous example, let's say you use data to figure out that more video views are what is driving engagement.

Now as a PM for monetization, you can then choose to build more video ad products, if that is where the users are spending more time. You can release those video ad products then to your advertisers also at a higher price since video ads usually garner a higher price than just a visual ad.

Post-launch, then you will again measure engagement to make sure that the video ad slots are not reducing the engagement that was being driven up. And also, you measure ARPU again to see whether these new video ad slots have actually increased this key metric.



Now this is obviously a very simple example, but it really shows how analytics drives, you know, growth by helping you build your strategy in which this case was the video ad product. And also, then measure the performance of this product that you've just released to your users.

In the next segment, we look at how different focus metrics change depending on the different stage or the life cycle of your product.



You learnt about identifying key metrics for very high-level objectives like conversion, customer journey, and so on. While that is very important high-level perspective, in practice, fresh product manager will be looking at one small part of the entire customer journey and not the entire customer journey itself. Let me explain.

A screenshot of the Flipkart platform homepage. At the top, there's a navigation bar with links for Electronics, TVs & Appliances, Men, Women, Baby & Kids, Home & Furniture, Sports, Books & More, and Offer Zone. A search bar is located at the top center. On the left, there's a banner for "SALE is LIVE" from 29th Sept - 4th Oct, featuring a 10% instant discount. The main content area shows several product offers: an Asus Vivobook laptop, a Philips hair trimmer, a Nokia 6.1 Plus smartphone, and an Ambrane power bank. The upGrad logo is visible in the top right corner of the page.

So, if you think of Flipkart as a platform, think of Flipkart being comprised of multiple components. So, on the platform you have search, you have merchandising, you have a product page, you have reviews, you have the checkout, and each of these can be considered a separate product component.

OBJECTIVES OF THE COMPONENT

01 What are the key metrics?

- Revenue
- Conversion
- Engagement

02 What are the key business objectives?

- Display useful reviews to the users
- Quicksort products for the users
- Increase user engagement

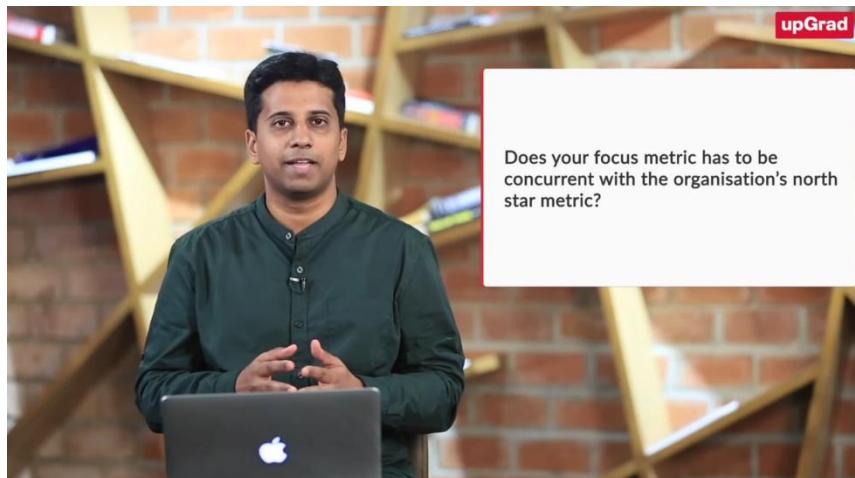
As a product manager, you will be looking at one component or maybe two, but you will have a limited scope. Then the question is for your components or for your own component, what are the key metrics and what are the key business objectives. So, to decide on your metrics, we have to ask the more important question, what are the objectives of your component?

Like I mentioned earlier, your component may not be worried about conversion so much. Maybe your component cares about showing people the right kind of reviews or maybe your component cares about helping people find the right product pecker. If you're dealing with games, maybe your component cares about engaging people more.

So, the key idea is that conversion or revenue is not always your main metric. Depending on the objective at hand, your metrics will change a lot. And the kind of metrics you can have, you could have a revenue focus metric or a conversion focus metric or like I mentioned, you could have something on engagement or you could have any other metric, maybe people finding something helpful, maybe people let's say teaching things faster and so on. The metrics depend on the objective, and these can vary a lot depending on the component you're dealing.

ZOMATO USER JOURNEY

So, these could be metrics which are not at the end or the beginning of the funnel, but also metrics which are, say some intermediate, helpful step with just nudge the customer in the right direction.



So, one important question here is, does your focus metric have to go hand in hand with the organization level North Star Metric. As an example, the organization is focusing on conversion as a North star metric, and you as a product manager are owning the reviews module.

