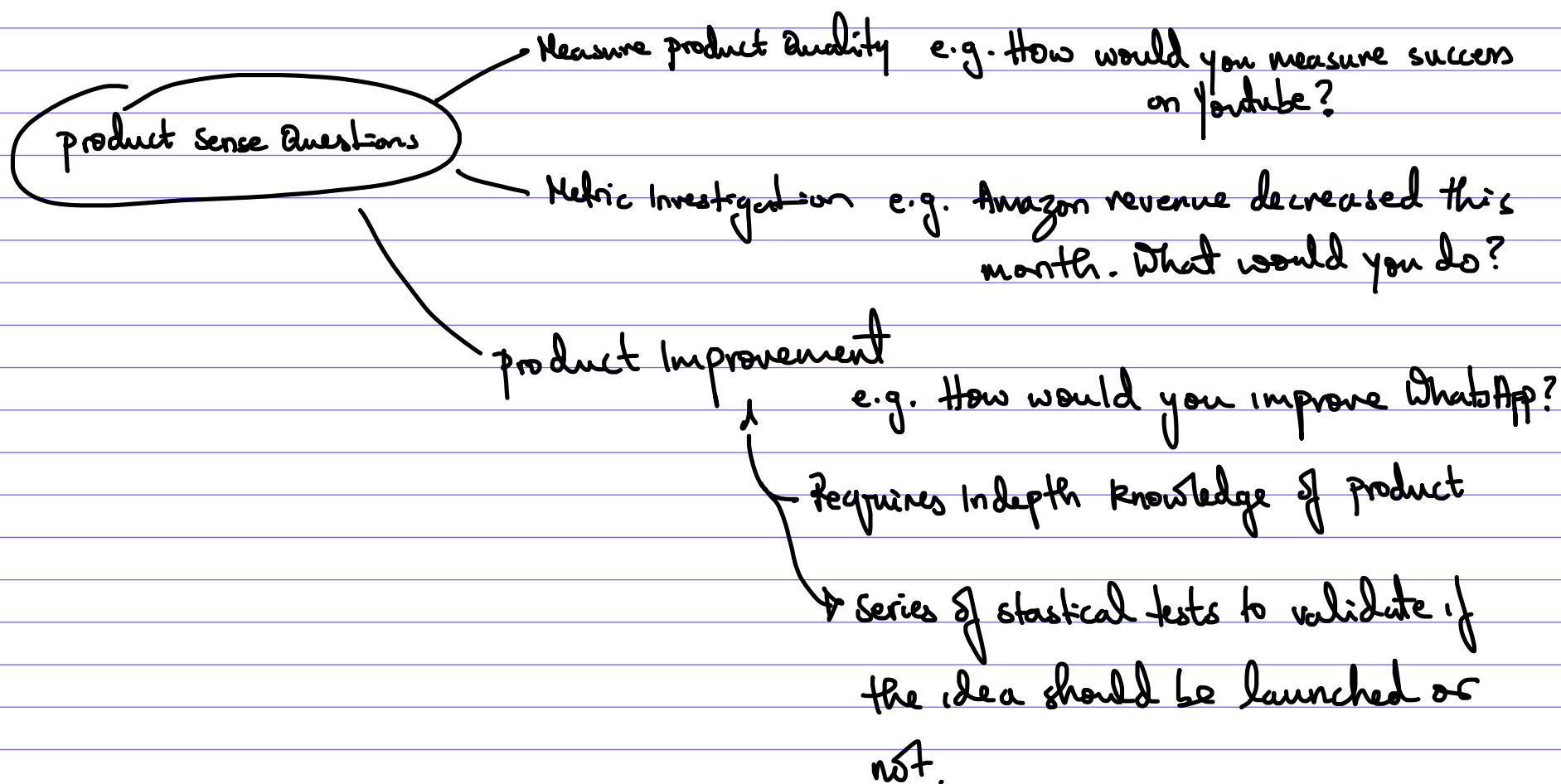
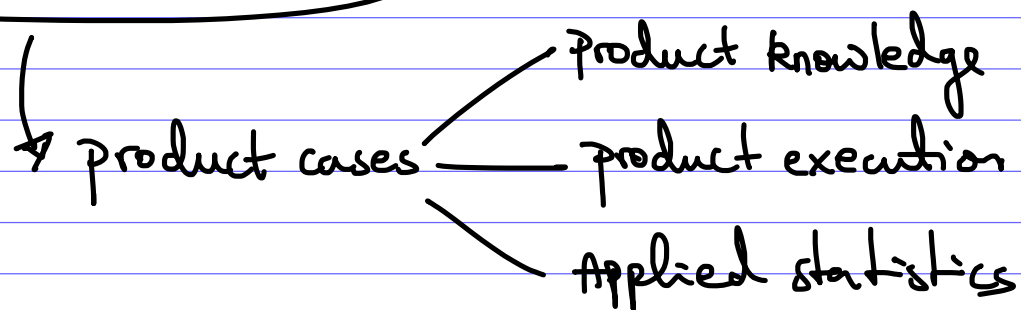


PRODUCT SENSE

Product sense interview



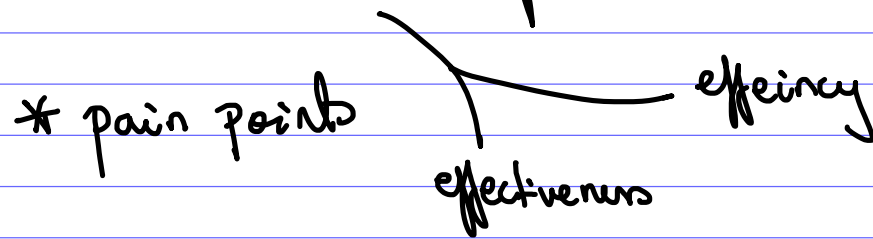
1. Demonstrate product knowledge by providing a product overview
 2. provide a sound product execution
 3. Demonstrate data intuition
 4. Be statistically sound
 5. Understand problem clearly
 6. Explain thought process clearly.
- } product sense
- } Technical knowledge
- } communication

BASICS

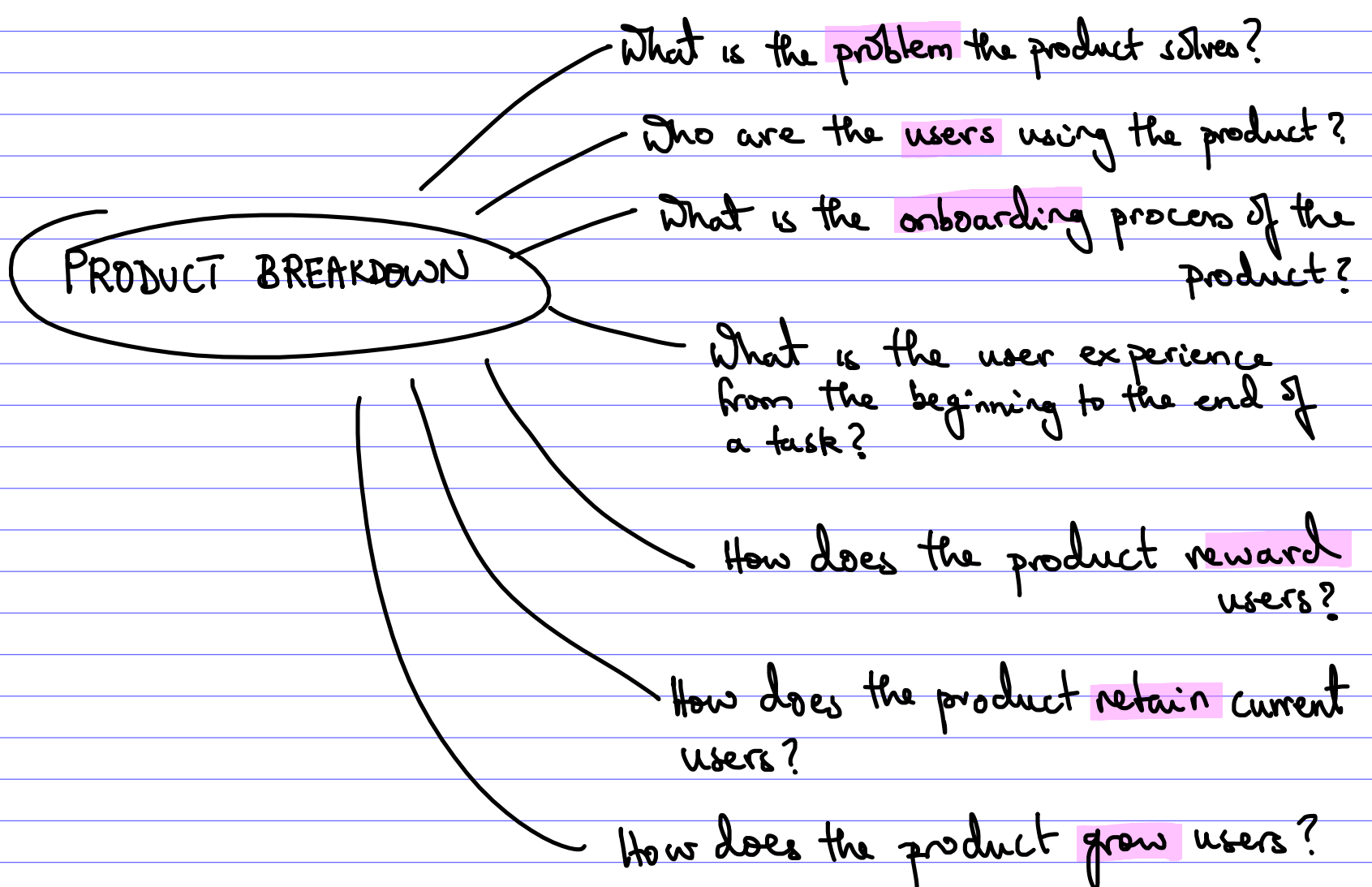
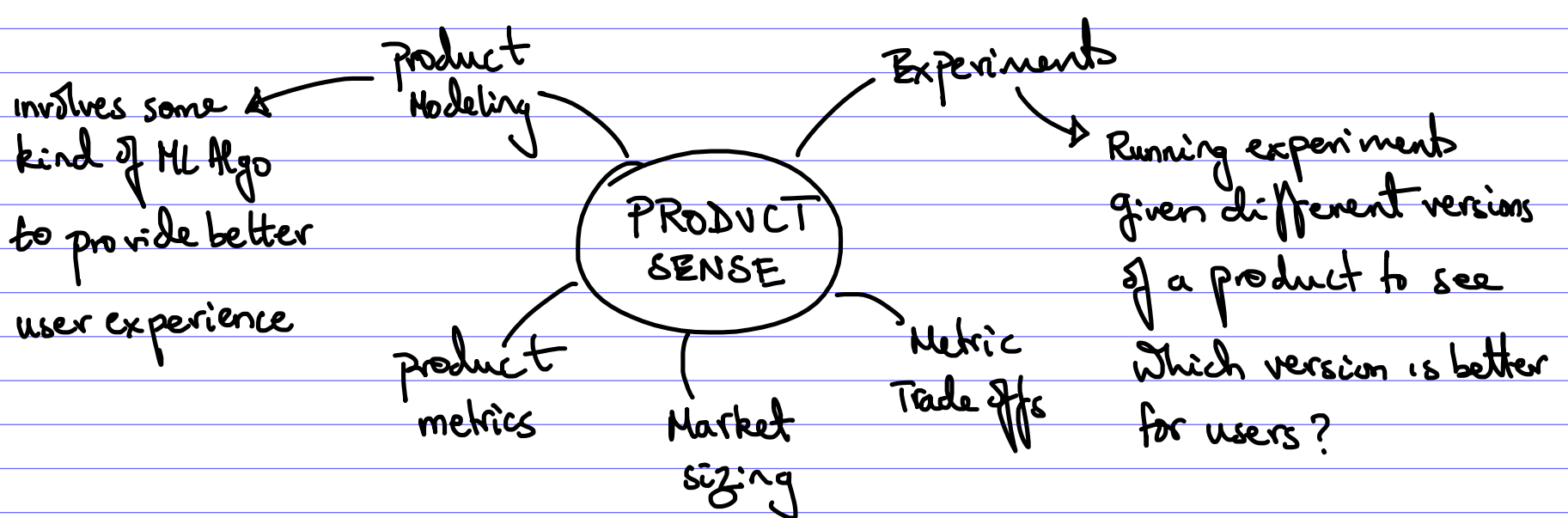
① Empathy : Ability to understand & feel what a user is experiencing

