

# Product Performance Metrics and Growth Hacking

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## Abstract

Product performance metrics are key indicators that define a product's success and tie the goals to business objectives. Ultimately identifying key KPIs is essential to create a North Star for the product. Usually, product metrics are categorized into acquisition, engagement, retention, and financial aspects. However, the metrics' scope goes beyond these metrics to a more contextual form with an increased emphasis on leading indicators than lagging indicators.

The rise in adoption of cloud technologies due to COVID-19 has given way to reliable and scalable solutions, with access to real-time data across geographies. Further, business intelligence tools for data visualization provide excellent avenues for gaining insights from the collected data. However, this alone is not sufficient. Product managers can leverage deep knowledge of user personas, use hyper-personalization and run experiments such as A/B testing to add significant customer experience value. Product managers need to identify the pain points for different customer segments and inculcate insights from product metrics to create growth hacking strategies.

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## 1. Introduction

In an era where automated deployments, DevOps and CI/CD have substantially reduced the time to release a new product feature, product managers are always on their toes, tracking metrics to measure the product's performance. With cloud technologies, metrics, monitoring, and alerting mechanisms are streamlined. Businesses have moved from on-premise to cloud for scalability and reliability. COVID-19 crisis has further led to increased cloud spending by 37% to \$29B during the first quarter of 2020 [1].

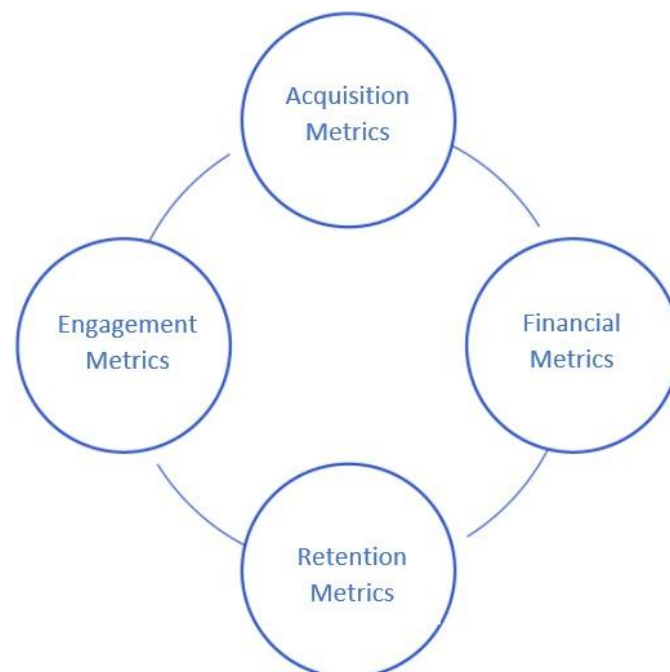
Now application metrics to monitor the latencies, error and success rates, server load, etc., can be measured accurately. System metrics such as average CPU utilization, IOPS can be calculated on a real-time basis with Cloudwatch metrics. A blog on the Amazon AWS website lists how CloudWatch provided BT with a cost-effective and robust monitoring solution that allowed it to monitor millions of Smart Hub 2 devices across the UK, improving its alerting mechanism and improving service to more than 30 million customers [2].

## 2. Methodologies

Metrics are usually classified as leading and lagging indicators. While lagging indicators assess the business's current state, leading indicators measure the likelihood of achieving future goals.

Lagging indicators are output-based. Even though product managers can capture these metrics with great ease, they struggle to translate lagging metrics to customer pain points for the user personas. The onus has shifted from mere data collection to deriving meaningful insights from the harnessed data. In such cases, data intelligence and data analytics tools such as Tableau and Microsoft Power BI can be used for visualization and interpretation. These metrics can further act as a base to the historical data and can be used in future releases to identify the probabilities associated with the identified risks, mitigating risks in future releases.

Such metrics are broadly classified into acquisition, activation, engagement, retention, and financials [3].



**Acquisition metrics:** These metrics measure the adoption of product amongst users. An example of when this could be useful is when a product manager is tasked to increase the userbase from 15M to 20M in three months. Generally, the acquisition metrics are segregated by customer segments or regions to drive adoption rates for each segment or region & deploy relevant strategies to boost user acquisition. *Daily active users per region/segment:* This metric is meant to identify the number of daily active users. The focus here is on the number of active users and not the user sessions.

*Source of referrals:* The source of referrals hints at the channels that successfully bring users to the platform. For instance, if 15% of the userbase is redirected through LinkedIn referrals, more budget and resources can be allotted to LinkedIn to tap more audience from this channel.