Essentially, you're showing different reviews to customers with the hope that you show them the best reviews, the most honest reviews or the most fair reviews to help them take decisions about the products.

Now in this case, do you think this necessarily agrees with conversion? Because you may have products which are not that great and you may want to show the right truthful picture to the customer. And in that case, does it really align with conversion.

So, the answer is no. Your metrics may not always agree with the North Star metrics, but there is a compromise, we understand that. But to some extent at the same time because you're running a business, you cannot be anti-conversion or you can't go against North star metrics as well.

Somewhere, there has to be a compromise between the North star metric and your metric, and maybe some other metrics you are measuring along with this metric. So, we understand that not all metrics are around conversion and so on. And we can have very specific component written metrics.

But the question remains, how do you decide what metrics and how do you prioritize those metrics? Well, one way to look at it is that it is heavily situation dependent. What do you mean by that? Well, think of three different situations.

PRODUCT STAGES

- 01 Pre-launch
 - What will you track?
- 02 Post successful launch
 - What could the objectives be?
 - How do you measure the benefits and adoption of the new feature?
- 03 Steady state
 - How do you measure the performance of the overall component?

Let's say you are launching a product feature. It's a new feature on your existing product. And in this situation, what will you track? Your considerations in this case will probably be different from what happens in some other situation in which you are in a steady state and the product has say matured.

Situation two could be right after a successful launch. Now in this situation, what could be our objectives? How do you measure, what are the benefits coming from this and what is the adoption of this new feature? And in the situation three where the feature has been there for a while, it has now matured. In a steady state, how do you measure the performance of this new feature and how it helps your overall comfort?

So, depending on the situation, what you care about and how you prioritize the metrics changes a lot. And let's take a more detailed example to discuss this further.

FEATURE: UPLOADING IMAGES TO REVIEW

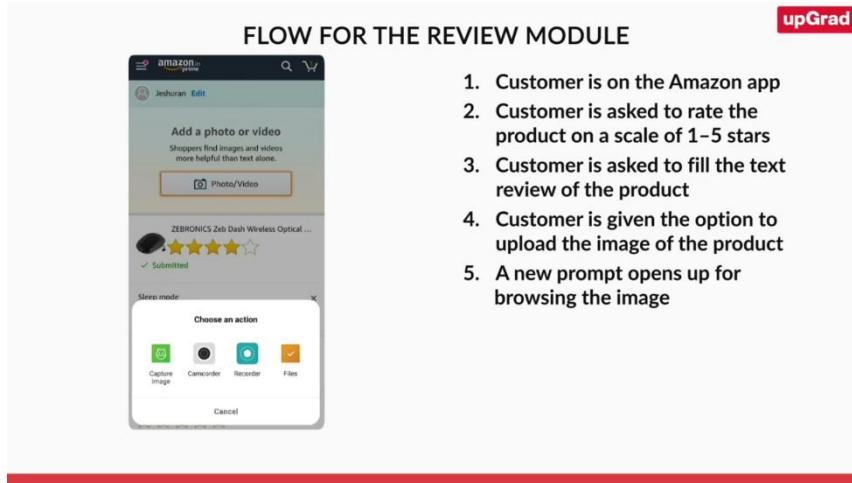
Add a photo or video
Shoppers find images and videos more helpful than text alone.

Photo/Video

So, let's understand these different situations and the considerations a little better by taking an example where you will put yourself in the shoes of a product manager at Amazon who is looking at the review's module, and you're about to launch a new feature.

And in this feature, you will allow people to upload images in their reviews as well. So, there is an existing flow of for the reviews, but you are adding some steps in between where the customer can upload images of the product and you believe that this will be more helpful for other customers.

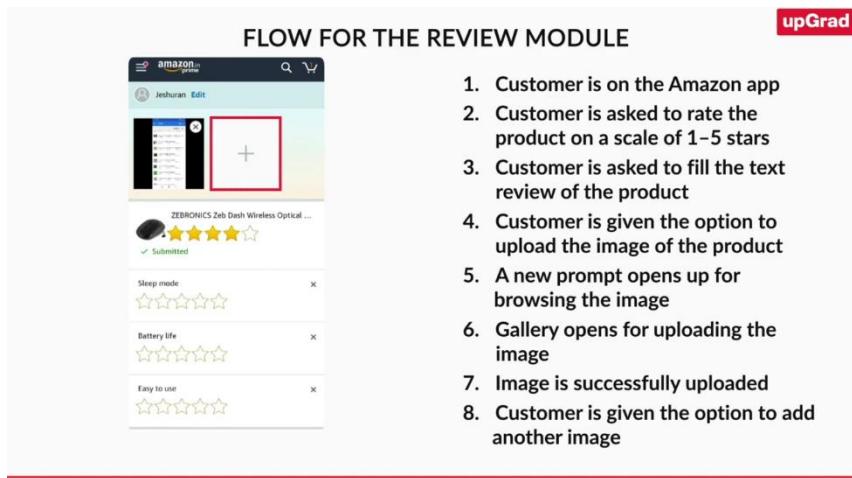
So, let's first look at what kind of flow we have to just understand the different steps and maybe that'll give us a better idea of what to track what or what not to track.