→ products are designed to solve a users' problem

→ At present, what path is the user taking to achieve a particular task? How can we create a product to streamline the process for users?



② Execution : Ability to solve a user problem with product decisions using ideation, analytics & experiment



e.g. Facebook News Feed

→ Product [specific feature in facebook]

1. Curates Content [Helps save users time in finding content related to them or are interested in]

2. Facebook users

3. Email Sign-up

4. Journey:

- scroll
- React
- Comment
- share

5. Reward: stay connected / Exposed to the local & international current affairs.

6. Retention: Notifications

7. Growth: sharing posts across users

PRODUCT METRICS

★ Can't measure → Can't Improve

① Product Vision : What is the main goal of the product?

→ What is the company's mission/purpose/focus?

(organization lvl) → Why should it exist?
(Qualitative) → What does it offer to the world?

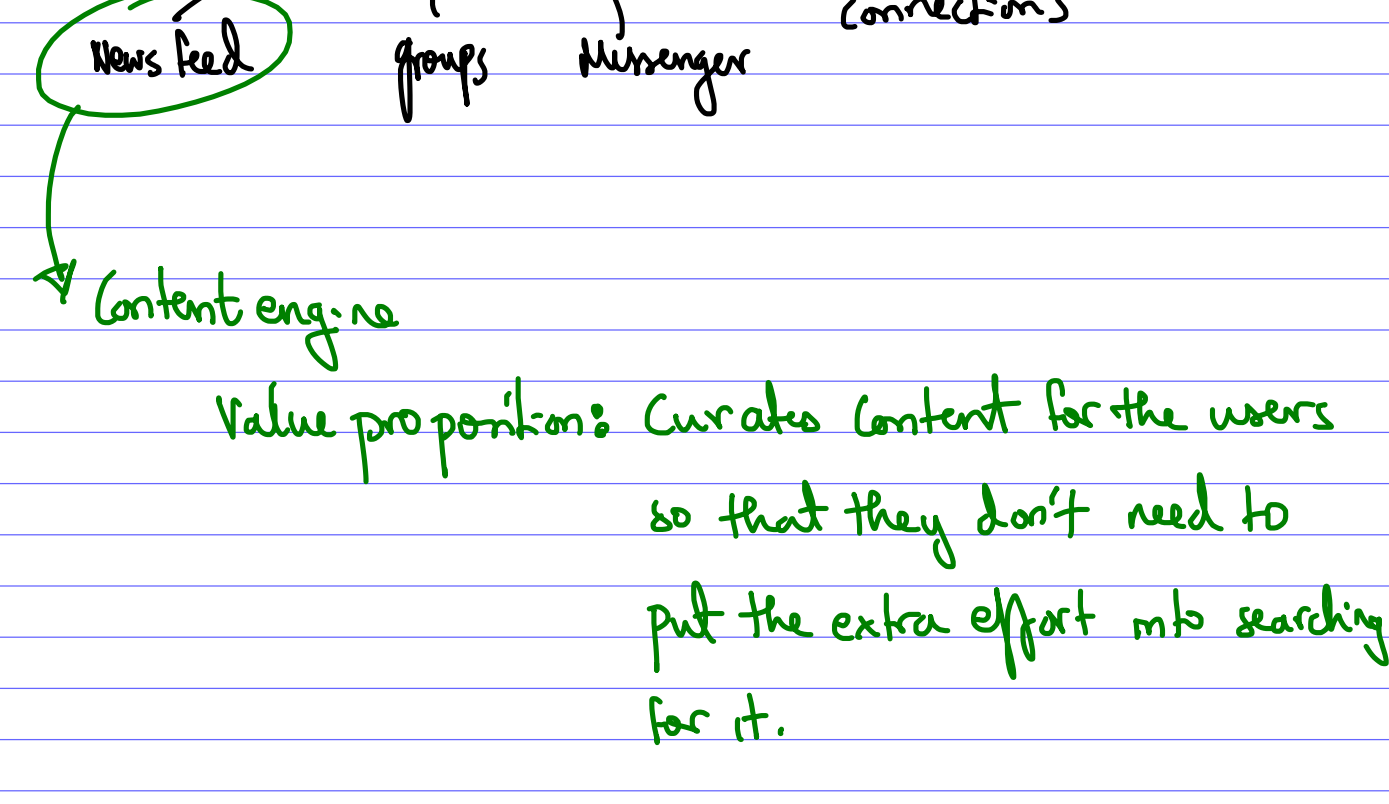
e.g.

- 1) Google: To organize the world's info & make it universally accessible & useful
- 2) Meta: To give ppl the power to build community & bring the world closer together
- 3) Netflix: To entertain the world

→ What value does the product offer to users?

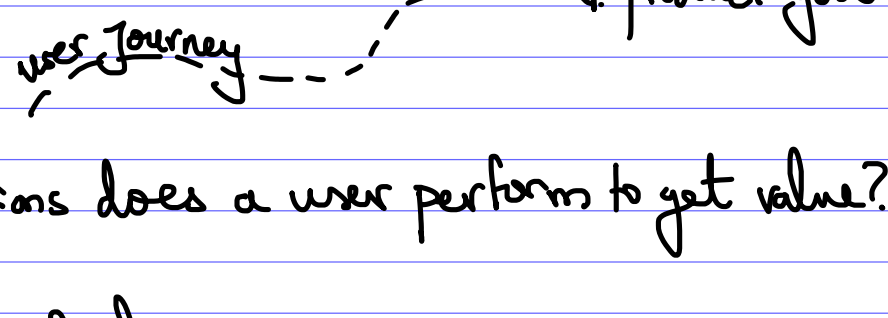
Value proposition : a statement that clearly identifies the benefits a company's products & services will deliver to its customers.

e.g.



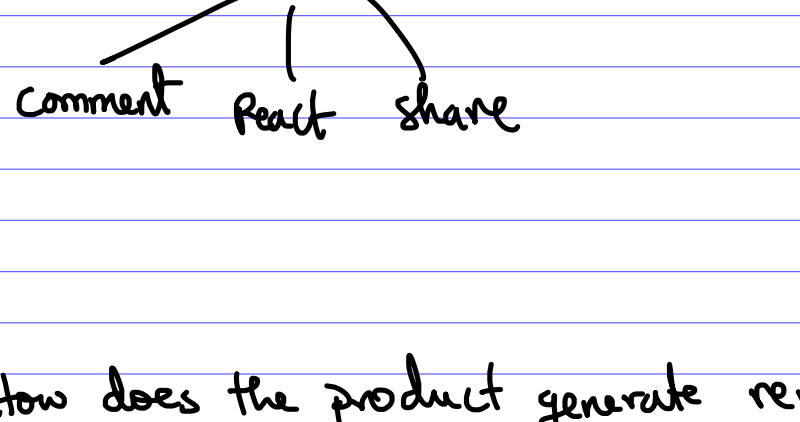
★ Defining clear goals can guide us in deciding what could be the main product metric.

