



CHURNZERO

# Churnopedia of SaaS Definitions and Metrics

For Customer Success Professionals



# The SaaS Definitions & Metrics Customer Success Needs to Know

To advance as a Customer Success professional, not only do you need to be well-versed in measuring customer health, but also the health of subscription businesses. Understanding the metrics that SaaS companies use to assess success is fundamental to your ability to make strategic choices, track performance against shared company goals, and ultimately, prove your value as a strong business leader. Use this essential resource (filled with realistic examples) to learn the SaaS definitions, metrics, and formulas that every Customer Success professional needs to know.

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Annual Contract Value (ACV)

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Average Revenue Per User/Unit (ARPU)

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Backlog

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Billings

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Churn Rate (Simple)

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- Churn Rate by Customer Count
  - Churn Rate by Recurring Revenue
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Customer Lifetime

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Customer Lifetime Value (CLTV)

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CLTV : CAC Ratio

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Gross Margin

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Net Promoter Score® (NPS)

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Renewal Rate

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Revenue

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Deferred Revenue

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Recurring Revenue

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Monthly Recurring Revenue (MRR)

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Annual Recurring Revenue (ARR)

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Expansion Monthly Recurring Revenue (MRR)

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Unit Economics

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## Annual Contract Value (ACV)

The Annual Contract Value (ACV) is the average one-year value of a customer contract. ACV is used in SaaS businesses that sell one- or multi-year agreements. ACV most often refers to renewable items such as software or services that can be renewed in the next period. Examples of non-renewable items include implementation fees and one-time training fees.

### EXAMPLE:

You have a total of 3 customers:

- Customer 1 has a 1-year contract. They paid \$12,000 per year for software only. Their ACV is \$12,000.
- Customer 2 has a 3-year contract for \$30,000. Their ACV is \$10,000 (\$30,000 contract value ÷ 3 years).
- Customer 3 has a 1-year contract for \$18,000, of which \$12,000 was for software, \$3,000 was for continual training access for employees (which they plan to renew each year), and \$3,000 was for implementation. Their ACV is \$15,000 (\$12,000 for software + \$3,000 for continuous training).

In this example, the company's average ACV is \$12,333.33. [(\$12,000 for customer 1 + \$10,000 for customer 2 + \$15,000 for customer 3) ÷ 3 total customers]

## Average Revenue Per User/Unit (ARPU)

Average Revenue Per User or Unit (ARPU) is the revenue generated per user or unit within a time period, usually monthly or yearly.

$$\text{ARPU} = \frac{\text{Total Revenue}}{\text{\# of Users or Units}}$$

### EXAMPLE:

- In January, you report revenue of \$500,000 with 10,000 users. Your monthly ARPU is \$50 (\$500,000 revenue ÷ 10,000 users).
- You introduce new add-ons at the end of the year that your customers purchased. Therefore, you report annual revenue of \$750,000 with 10,000 users for the year. Your yearly ARPU is \$75 (\$750,000 revenue ÷ 10,000 users).

## Backlog

Backlog consists of revenue that is committed by the customer in advance of their service and is not yet invoiced. While your business has a commitment from the customer to pay, an invoice hasn't been sent to the customer and the products or services haven't been delivered.

### EXAMPLE based on an annual subscription that is billed quarterly:

- On January 1, you sell a customer and their subscription immediately starts. They commit to a 1-year contract for \$12,000 to be paid quarterly. You immediately invoice them \$3,000 for the first quarter. As of January 1, your backlog is \$9,000. On April 1, you invoice the customer \$3,000 for the second quarter. Your backlog then decreases to \$6,000.

## Billings

Billings are the amounts that you invoice your customers.

### EXAMPLE:

In January, you have a total of 6 customers:

- Customer 1 has a month-to-month contract (cancelable at the end of each month) and pays \$1,000 per month. Each month, you bill \$1,000. Your January billing is \$1,000.
- Customer 2 purchased a \$12,000 annual contract last November. You billed \$12,000 last November. Your January billing is \$0.
- Customer 3 has a \$12,000 annual contract paid quarterly. The customer started last September, so their second quarterly invoice will go out in January. Your January billing is \$3,000.
- Customer 4 purchased a \$12,000 contract in January and pays the annual cost upfront. Your January billing is \$12,000.
- Customer 5 purchased a \$12,000 contract in January with a 1-year commitment and pays monthly. Your January billing is \$1,000.
- Customer 6 purchased a \$12,000 annual contract in January and pays month-to-month (cancelable at the end of each month). Your January billing is \$1,000.

Your total January billings are \$18,000 ( $\$1,000 + \$0 + \$3,000 + \$12,000 + \$1,000 + \$1,000$ ).

## Bookings

Bookings are the sum of all committed dollars in your new contracts.

### EXAMPLE:

In January, you have 4 contracts:

- Contract 1 is a month-to-month contract (cancelable at the end of each month) that pays \$1,000 per month. Your booking is \$1,000.
- Contract 2 is a \$12,000 annual contract where the customer pays the total contract value upfront. Your booking is \$12,000.
- Contract 3 is a \$12,000 annual contract where the customer pays quarterly. Your booking is \$12,000 since your customer has committed for an annual term.
- Contract 4 is a 5-year committed contract that annually pays \$12,000. Your booking is \$60,000.

In this case, your total January bookings are \$85,000 (\$1,000 for contract 1 + \$12,000 for contract 2 + \$12,000 for contract 3 + \$60,000 for contract 4).

Common variations: In many instances, bookings can be restricted to the first year. If that is the case, the above example would have bookings of \$37,000 (\$1,000 for contract 1 + \$12,000 for contract 2 + \$12,000 for contract 3 + \$12,000 for contract 4).