So, here's one of the multiple flows a customer can come on to the review's module via multiple channels. But let's look at one flow here where the customer is already on the Amazon app and customers is in his order section.

And the first step, the reviews module does is that it shows the customer a small section asking the customer to review that particular purchase. So, this is the first step where you see a product and you see five empty stars below and asking you and prompting you to give a star rating.

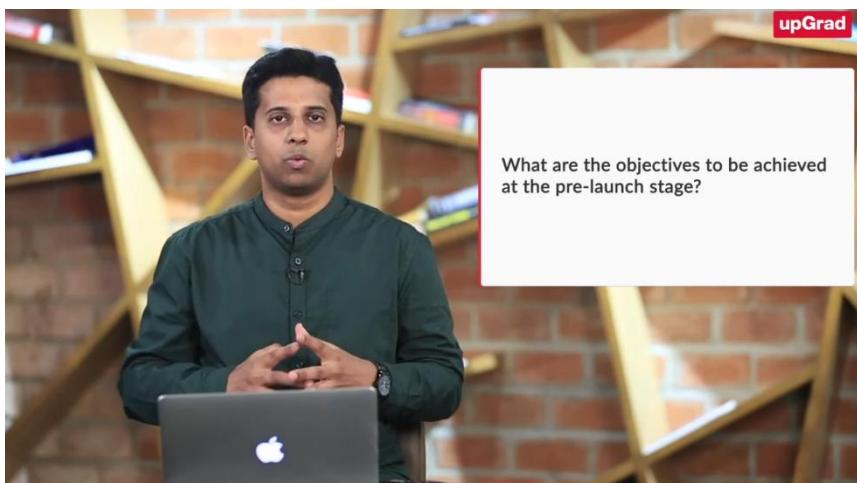
Once the customer gives a star rating, you move on to the next step in the flow, where your star rating is registered and it asks you a few questions maybe about the product. And there is a step where it asks you to write your text review for the same. So far this is the usual flow.



What you've added here is an option allowing the customer to add a photo or a video. And there is this small section where there is a clickable button. So, this is where your new feature starts. The first action the customer can take here is click on the photo slash video button, right, which has this text.

Once the customer clicks on this, after this action, there's a new prompt. This new prompt helps you choose the source of the file or the image or the recording. Now, once you choose this, you go to your, say gallery, you add an image, and after that the customer initiates the upload. There will be a small section which shows the customer that it is actually loading the image.

When the image is successfully loaded, the appearance will change and it gives an indication that you know what your image is successfully uploaded, and the customer also has option to add another image and so on. After all of this, once the customer clicks on the submit button, you get a final thank you page confirming that the review has been submitted. These are the steps now in the review flow.



Now, let's think of the different situations we talked of earlier and let's look at the flow, and identify what's important for us at each step in each situation. So, yes, the first situation, the prelaunch time, which of the several actions in the flow, would you want to track.

So, before that, the question is what are your objectives? What do you really want to do at this stage? Well, the first priority here could be just ensuring that the flow is working and the experience is not breaking, that the user does not face a lot of issues while interacting with this flow.

PRODUCT ANALYTICS OBJECTIVES AT DIFFERENT STAGES

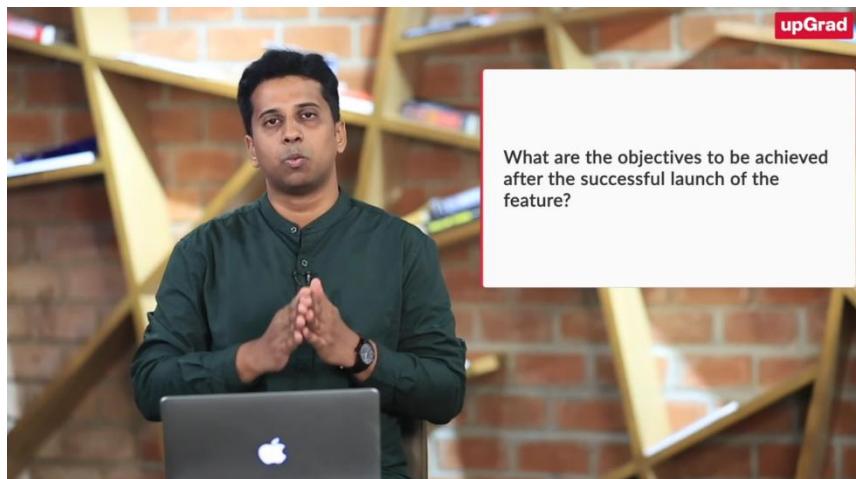
Pre-launch stage

1. Ensure that the user platform is working smoothly
2. Track the different actions of the users
 - Users uploading the images for review
3. Check whether the flow is working correctly
 - Errors in uploading images
 - Errors in adding multiple images