→ What steps does a user take to achieve success?



What actions does a user perform to get value?

e.g. News Feed



→ How does the product generate revenue?

product → monetize → sustain → Help users

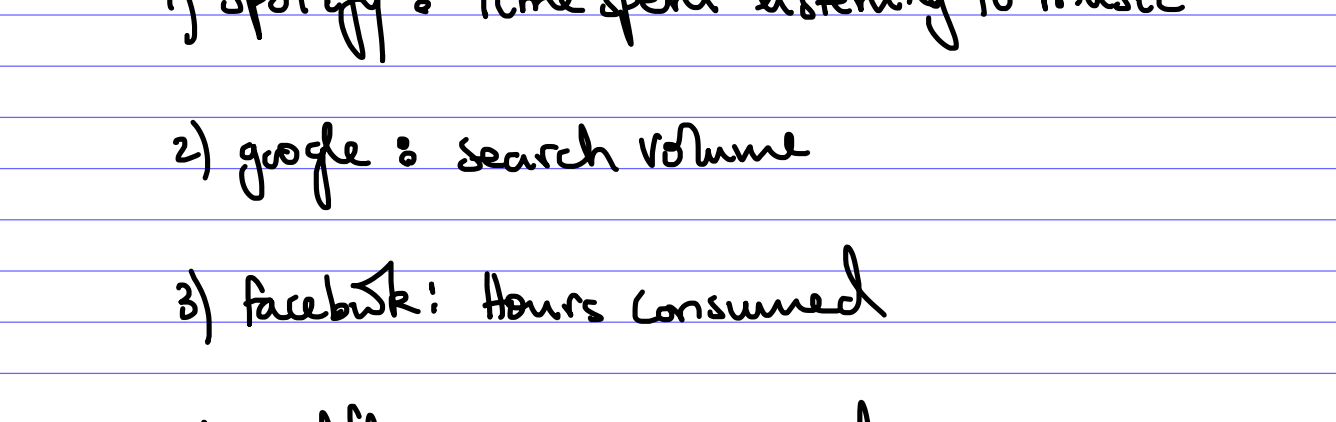
e.g. News Feed

Advertiser → Publish → click → Revenue

② North Star Metric : What is the primary metric that measures the success of a company?

KPI : **key performance Indicator**

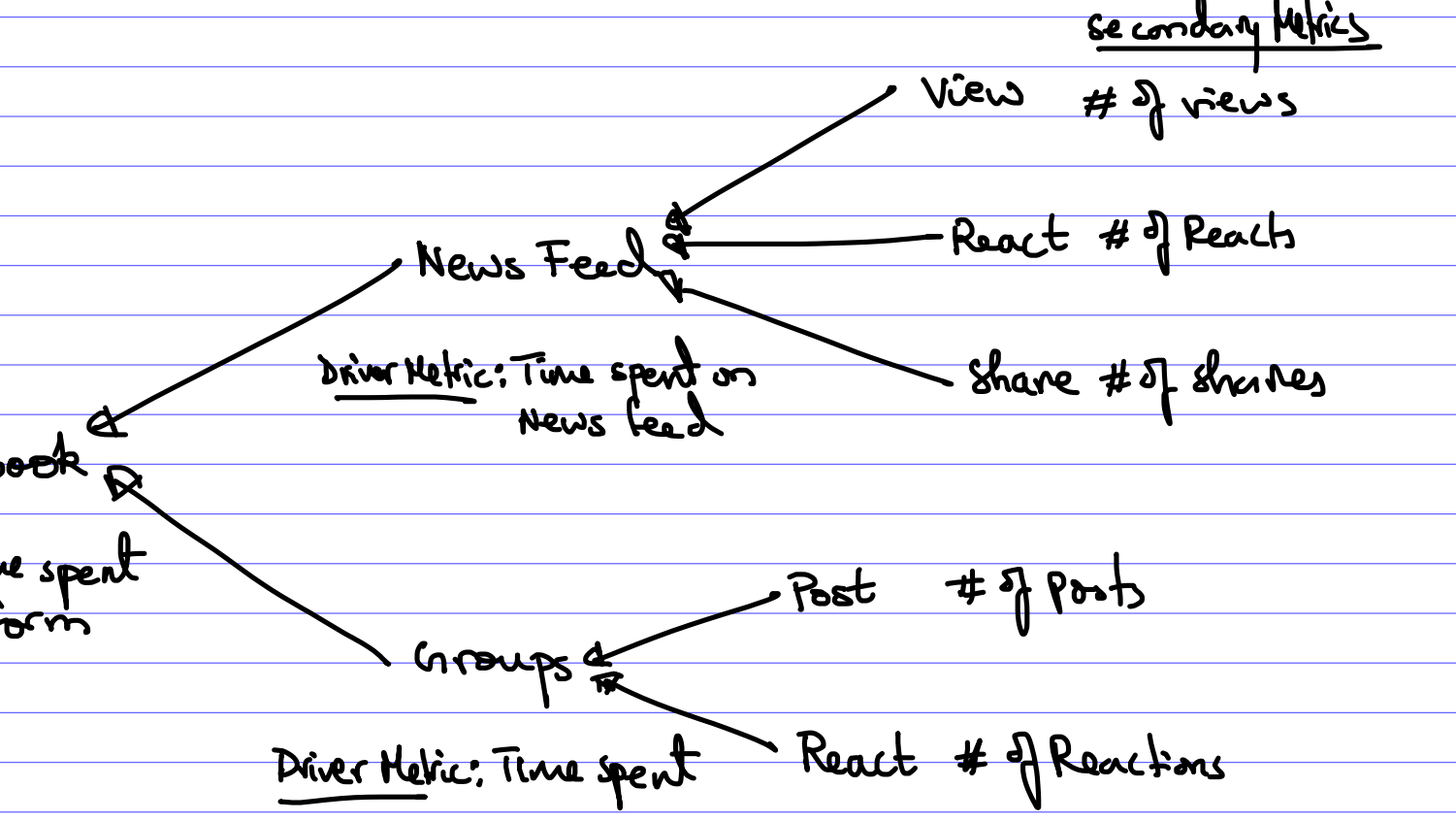
The primary KPI that best aligns with the company's mission statement.



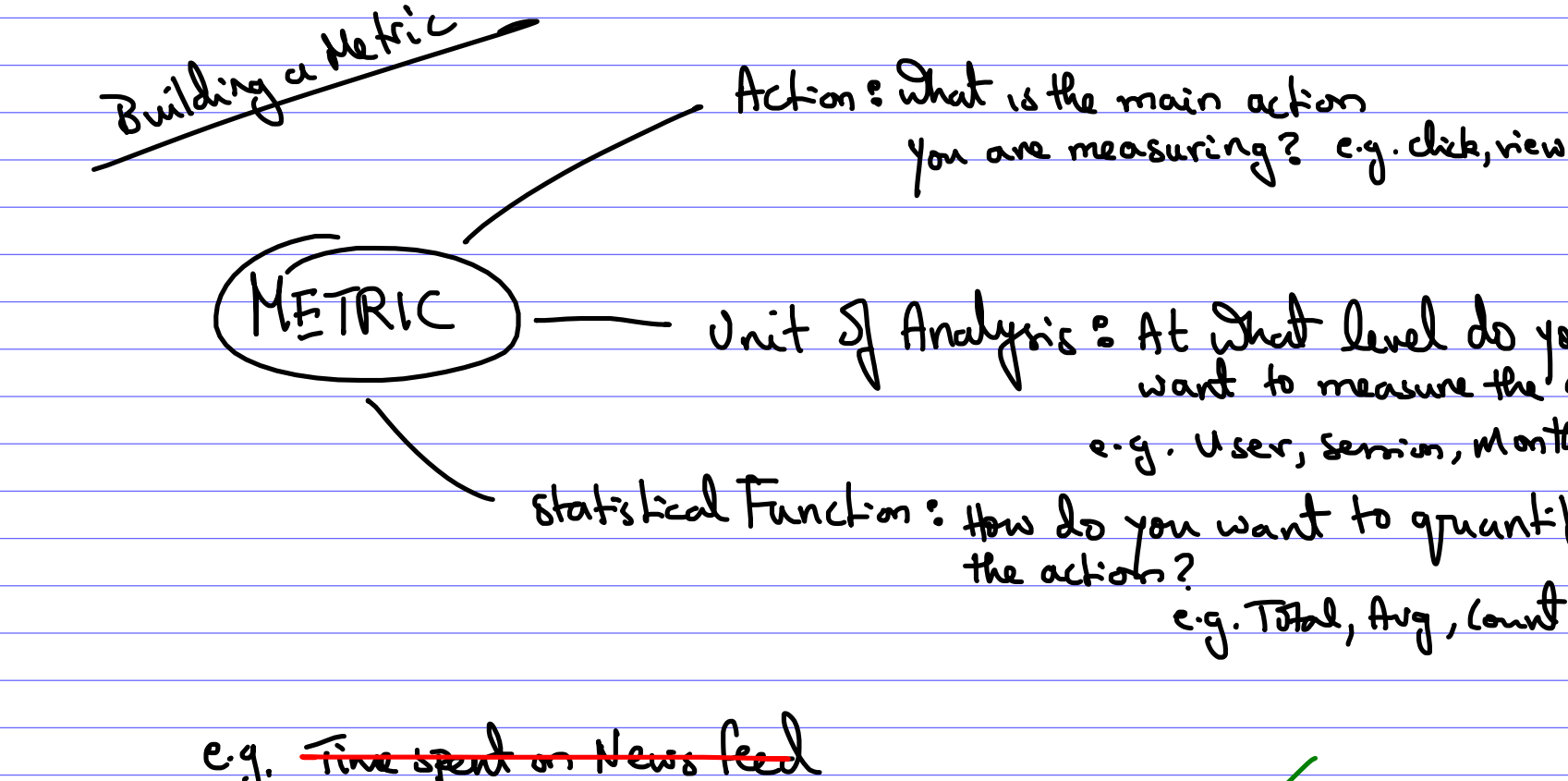
e.g.