## Churn Rate (Simple)

Churn rate is the rate at which you lose customers or revenue within a time period, usually monthly or yearly. You can calculate churn rates based on your customer count or recurring revenue. Exclude new customers or new recurring revenue won during the period.

## Churn Rate Based on Customer Count

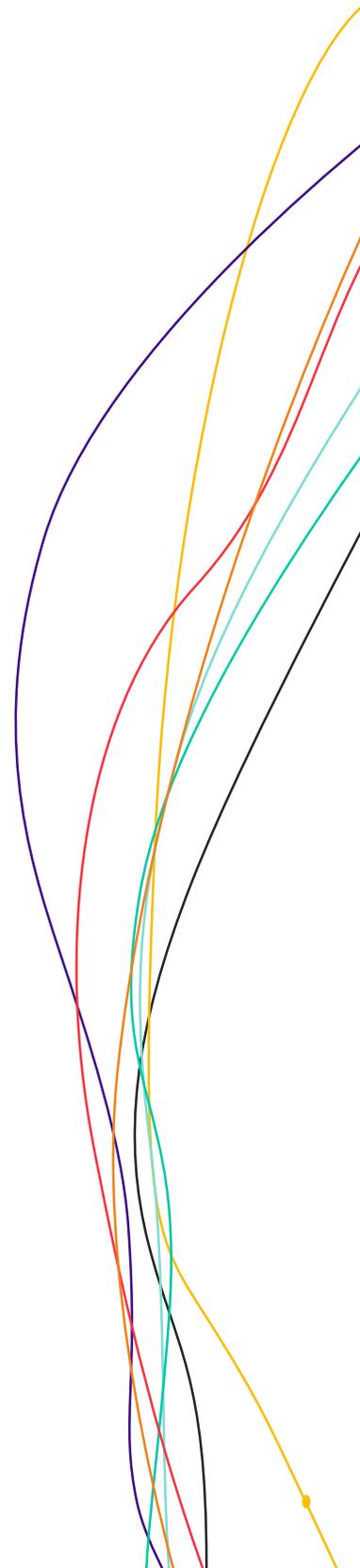
$$\text{Churn Rate} = \frac{\text{\# of Customers Lost in the Period}}{\text{\# of Customers at the Start of the Period}}$$

### EXAMPLE:

You want to calculate your monthly churn rate in January.

- Your business entered January with 900 existing customers.
- You acquired 50 brand new customers in January. (Note: This does not count towards your monthly churn rate for January.)
- Exiting January, you lost 30 of the 900 existing customers.

Your monthly churn rate for January is 3.33% (30 lost customers ÷ 900 existing customers).



**EXAMPLE:**

You want to calculate your yearly churn rate for 2019.

- Your business entered January 2019 with 500 customers.
- You acquired 250 brand new customers in 2019. (Note: This does not count towards your yearly churn rate for 2019.) \*
- Exiting December 2019, you lost 150 of the 500 existing customers.

Your yearly churn rate for 2019 is 30% (150 lost customers ÷ 500 existing customers).

\*Businesses may count “win-backs”—former customers that return as customers within a time period (i.e. 12 to 24 months)— as a renewed customer. In that case, it would be possible to have a negative churn rate.

## Churn Rate Based on Recurring Revenue

Churn rate based on recurring revenue also includes price changes, upsells, and downgrades.

$$\text{Churn Rate} = \frac{\text{Recurring Revenue Lost in the Period}}{\text{Recurring Revenue at the Start of the Period}}$$

**EXAMPLE:**

You want to calculate your monthly churn rate in January.

- Your business entered January with 900 customers. Let's say they have an Average Revenue Per User/Unit (ARPU) of \$30. That means you entered the month with a Monthly Recurring Revenue (MRR) of \$27,000.
- Exiting January, you lost 30 of the 900 existing customers. Let's say those were some of your higher-paying clients with an ARPU of \$40. That means you lost \$1,200 of MRR.

While your monthly churn rate by customer count for January is 3.33% (30 lost customers ÷ 900 existing customers), your MRR churn rate is 4.44%. MRR churn is higher than your churn by customer count because you lost your higher-paying customers.

**EXAMPLE:**

You want to calculate your annual churn rate in January.

- Your business entered January 2019 with 500 customers and an ARPU of \$20,000. Therefore, your Annual Recurring Revenue (ARR) is \$10,000,000.
- Exiting December 2019, you lost 150 of the 500 existing customers. These lost clients pay less, with an average ARPU of \$12,000. Therefore, you lost \$1,800,000 in ARR.

While your annual churn rate by customer count for 2019 is 30% (150 lost customers ÷ 500 existing customers), your ARR churn rate is 18%. ARR churn is much lower than customer count churn because you lost your lower-paying customers (\$1,800,000 ÷ \$10,000,000).

For a more in-depth review of churn rates, read the section below.

## Churn Rate (Less Simple)

**NOTE:** Start with Churn Rate (Simple) to learn the basics of calculating churn rates.

In this section, we'll focus on churn rates by recurring revenue.