So, here what you're really concerned about is the different actions that the user does. You should be able to track the different actions and with these actions, you should be able to identify if the flow is working correctly or not. That's your primary objective at the stage.

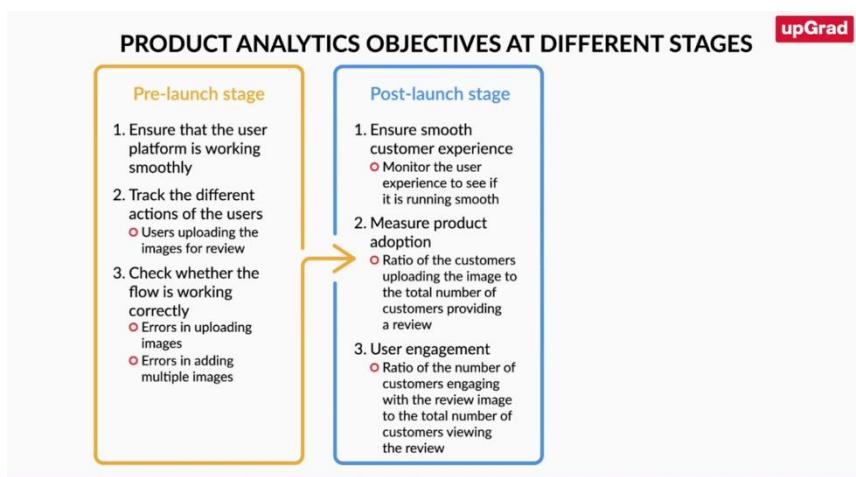
How will this help you? Well, this helps you with identifying issues. For example, say, there are a lot of errors in image uploads. The customer has initiated the image upload, but for some reason, there's a lot of errors. That could be one thing you want to identify.

You would also want to identify if customers are adding multiple images and so on. So, there's a lot of small detail, tiny places where the experience can break. And at this stage you just want to ensure that the entire flow works perfectly and there are no breakages. So, let's say we have enabled on the tracking and situation one is over, and now let's say you are successfully launching the feature.



Right after the launch, what do you want to track now? Again, we ask the question, what could be your objectives at this point?

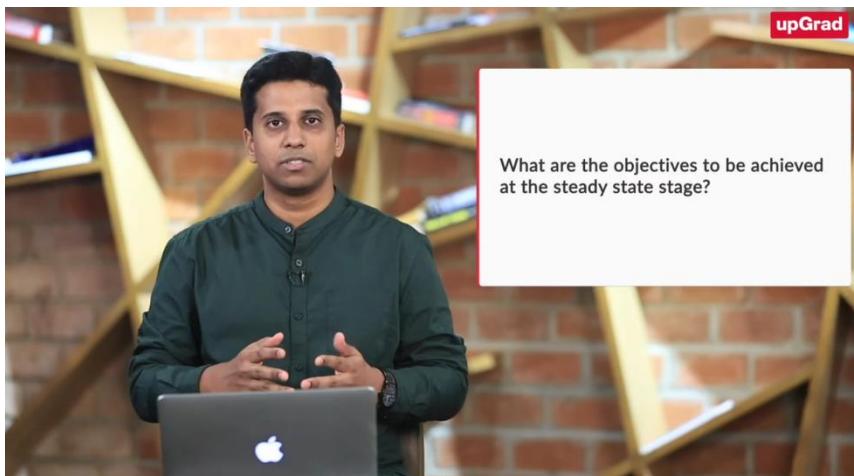
So, again, the primary objective in the initial part is just monitor the flow. You would want to know if something is breaking or not. At this stage, you would want to monitor if the experience is running smoothly for all the customer. This is a key objective.



The other important objective here is now that we know that the experience is smooth, it's working fine, what is the adoption of this? Because you would want that more and more people adopt this feature and you interact with it and contribute more images.