*Conversion Rate:* Conversion rate is a key metric for products with a freemium model. It measures the number of users that choose to upgrade the product from a free tier to a paid subscription. It also quantifies the number of users that convert the visit to a signup.

**Engagement metrics:** Engagement metrics measure the interest generated in consumers' minds for the product and their subsequent engagement with the product in a particular time frame [4]. These metrics help differentiate amongst power users, medium users, and light users.

*Total watch time per user:* It measures the total time users have been engaged with the product. This could be segregated based on the day(morning/night), the peak hours of engagement, etc. For a recommendation-based OTT platform, more engagement enables increased data gathering and aids in providing relevant recommendations to users based on observed behaviour rather than expected behaviour. For instance, the higher the watch time per user in Netflix, the more Netflix can provide relevant and personalized content to its users. Netflix's recommendation system accounts for 80% of the hours of content streamed on the platform, whereas searches lead to just 20% of the streamed content. Hence, a significant chunk of revenue comes from organic recommendations.

**Retention metrics:** The last thing a product manager wants is a drop in the number of users using the product. Metrics such as churn rate and NPS can be a good predictor of attrition [5]. Based on such metrics, product managers can identify trends and focus on the right audience.

*Churn rate:* Churn rate is the annual rate at which customers who have subscribed to a product/service stop their subscriptions. Churn rate acts as an input to customer lifetime value (LTV) modelling.

*Customer lifetime value:* CLTV quantifies the revenue potential within a specified time- frame regarding the customer's engagement with the product.

*Customer Churn Rate = (Customers Lost/ Total customers) \* 100 %*

*Customer LTV = (Revenue of the time-period) \* 100 / (Churn Rate)*

Revenue churn is commonly used in the SaaS business model as it relies on a recurring revenue model. [6]

*NPS/word-of-mouth:* Product managers usually spend a considerable amount of time conducting surveys or interviewing customers to derive NPS. The key here is to find out the promoters and continue to maintain a good relationship with them by adding wow factors to the product (Kano's model). On the other hand, the detractors are to be identified, their pain points to be resolved, and the key is to turn them into loyalists or let them go.

**Financials metrics:** Financial metrics enable managers to track the resources spent vs benefits gained and provide insight into the cost v/s value curve over a prolonged or short time.

*Customer acquisition cost:* This metric measures the average cost incurred in acquiring a new customer. This is useful to measure in the case of industries such as construction, where conversion is costly. This metric is also used by new-age internet companies, especially e-commerce, where churn rate plays an important role, and CAC decides whether to focus on new customers or care more for older ones.

*Average revenue per user (ARPU):* It measures the average revenue gained per user. This metric is useful in industries with competitive pricing, such as Telecom & Financial Services industries.

*Revenue growth rate:* Revenue growth rate measures the jump or surge in revenue over time. This metric is most important when the product is in the maturity stage. In the inception or growth stage, market share is more relevant than the revenue growth rate.

## **Contextual Metrics**

The metrics for evaluating product performance should be correlated with the context of the product. Metrics to be considered would be different when the product is a SaaS application vs a platform vs a mobile app. A few contextual metrics are discussed below:

### **Mobile applications**

*Performance of channels:* Traffic sources are helpful to identify the channel that is either generating interest in the minds of consumers or routing traffic to the application [7]. The audience's reaction to a push notification, email message or SMS sent via a marketing campaign could be different. The product can tweak the value proposition based on these outcomes.

*Application metrics:* Session duration, app ratings, app reviews and percentage of paid users in the case of the freemium model are relevant metrics for mobile applications.

## **Feature metrics**

Features communicate the value of the product to the users. A newly added feature's response is usually based on the market perception of value and the extent of behaviour change required. Product managers can identify a behavioural cohort of people from the overall user population based on their usage of the feature and deliver a personalized customer experience, leading to customer retention. They can also decide whether to kill a feature or not to prevent feature fatigue. [8]

*Percentage of users completing the workflow:* This metric acts as health status for the feature, quantifying the dropouts and indicating ease of access in completing a particular workflow.

*Growth in adoption of a feature:* This metric denotes the success of the feature. The aim to launch new features is to add substantial value to the users or increase traction to the product via the feature set. Therefore, it is essential to track the growth in the adoption of the feature over time. If the product grows at 15% per annum, but a particular feature grows at a meagre 2-3%, it is possible that the feature either has not been marketed and communicated to the targeted users or needs a significant overhaul in terms of design, usefulness and usability.