In the Churn Rate (Simple) section, we calculated the churn rate based on the lost revenue of customers who did not renew. But businesses are more complex than that. A growing business may have the following types of renewals:

- Non-renewal (customers leave and contribute nothing)
- Downgrade (customers buy a different product that contributes less revenue than their previous purchase)
- Discounts or price cuts (customers use the same product but pay less)
- Straight renewal (customers renew the same product at the same price)
- Lower discount or price increase (customers renew the same product but pay more)
- Upsell (customers buy a more expensive product tier that contributes more revenue than their previous purchase)
- Win-backs (former customers who returned, generally restricted to a dormancy time period)

Using these renewal types, we typically categorize churn in the following ways:

- Churned recurring revenue
  - Non-renewals
- Contracting recurring revenue
  - Downgrade
  - Discount or price cut
- Renewed recurring revenue
  - Straight renewals
- Expansion recurring revenue
  - Lower discount or price increase
  - Upsell
  - Win-Backs

### EXAMPLE:

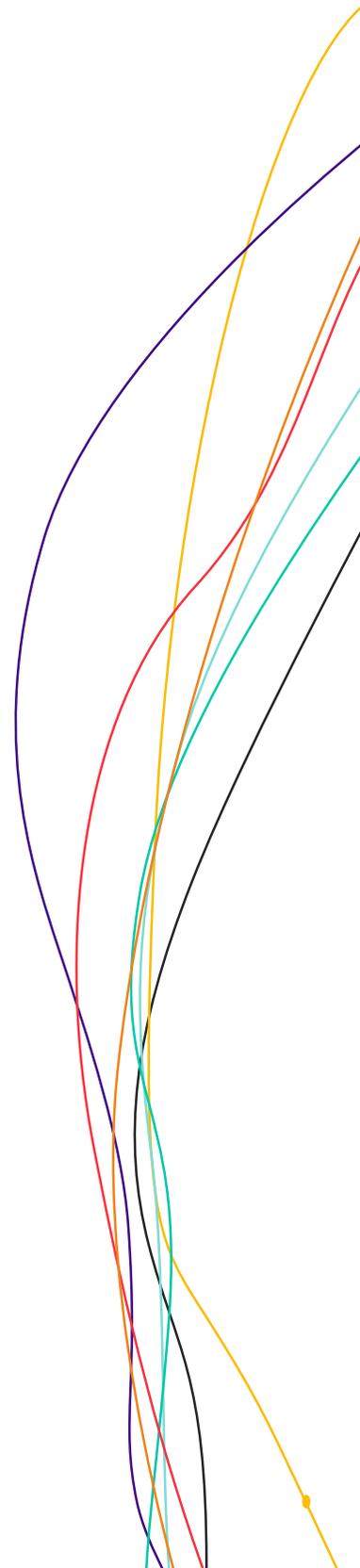
You want to calculate your monthly churn rate in January.

Your business entered January with 900 customers and an Average Revenue Per User/Unit (ARPU) of \$30. That means you entered the month with a Monthly Recurring Revenue (MRR) of \$27,000.

Exiting January, you lost 30 of the 900 existing customers. Let's say those were higher-paying clients with an ARPU of \$40. That means you lost \$1,200 of MRR.

Your business also had contracting revenue:

- 75 customers downgraded your product to a lower level, losing \$10 ARPU
- 20 customers were given discounts, losing \$5 ARPU



The good news though, is that there was also expansion revenue:

- 100 customers upgraded your product to a higher level, gaining \$10 ARPU
- 10 customers phased out of discounts, gaining \$5 ARPU
- 10 customers were won back, gaining \$30 ARPU

	Customer Count	ARPU	MRR
Start of January	900	\$30.00	\$27,000
Customers Churned	-30	\$40.00	-\$1,200
Contracting Revenue			
Downgraded	75	-\$10.00	-\$750
Discounted	20	-\$5.00	-\$100
Expansion Revenue			
Upgraded	100	\$10.00	\$1,000
Stopped Discounting	10	\$5.00	\$50
Win-Backs	10	\$30.00	\$300
End of January	880	\$29.89	\$26,300
Customer Count Churn	2.22%		
<b>MRR Churn Rate</b>			<b>2.59%</b>

While your monthly churn rate based on customer count for January is 2.22% (880 ÷ 900), your MRR churn rate is 2.59%.

## Negative Churn

If you use the calculations from Churn Rate (Less Simple) and your monthly recurring revenue (MRR) churn rate is negative, congratulations, you have negative churn. You'll also hear this referred to as "net negative churn."

Negative churn is achieved when you generate more expansion MRR (cross-sell, upsell, seat expansion) from existing customers than churned MRR (including downgrades).

## Cohort

A cohort is a specific group of customers, typically categorized by the length of time a customer has been with a company. Cohorts are created for analysis.

### **EXAMPLE** of cohorts that you can analyze:

- Year-One Cohort: Customers who are in the first 12 months of their relationship with your business
- Q1 2019 Cohort: Customers who started their relationship with your company in Q1 of 2019
- “Pro” Cohort: Customers who purchased the “Pro” version of your service

Use case: For annual business, examine the churn rate of your Year-One Cohort against your Year-Two Cohort.

## Cost of Goods Sold (COGS)

Cost of Goods Sold (COGS) refers to the cost to deliver the “good.” For SaaS companies, these are items that a single customer will need once they purchase the software. They tend to be infrastructure and customer support costs, such as:

- Site operations costs (hosting, fees, association personnel)
- Support personnel
- Software implementation costs
- Training and onboarding costs

Items like customer acquisition, software development, and G&A are not included in COGS since they don’t change with the addition of a new customer.

For SaaS companies, COGS are in the range of 5% to 40%. Higher COGS are generally influenced by more complex software implementation or service costs

### **EXAMPLE:**

Your customer’s COGS include:

- Hosting expenses: \$8,750
- Internal engineering support: \$4,100
- Customer support: \$12,300
- Third party and/or transaction fees: \$3,500
- Professional services: \$32,000

Your monthly COGS is \$60,650 (\$8,750 + \$4,100 + \$12,300 + \$3,500 + \$32,000). If your total monthly revenue is \$200,000, then your percentage of COGS to revenue is 30% and your gross margin is 70%.