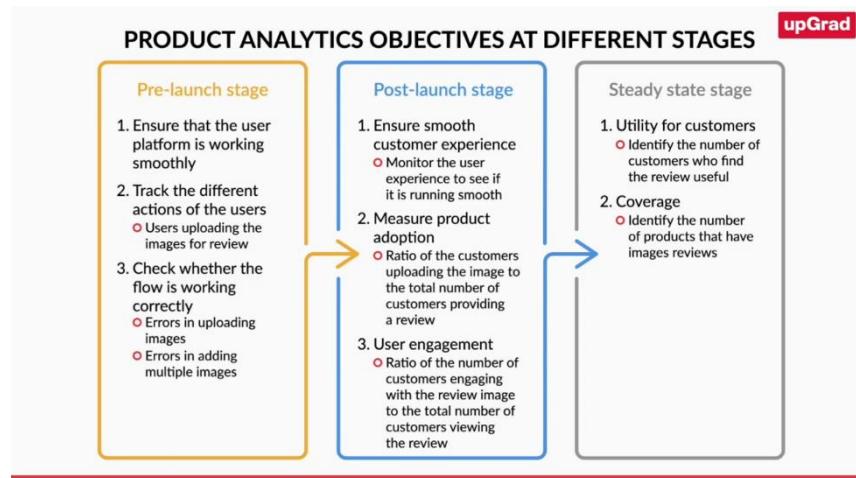
So, these will be your primary metrics. And in adoption, you could have things like number of customers uploading an image divided by total number of customers providing review. And so on, you can create metrics around adoption of this new flow.

Another adoption metric from, let's say the customer's consumption site would be given that the image is present on the product page, how many customers click on the images available. Because at the end, you also want them to see these images and find it helpful and so on. So, you want to measure adoption from the consumption side as well, not just the contribution side.



That brings us to the third situation. So far, you have successfully launched a particular feature. You have also ensured that it is running smoothly and that there is some adoption of your feature. And now we have attained a steady state. This is more of a long-term assessment we are doing.

Now in this state, in this situation, what metrics do you track? So, again, we ask the question, what are your objectives at this juncture? What do you want to do now? What are your objectives?



Well, there are two broad objectives you can think of over here. One, the whole point of having this feature was that you wanted it to be more helpful to people in making a decision. And therefore, you were concerned about the utility of this feature for the customers.

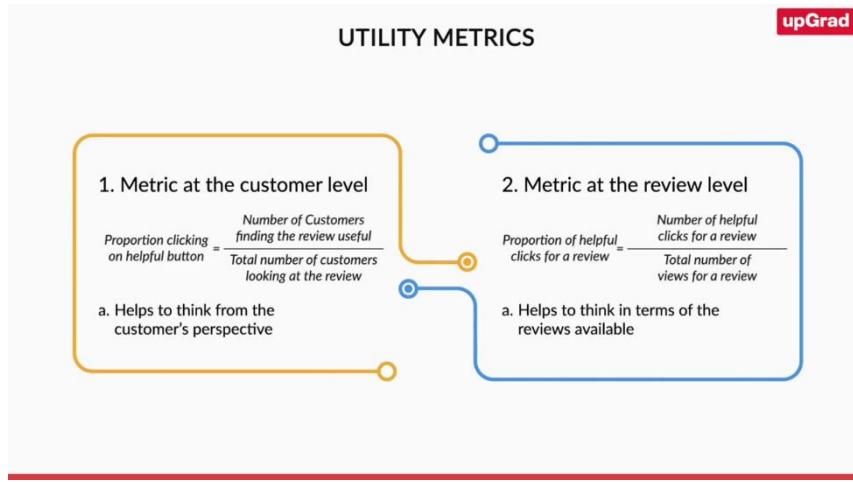
The other theme is coverage. Coverage is where say after you have launched the images you would ideally want, ideally all products should have some images in reviews. So, coverage could be a metric for you to track. Let's look at each of them in a little bit more detail.



Let's talk of utility for the customers. You want this to be useful to the customer in decision making. Now, a customer will not tell you that this was very useful to me or not, and they probably won't, you won't have ways of asking that to the customer.

But there are proxy ways or roundabout ways. You can measure utility via engagement. What do we mean by that? Well, there is a small button for the customer next to each review, and the customer can choose to click the button which says that yes, this review was helpful to me.

So, when a customer clicks on this was helpful, you can be sure that this helped that customer. This is a roundabout way, or let's say an indirect way, the best we have to assess whether this review was helpful or not. Because not all customers really click a button, even if they found it helpful. But this is the best we can get.