- 1) Spotify : Time spent listening to music
- 2) Google : Search Volume
- 3) Facebook : Hours Consumed
- 4) Netflix : Hours Streamed

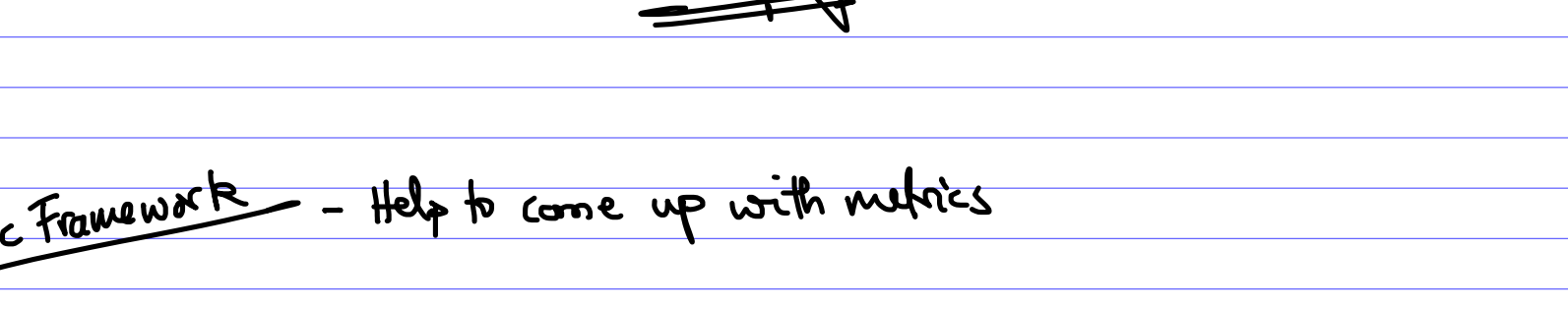
③ Driver & Secondary Metrics : What are the granular product- and feature-level metrics that correlate with NSM



e.g.



Building a Metric

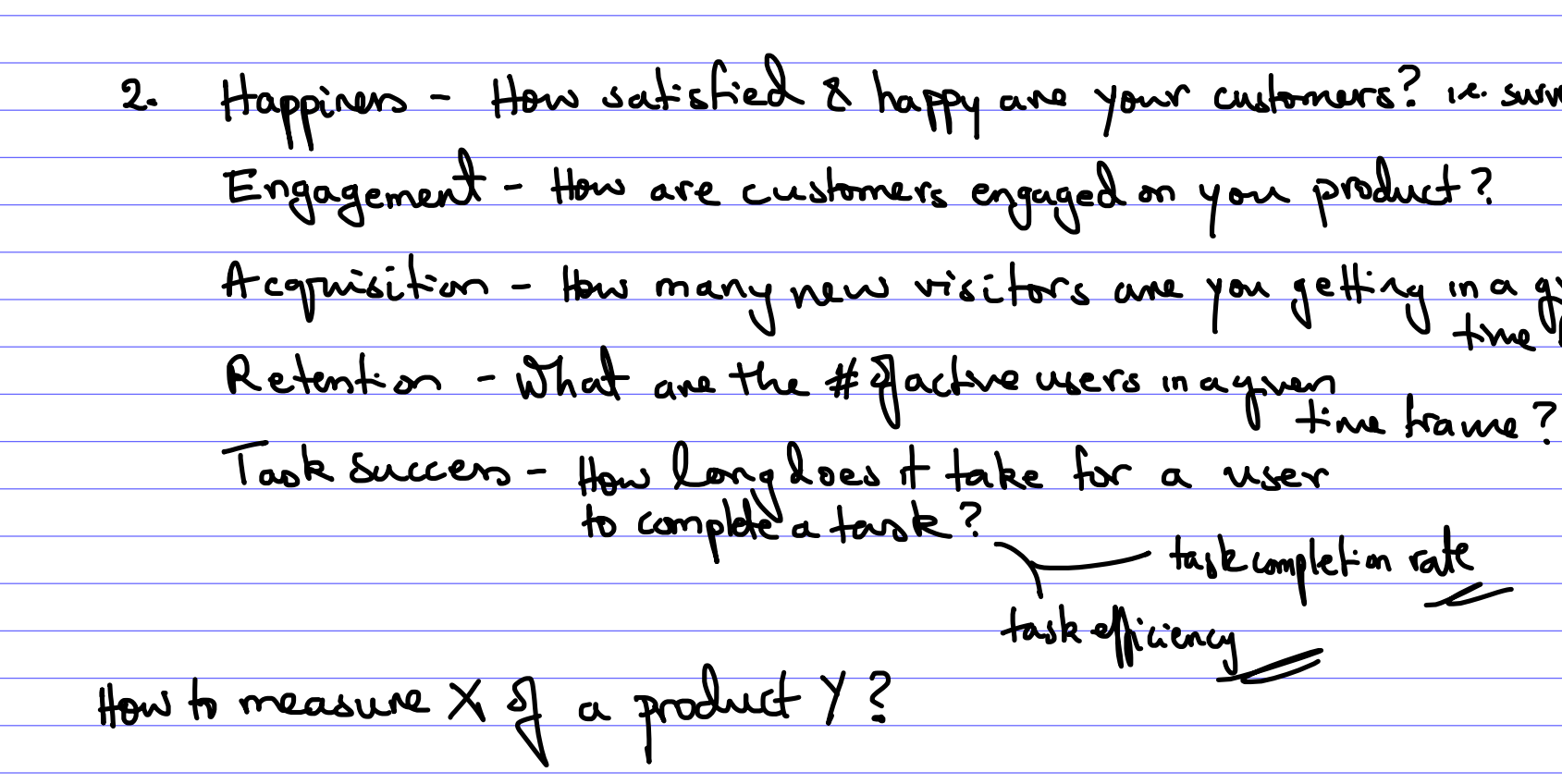


e.g. ~~Time spent on News feed~~

Total time spent on News feed per Month

Be specific

Metric Framework - Help to come up with metrics



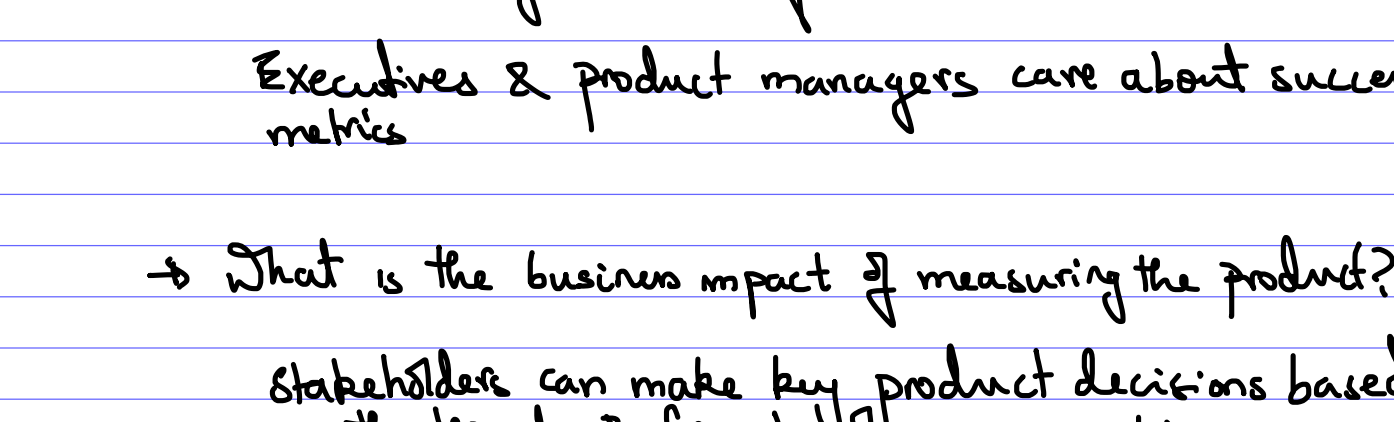
2. Happines - How satisfied & happy are your customers? i.e. survey score
Engagement - How are customers engaged on your product?
Acquisition - How many new visitors are you getting in a given time frame?
Retention - What are the # of active users in a given time frame?
Task Success - How long does it take for a user to complete a task?

How to measure X of a product Y?

- Goal - What is the business goal of the direction?
- Action - What is the user journey of the product?
- Metric - How do you measure the product?
- Evaluate - How would you prioritize & evaluate the metrics?

e.g. How do you measure success on YouTube?

