Three Ways To Calculate

Annual Recurring Revenue

A Guide for SaaS Finance Leaders

ORDWAY

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What is ARR?

Annual Recurring Revenue

ARR is one of the most important, if not the most important, metrics used to evaluate the health of SaaS and cloud businesses. Venture capital and growth equity investors typically assign valuations based upon a multiple of a company's ARR. Debt covenants and lines of credit often are linked to ARR. Executive compensation agreements and business plan goals are driven by ARR.

What is ARR?

While there is little debate about the importance of ARR, there isn't general agreement on:

1) When to start and end reporting on it

Does ARR start on the contract effective date? Or should it be aligned with implementation and go-live?

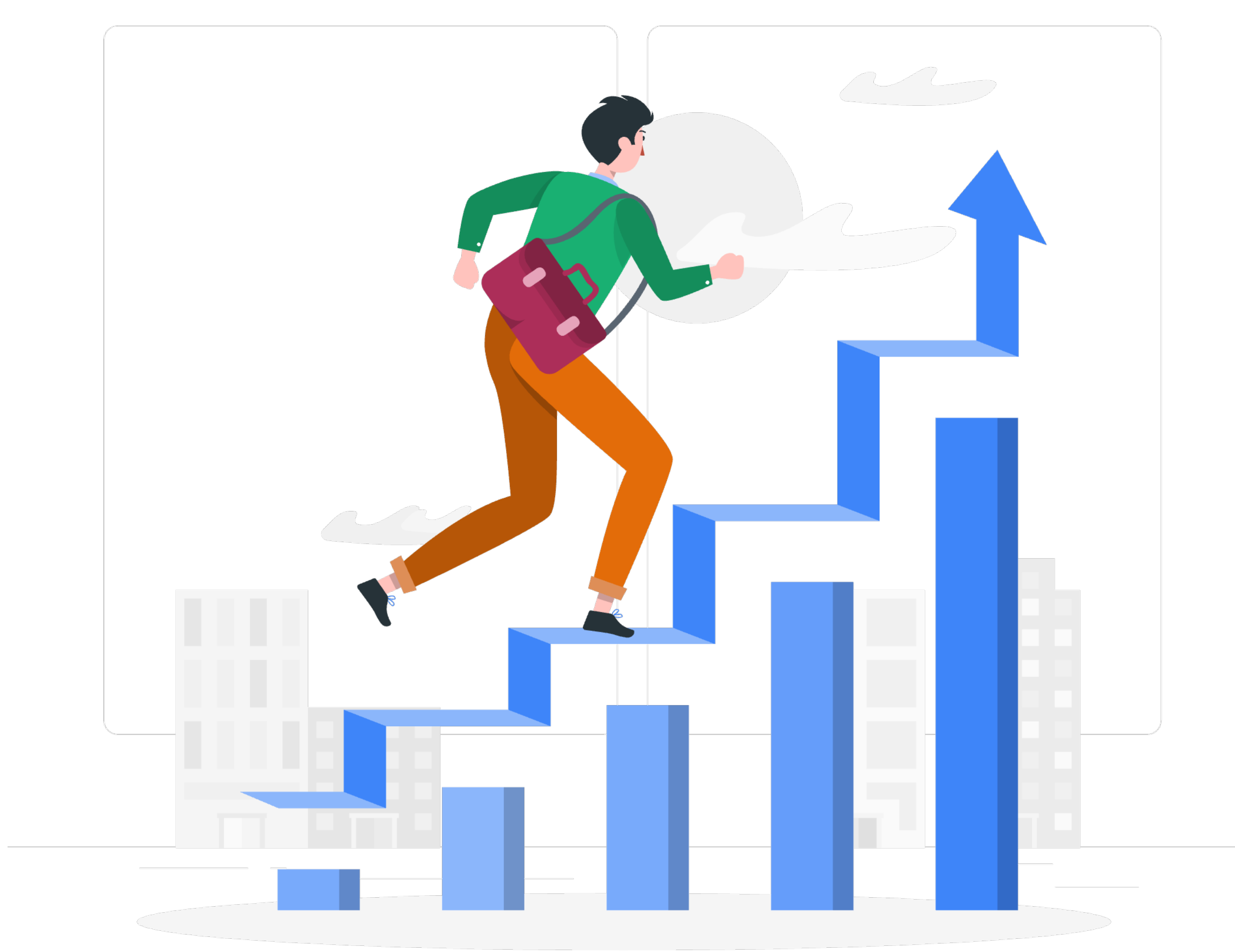
2) Which revenue streams to include

Can ARR include monthly fees? Revenue from usage-based pricing? Professional services?

3) Which formula to use to calculate it

Is ARR 12 x current MRR? Or is 12 x the average monthly fees during the contract term?

Public Company Benchmarks



Many Different Approaches

Ordway conducted an analysis of the investor disclosures of 150 publicly traded companies in the SaaS, cloud, and fintech space to understand how they calculated ARR.

The analysis identified that there were three different formulas used to calculate ARR. In addition, there were over a dozen policy elections that companies were using to decide when to start and stop reporting and what revenue streams to include or exclude in the calculations.

Over 50 different approaches to calculating ARR were identified from the 70 companies that defined their approach. We suspect that if you were to analyze a broader set of SaaS companies including earlier-stage private companies, you would find hundreds of different approaches.

About the Research

In 2022 and 2023, the Ordway research team analyzed the SEC filings, investor presentations, and earnings transcripts of ~150 companies traded on the NYSE and NASDAQ. The study found that 60% of companies referenced ARR and 50% provided a definition. In many cases, the definitions provided an explanation of the methodology used. Download a copy of the report at https://ordwaylabs.com/resources/research

Standardizing the Approach

Has SaaS Outgrown a One-Size-Fits-All Approach to ARR?

As the SaaS and cloud industry has grown over the past two decades, business models have grown increasingly diverse. Most $1M ARR companies have a single product and single pricing model. As they scale to $10M, $100M, and eventually $1B they add new products to land and expand, new contract structures to service enterprise accounts, and execute M+A transactions to expand market share. Today's $100M ARR company has:

Diverse Product Lines

Technology providers are not only bundling hardware and software into as-a-Service offerings they are also generating revenue from processing credit card payments, interest on small business loans, and commissions from third-party developers who sell apps in their marketplaces.

Diverse Pricing Models

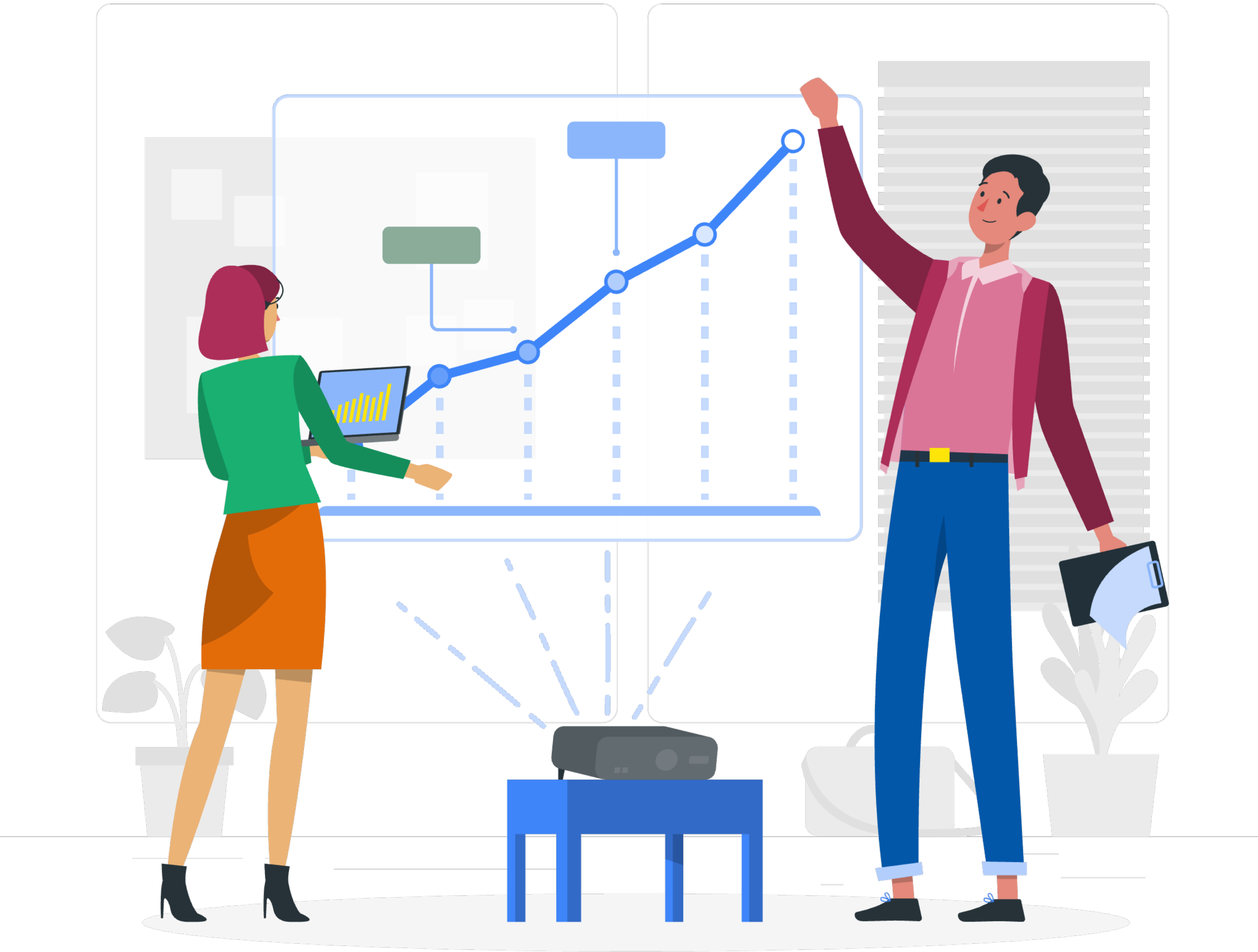
No longer are SaaS applications being priced simply on a per-user, per-month basis defined in the contract. Today's technology providers are billing based on consumption metrics like GB of data transferred or the number of API calls executed known only in arrears.