## Customer Acquisition Cost (CAC)

In a SaaS company, the Customer Acquisition Costs (CAC) refers to how much your company spent to convince customers to buy your software or service. The total cost refers to the sales and marketing spend including personnel and program cost.

$$\text{CAC} = \frac{\text{Total Marketing and Sales Spend in a Period}}{\text{\# of New Customers in a Period}}$$

### EXAMPLE:

Your business sells to consumers and has no direct sales staff. Here's how to calculate CAC for a single month:

Monthly Items		Notes
No. of Marketing Employees	5	
Cost Per Employee Per Month	\$10,000	(Should be "fully loaded" which includes benefits)
Program Spend		
Agencies	\$15,000	
SEM Spend	\$10,000	
Trade Show	\$5,000	
Costs		
Personnel	\$50,000	(5 employees X \$10,000 average per month)
External Agencies	\$15,000	
Program Spend	\$15,000	
<b>TOTAL COST</b>	<b>\$80,000</b>	
CAC		
New Customers	800	
<b>CAC</b>	<b>\$100</b>	(\$80,000 total spend ÷ 800 new customers)

You sell to other businesses using a direct sales staff. Here's how to calculate CAC for a quarter:

Quarterly Items		Notes
No. of Marketing Employees	3	
Cost Per Employee Per Quarter	\$30,000	(Should be "fully loaded" which includes benefits)
No. of Sales Employees	5	
Cost Per Employee Per Quarter	\$20,000	(Should be "fully loaded" which includes benefits)
Total Commission Payments in Quarter	\$85,000	For all sales
Program Spend		
Agencies	\$60,000	
SEM Spend	\$100,000	
Trade Show	\$10,000	
Costs		
Marketing Personnel	\$90,000	(3 employees X average employee income per quarter)
Sales Personnel	\$185,000	(5 employees X average employee income per quarter) + commissions
External Agencies	\$60,000	
Program Spend	\$110,000	
<b>TOTAL COST</b>	<b>\$445,000</b>	
CAC		
New Customers	50	
<b>CAC</b>	<b>\$8,900</b>	(445,000 total spend ÷ 50 new customers)

**NOTE:** It may seem unfair that CAC is based on marketing and sales spend from the same period as new customers acquired. Many marketing and sales professionals will tell you that investments today reap future benefits, making the CAC for the current period seem high. Our recommendation is that simplicity beats perfection. Pay attention to your quarterly CAC and how it changes from quarter to quarter.

## Customer Acquisition Cost (CAC), Recovering

An important measure in subscription businesses is how long it takes to recover the initial Customer Acquisition Cost (CAC), which for some, is the single most expensive expenditure in a customer's lifetime. Recovery time is typically measured in months. Here are two ways you can measure CAC, recovering:

$$\text{\# of Months to Recover CAC} = \frac{\text{CAC}}{[\text{Customer Lifetime Value (CLTV)} \div \text{Customer Lifetime (Measured in Months)}]}$$

$$\text{\# of Months to Recover CAC} = \frac{\text{CAC}}{[\text{Average monthly recurring revenue (MRR) Per Customer} \times \text{Gross Margin \%}]}$$

### EXAMPLE (based on the first formula):

You want to know how long it will take to recover your CAC.

First, you need to calculate your CAC. Your marketing and sales costs include:

- Marketing personnel cost: \$90,000 (3 employees X average employee salary per quarter)
- Sales personnel cost: \$185,000 [(5 employees X average employee salary per quarter) + commissions]
- External agencies cost: \$60,000
- Program spend: \$110,000
- Total spend: \$445,000

You acquire 50 new customers.

Your CAC is \$8,900 (\$445,000 total costs ÷ 50 new customers).

Second, you need to calculate your CLTV, which includes:

- Average monthly revenue per customer: \$2,000
- Gross margin: 60%
- Customer lifetime: 18 months

Your CLTV is \$21,600 (\$2,000 X 60% X 18).

Therefore, it will take 7.4 months to recover your CAC [\$8,900 CAC ÷ (\$21,600 CLTV ÷ 18 months)].

There are many benchmarks on healthy CAC spending, but it really depends on your CLTV, so we recommend focusing on the CLTV : CAC ratio.

## Customer Health Score

Customer health scoring is the process of evaluating a customer's overall engagement and satisfaction with your company in a simple score. It is used to gauge renewal likelihood. Companies score in many ways, including assigning points, implementing rankings (A, B, C, D), or using a color-coding system (green, yellow, or red) to indicate good, average, or poor health. Health scoring methodologies need a combination of several data types and sources to be an effective key performance indicator (KPI). Potential data sources include marketing automation platforms, customer relationship management (CRM) software, customer service platforms, ticketing systems, customer messaging platforms, and your own product.

To find out the top factors that comprise a strong health score, check out our [Health Scoring Cheat Sheet](#).

## Customer Lifetime

Customer lifetime is how long a customer stays with your company in a specific time period, typically months or years. You need a substantial number of customers to accurately calculate your average customer lifetime. If you have too few customers, each customer's churn or renewal will have an outsized impact on your calculation. But with a suitable sample size, here's an easy way to calculate your customer lifetime:

$$\text{Customer Lifetime} = \frac{1}{\text{Customer Churn Rate}}$$

**NOTE:** Your customer lifetime and churn rate need to match in timeframe (months or years).

### EXAMPLE:

- If you have a 2.5% monthly churn, here's your calculation:
  - $1 \div 0.025$  (monthly churn) = 40, which is the average number of months customers stay with your company
- If you have a 25% yearly churn rate, here's your calculation:
  - $1 \div 0.25$  (monthly churn) = 4, which is the average number of years customers stay with your company

**Caveat:** A good sample set of customers is needed to make this formula accurate. For example, let's say a customer buys a newly launched product with a month-to-month contract. Calculating an accurate customer lifetime for such a young product is a challenge as newer customers often churn faster than more mature customers.

