

Understanding Metrics for Business Improvement

Introduction

Product teams use analytics to:

- Understand users and target appropriate segments.
- Improve user experience (UX) by analyzing customer behavior.
- Measure product adoption and increase its value.
- Evaluate the effectiveness of marketing campaigns.

Types of Analytics

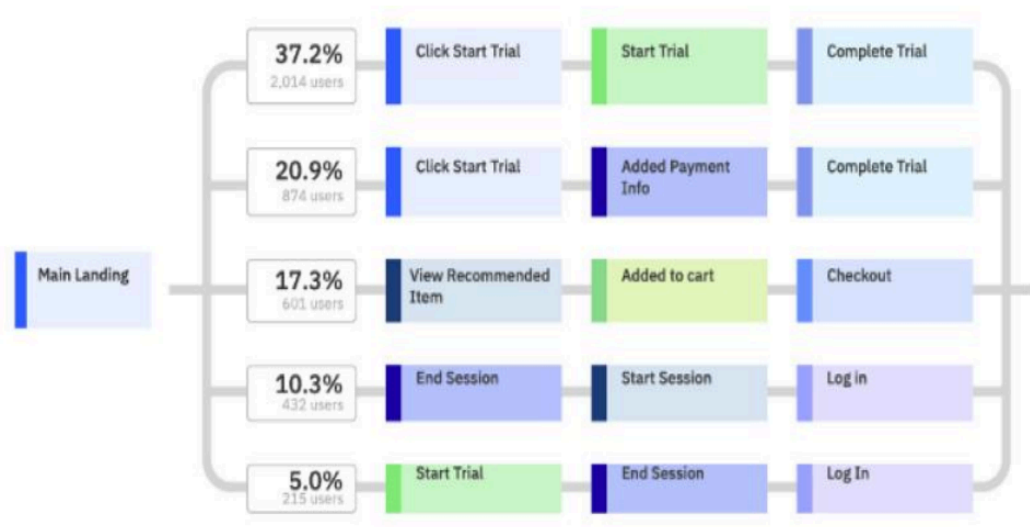
1. **User Behavior Analytics** (e.g., click paths, engagement)
2. **Business Analytics** (e.g., active users, conversion rate, lifetime value)
3. **Financial Analytics** (e.g., average selling price, billings)
4. **Performance Metrics** (e.g., load time, uptime)
5. **Operational Costs** (e.g., storage, hosting)
6. **Go-to-Market Costs** (e.g., acquisition costs, sales costs)
7. **Sentiment Analysis** (e.g., NPS, customer satisfaction)
8. **A/B Testing** (e.g., testing new features or UI changes)

[Insert Types of Analytics Diagram here]

User Behavior Analytics

Key Metrics to Analyze:

- **Popular and Unpopular Features:** Which features are frequently used and which are ignored.
- **Friction Points:** Identify where users face issues in workflows.
- **User Engagement:** Analyze frequency and duration of user interactions.
- **User Segmentation:** Categorize users as heavy users, occasional users, or freeloaders.
- **User Workflow:** Map the user journey for specific tasks.



Exercise: Based on user behavior analytics, identify one popular feature and one friction point in your product.

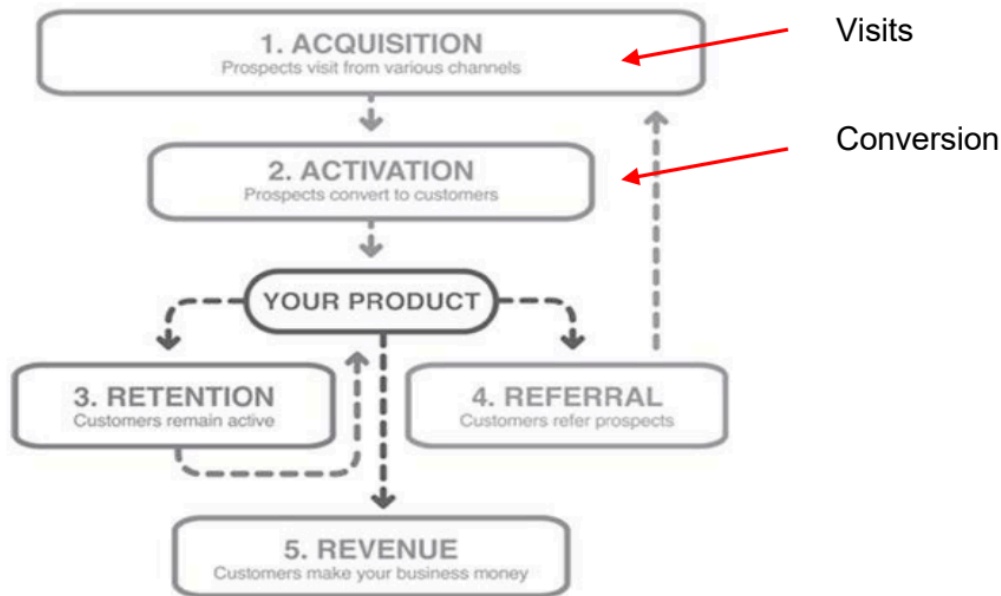
Solution:

- **Popular Feature:** Quick booking in an app.
- **Friction Point:** Complicated checkout process leading to user drop-off.