Two sided Market: consumer creators



1. Goal

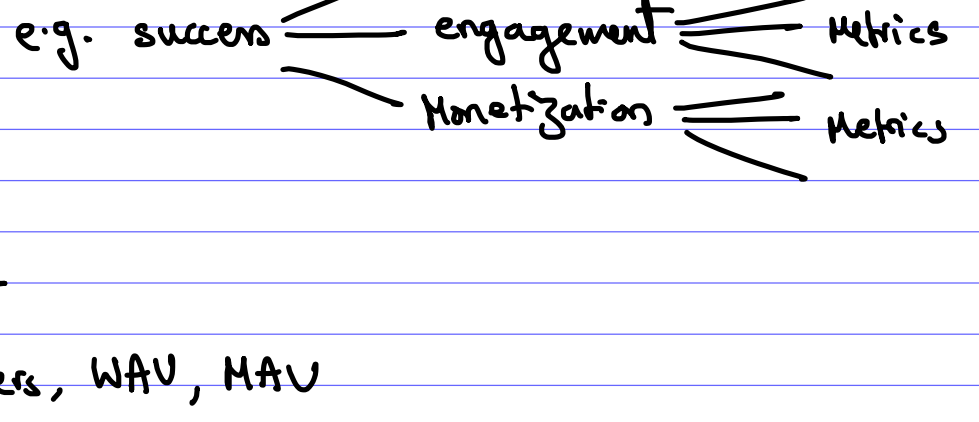
- What is the purpose of the product?
Youtube is a video platform that allows users to view & publish videos. The platform's mission is to "give everyone a voice & shows them the world."
- What does the term "success" mean? Breakdown into dimensions
Track growth, engagement, & monetization of Youtube
- Who is the key audience of the metrics?
Executives & product managers care about success metrics
- What is the business impact of measuring the product?
Stakeholders can make key product decisions based on the trends & forecasts of success metrics.

2. Action

→ What are the **concrete** actions a user takes to achieve a task?

~~Engage / usage~~ Too Vague

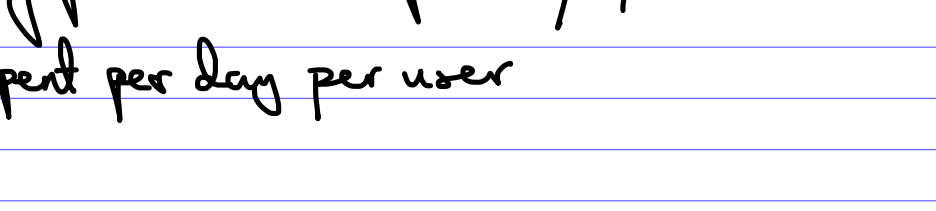
Sign-Ups, Clicks, Purchase



3. Metrics

→ Group metrics based on dimensions

varies depending on Question



Growth

- Daily Active Users, MAU, MAU
- Stickiness Score: How often users are returning to an app **DAU/MAU**
- Sign-up Rate: # Sign-Ups / visitors per D/W/M

Engagement

- Total watch hours per D/W/M
- Avg " " " " per user
- Total # of posts created per D/W/M
- Avg hours spent per day per user

Monetization

- Total Ad revenue per D/W/M
- Subscription \$ per D/W/M
- Avg Ad revenue per day per user

4. Evaluate

→ **Primary Metric**

* Total watch hours per D/W/M

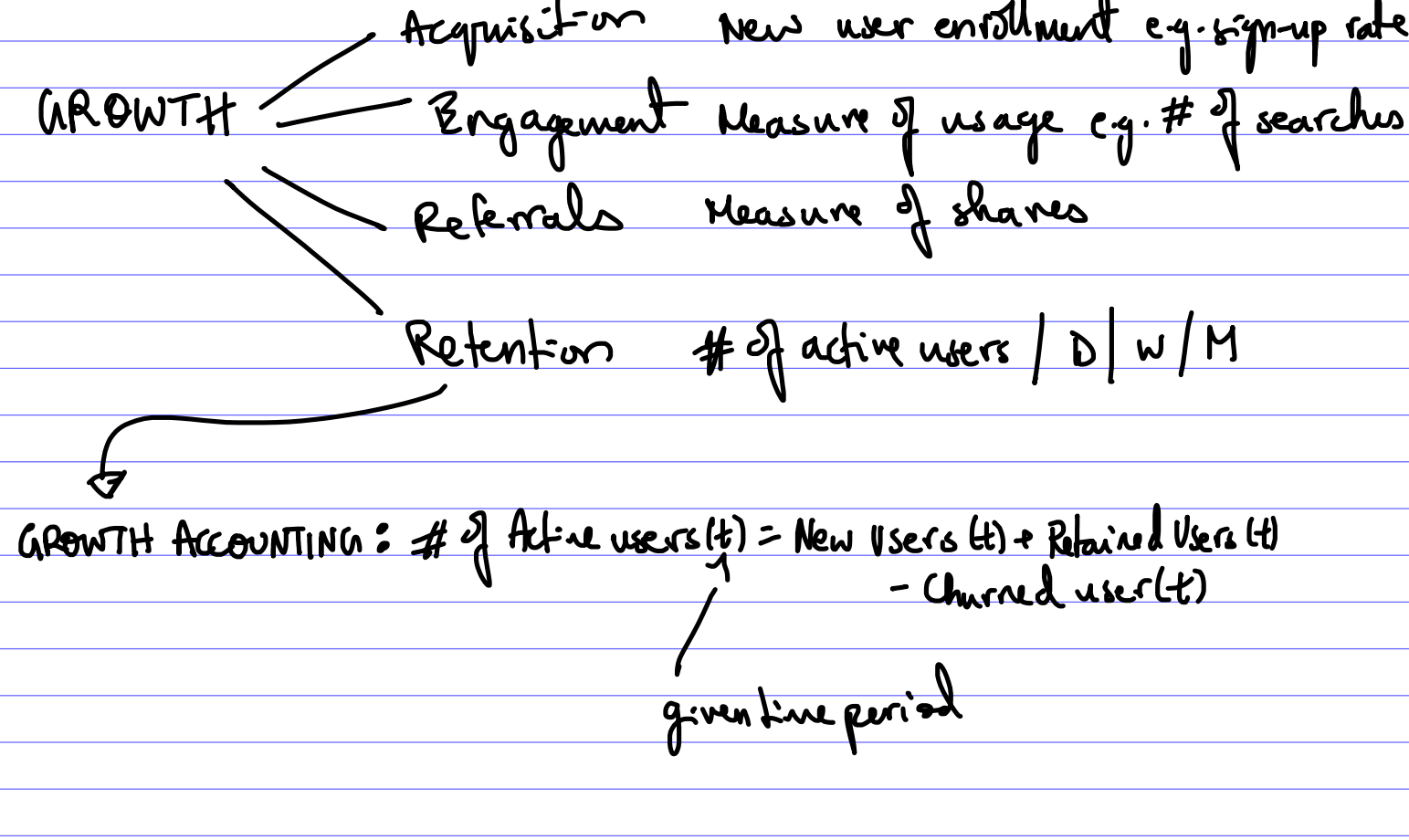
→ **Secondary Metrics**

- * DAU
- * Total # of posts created per D/W/M
- * Total Ad revenue generated per D/W/M

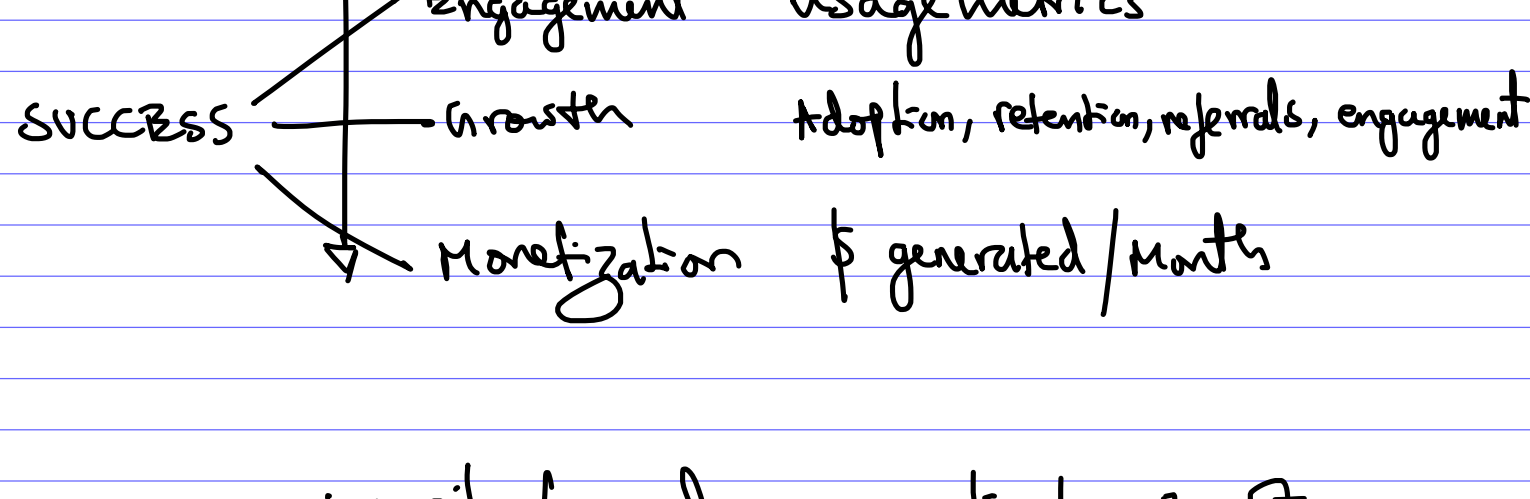
MEASURING PRODUCT QUALITY

How do you measure [quality] on [products]?

What is GROWTH? Measuring growth ensures that a product is increasing its active user size.



What is SUCCESS? A quality that embodies whether a product is on the right path towards the company's North star.