Others price based upon a percentage of the dollar value of gross merchandise value processed or assets under management.

Rethinking ARR

Are You Using the Best Approach to Calculate ARR?

You don't want to just report on ARR the way you've always done it. You want to report on ARR using the approach that best tells your story - the one that reflects the recurring revenue your company is contracted to deliver over the next year. Which formula and policy elections most accurately represent the state of your business and the way investors should think about it?



What is Recurring?

Are there revenue streams that act, look, and smell like recurring revenue even though they don't meet the textbook definition of ARR?

If so, perhaps they should be included in the calculations.

What is most Relevant?

Are there revenue streams that are recurring, but are not long-term focus areas for your business that create a potentially misleading drag on ARR?

If so, perhaps they should be excluded from the calculations.

Even if you are satisfied with your current approach, it is only prudent to understand the different approaches being used to be confident that your reporting provides the best insight into recurring revenue growth.

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Section 1:

ARR Policy Elections

Three Ways to Calculate ARR

Reporting Start Date

When should you start to report on ARR for a new contract that was recently signed? Do you start to report ARR as soon as the contract is booked? Or do you wait until the effective date of the contract? Or until you begin to recognize revenue for the contract?

The sooner ARR is reported, the faster the company can realize a higher valuation from investors and the higher percentage of variable compensation employees can attain within the year. However, accelerating reporting of ARR for customers that have implementation or other contract conversion risks can also create challenges. You may have to restate ARR for prior periods and explain to investors why you had to back out customers that failed.

SaaS finance teams should consider which ARR reporting date is best to adopt. Options include:

Booking Date

Begin reporting ARR as soon as the contract is signed and marked closed-won in the CRM.

Contract Start Date

Begin reporting ARR on the date the official effective date on the contract.

Revenue Recognition Date

Report ARR in alignment with GAAP revenue recognition start dates.

Go Live Date

Start reporting ARR on customer go-live (if an implementation process is required).

Reporting End Date

When do you stop reporting ARR for customers that have decided to cancel or are at high risk of churn? Do you stop reporting as soon as the customer has notified you of their intention to terminate the contract? Or do you wait until the actual contract end date? Should you continue report ARR for customers whose contracts have expired, but are actively negotiating a renewal? How do you handle customers who may have temporarily paused their subscriptions for 90 days, but committed to reactivate?

Selection of an end date is important, because it will directly impact churn, gross retention and net retention. Accelerating the end date may over-state the level of customer attrition. On the other hand, pushing out the end date could create credibility issues if investors suspect you are attempting to delay reporting on customer churn.

SaaS finance teams should consider which ARR reporting date is best to adopt. Options include:

Notification Date

Stop reporting ARR in the month the customer notifies you they intend to cancel – even if the contract end date is several months out.

Contract End Date

Wait until the last day of the contract to stop reporting. Or wait until the period following the contract end to stop reporting the ARR.

Contract End Date + N Days

Offer a grace period for late renewals of 30, 90, or 180 days for scenarios in which the contract expires, but there is still a possibility the customer will renew.

Non-Core Segments

Vertical Industry or Revenue-Based Segments

Do you have a segment of customers that are not strategic and are not forecasted to grow? An example might be a specific vertical industry such as government or healthcare that was important to the business earlier in the company's history but is no longer a focus for the go-to-market team. If you have exited certain international or geographic markets, it may not make sense to include recurring revenues from those segments in your ARR.

Are you include revenues from non-core customer segment in ARR? Does it makes sense to include consumers or SMB, if the strategy has shifted towards the enterprise.

Legacy Product Lines

Do you have any legacy product lines that are discontinued or that you consider non-strategic? These legacy products might be the result of a recent merger or a business strategy change. Examples might include an on-premise offering that is no longer being sold, or an obsolete technology that is no longer supported in modern browsers.

Legacy offerings, even if recurring in nature, will experience declining revenues over time and may not be appropriate to include a forward-looking projection. SaaS finance teams will need to decide whether to include or exclude these non-core products from ARR calculations.

Customers on Short-Term Contracts

Do you have customer contracts that are short-term in nature such as month-to-month plans? If so, does the revenue from this group of customers trend in a predictable, consistent manner similar to recurring revenue? Analyze the historical patterns for revenue, conversion rates, and churn dynamics from these accounts to assess. If it behaves like recurring revenue you may want to include the monthly fees in your ARR.

Adding monthly plans and other short-term contracts to ARR will make your total ARR larger, potentially resulting in a higher valuation. However, there is risk as well.

If conversion rates or churn dynamics take a turn for the worse, the short-term contracts could create a drag on ARR. SaaS finance teams will need to decide whether or not ARR should include:

Monthly plans

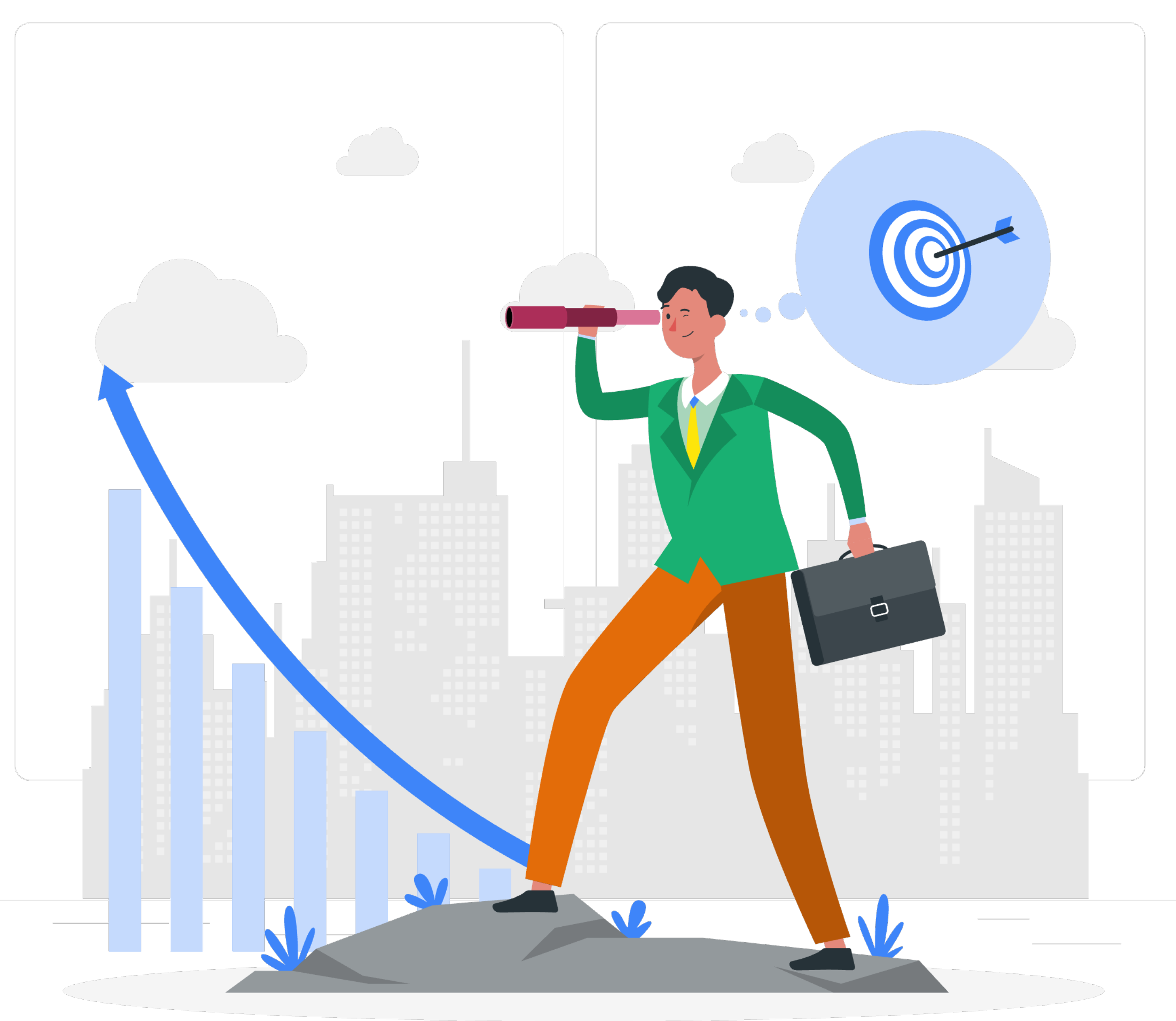
The customer is billed monthly without a long-term contract and has the option to cancel at any time.