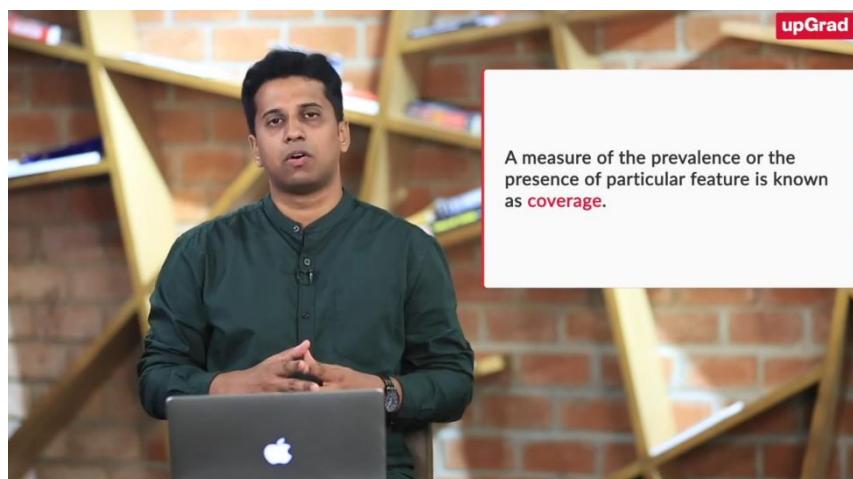


So, we can centre our metrics around this. We can create a metrics from this action. One example could be of all the customers who saw the reviews, what proportion clicked on the helpful button. So, in terms of a proportion, the numerator would be customers who found any review helpful divided by all customers who saw reviews. This could be one metric, which is at a customer level.

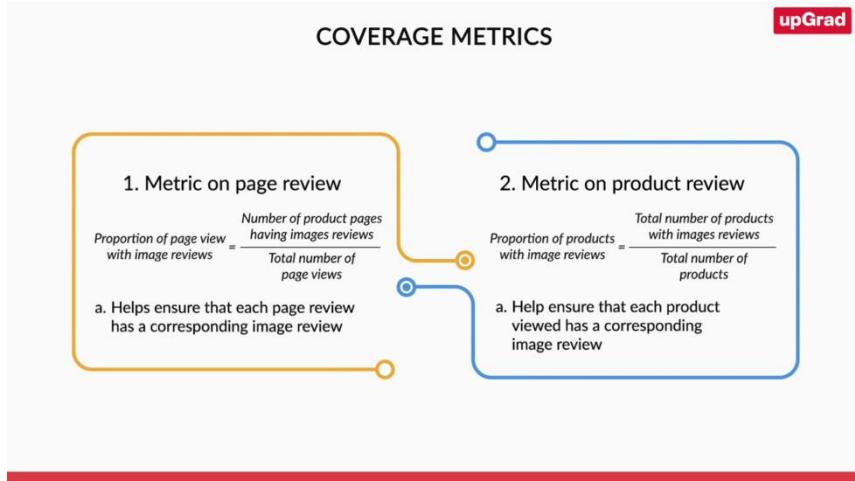
We can have a different spin to the same metric, where you can have metric, which is not for each customer, but say, for each review view itself. So, you can say the number of clicks on the helpful button divided by total number of review views.

So, this is more of an overall, say review views level metric, which helps you to identify if you're showing hundred reviews, you know, what proportion are people finding it helpful. As opposed to the first case where you're thinking in terms of a customer, and the customer could see tens and dozens of reviews.

So, there's a subtle difference between the metrics, but both metrics are centered on the action, which is the customer clicking the helpful button.



So, the other aspect is coverage. So, what is coverage? Well, coverage very simply is a measure of the prevalence or the presence of this particular feature. So, in our example, it could be a measure of how many products or how many page views have the images available for the customer to see.



So, one metric here could be of all the product views that happen on the page or on the platform, how many of those product views had some customer images from reviews to show.

So, the numerator could be page views with image reviews, divided by total page views. That could be one metric, which is about page views happen.

The other way to look at coverage would be in terms of products. So, you could say I'd want ideally all the products to have some image review to it. So, the other metric here could be of all the products viewed, of all the products viewed, how many of them have review images?

So, the numerator could be products having review images divided by total number of products. And you can limit this to the products which had at least one view.