## **Ecommerce**

Obsession with measuring and optimizing metrics has enabled almost all e-commerce companies worldwide to grow fast, stay focused and maximize resource utilization. Proper measurement of business' website performance has ensured that strategies and operations are continuously improved to stay as a relevant competitor in the fierce competition in market [9]. The performance should pertain to the relevant metrics for the domain. For instance, Stockout and Shopping cart abandonment is relevant for e-commerce companies, whereas bounce-rate and the number of app downloads is relevant for all app-based offerings.

## **Product platforms**

Product managers need to have metrics pertaining to each side in the case of product platforms. For example, one might want to evaluate the supply-side metrics of Uber via the seller concentration or the growth rate in drivers while for the demand side, the percentage searches ending in trip completion and the 'average transaction size' of trips are more relevant [10].

Apart from sides, mobile applications include metrics like - number of app launches, session duration, bounce rate, Viral Coefficient, Churn Rate, app downloads, signups, referrals made/accepted etc.

## **SaaS product**

In a SaaS product, virality (measured by K-factor), recurring revenue, and renewal

rate are few crucial metrics.

*Virality:* The tendency of a piece of information to be circulated rapidly and widely from one Internet user to another; the quality or fact of being viral. Virality Rate is the number of people sharing your post relative to the number of unique views (also called impressions) it had during a period (daily/weekly/monthly etc.) [11]

*Renewal Rate:* Renewal rate measures the percentage of customers who end up renewing their subscriptions to services/products at the end of the subscription duration. A very high renewal rate (like 97% for Costco membership) indicates loyal customers, resulting in long-term value.

### **Social media products**

*Reactions:* Reactions such as Likes, Shares, comments, etc. especially provide qualitative data to gauge the interest in the minds of consumers.

*Organic vs paid traffic:* Organic traffic comes to sites (primarily businesses) through users' searches. On the other hand, paid traffic is generated through advertisements and sponsored listings when users click on an advertisement and land on the business' page. Search engine optimization (SEO) improves the quality and quantity of traffic coming on a website using organic search engine results like Bing.

### **Review Framework**

A review framework is recommended for assessing the strategic and operational fit of the identified metrics. With a review framework, Product Managers can filter out irrelevant metrics, layout the short-term and long-term impact of the chosen metrics and prepare a contingency plan for the desired metrics.

In the table below, the metric 'monthly churn rate' is mapped against the following review parameters:

- i. *Business Objective*
- ii. *Impact on the business objective*
- iii. *The complexity of collecting data*
- iv. *Ease of interpretation across teams*

<b>Metric</b>	<b>Review Parameters</b>	<b>Strategic/ Operational Fit</b>	<b>Associated metrics</b>	<b>Measurement of Negatives &amp; Contingency</b>
<b>Monthly Churn rate</b>	<b>Business Objective -</b> Increase customer retention by 15%  <b>Impact on Objective</b> – High  <b>The complexity of Data Collection -</b> Low  <b>Ease of interpretation – Yes</b>	Approve	# of referrals,  increase in  revenue	Annual subscription plans: difficulty in translating it to monthly churn  Seasonal demand: unexpected variations in dropout pattern
<b>Revenue Growth  rate</b>	<b>Business Objective -</b> Decrease customer acquisition cost by 10%  <b>Impact on Objective</b> - Low  <b>The complexity of Data Collection –</b> Medium  <b>Ease of interpretation – Yes</b>	Reject	NA	NA

Assuming that the business objective is to increase customer retention by 15%, the impact of measuring the monthly churn rate to validate the success of the business objective is very high. This metric can be easily collected and can be easily interpreted across teams. Therefore, the strategic and operational fitment indicates that the monthly churn rate can be considered a success metric. Post-Strategic/Operational fitment, measurement of the abnormalities or contingencies related to the metric are highlighted.

### *Contingencies*

Suppose the platform only offers an annual subscription plan that most customers renew around the same time every year. In that case, there could be an unexpected variation in the dropout pattern due to seasonal demand. Once plotting this metric pattern is done over a long time, it would be clear where inconsistencies could be observed and those reasons.

### *Other associated metrics*

Lastly, metrics that could be impacted in the short-term or long-term by the chosen metrics are also specified. A drastic reduction in churn rate could mean that users explore the application more, leading to increased referrals or higher revenue for the product in the long run.

Analyzing another metric, '*revenue growth rate*', the business objective is to decrease the customer acquisition cost by 10%. Since the metric has no correlation with the business objective, it is rejected.