Short contracts

The customer may have a termination-for-convenience clause that they can use to opt-out after 3 or 6 months.

Termination for convenience

The customer has a temporary need and has contracted for a time period of 3, 6, or 9 months.



Subscriptions with Complex Pricing

Most SaaS subscriptions have simple pricing that is fixed for the duration of the contract. For example, the customer agrees to pay for 10 users at a price of $100 per month per user for 24 months. However, more and more, SaaS providers are getting more creative with pricing and contract structures to gain a competitive advantage and accelerate new customer acquisition. Sales teams are offering contracts in which the pricing increases at pre-defined milestones in the contract lifecycle, to better align the value the customer receives with the fees paid. Examples include:

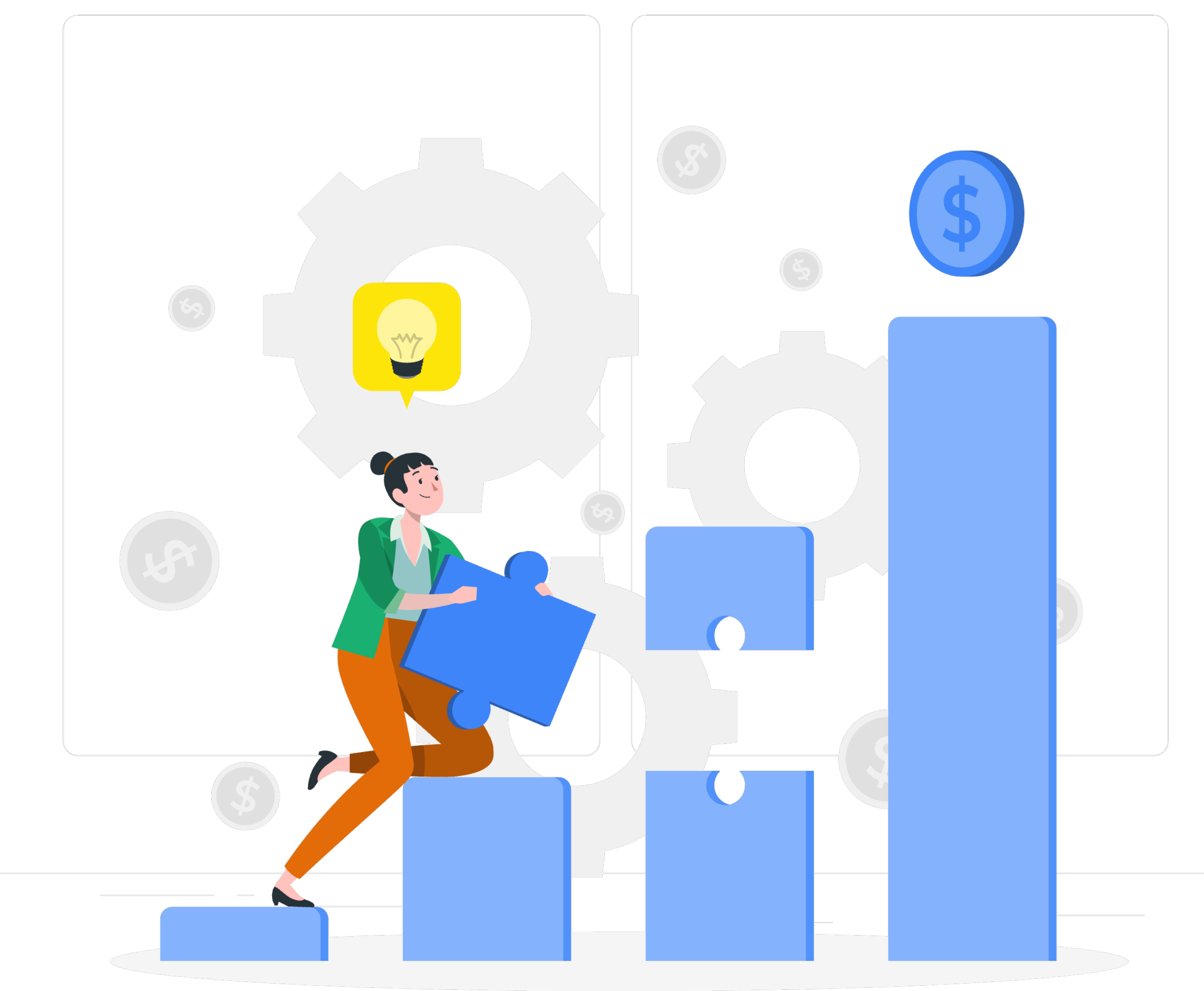
Step-Up Contracts

The price increases (or level of discount decreases) in steps at several pre-defined dates during the contract term such as at the end of each year.

Phased Activation Schedules

The price increases at pre-defined dates in the contract term that are correlated with when additional user groups are on-boarded to the platform.

There are several different ways the ARR could be calculated for these types of arrangements, depending upon whether the price at the start, middle, or end of the contract is used.



Step-Up Pricing

Example 1: Subscriptions with Variable Pricing

One increasingly popular subscription contract structure is called a “step-up” contract (sometimes called a declining discount). With a step-up contract the monthly subscription price the customer pays gradually increases at pre-defined milestones during the contract term.

Suppose a SaaS provider enters into a three-year contract with a startup that is growing quickly. The startup is low on cash in year 1, but anticipates additional fundraising and cash collections from its growth over the three-year term. To accommodate the financial needs of the startup, the SaaS provider offers an aggressive discount of 67% off the list price in year 1 and a significant discount of 33% in year 2. In year 3, the startup pays full price which would be the expectation if the contract renews for a fourth year.

	List Price	Declining Discount	Extended Price	Annual Total
Year 1	\$3,000/mo	67%	\$1,000/mo	\$12,000
Year 2	\$3,000/mo	33%	\$2,000/mo	\$24,000
Year 3	\$3,000/mo	0%	\$3,000/mo	\$36,000

What should the ARR be reported as for the contract? Should the ARR change each year as the monthly price increases? Or should the ARR be set as the average across the 3-year term? Or should it be the exit ARR at the end of the contract (the expected renewal price)?

Phased Activation Schedules

Example 2: Subscriptions with Variable Pricing

Another example of a subscription with pricing that varies during the contract term is a phased user adoption model. Rather than on-boarding all of the users at the start of the contract, the customer plans to on-board different waves of users at different times. Assuming that the SaaS provider is using per user per month pricing, as most do, the total fees paid will increase as the contract lifecycle progresses.

Suppose that a SaaS provider enters into a one-year contract with a large financial services institution that wants to on-board users in four phases throughout the year. The first phase starts with a pilot group of 100 users. Each quarter a new group of users are on-boarded until the total community of 1,500 users is added.

	Start Date	New Users	Total Users	Per User Price	Monthly Price	Annualized Price
Phase 1	Jan 1	100	100	$10/mo	$1,000	$12,000
Phase 2	Apr 1	200	300	$10/mo	$3,000	$36,000
Phase 3	Jul 1	400	700	$10/mo	$7,000	$84,000
Phase 4	Oct 1	800	1,500	$10/mo	$15,000	$180,000

What should the ARR be for the contract outlined above? Does the ARR adjust each quarter as the additional users are on-boarded and monthly price is raised? Is there a fixed ARR throughout the contract term based upon the average monthly price paid throughout the year? Or should it be the exit ARR from the last month of the contract (the expected renewal price)?

Pricing with Variable Fees

Ten years ago most SaaS companies were using per-user, per-month pricing models that generated consistent fees. However, today's pricing models are more complex, many of which include variable fees that change month-to-month.

