

# Business Metrics Lesson: Terminology and Formulas

Metric	Formula	Commonly Used Alternate Terms
<i>Marketing</i>		
<b>Click through rate (CTR)</b>	$(\text{Clicks} / \text{Impressions}) * 100$	
<b>Cost Per Click (CPC)</b>	Cost of advertising on the source platform / Number of people who clicked on that ad	
<b>Cost Per Lead (CPL)</b>	Cost of advertising on the source platform / Total number of leads	
<b>Customer Acquisition Cost (CAC)</b>	$(\text{Total marketing expenses} + \text{total sales expenses and salaries}) / \# \text{ of customers acquired}$	
<i>Marketing &amp; Financial</i>		
<b>Cost Per Acquisition (CPA)</b>	$(\text{Marketing and Sales Cost}) / \text{number of new leads customers}$	
<b>Life Time Value (LTV)</b>	$\text{Average Sale Revenue} \times \text{Number of Repeat Sales} \times \text{Expected Retention Time} \times \text{Profit Margin}$	
<b>Average Sale Revenue</b>	$(\text{Total customer revenue} / \text{Number of purchases in the cycle})$	
<b>Total Sale Revenue Per Cycle</b>	Revenue earned from customer per purchase cycle	
<b>Number of Sales Per Purchase Cycle</b>	Number of times customer buys during the purchase cycle	

<b>Cost Per Acquisition</b>	(Cost of marketing and sales)/ number of new leads	
<b>Expected Retention Time</b>	Amount of time (measured in purchasing cycles) you expect to retain the customer.	
<b>Average Sale Revenue</b>	(Total customer revenue/ Number of purchases in the cycle)	
<b>Profit Margin (%) Per Customer</b>	$((\text{Average Sale} - \text{Average Cost of Sale}) / \text{Average Sale}) \times 100$	
<i>Growth</i>		
<b>Stickiness</b>	Daily Active Users/ Monthly Active Users	
<b>Churn rate</b>	$(\text{Customers beginning of month} - \text{Customers end of month}) / \text{Customers beginning of month}$	
<i>Financial</i>		
<b>Revenue</b>	Money that a company makes from the sales of its products and services	
<b>Cost of Goods Sold</b>	Direct costs the company incurs to develop and product the product or service being sold	Cost of Sales Cost of Revenue
<b>Gross Profit</b>	Revenue - Cost of Goods Sold	
<b>Selling, General and Administrative expenses</b>	Selling, General and Administrative expenses Marketing, sale commissions and salaries for office staff, supplies, computers, legal expenses, rent, utilities, taxes and interests on any loans). SG&A typically exclude research and development expenses.	Operating Expenses

<b>Total Operating Expenses</b>	Expenses incurred outside of direct manufacturing costs	
<b>Operating Profit</b>	Gross Profit - Total Operating Expenses	Operating Income, Earnings Before Interest and Tax (EBIT)
<b>Net Profit</b>	Operating Profit - (Interest + Taxes)	Net Income
<b>Gross Margin</b>	$(\text{Total Sales Revenue} - \text{Cost of Goods Sold}) / \text{Total Sales Revenue}$	
<b>Contribution Margin</b>	$(\text{Revenue} - \text{Variable Costs}) / \text{Total units sold}$	

## Overarching Themes

Businesses use **Key Performance Indicators** to track how they are performing on key goals or objectives.

The **Marketing Funnel** captures the various stages in the customer's journey. At the top of the funnel, it captures the impressions, clicks, leads and conversions at the bottom of the funnel.

**Optimizing the funnel** refers to maximizing the conversion rate at each level of the funnel.

The **Sales Funnel** captures the various stages in the sales cycle. At the top of the funnel, it captures the prospects, then the leads and qualified leads, and ends with bookings or closed deals at the bottom of the funnel.

It is important to look at the **distribution of the data** to understand if the measures of central tendency represent a normal distribution. Looking at the distribution and measures of central tendency is a critical step of the data analysis process.

Data should be examined split across cohorts, business cycles, time, product lines, regions and other **grouping** criteria to fully understand the data. It is critical to slice the data across various factors to make sense of the data and make recommendations.