Here's a simplified example: The product is released in January.

- Each month, the business acquires 100 new customers.
- The churn rate for the first month after customer acquisition is 30%.
- The churn rate for the second month after customer acquisition is 15%, and so on.

	Jan 2014	Feb 2014	Mar 2014	Apr 2014	May 2014	Jun 2014	Jul 2014	Aug 2014	Sep 2014	Oct 2014	Nov 2014	Dec 2014	Jan 2015
Jan 2014	100	70	60	55	52	49	47	46	45	44	42	41	40
Feb 2014		100	70	60	55	52	49	47	46	45	44	42	41
Mar 2014			100	70	60	55	52	49	47	46	45	44	42
Apr 2014				100	70	60	55	52	49	47	46	45	44
May 2014					100	70	60	55	52	49	47	46	45
Jun 2014						100	70	60	55	52	49	47	46
Jul 2014							100	70	60	55	52	49	47
Aug 2014								100	70	60	55	52	49
Sep 2014									100	70	60	55	52
Oct 2014										100	70	60	55
Nov 2014											100	70	60
Dec 2014												100	70
Jan 2015													100
New Customers	100	100	100	100	100	100	100	100	100	100	100	100	100
End Month With	100	170	230	265	336	385	433	478	523	567	609	650	691
Lost Customers	0	30	41	45	48	51	53	54	55	56	58	59	60
Churn Rate	NA	30.0%	23.8%	19.6%	17.0%	15.1%	13.7%	12.5%	11.6%	10.8%	10.2%	9.6%	9.2%

**Churn Rates for Customers In:**

Month 1	30.0%	Month 5	5.0%
Month 2	15.0%	Month 6	4.0%
Month 3	7.5%	Month 7	3.0%
Month 4	6.0%	Month 8 and beyond	2.5%

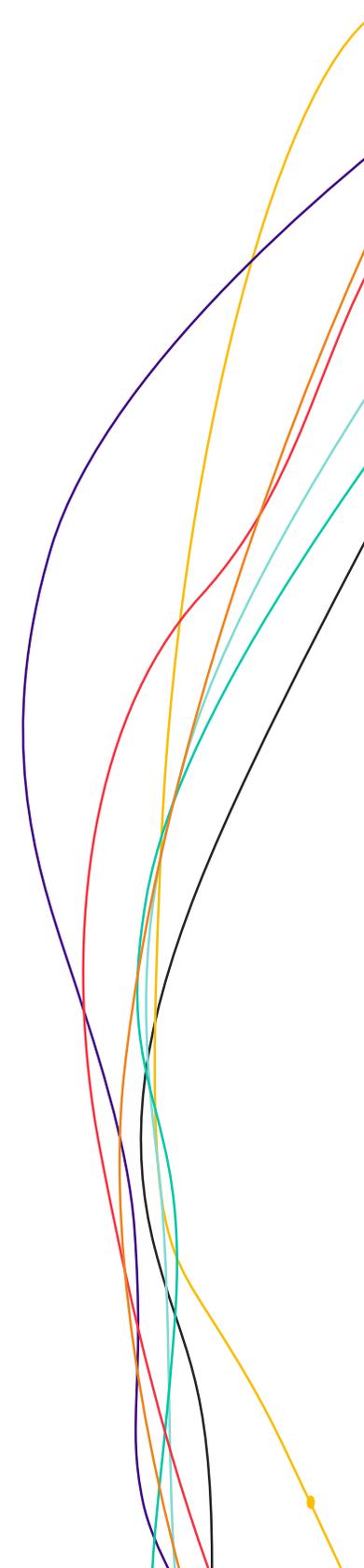
As shown in the table above, as the year unfolds, the churn rate of the base starts at 30% (in February when all customers are new) and steadily drops to 9.2% in the following January. In fact, if you extend this table over many years, you'll see that the churn rate steadily trends to 2.5%.

The lesson is that churn rates are dynamic, especially for those with new products.

**Customer Lifetime Value (CLTV) or Lifetime Value (LTV)**

Customer Lifetime Value (CLTV) is the gross profit a customer delivers to your business in their lifetime. It's the amount of revenue your business will make from a customer over their average lifetime as a customer.

$$CLTV = \frac{[Average Revenue Per User/Unit (ARPU) \times Gross Margin] \times Customer Lifetime}{}$$



**EXAMPLE:**

Your average customer pays your business \$50 per month (ARPU).

- It costs your business \$10 to deliver your product to the customer. You may know this as the Cost of Goods Sold (COGS).
- Your average customer lifetime is 18 months.

Therefore, your business CLTV is \$720 or  $(\$50 \text{ ARPU} - \$10 \text{ service cost}) \times 18 \text{ customer lifetime}$ .

**EXAMPLE:**

Your average customer pays your business \$25,000 per year (ARPU).

- It costs your business \$10,000 to deliver your product to the customer.
- Your average customer lifetime is 4.5 years.

Therefore, your business CLTV is \$67,500 or  $(\$25,000 \text{ ARPU} - \$10,000 \text{ service cost}) \times 4.5 \text{ customer lifetime}$ .

## Customer Lifetime Value: Customer Acquisition Cost (CLTV : CAC Ratio)

The Customer Lifetime Value: Customer Acquisition Cost (CLTV: CAC) ratio is a critical subscription business metric. This ratio tells you how profitable a customer will be over their lifetime.