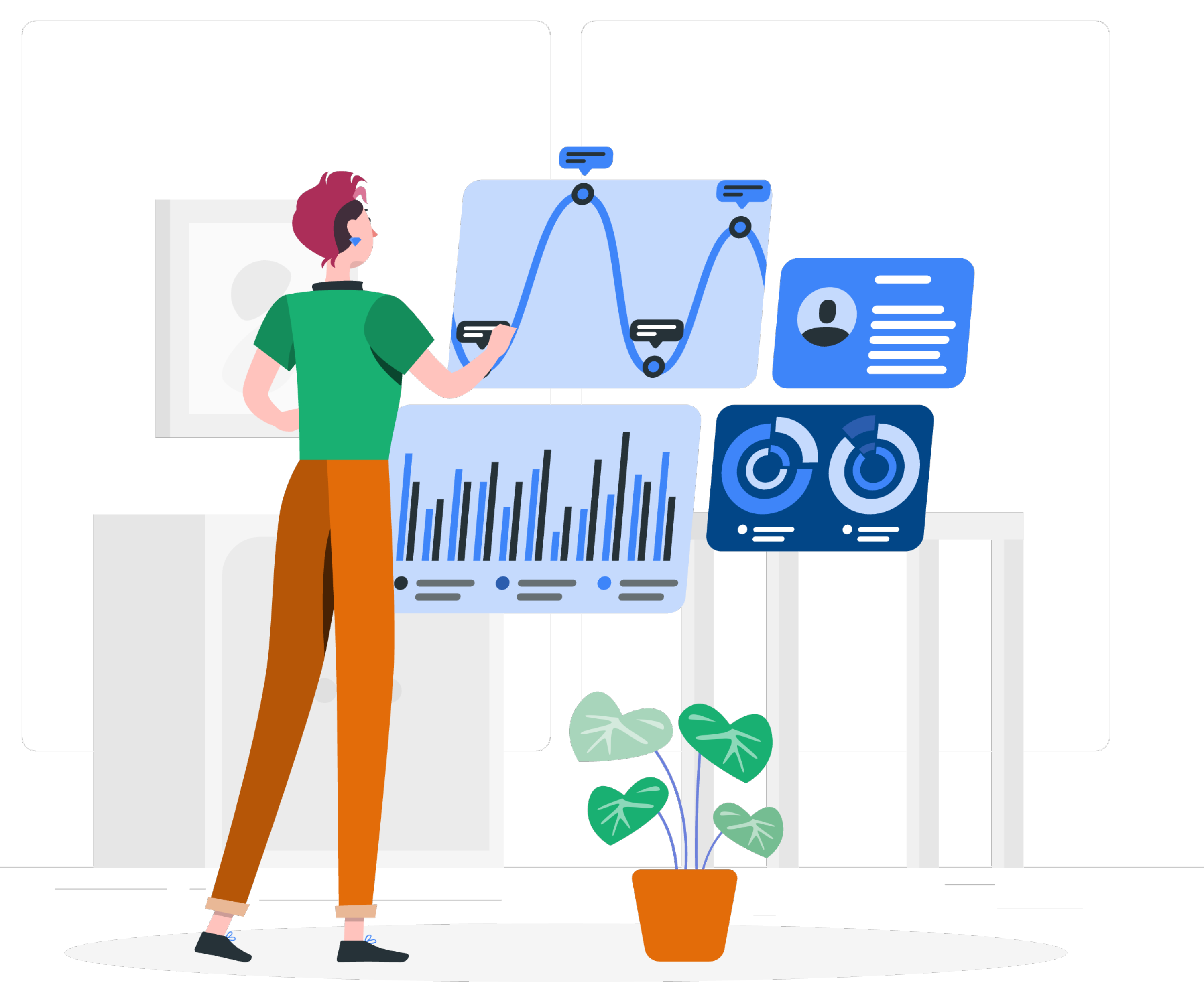
Examples include:

Usage-Based Pricing

Monthly fees are tied to the customers actual consumption of the service. Pricing may be tied to a volume metric (GB transferred), a transaction metric (API calls), or a time metric (minutes used).

Percentage Pricing

Monthly fees are based upon taking a small percentage of the dollar value of transactions processed on the platform. Examples include payment services that charge a fraction of a percent of the gross merchandise value.

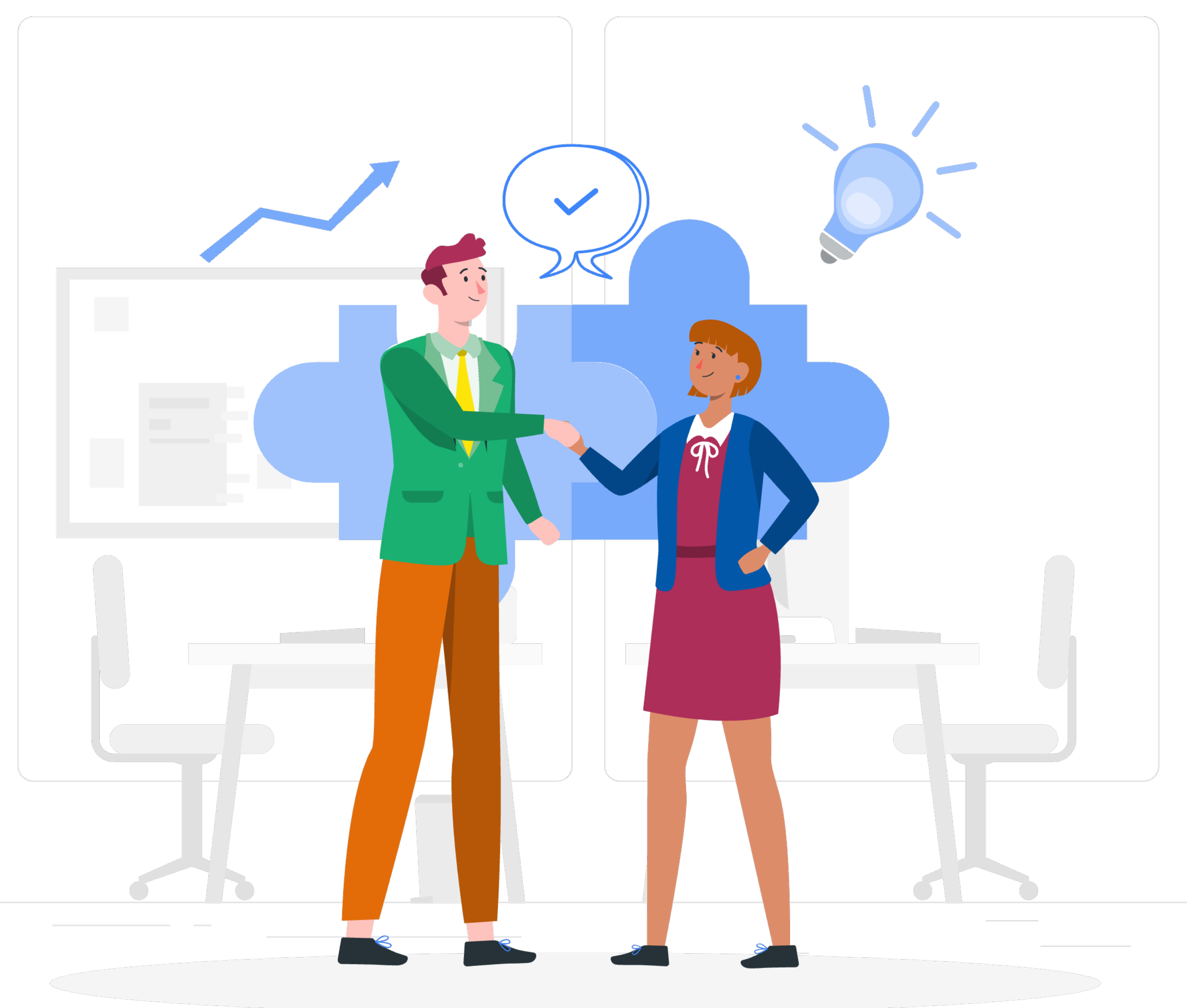


These variable fees are less predictable than simple, fixed-fee subscription contracts, but nonetheless can provide a recurring revenue stream when aggregated across a large population of customers.

SaaS finance teams should decide whether to include variable fee revenue in ARR. Do the historical revenue trends towards a consistent, predictable patterns? Are the majority of customers on annual contracts with monthly minimum fees or prepaid credits with fixed expiration dates? If so, the fees may be appropriate to include in ARR.

Self-Managed Software

In the early days of cloud, almost every SaaS company focused on delivering with an "as-a-Service" model. The SaaS company managed all the technology on behalf of the customer. As the industry has evolved and cloud technology has become ubiquitous, there is now a mix of deployment models in use. While the "as-a-Service" remains the most popular, many new software companies also offer an "as-a-Product" model, enabling corporate IT teams to self-manage the technology in their own corporate data center or cloud environment. Legacy software providers that grew up before the cloud also have a mix of deployment models.



A number of different subscription and licensing models are in use. Examples include:

Term Licenses

Subscription contract that grants the right to run the software for the term of the contract.

Perpetual Licenses

One-time fees paid in exchange for a perpetual right to use the software application.

Maintenance Contracts

Annual maintenance revenue fees required to get upgrades and technical support.

SaaS finance teams will need to evaluate if fees from these self-managed deployments meet the criteria for inclusion in ARR.

Professional Services

Many SaaS and cloud companies offer professional services to help their customers adopt and realize the value of the technology. The most common are engagements during the first few months of the customer lifecycle to help with migration, transition, education, integration, and implementation of the new technology. However, not all professional services are one-time in nature. Some services are productized offerings that are delivered through the duration of the contract in exchange for a fixed monthly fee. Although these people-based services may not have the same gross margin profile as the core SaaS and cloud products do, they do generate recurring revenue.

SaaS finance teams will need to evaluate the various types of professional services offered to determine if the revenue streams are recurring and predictable in nature. If so, the fees may be appropriate to include in ARR.

Examples of common professional services offerings to consider including are:

Managed Services

A pre-defined set of list of operational tasks to proactively manage the technology.

Premium Customer Support

Faster response times or service level agreements and access to more skilled staff.

Long-Term Engagements

On-going projects that provide customer-specific functionality or technical capabilities.

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Section 3:

How to Calculate ARR?