CONSIDERATIONS FOR METRICS

01 What are the different types of metrics in terms of the frequency of measurement?

- Daily
- Weekly
- Monthly

02 How do you organise metrics?

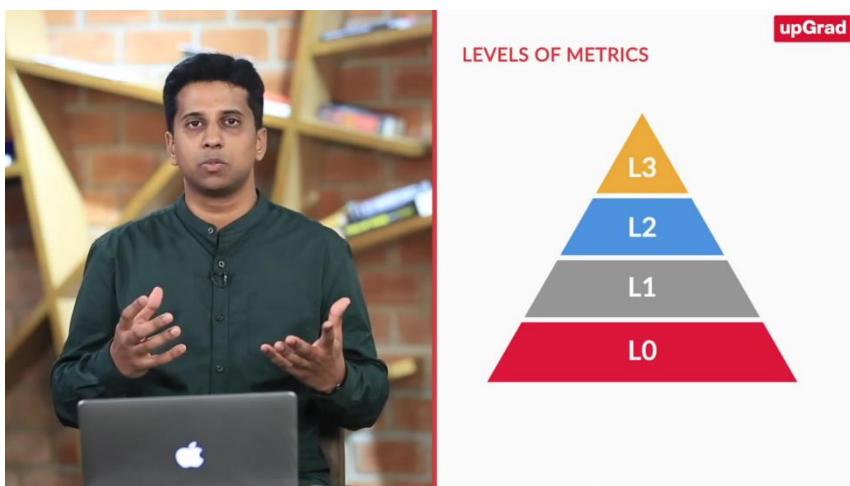
- Consider multiple metrics with different aspects

So, let's now look at one example to bring it all together, and we will look at what a metrics dashboard may look for this review's module. And we have here one example we have created, where we have divided the metrics into different themes and there are different levels of metrics. So, I'll explain that in a moment.

- First consideration here is that when do you measure the metrics, what is the frequency with which you measure different metrics? And the reason the question rises is because not all metrics need to be tracked daily. Some metrics are okay to be tracked weekly and some metrics need time for maturity. So, it's okay to track them monthly as well.

So, you can measure daily, weekly, and monthly as well. For most metrics though, there is a weekly cadence which should be sufficient, and maybe some other metrics, maybe like an NPS metric, it's okay to view them with an even lower frequency.

- So, the other question is how do we organize the metrics? Because we know by now that there could be multiple metrics, and also a consideration is that you may not always be able to define like one single metric, which is the most important metric to you, especially because you're looking at a component which has different aspects to it. So, what you can still do is organize these metrics into some themes. And you can have say four important metrics.



Like in this case, you see that there are three themes and there are four metrics, and all of these are what we call our L zero metrics. Or think of it as the highest-level metrics, which will give you a quick view on the state of things for that component.

So, the L0 metrics essentially are the few limited key metrics, which will tell you in one glance what the state of the component is, the health of the component. Then there are L1 metrics which help you to go a little further, drill down a bit further.

So, for example, we have the review coverage as a theme in this example. And for review coverage, we have some L0 metrics. We also have some L1 metrics. Likewise, for contribution, you have some L0 metrics. You also have some L1 metrics which drill a bit further.

THEMES FOR THE L0 METRIC

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Theme/Aspect	Explanation of the metric	Metric
		L0 Metrics
Review Coverage	How many of the page reviews will have image reviews	Percent page views with reviews
	How many of the products viewed have image reviews	Percent products with reviews
Engagement	How many of the available reviews are helpful	Helpful clicks per review view
Contribution	How many of the present products are getting reviews	Reviews per units

So, let's define these as well. Let's look at each of the themes. The first theme is review coverage. We touched upon this slightly where we said we want to see of all the page views, how many of them will have reviews, or image review in that case.

So, the metric over here could simply be percent page views with reviews. Or in all metric could be on products. So, it could be percent products with reviews. And you could limit to products which were seen. So, you can say product with page views, percent of that which has reviews. So, this is the first theme, which is the review coverage theme.

The second theme could be engagement because you are concerned about engagement as well. You want people to find your reviews helpful and you want them to click on the helpful button. So, a metric over here could be helpful clicks per review view or like a percent metric where it is, you know, the number of helpful clicks divided by total review views. This could be another L0 metric for this theme.

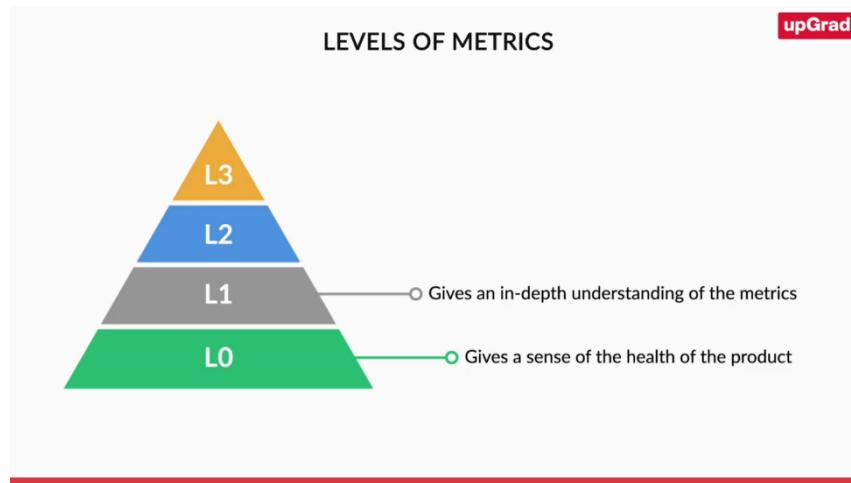
Likewise, you can have a theme around contribution and contribution, we can define as if hundred people buy the product, how many people are giving you reviews or rather you can have if a hundred units are being purchased on the platform for how many of them are you getting reviews. So, a simple metric over here could be reviews divided by units sold, and that gives you a contribution metric, and of course you want it to be higher.