Remember, CLTV is the amount a customer pays you minus the cost of servicing them. CAC is the cost to acquire a customer. The ratio is a simple division:

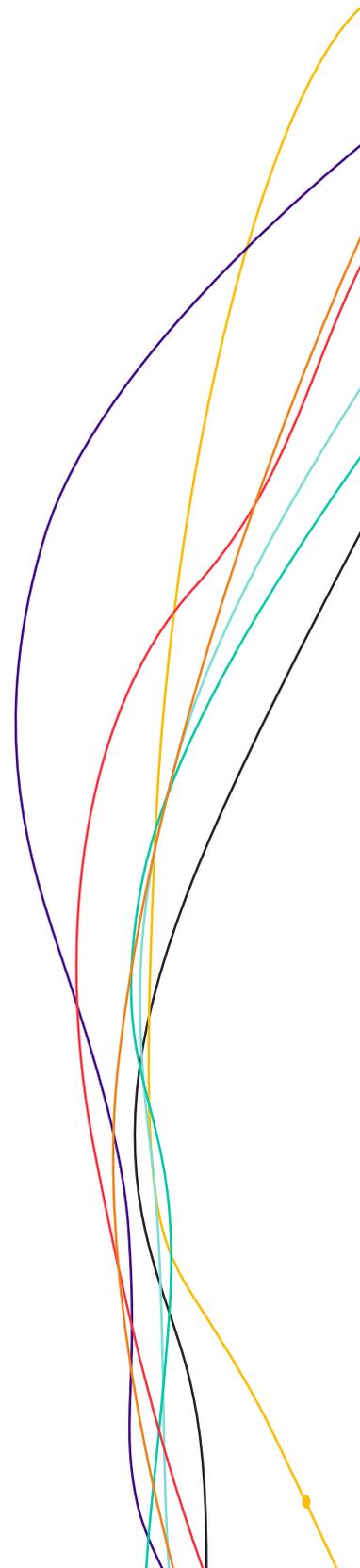
$$\frac{\text{CLTV}}{\text{CAC}}$$

**EXAMPLE:**

Your CLTV is \$450 and your CAC is \$125. This means your CLTV:CAC ratio is 3.6.

So, what's a good CLTV:CAC ratio?

The CLTV:CAC ratio packs a lot of data into one number. Your marketing and sales spend is represented in the CAC. Your product pricing, cost of goods, and churn rate are represented in the CLTV. This ratio is a simple number that can be measured internally and against peers. Generally, it's accepted that a CLTV:CAC ratio of 3 or higher is healthy.



## Gross Margin

Gross margin is the amount of money your business makes after Cost of Goods Sold (COGS), which includes infrastructure and support costs. See our definition of COGS to learn more.

$$\text{Gross Margin \%} = 100\% - \text{COGS}$$

### EXAMPLE:

If your COGS are 30%, then your gross margin is 70%.

## Net Promoter Score® (NPS)

Net Promoter Score® (NPS)\* is a customer satisfaction benchmark that measures how likely your customers are to recommend you to a friend or colleague. To calculate your NPS, you must first survey your customers. NPS is the answer to the question:

How likely are you to recommend us to a friend or colleague?

You score the answers on a zero-to-ten scale which is divided into three groups:

- 😊 **Promoters:** Customers who scored 9 or 10. These are loyal enthusiasts who are likely to keep renewing and to refer your product/services to others.
- 😐 **Passives:** Customers who scored 7 or 8. These are satisfied but unenthusiastic customers who can be particularly vulnerable to competitive offerings.
- 😞 **Detractors:** Customers who scored 0 to 6. These are unhappy customers who are at risk for churning and have the potential to do damage to your brand through negative word-of-mouth.

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

Your NPS will fall inside a range of -100 to +100. A positive score is generally a win, as this means you have more promoters than detractors. But overall, a good score depends on industry, company size, and business maturity. For example, consumer products usually score higher on NPS than B2B products. The most important thing is to benchmark against yourself to make sure you improve.

For tips on when to survey customers, follow-up survey actions, and NPS best practices, check out our [NPS Cheat Sheet](#).

\*Net Promoter, Net Promoter System, Net Promoter Score, NPS and the NPS-related emoticons are registered trademarks of Bain & Company, Inc., Fred Reichheld and Satmetrix Systems, Inc.

## Net Revenue Retention

Net Revenue Retention calculates total revenue (including expansion) minus revenue churn (contract expirations, cancelations, or downgrades).

$$\text{Net Revenue Retention} = \frac{\text{Monthly Recurring Revenue (MRR) at Start of Month} + \text{Expansions} + \text{Upsells} - \text{Churn} - \text{Contractions}}{\text{MRR at Start of Month}}$$

### EXAMPLE:

Your business enters January with an MRR of \$27,000 and exits January with an MRR of \$35,000 (due to upsells) from the same customers at the start of the month.

Your business exits January with \$5,000 in revenue churn due to contract expirations.

Your net revenue retention for January is 111% ( $\$30,000 \div \$27,000$ ).

## Renewal Rate

Customer renewal rate is the percentage rate of customer retention. It measures the rate at which a company's customers renew their contract.

$$\text{Customer Renewal Rate \%} = 100\% - \text{Churn Rate}$$

### EXAMPLE:

- If your churn rate is 2%, then your renewal rate is 98% ( $100\% - 2\% \text{ churn rate} = 98\%$ ). If your negative churn rate is -5%, then your renewal rate is 105%.