Three Ways to Calculate ARR

ARR Calculation Formulas

In addition to the various policy elections discussed earlier, there are also three different formulas used by SaaS companies to calculate ARR. All three formulas follow a similar methodology by identifying a monthly revenue metric which is then annualized. The key difference between the formulas is how the monthly revenue metric is computed. In the "assigned" model it is based upon a review of the monthly price on the contract. In the "average" model, the average price paid throughout the contract term is calculated. In the "actuals" model, the recent historical GAAP revenue run rate is used.

Name	Formula	Description
Assigned ARR	**ARR** = MRR x 12 with MRR = Assigned value from contract	ARR is assigned by a finance or revenue ops manager at the time of contract signature. Typically involves judgment following review of contract details and company defined policy.
Average ARR	**ARR** = Average Fees per Month x 12 with Average Fees per Month = TCV / Contract Length	ARR is calculated. First, the Total Contract Value is computed. Second, the TCV is divided by the number of months in the contract to arrive at an Average Fee per Month. The Average Fee per Month is then annualized to arrive at an ARR.
Actuals ARR	**ARR** = MRR for Past Month x 12 with MRR = Recurring revenue components of last month's total GAAP revenue	ARR is derived based upon GAAP revenue. First, an MRR is derived by identifying the recurring revenue as components of the total revenue as calculated using GAAP accounting rules. Second, the MRR is annualized to arrive at an ARR.

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Method 1:

Assigned ARR

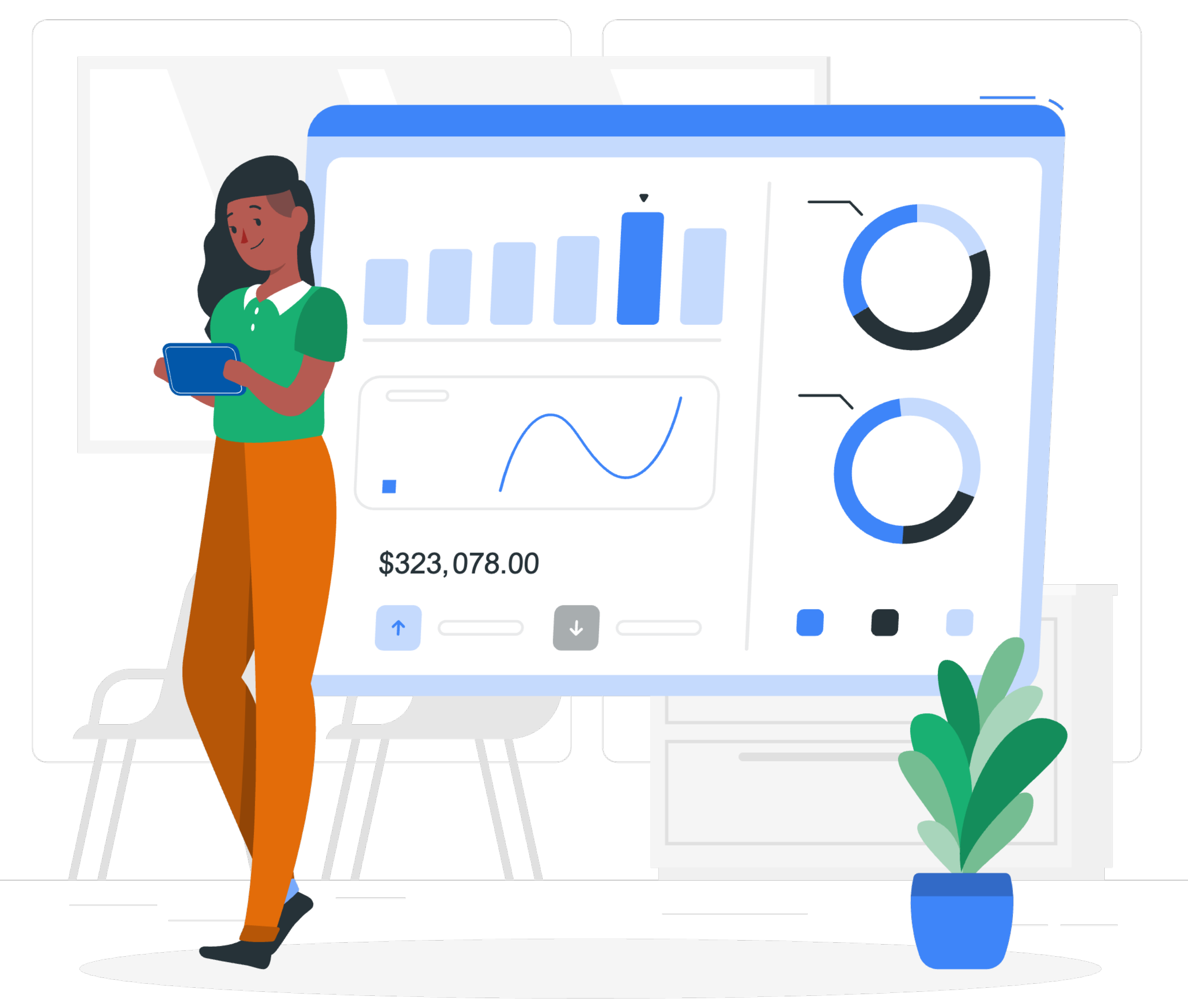
Three Ways to Calculate ARR

The Calculations

Contract Review and Assignment

After a new logo account is closed (or an existing contract is modified), someone in the finance or revenue operations team reviews the customer's contract. S/he determines which of the fees being charged on the contract are recurring in nature based on the company's ARR policy. The recurring fees are summed up and this total is the assigned MRR. The MRR is multiplied by 12 to arrive at the ARR.

We use the word "assigned" because a human being is "assigning" an MRR to the account based upon the contract review and company policy guidelines. A software application could also perform the assignment.



Popular for Subscription Pricing

The assigned ARR is most common with companies that have fixed monthly fee subscription pricing (e.g. $50/user per month). Fixed subscription fees are popular in business applications such as CRM and SalesTech as well as productivity software such as office suites, video conferencing, and collaboration apps.

Step #1 – Assigned MRR	Assigned MRR = Sum of all fixed, predictable recurring fees
Step #2 – Assigned ARR	Assigned ARR = Assigned MRR x 12

Policy Elections

Recurring Revenue Fees

Which product lines, contract types, and revenue streams produce "recurring revenue?" Products with fixed-fee subscription pricing will certainly meet the definition. Premium support and managed services offerings may have fixed, monthly fees that are offered throughout the contract lifecycle. Even products with usage-based pricing may be able to be assigned an MRR if there are contractual commitments for monthly minimum fees.

Variable Pricing

For contracts with step up pricing and phased activation schedules, the finance team will need to decide which price to assign for the ARR calculation.

Suppose the customer has a step-up pricing contract for which the monthly price increases each year:

Year 1 - Customer pays $100/mo
Year 2 - Customer pays $200/mo
Year 3 - Customer pays $300/mo

Some organizations have an ARR policy that assigns the price for the start date of the contract (e.g. $100). Others might have an ARR policy to use the price on last day of the contract period (e.g. $300). The policy election can make a significant difference in the resulting ARR.

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Method 2:

Average ARR

Three Ways to Calculate ARR

The Calculations

Average ARR requires a few more steps to calculate than with the assigned method. First, the average monthly fees are calculated by dividing the customer's Total Contract Value (TCV) by the number of months in the contract term. The average monthly fee then annualized (multiplying by 12) to arrive at ARR.

The Average ARR method is popular for contracts that have variable pricing that changes during the term. Examples include the step-up pricing and phased activation schedules referenced in the ARR policy section. The Average method is also common with software companies that have a mix of self-managed and as-a-Service deployments that contain both maintenance fees for perpetual licenses and subscription fees for SaaS.

Average ARR Calculation

1 Total Contract Value (TCV)

TCV is the sum of all contract line items with recurring revenue characteristics.

2 Average Fees per Month

Average Fees per Month is the Total Contract Value divided by the contract length in months.

3 Average ARR

Calculated by multiplying the Average Monthly Fees per Month by 12.

Policy Elections

There are a few variables that will need to decide upon before calculating ARR using the Average ARR model:

Recurring Revenue Fees

The scope of fees to be included in the Total Contract Value will need to be determined. TCV could include all contracted revenues or just the components that are deemed “recurring.” Areas that warrant special consideration include:

1) Professional services
2) Managed services
3) Maintenance for perpetual licenses
4) Other one-time fees
5) Usage fees
6) Percentage transaction fees

Contract Term Unit of Measure

The contract term could be measured in quarters, months, or days. The use of a more granular term length can result in a more precise ARR calculation for contracts with unusual term lengths as well as mid-contract modifications where prorations must be calculated.

Advantages

The Average ARR model has both advantages and disadvantages compared to the Assigned model. While it is slightly more difficult to understand and calculate, the Average model accommodates a wider range of scenarios. It also eliminates the need to make judgments for complex contract scenarios with multiple different revenue streams and complex pricing models.