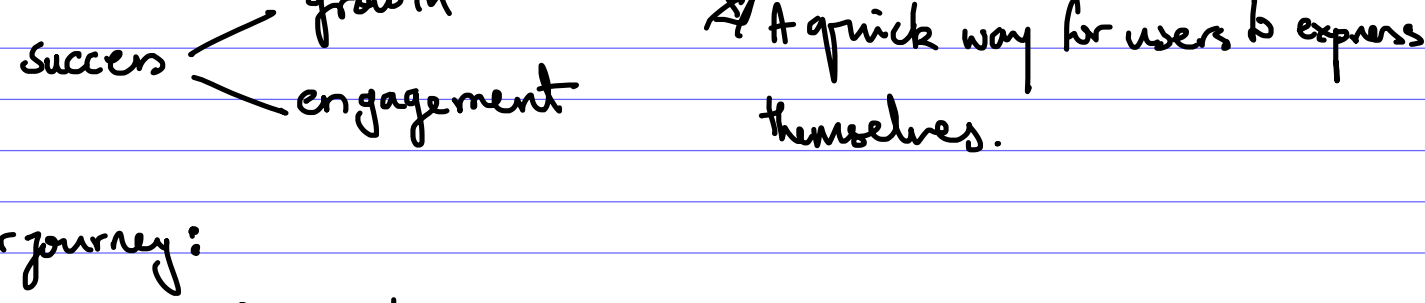
if company is primarily focused on monetization & not providing value to users, while this may work out in the short term, in the long time it may impact the engagement, growth & finally monetization.

e.g. Google deciding to populate the search engine with lots of Ads.

What is HEALTH? A 360-degree overview of a product's core functions. Use the HEART framework to measure the health of a product.

e.g. How would you evaluate the success of Reactions on Facebook?

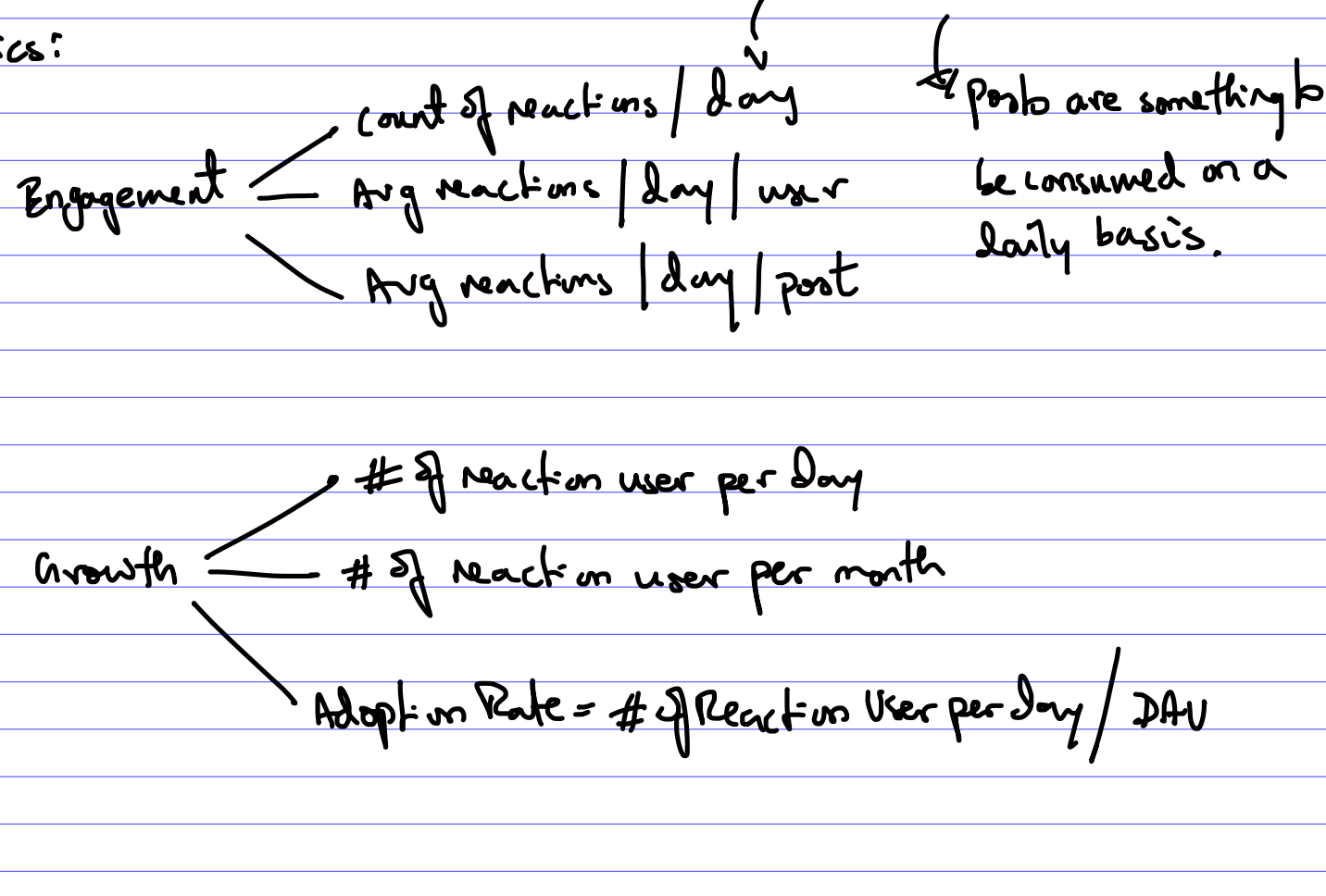
Goal: FB's reactions enables users to express emotions visually on Facebook posts.



User journey:

1. Read a post
 2. Click an emoji
 3. Display Reactions
- allows viewers to gauge the general sentiment

Metrics:



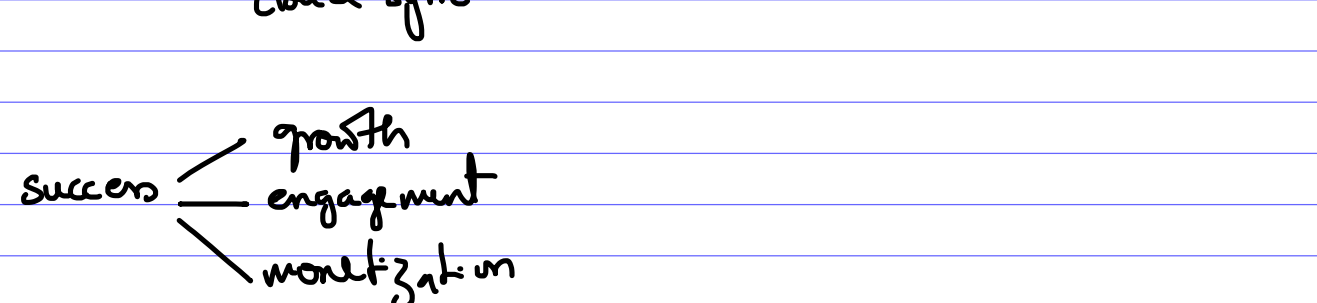
Evaluate:

Primary: # of Reaction User per day

Secondary:

- count of reactions per day
- Avg reactions per day per user
- Avg reactions per day per post

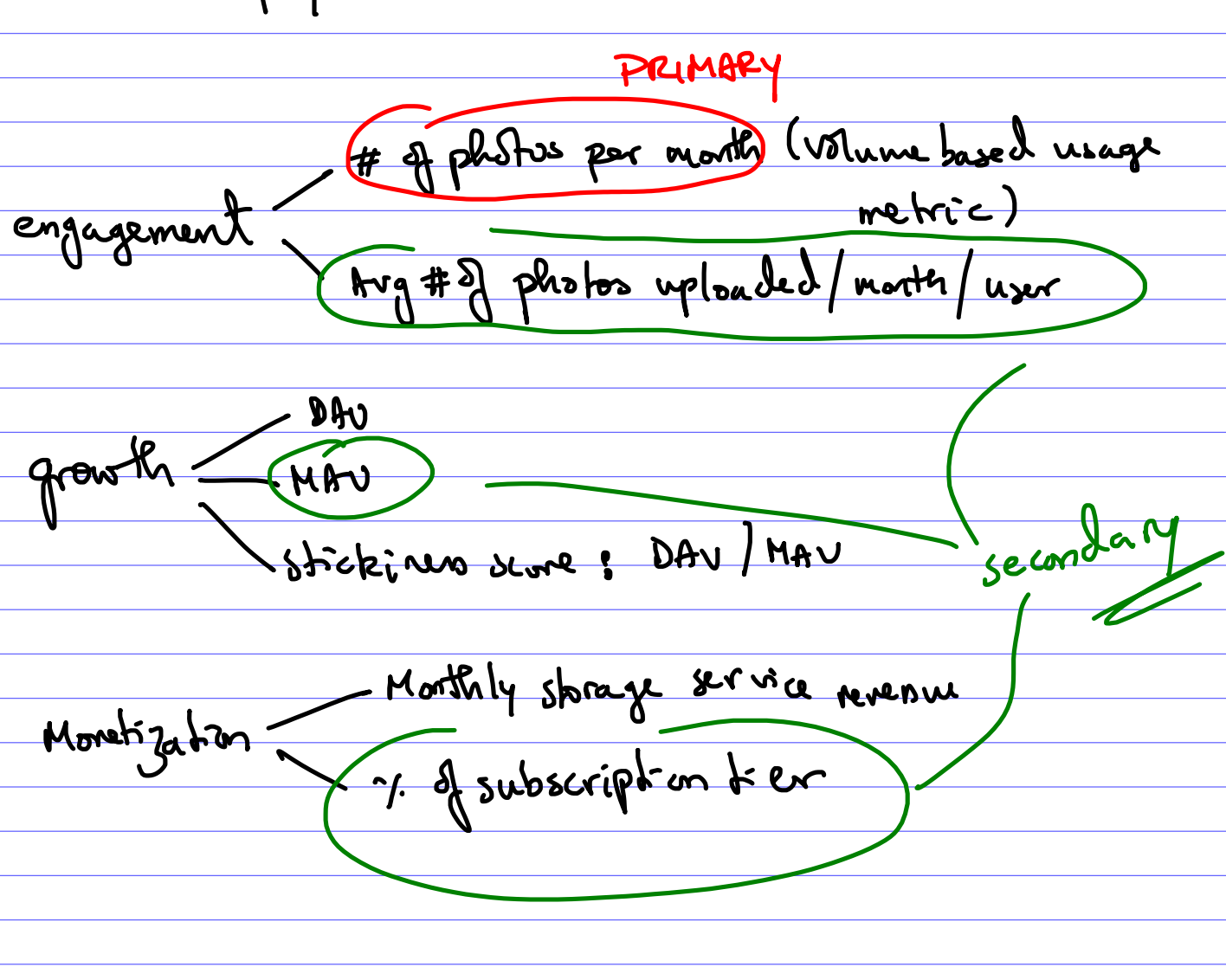
e.g. How do you measure the success of google photos?