CONTRIBUTION THEME FOR THE L1 METRIC

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Theme/Aspect	Metric
	L0 Metrics
Review Coverage	Percent page views with reviews
	Percent products with reviews
Engagement	Helpful clicks per review view
Contribution	Reviews per unit
	L1 Metrics
Contribution	Email
	My order page
	Notification

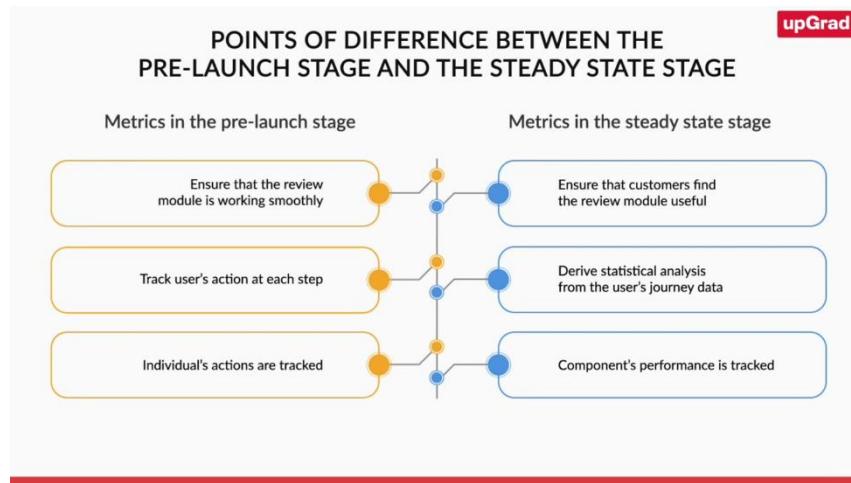
Now going to the L1 section, let's break down the contribution theme into L1 metrics. One granular view, which is of very high significance for you is where are these reviews coming from in terms of the source on the platform? So, are these reviews coming via email, are these reviews coming from my orders page, are these reviews coming from the notification which Amazon sends you, and so on. And in a steady state, you would want to monitor these as well.



Again, like we said earlier, the L0 is what really gives you a sense of the health of the product. The L1 is what you look further just to ensure the finer view is fine. Or in some cases, maybe if you see some change in the L0, some dip in the zero metric, the L1 metric helps you identify which larger say theme there is a problem.

Theme/Aspect	Metric
	L0 Metrics
Review Coverage	Percent page views with reviews
	Percent products with reviews
Engagement	Helpful clicks per review view
Contribution	Reviews per unit
	L1 Metrics
Contribution	Email
	My order page
	Notification
	L2 Metrics
	L3 Metrics

So, L0 and L1 together should give you a fairly detailed view of your metrics and you could go further. You can have L2 metrics, L3 and so on, as you like.



And one theme or one important thing to notice over here is that when we were looking at the first situation, when we were trying to ensure the module is working fine, there were so many metrics. We wanted to capture every user action there, whether user clicked on this, clicked on that and so on. So, you'd want to track all of those things. But now in a steady state, you really don't worry about those individual actions.

Theme/ Aspect	Explanation of the metric	Metric	Week1	Week2	Week3	Week4	Week5
		L0 Metrics					
Review Coverage	How many of the page reviews will have image reviews	Percent page views with reviews					
	How many of the products viewed have image reviews	Percent products with reviews					
Engagement	How many of the available reviews are helpful	Helpful clicks per review view					
Contribution	How many of the present products are getting reviews	Reviews per unit					
		L1 Metrics					
Contribution							
	Reviews by source	Email	20%	24%	26%	24%	30%
		My orders page	29%	24%	23%	24%	20%
		Notification	49%	47%	47%	46%	46%

So, I guess this is an example where you can identify that those can be thought of as tracking metrics, which you would want to track, but you don't need to look at them in every week.

So, they are not your monitoring metrics, your monitoring metrics are limited and few, and there is limited redundancy. There's no redundancy in them and you'd want them to together give you a complete picture of the product.



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