Contracted Revenue Streams

The Average ARR makes it easier for SaaS companies to include a broader mix of contracted services in the calculation. By using different policy elections around what is (or is not) included in the recurring fees used to calculate TCV, the average model can include:

- Maintenance agreements for perpetual licenses
- Term licenses for self-managed deployments
- Long-term professional services engagements
- Capacity contracts for usage-based pricing with monthly minimums or prepaid credits

Pull Forward ARR

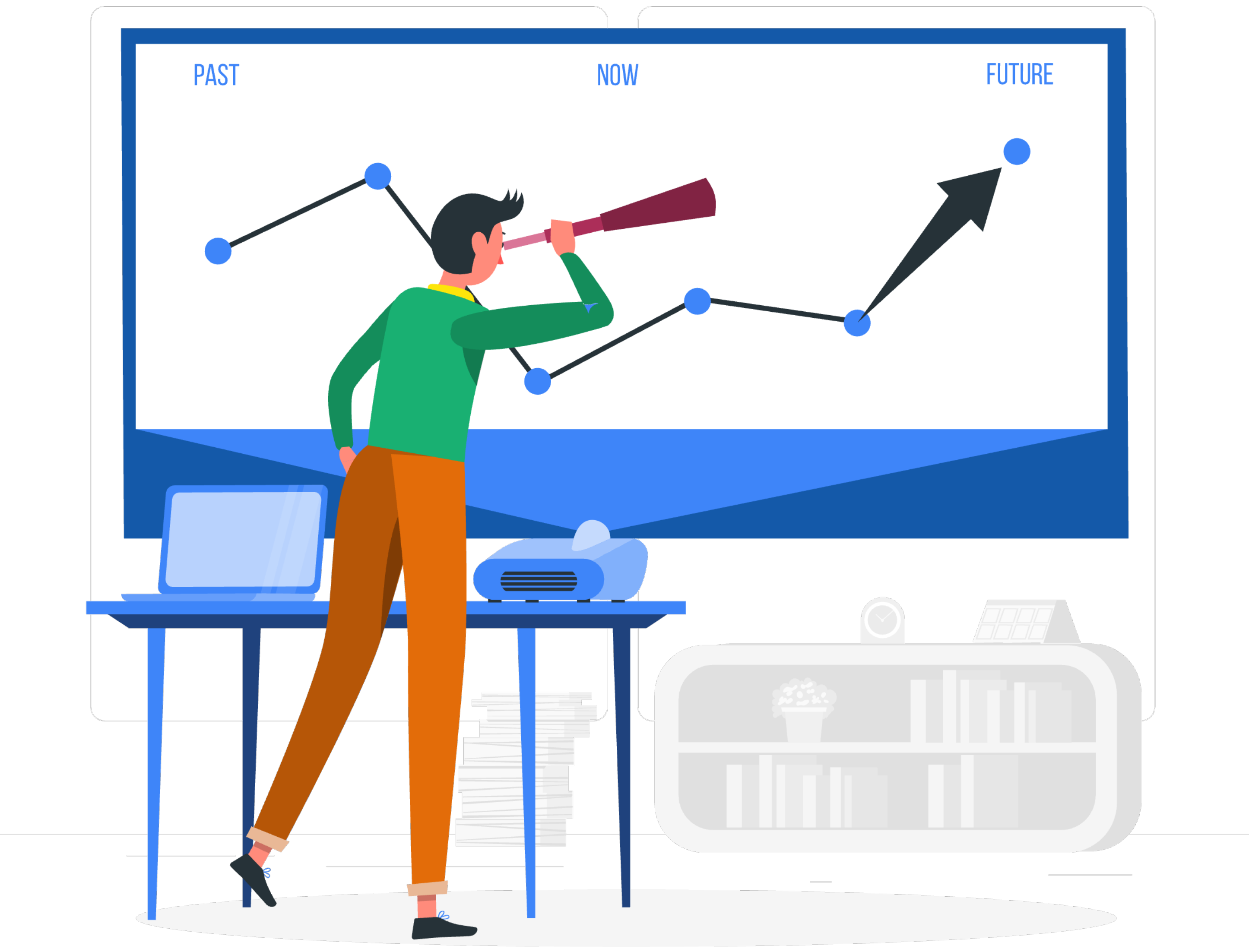
The Average ARR calculation can pull forward a higher ARR in scenarios for which the pricing currently being paid in the current phase of the contract lifecycle is lower than it will be in later stages. Examples include step up pricing and phased activation schedules which have a lower price in the earlier stages of the contract lifecycle but gradually increase throughout the term.

Example – Average ARR

Phased Activation Schedule Example

To better understand the advantages of the Average ARR approach in handling more complex contract structures, let's review a hypothetical example of a contract with a phased activation schedule.

Suppose a customer signs a two-year contract for a SaaS application that is priced based on the number of registered users per month. The price per user is $10/month. The contract is structured with three waves of users adopting at different times:



Wave 1

- 100 users
- Starts on month 1
- Price of $1,000/mo.
- (100 users x $10/user)

Wave 2

- 200 users
- Starts on month 7
- Total price is $3,000/mo.
- (300 users x $10/user)

Wave 3

- 300 users
- Starts on month 13
- Total price is $6,000/mo.
- (600 users x $10/user).

Example – Average ARR

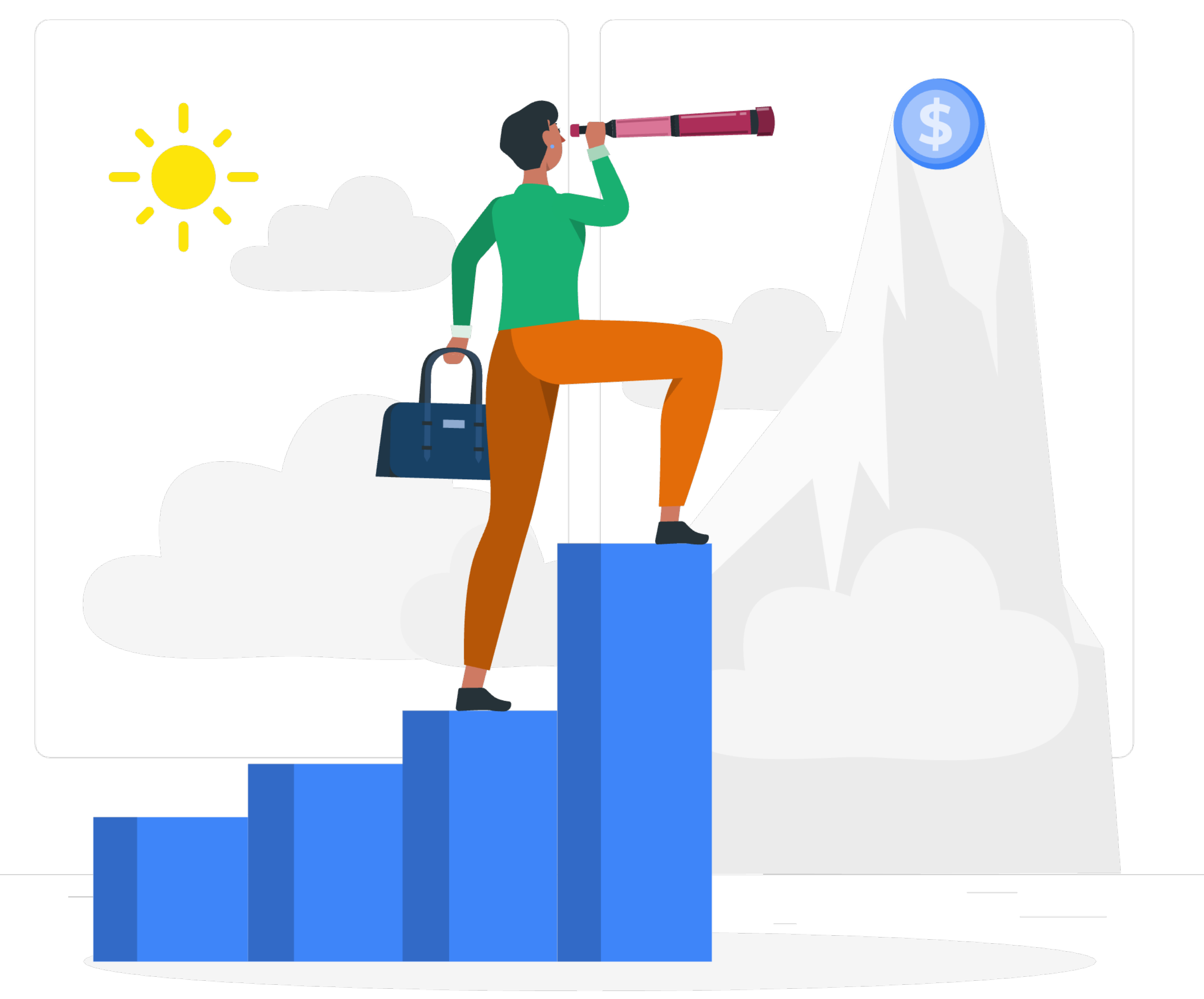
The Average ARR would be computed for the phased activation schedule example on the prior page would be:

1 Total Contract Value (TCV)

TCV Total = TCV Mos 1-6 + TCV Mos 7-12 + TCV Mos 13-24

TCV Mos 1-6 = $1,000/mo x 6 mos = $6,000
TCV Mos 7-12 = $3,000/mo x 6 mos = $18,000
TCV Mos 13-24 = $6,000/mo x 12 mos = $72,000

TCV Total = $96,000



2 Average Monthly Fee

Average Monthly Fee = TCV/Months in Contract
Average Monthly Fee = $96,000/24
Average Monthly Fee = $4,000

3 Annual Recurring Revenue (ARR)

ARR = Average Monthly Fee x 12
ARR = $4,000 x 12
ARR = $48,000

Note that the average monthly fee is $4,000 in months 1-6 even though the customer is only paying $1,000. As a result, the ARR for months 1-6 is 4X higher than it would be using the Assigned ARR methodology described above.