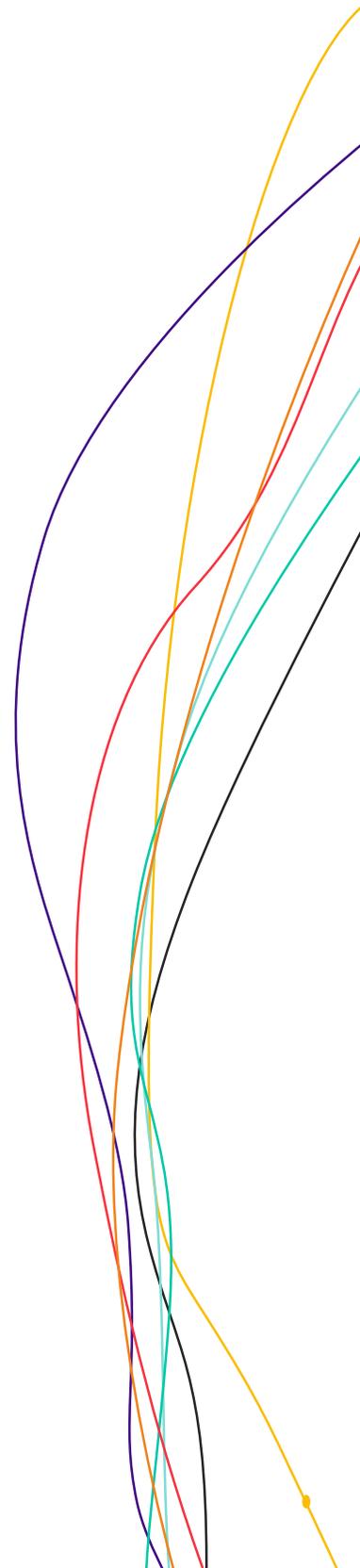
## Revenue

Revenue refers to the total amount of income (before expense deductions) produced by your company's sale of goods and services. For SaaS companies, revenue is often recognized when the software or service has been delivered to the customer.

### EXAMPLE:

You have a customer that's on a month-to-month contract (cancelable at the end of each month) that pays \$1,000 per month. Your revenue for that customer in any given month is \$1,000.

You have a customer that's on an annual contract (cancelable at the end of their 12-month contract) that pays \$12,000 per year. Despite the annual contract, your revenue for that customer in a full month is \$1,000. In each month over the course of the annual contract (partial months aside), you'll recognize \$1,000 per month.



NOTE: In the annual contract example, any revenue that is “waiting” to be recognized goes into deferred revenue.

## Deferred Revenue

Deferred revenue consists of payments made in advance of the service. While your business has a commitment from the customer to pay and has sent a customer invoice, services have not been rendered and/or products have not been delivered.

### Example for an annual subscription paid all at once:

- On January 1, you sell a customer and their subscription immediately starts. They commit to a 1-year contract for \$12,000 to be paid all at once. You immediately invoice them.
- On January 1, your deferred revenue is \$12,000.
- On February 1, your deferred revenue is \$11,000 after recognizing \$1,000 of revenue in January.

### Example for an annual subscription billed quarterly:

- On January 1, you sell a customer and their subscription immediately starts. They commit to a 1-year contract for \$12,000 to be paid quarterly. You immediately invoice them \$3,000 for the first quarter.
- On January 1, your deferred revenue is \$3,000.
- On February 1, your deferred revenue is \$2,000 after recognizing \$1,000 of revenue in January.

## Recurring Revenue

Recurring revenue is your company's revenue that is very likely to continue in the future. As a subscription business, your renewable software and services revenue should count as recurring.

## Monthly Recurring Revenue (MRR)

The Monthly Recurring Revenue (MRR) is the sum of your recurring revenue at the end of the month.

**EXAMPLE:**

In January, you have 3 customers.

- Customer 1 has been a customer for 6 months. They pay \$12,000 upfront for an annual software subscription. In January, customer 1 contributes \$1,000 to MRR.
- Customer 2 has been a customer for 2 months. They pay \$1,000 each month on a month-to-month software subscription. In January, customer 2 contributes \$1,000 to MRR.
- Customer 3 becomes a customer on January 1. They pay \$24,000 upfront for an annual software subscription and an additional \$3,000 for a one-time implementation. Since only the software cost is recurring, customer 3 contributes \$2,000 to MRR.

Your total MRR for January is \$4,000

## Annual Recurring Revenue (ARR)

Annual Recurring Revenue (ARR) is your Monthly Recurring Revenue (MRR) multiplied by 12.

## Expansion Monthly Recurring Revenue (MRR)

Expansion MRR is additional MRR (upsells, cross-sells, add-ons) from existing customers compared over a running monthly basis. Expansion MRR does not include revenue from new customers.

$$\text{Expansion MRR \%} = \frac{(\text{MRR at End of Month} - \text{MRR at Start of Month From the Same Customers at the Start of the Month})}{\text{MRR at the Start of Month}}$$

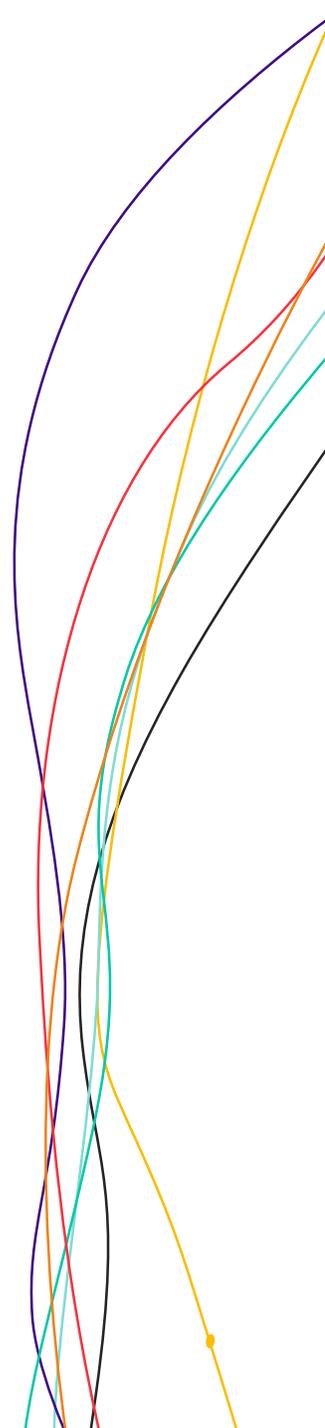
**EXAMPLE:**

You want to know your expansion MRR.