success

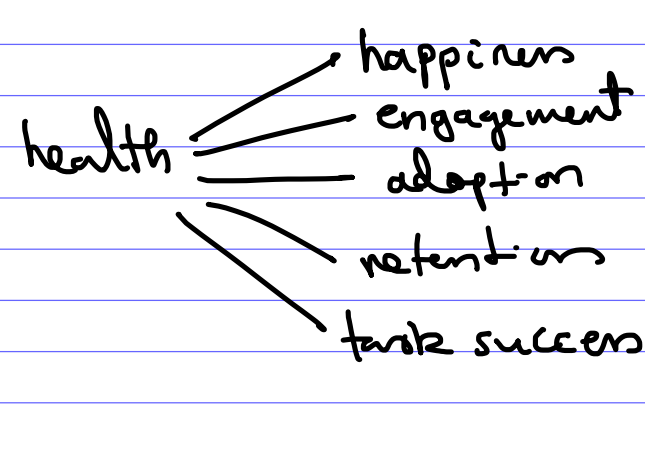
- growth
- engagement
- monetization

- 1 create a google account
- 2 upload photos & videos
- 3 create playlists, search, shares

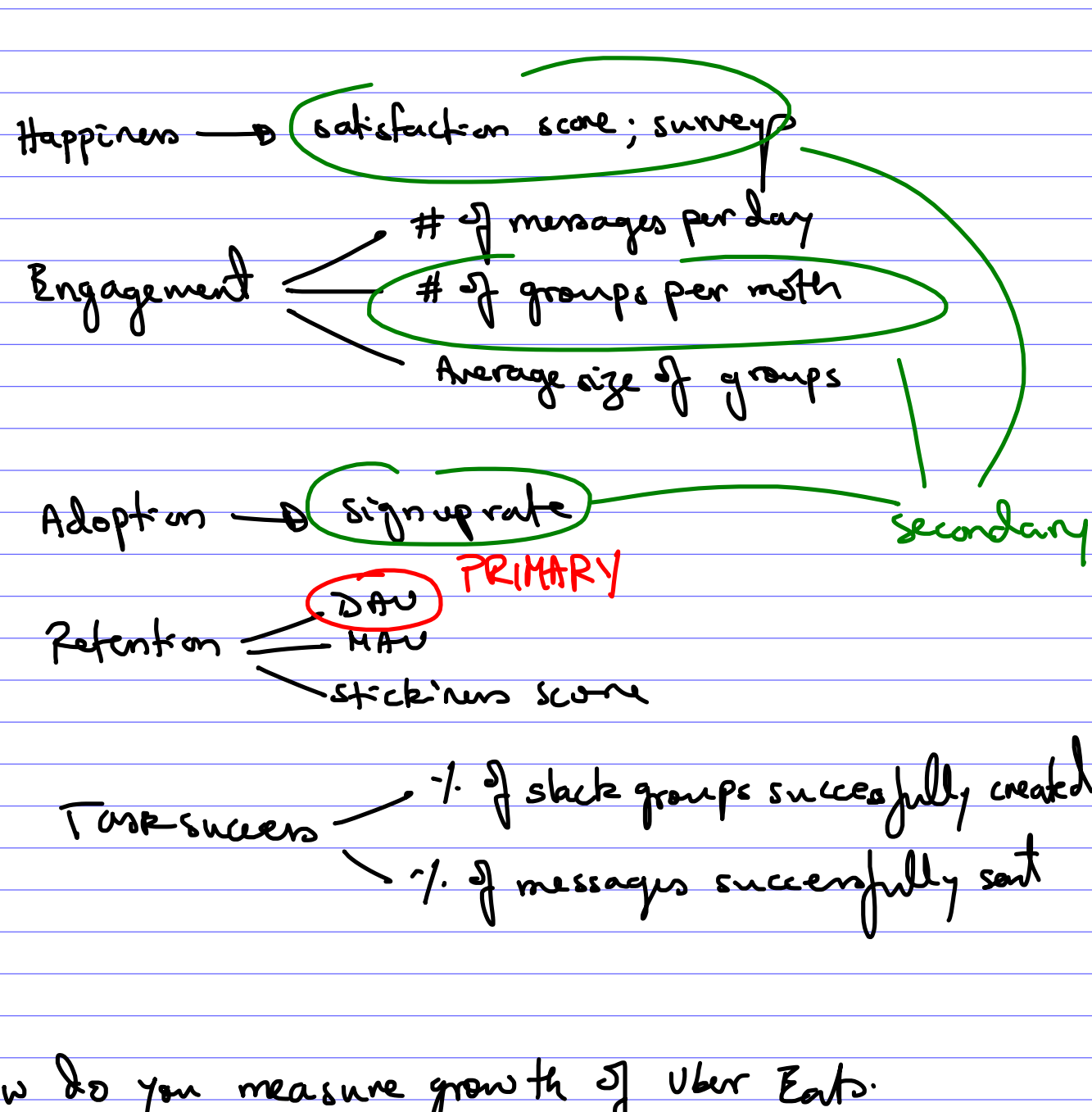


e.g. How do you measure the health of slack?

a communication app that allows members to communicate & collaborate on ideas.



- 1 sign up with an email account
- 2 post & read messages
- 3 create channels
- 4 search contents

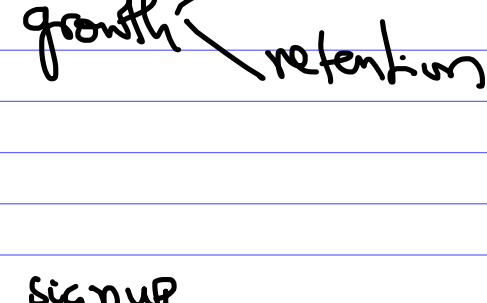


e.g. How do you measure growth of uber Eats.

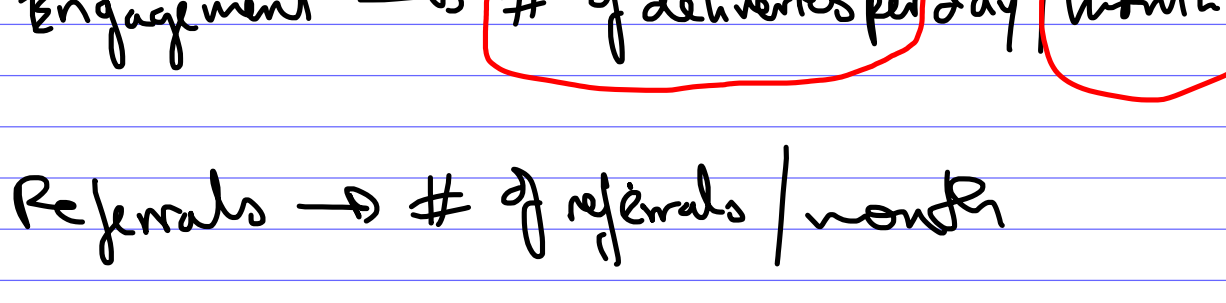
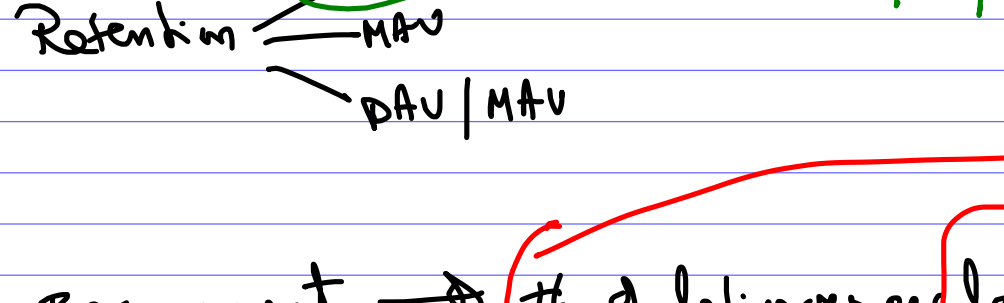
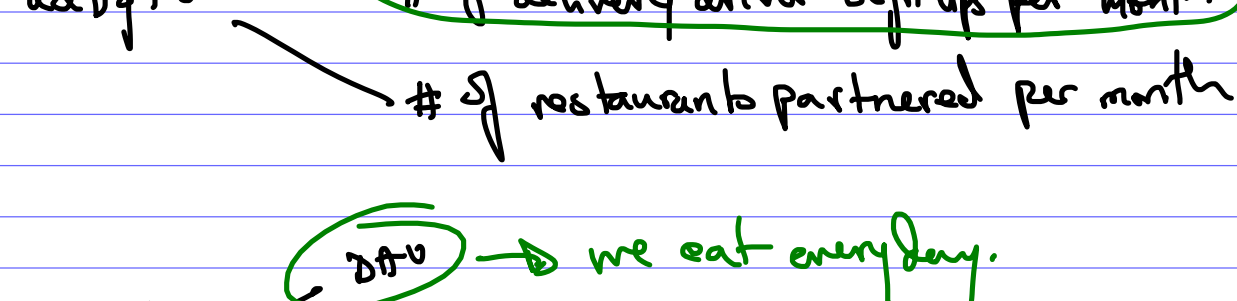
one of uber's flagship app that delivers restaurant meals to customers on-demand.