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Method 3:

Actuals ARR

Three Ways to Calculate ARR

The Calculations

The actuals method offers the simplest way to calculate ARR of the three approaches. Actuals is computed by taking the GAAP recurring revenue for the past month and multiplying it by 12. It is effectively, the annualized revenue run rate of the past month's fees. A common variation is to use the GAAP recurring revenue for the quarter and multiply it by 4.

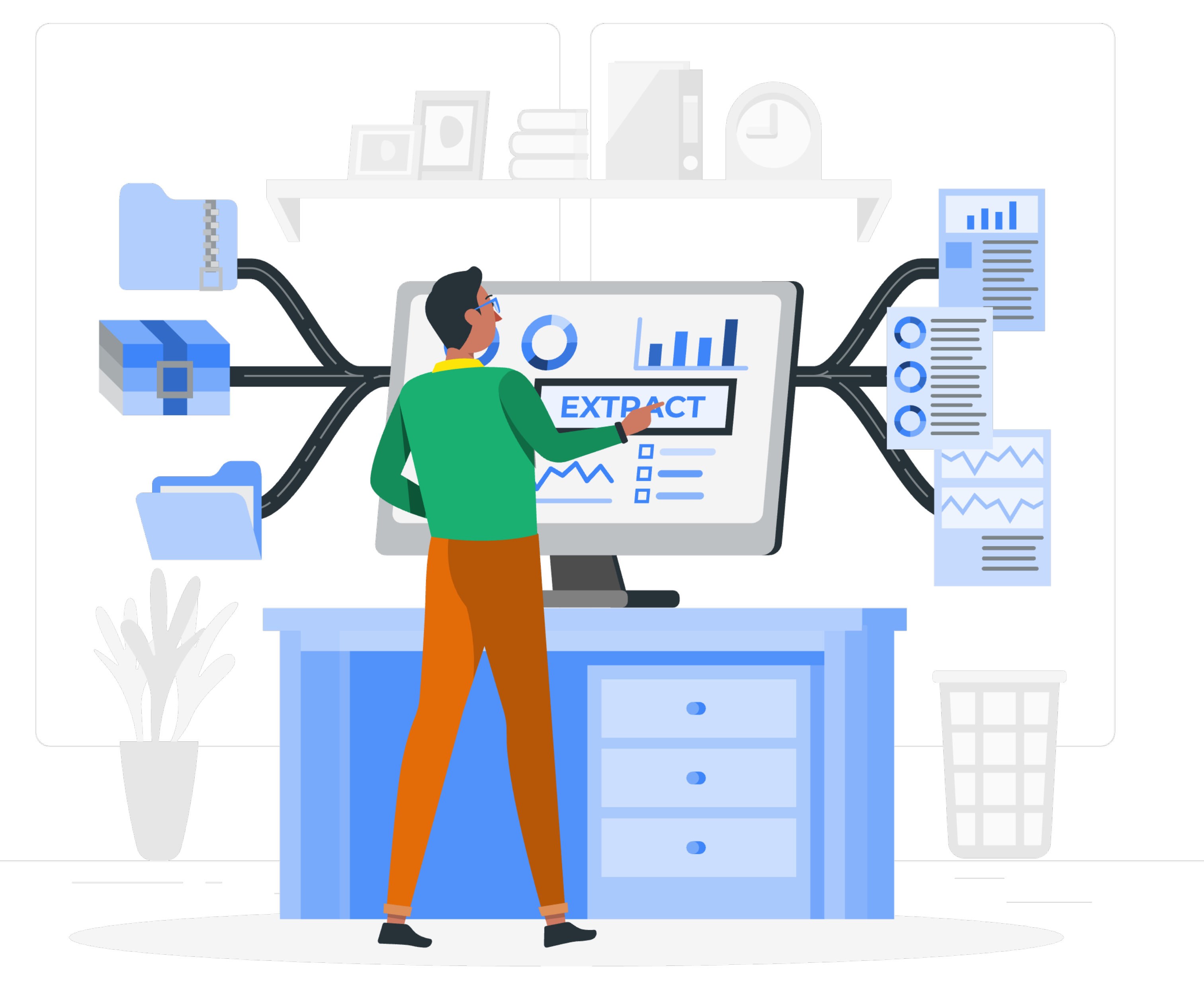
The name "actuals" is used, because the ARR is based on the "actual" revenue recognized using GAAP accounting rules over the past month or quarter.

Actuals ARR

GAAP Revenue for Past Month x 12

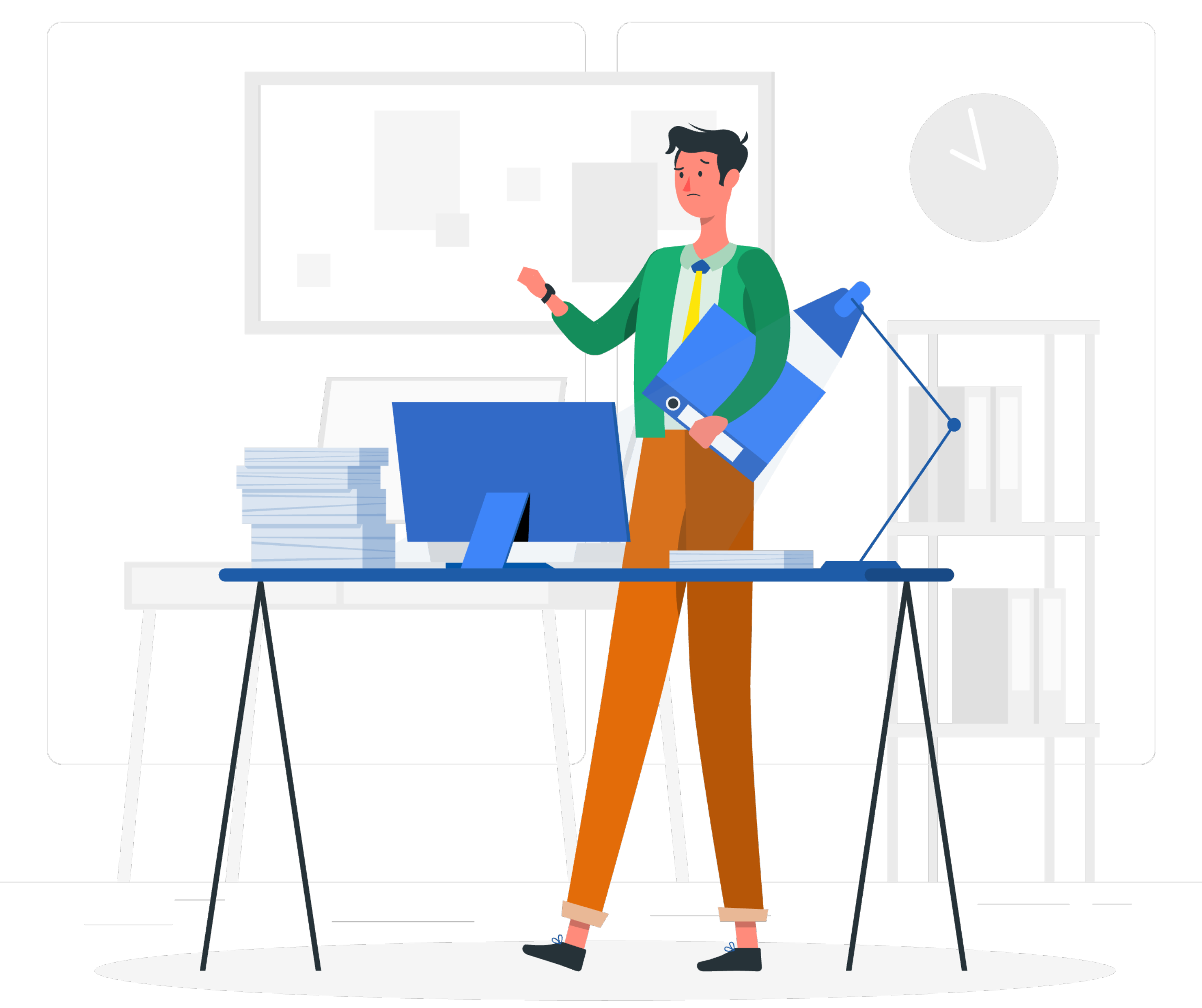
The actuals method is popular with SaaS and cloud providers that have usage-based pricing and other variable, unpredictable fees. Most organizations using the actuals approach do not refer to ARR as Annual Recurring Revenue, but rather had adopted an alternative, similar acronym such as:

- Annualized Run Rate
- Annual Revenue Run Rate
- Annualized Recurring Revenue Run Rate



Policy Elections

There are a few policy elections that will need to be decided upon before calculating ARR using the actuals model:



Revenue Sources

The GAAP Revenue for the past month in step could include all GAAP revenue or just a subset that is deemed to be "recurring" in nature. Specific areas that warrant consideration include

1) Monthly contracts
2) Professional services
3) Managed services
4) Other one-time fees
5) Variable usage fees
6) Percentage transaction fees
7) Maintenance fees from perpetual licenses

Run-Rate Time Frame

Options include the GAAP revenue from the

1) Last month
2) Last 30 days
3) Last quarter
4) Last 90 days
5) Last year
6) Last 365 days

Advantages - Compared to Average

The Actuals method offers greater flexibility than the Assigned and Average methods in two important areas:

Uncontracted Usage Revenue

Larger customers will typically sign annual contracts that offer a discount in exchange for a spend commitment. The two most popular models are:

- **Monthly minimums** - The customer pays a minimum fee each month based upon their planned consumption. Additional usage is billed as overage fees atop the monthly minimum fee.
- **Prepaid credits** – The customer buys credits in advance which can be redeemed over the term of the contract as services are consumed. Once all credits are depleted billing switches to a post-paid model based upon monthly consumption.