First, calculate your expansion revenue.

- Your business enters January with an MRR of \$2,800.
- Your business exits January with an MRR of \$3,000 from the same customers at the start of the month.

Your expansion MRR % is 7.1%. [(3,000 MRR at end of month from the same customers at the start of the month - 2,800 MRR at start of month) ÷ 2,800 MRR at the start of month]



## Unit Economics

Unit Economics refers to the financial numbers around a single “unit,” which typically refers to a single customer. Many of the metrics in the Churnopedia are the basics of unit economics, especially:

- Customer Lifetime Value (CLTV)
- Customer Acquisition Cost (CAC)
- Gross Margin

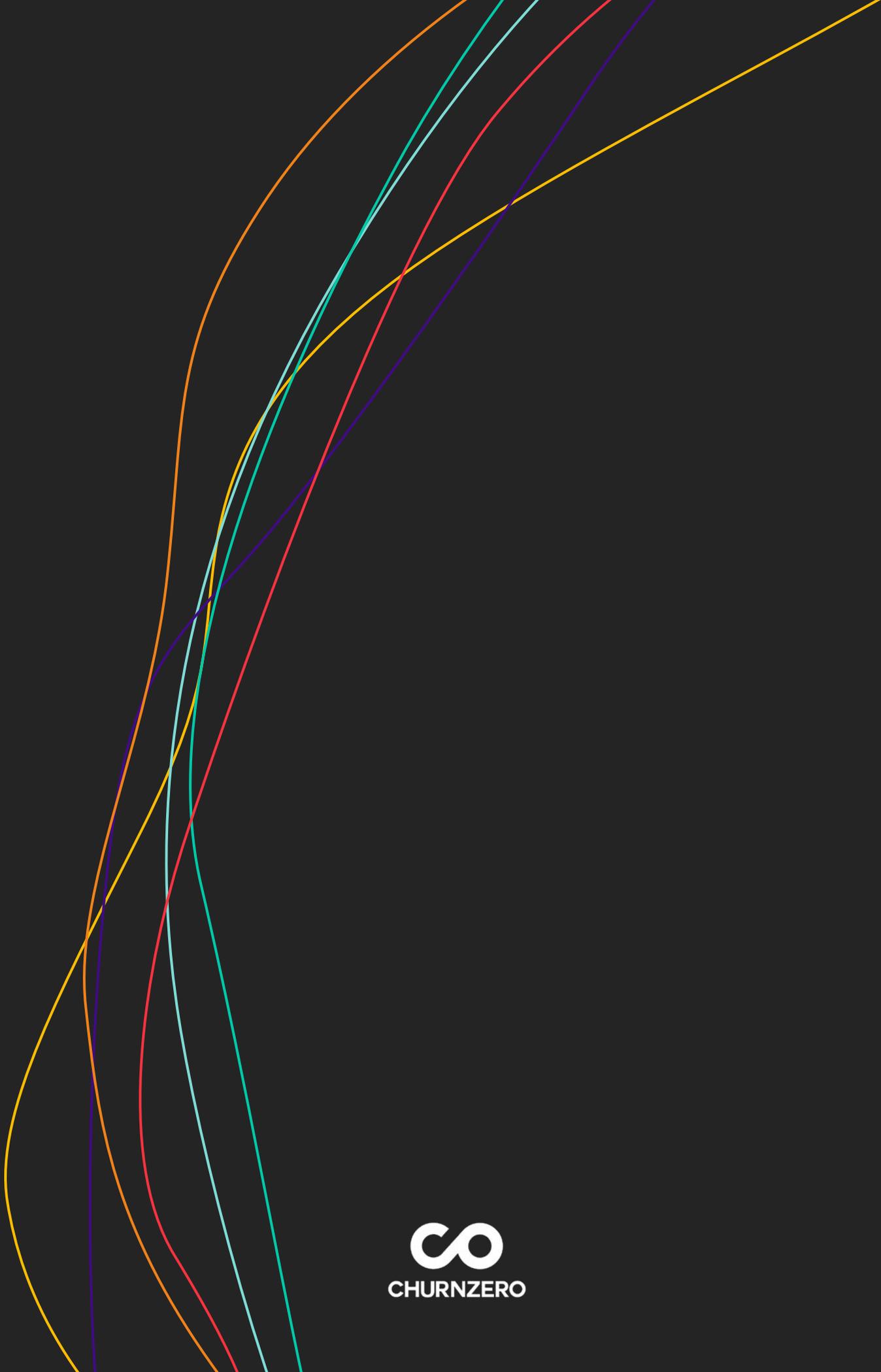
If your business can get a good understanding of the economics of a single customer (“unit”), then investment decisions become easier.

## Worksheet

Record your company’s metrics in this worksheet to use as an easy reference when calculating metrics.

METRIC	YOUR VALUE
Annual Recurring Revenue (ARR)	
Annual Contract Value (ACV)	
Average Revenue Per User/Unit (ARPU)	
Churn Rate (Less Simple)	
Churn Rate by Customer Count	
Churn Rate by Recurring Revenue	
Churn Rate (Simple)	
CLTV:CAC Ratio	
Cost of Goods Sold (COGS)	
Customer Acquisition Cost (CAC)	
Customer Health Score	
Customer Lifetime	
Customer Lifetime Value (CLTV)	
Gross Margin	
Monthly Recurring Revenue (MRR)	
Negative Churn	
Net Promoter Score® (NPS)	
Net Revenue Retention	
Renewal Rate	
Revenue	





  
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