Business Analytics

Dave McClure's AARRR Framework

- **Acquisition:** Number of new prospects visiting the site.
- **Activation/Conversion:** Percentage of prospects signing up as customers.
- **Retention:** Percentage of customers remaining active over time.
- **Revenue:** Average revenue generated per customer.
- **Referral:** Number of customers referring the product to friends.



Order of Optimization

1. **Retention:** Focus first on retaining users, as it indicates product value.
2. **Conversion:** Improve sign-up rates to grow the user base.
3. **Acquisition:** Attract more users once the product shows high retention and conversion.

Exercise: Identify which metric you would prioritize and why.

Solution:

- **Metric to Prioritize:** Retention.
 - **Reason:** Retention demonstrates product value and user satisfaction.
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Financial Analytics

Key Metrics

- **Average Revenue Per User (ARPU)**
 - Example: Amazon, Ola, Slack
 - Formula: $ARPU = \text{Total Revenue} / \text{Number of Users}$
- **Customer Lifetime Value (CLV)**
 - Formula: $CLV = ARPU * \text{Avg. Customer Lifetime} * \text{Gross Margin}$
 - Helps in product pricing and customer acquisition strategies.

Exercise: Calculate ARPU and CLV for a product with total revenue of \$100,000, 500 users, an average customer lifetime of 2 years, and a gross margin of 30%.

Solution:

- **ARPU** = $\$100,000 / 500 = \200
 - **CLV** = $200 * 2 * 0.30 = \$120$
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Sentiment Analysis: Net Promoter Score (NPS)

Overview

NPS is used to measure customer sentiment by asking: *“How likely are you to recommend the product to a friend?”*

- **Promoters** (scores 9 or 10)
- **Passives** (scores 7 or 8)
- **Detractors** (scores 0 to 6)

Formula: $NPS = \% \text{ of Promoters} - \% \text{ of Detractors}$

Exercise: Based on survey results, if 60% of respondents are promoters and 20% are detractors, calculate NPS.

Solution:

- **NPS** = $60\% - 20\% = 40$
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A/B Testing

Overview

A/B testing is used when the impact of a change is uncertain or high-risk. It involves testing different versions (A vs. B) of a product element to see which performs better.

Example:

- A company notices a low conversion rate of 5% on its landing page. A new design is tested on a small percentage of users.

- If conversion increases to 6%, statistical analysis determines the reliability of the improvement.

Exercise: What feature in your product would you like to A/B test, and what outcome would you expect?

Solution:

- **Feature:** Call-to-action button color.
 - **Expected Outcome:** Increased click-through rate by 1-2%.
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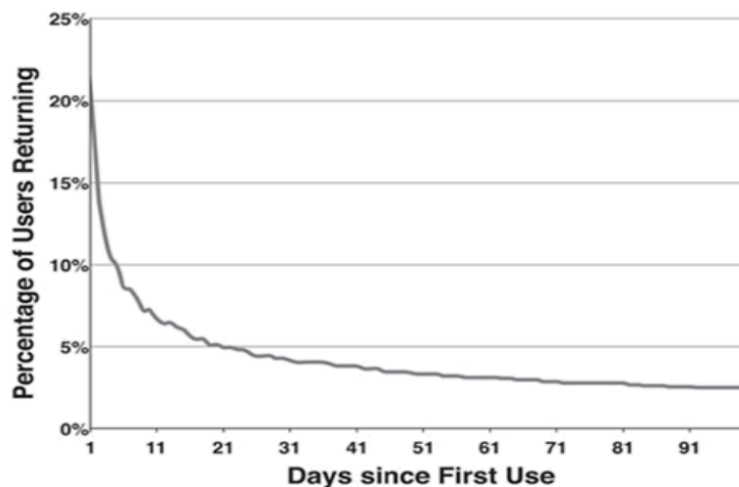
Case Studies