## **Growth Hacking**

Growth hacking sits at the intersection of marketing, product, and data. A growth hacker is responsible for optimizations, creative marketing, and analytics to bring growth to the product [12].

### **Elements of Growth Hacking [13]**

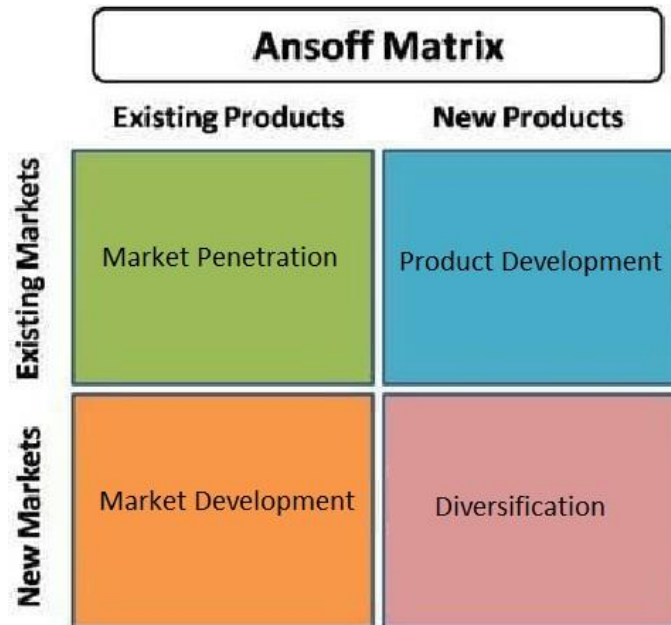
- **Low-Cost Technique:** Frugal ways to derive methodologies to achieve growth
- **Data-driven:** Relies on data rather than gut feeling
- **Disruptive to invoke reaction:** Growth hacks are unique & are created/used on a case-to-case basis, and require creativity, For instance, Gmail's invite-only worked for Gmail, triggering FOMO but failed for Google+ or Buzz.
- **Experimentation:** Processes are automated after a scalable growth tactic is identified to use freed resources for experimentation further.
- **Relevant audience:** Focus on influencers/ power-users and bring relevant traffic. Digital marketing techniques such as SEO/AdWords are a small subset of growth hacks available.

## **Approach to Growth Hacking**

### *Product/Market Expansion Grid*

Ansoff matrix is a strategic planning tool that defines opportunities for business growth. Four strategies for product growth: market penetration, market development, product development, and diversification.





Market penetration strategy is used to gain market share. For instance, Coke and Pepsi spent massive promotional budgets to gain market. Product development is a line extension strategy in which firms can leverage customers' existing knowledge to launch new products. Market development strategy is used to re-position the brand or build new markets for an existing product, while growth strategy through diversification is usually risky due to lack of both product and market expertise.

#### *Cohort Analysis*

Amazon established its dominance in e-retail by offering the lowest prices through cohort analysis of its customers who also buy from Walmart, Target, Kroger etc.

#### *Platform Integration*

Firms such as Airbnb have used Platform Integration to grow their userbase substantially. New products do it to leverage another beloved platform's reach and scale.

#### *Digital marketing and Social strategies*

Marketing hinges on relationships and not just products. There is a need to address the motional values along with functional and economic values. A way to build connections with end-users is to give them incentives to use the platform. For instance, Yelp re-invented the social-media strategy by rewarding 'Elite' users, thereby maintaining a community that wrote genuine, high-quality reviews. [14] Dropbox used a simple referral reward system, giving 500MB increases in storage to both the referee and the referred party when the latter signed up for any level of service. Dropbox increased its customer base from 100,000 to 4 million users in 15

months through its referral program. [15]

## Recommendations

- B2B and B2C offerings have different value chain – growth hacks follow different strategies for both. In the B2B space, the strategy is to understand the people involved in the decision buying centre and address their unique needs. While in B2C, customers can be segmented into the top of the funnel (TOFU) and bottom of the funnel (BOFU), and a unique set of strategies can be derived for both segments
- Data Intelligence tools can be used to derive meaningful insights through visual representation of metrics/raw-data.
- Lagging indicators should be used; pain-points should be translated for targeted personas.
- Probabilities associated with the risks and contingencies should be identified, and a risk-mitigation plan should be put in place.
- Even though deriving a set of metrics is important for a holistic view of the product, a ‘North-Star’ metric should be identified & product’s success should be defined.

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