To help people get anything i.e. food, groceries etc. through the comfort of a phone and help people earn their way.

3 sided market: restaurants, delivery drivers, customers



- 1 signup
- 2 browse restaurants + menus
- 3 order

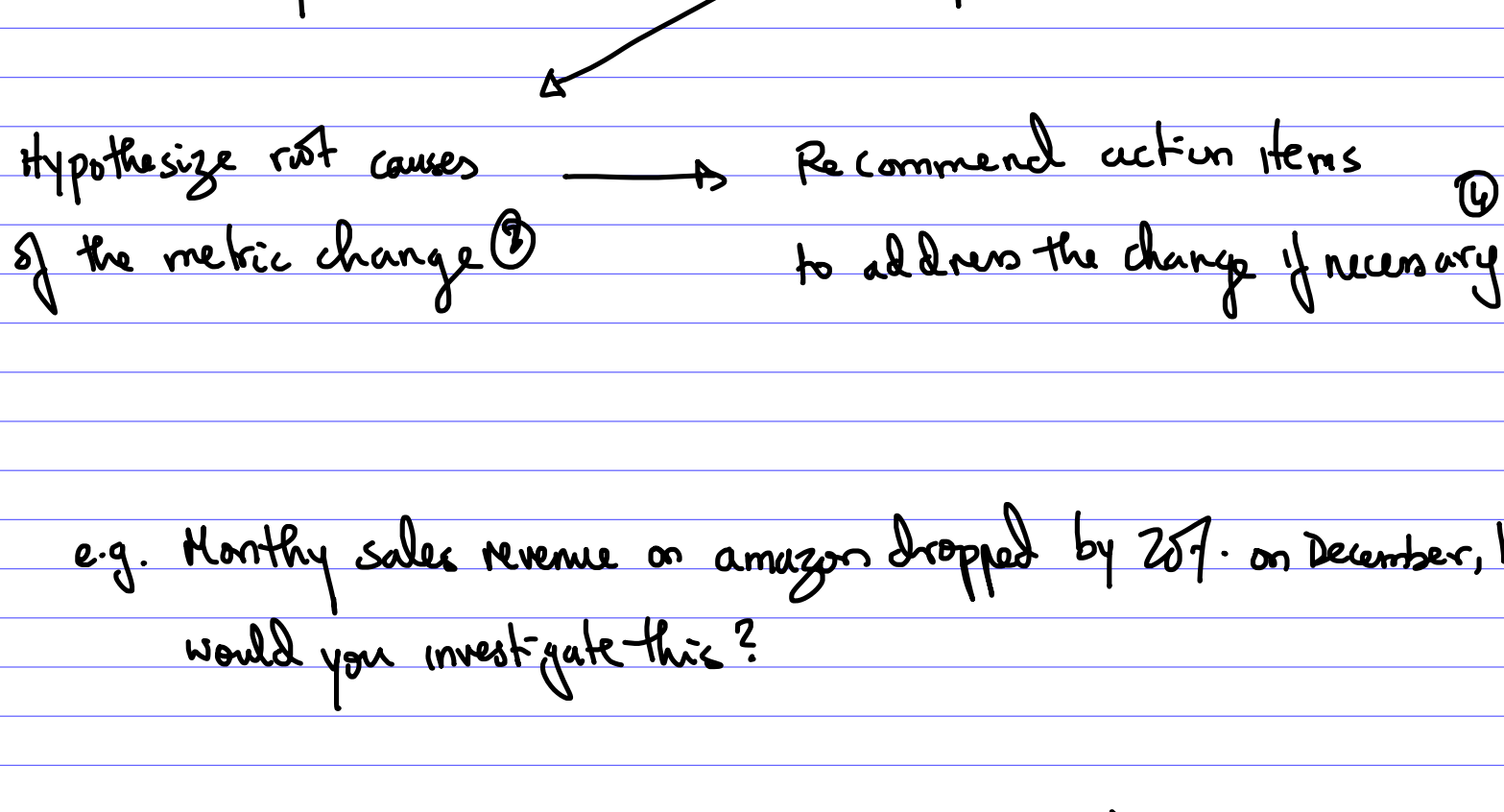


Referrals \rightarrow # of referrals / month

monetization \rightarrow % of users on (premium) user base

METRIC INVESTIGATION

* A product case that involves investigating an unexpected change in key metrics



eg. Monthly sales revenue on amazon dropped by 20% on December, how would you investigate this?

① sales revenue = $\sum (\text{Price}(i) * \text{quantity}(i))$

↑ i - transaction

↳ looking at the building blocks of a metric may give insights as to how the metric change has come.

* Amazon is a conglomeration of multiple businesses are we taking into consideration all the businesses or a specific part of Amazon?

* is the 20% drop based on the sales revenue compared to Dec last year or the previous month of same year?

② * **Outline Research questions / procedure to identify Root cause**

* **outline your approach to the investigation**

* **WE ARE NOT FINDING THE ROOT CAUSE BUT RATHER DEVELOPING AN APPROACH FOR ANALYSIS**

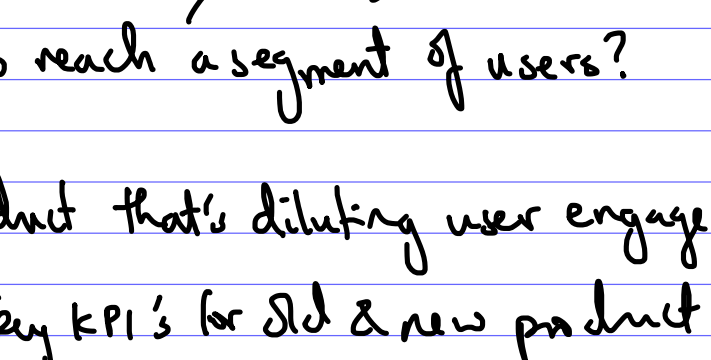
* Time: is the drop sudden or gradual? is it seasonal?

* Funnel: Which step of the conversion procedure does the drop occur?

* Regional: is the change global or regional? looking at revenue share across countries & continents.

* Device: is the change seen across devices or some OS?

* Other features: is the change seen across the platform or specific products.



* Competition: is the decline happening to other companies?

(terms: customer patterns, user experience factors)

③

* is the drop following a seasonal trend?

* is there a broken feature, outage, or data pipeline issue? **faulty reporting**

* Has there been a new product or feature released with bugs or change aversion?

* Are users losing interest?

* is advertising failing to reach a segment of users? **Amazon is well established**

* is there a similar product that's diluting user engagement? i.e. cannibalism

↳ look at key KPI's for old & new product

* Are users switching to competitors

* other external factors: Media backlash, inflation, pandemic **faulty reporting**

④

↳ wait longer to see if the trend continues to drop

↳ Notify the product &/or engineering managers to address the change.

↳ Address the problem by fixing the code.

* Rollback the feature.

↳ Develop a new marketing, funnel, &/or product strategy to increase user engagement & growth.

eg. Facebook engagement declined by 10% this month. What do you do?

①

* Are we talking about Facebook core app or the ecosystem as a whole?

* engagement? **proxy for engagement**

↑ Total session time per day & per month?

↑ encapsulates the overall functionalities users display on FB.

* 10%? Compared to previous month & year on year?

↳ is it gradual or sudden change?

②

* check the trend of previous years to evaluate seasonality.

* check page visits, ad clicks, DAU, MAU

* **Metrics are correlated**

* Assess by continental & country levels

* Assess by device types

* check engagement of core features within the app e.g. groups, marketplace.

Also check other products within Meta's ecosystem.

* is the decline happening to competitors? **faulty reporting**

③

* 10% decline is too steep for seasonality to occur

* is there a broken feature, outage, or data pipeline issue? **faulty reporting**

* A major bug in core feature such as News Feed, or potentially new layout on FB causing change aversion. **faulty reporting**

* Are users losing interest?

* is advertising failing to reach a segment of users? **Facebook is well established**

* is there a similar product that's diluting user engagement? i.e. cannibalism

* Are users switching to competitors

* other external factors: Media backlash, inflation, pandemic **faulty reporting**

↳ this would actually increase the engagement

④

* Notify & fix

↳ look at error logs

↳ look at timeline of major releases

eg. Youtube comments are up by 5% but watch time is down by 3% this month. What do you do?

①

* comments & text replies to videos

* watchtime: time spent consuming videos [NSM]

↑ Gauge engagement.

* is the decline year on year or compared to previous month.

* given comments increased we expect watchtime to ↑ also?

②

* check the trend of previous years to evaluate seasonality

* check page visits, view count, ad clicks, DAU, MAU

* Assess by continental & country levels

* Assess by device types

* check engagement of core features **shorts**

* is the decline happening to other competitors? **live**

* the changes could be related or independent of each other.

③

* is the drop following a seasonal trend? Maybe as its 3% **faulty reporting**

* is there a broken feature, outage, or data pipeline issue? **faulty reporting**

* A new UI/UX on YT video page is causing a behavioral change. **maybe comments ↑ b/c of UI/UX**

* Are users losing interest? **but watch time has nothing to do with this maybe the ranking algo is at work, only**

* is advertising failing to reach a segment of users?

* is there a similar product that's diluting user engagement? i.e. cannibalism

* Are users switching to competitors? **faulty reporting**

* other external factors: Media backlash, inflation, pandemic **faulty reporting**

④

* Notify & wait

* fix

* Rollback

* new marketing strategy **faulty reporting**