Case Study 1: Intuit - Improving Conversion

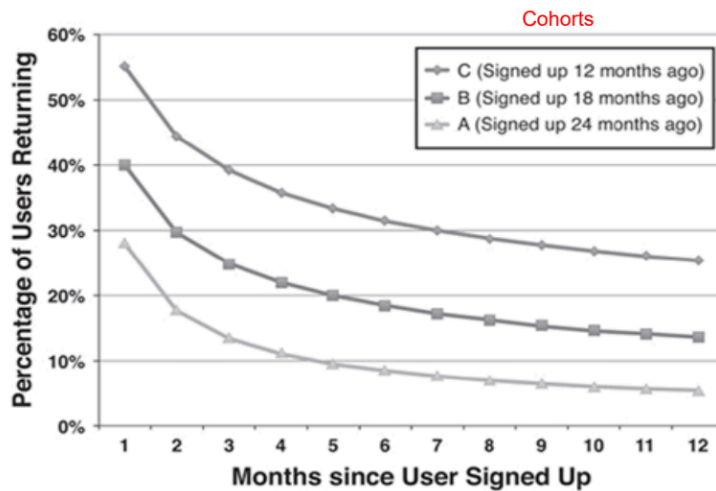
- **Problem:** Low conversion rate during sign-up.
- **Solution:** Analyzed the sign-up process, conducted usability testing, and identified UX issues. Made quick improvements to the UX design.
- **Result:** Conversion rate improved by 40%.

Measuring retention rate

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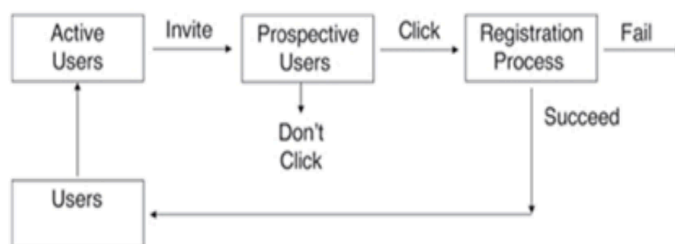
Measuring improvement in retention rate

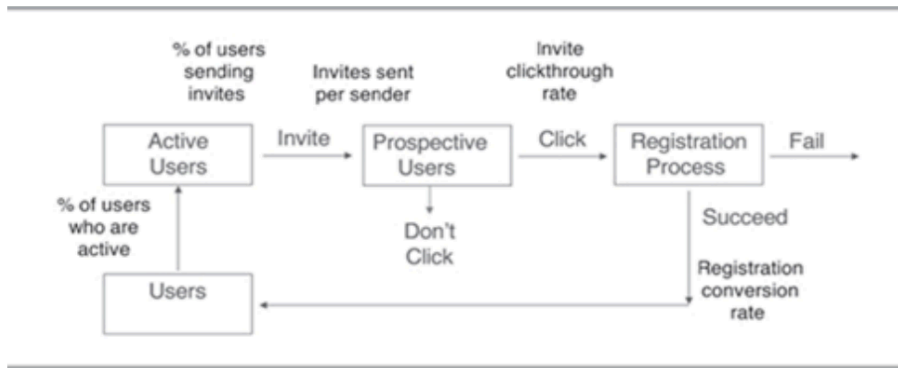


Retention rate of different cohorts, as the product-market fit is improved

Case Study 2: Friendster's Viral Loop

- **Metrics:**
 - **Baseline:** 15% of users send invites, each sending 2.3 invites on average, with an 85% registration conversion rate.
- **Action:** Introduced an address book import feature.
- **Outcome:** Average invites increased from 2.3 to 5, leading to better user growth.



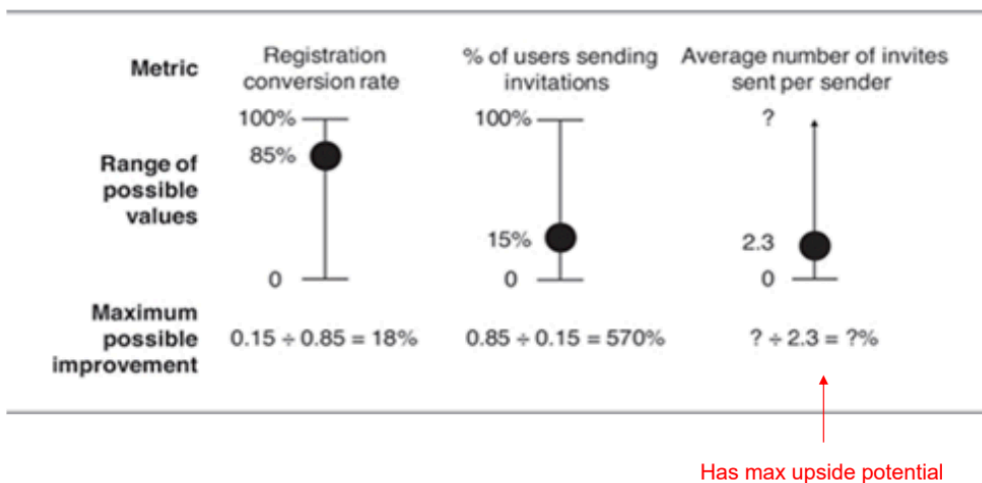


Exercise: Identify a viral loop in your product and suggest an improvement.

Solution:

- **Current Viral Loop:** Social media sharing of product updates.
- **Suggested Improvement:** Incentivize sharing with rewards for referrals.

Upside potential of Metrics



Outcome