In the Average ARR model, only the contractually committed fees can be included in the TCV. However, with the Actuals model all types of usage-based fees, both contracted and not contracted (pay-as-you-go/post-paid fees), are included.

Month-to-Month Contracts

The fees generated from month-to-month customers are not included in TCV and therefore not part of ARR in the Average model. However, these monthly accounts can be included in the Actuals method thereby ARR.

Advantages – Compared to Assigned

The Actuals ARR method also offers advantages compared to the Assigned approach. Since the Actuals can include any historical GAAP revenue stream, it may be a better choice for month-to-month or usage-based pricing.

Calculating ARR for Usage-Based Pricing

Suppose a customer signed a contract that includes a monthly fixed “platform fee” of $1,000 and a usage-based pricing component that charges $0.10 per transaction. The actual amounts billed per month are listed below:

	Month 1	Month 12
Monthly Fees	Platform Fee = $1000 Usage Fees = $500 Total = $1,500	Platform Fee = $1000 Usage Fees = $2000 Total = $3,000
Actuals ARR Calculation	Adjusted ARR = Recurring Fees x 12 Adjusted ARR = $1,500 x 12 Adjusted ARR = $18,000	Adjusted ARR = Recurring Fees x 12 Adjusted ARR = $3,000 x 12 Adjusted ARR = $36,000
Assigned ARR Calculation (For Comparison Purposes)	Assigned ARR = MRR x 12 Assigned ARR = $1,000 x 12 Assigned ARR = $12,000	Assigned ARR = MRR x 12 Assigned ARR = $1,000 x 12 Assigned ARR = $12,000

Using the assigned method, only the recurring fees, which are known in advance and included on the contract would be part of the ARR calculation. In the example above, only the platform fee would be included in MRR.

However, in the actuals method, the ARR is based upon historical GAAP revenue which includes both the platform fee and usage fees. By including the usage fees, the actuals ARR is 50% higher than the assigned ARR in month 1. The actuals is 3X the assigned ARR in month 12.

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Method 4:

Hybrid Approach

Three Ways to Calculate ARR

Combining Models

Some SaaS providers opt not to make a choice. Instead, they use a combination of the three different ARR models to calculate it. ARR is first calculated at a product-line level using the optimal approach for each specific revenue stream. Each of the product-line ARR sub-totals are then summed together to arrive at a Total ARR for the business.

Hybrid ARR

Hybrid ARR = Product-Line ARR_A + Product-Line ARR_B ... + Product-Line ARR_N

For example, a company that uses a hybrid pricing model with both fixed fee subscriptions and variable usage-based fees may want to use two different formulas to best represent ARR for the two different revenue streams:

- **Subscription Fees** - Assigned ARR could be used for the subscription pricing model by taking the 12X the MRR of each of the fixed fee product lines.
- **Usage-Based Fees** - The actuals of 4X last quarter's GAAP revenue could be used for the variable fees generated from usage-based pricing.

The product-line ARRs for subscription and usage-based pricing could then be summed together to arrive at total ARR.

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Comparison of Three Methods

Three Ways to Calculate ARR

Example Scenario

To highlight the different outcomes from using the various formulas, let us walk through the detailed calculations for ARR for a fictitious scenario with complex pricing. Suppose an AI company signs a new Fortune 500 customer for a mix of different services with different pricing models that includes:

- **Monthly subscription fees** – Tied to the number of users on the platform. The customer anticipates wider adoption each year and negotiates a step-up increase in user count for each year.
- **Payment transaction fees** – Based upon a percentage of the dollar value of payment transactions processed on the platform. The amounts will vary per month, but for purposes of the example, assume they are constant.
- **Usage-based fees** – Tied to the volume of transactions processed. The customer pre-purchases a fixed number of credits. Once the prepaid credits are depleted, the usage will be billed monthly in a post-paid model. The usage fees will vary per month, but for simplicity sake, let's assume they are constant.
- **Professional services** – One-time fees during the onset of the contract to implement the technology.

	Professional Services	Monthly subscription fees	Usage-based fees*	Payment transaction fees*
Any Year			$10,000 prepaid	
Year 1	$10,000	$1,000/mo		$500/mo
Year 2		$2,000/mo	$500/mo	$1000/mo
Year 3		$4,000/mo	$1,000/mo	$2000/mo

* The usage and payment transactions fees will vary by month, but for simplicity of the example let's assume they stay constant for simplicity.

Let's calculate the ARR for the mid-point of the contract (month 18 in year 2) using the different calculation methods.

Example Calculations – Assigned ARR

Example of Method 1

Using the fees from the example contract below, let's calculate the ARR for month 18 for using the Assigned method.

	Professional Services	Monthly subscription fees	Usage-based fees*	Payment transaction fees*
Any Year			$10,000 prepaid	
Year 1	$10,000	$1,000/mo		$500/mo
Year 2		$2,000/mo	$500/mo	$1000/mo
Year 3		$4,000/mo	$1,000/mo	$2000/mo

Step 1)
Review the contract to identify fixed, monthly recurring fees. The AI company's ARR policy stipulates to use the pricing from the current month (e.g. month 18) in the contract to calculate ARR. There are no professional services fees in month 18, but even if there were, they would be excluded as they are not recurring. We exclude the usage and payment transaction fees because there are no fixed, monthly fees committed in the contract.

Assigned MRR = Fixed, Predictable Monthly Recurring Fees for month 18 (year 2)
Assigned MRR = $2,000

Step 2)
ARR = Assigned MRR x 12
ARR = $2, 000 x 12
ARR = $24,000

Example Calculations – Average ARR

Example of Method 2

Using the fees from the example contract below, let's calculate the ARR for month 18 for using the Average method.

	Professional Services	Monthly subscription fees	Usage-based fees*	Payment transaction fees*
Any Year			$10,000 prepaid	
Year 1	$10,000	$1,000/mo		$500/mo
Year 2		$2,000/mo	$500/mo	$1000/mo
Year 3		$4,000/mo	$1,000/mo	$2000/mo

Step 1) Calculate the Total Contract Value

The AI company's ARR policy stipulates that professional services engagements which are short-term are not to be included in ARR. The policy also states that for services with usage and percentage pricing are not to considered in TCV since unless the customer has contractual arrangements such as a monthly minimum or prepaid credits.

Total Contract Value = Monthly Subscription Fees + Contracted Usage Fees

Sum of Monthly Subscription Fees for Year 1 = $1,000 x 12 + $2,000 x 12 + $4,000 x 12
Sum of Monthly Subscription Fees = $84,000

Contracted Usage Fees = $10,000

Total Contract Value = $84,000 + $10,000
Total Contract Value = $94,000

Example Calculations – Average ARR

Example of Method 2 (Continued)

Using the fees from the example contract below, let's calculate the ARR for month 18 for using the Average method.

Step 2) Calculate Average Fees per Month

Average Fees per Month = Total Contract Value / Contract Term

Contract Term = 36 Months
Total Contract Value = $94,000

Average Fees per Month = $94,000 / 36
Average Fees per Month = $2,611

Step 3) Calculate the ARR by annualizing the Average Monthly Fees

ARR = Average Fees per Month x 12
ARR = $2,611 x 12
ARR = $31,333

Note that the ARR calculated using Formula #2, Average Monthly Fees of $31,333 is much higher than the ARR calculated using Formula #1 of 24,000. The difference results from including the contracted usage-fees as well as the varied monthly subscription fees for years 1 and 3 in the TCV calculation.

Example Calculations– Actuals ARR

Example of Method 3

Using the fees from the example contract below, let's calculate the ARR for month 18 for using the Average method.

	Professional Services	Monthly subscription fees	Usage-based fees*	Payment transaction fees*
Any Year			$10,000 prepaid	
Year 1	$10,000	$1,000/mo		$500/mo
Year 2		$2,000/mo	$500/mo	$1000/mo
Year 3		$4,000/mo	$1,000/mo	$2000/mo

Key Assumptions

For simplicity of the example, let's make a few key assumptions:

- **Usage Fees** – Assume the prepaid credits have been depleted by month 18 and that the usage fees are being billed based upon consumption at the rate of $500/month on a post-paid basis.
- **GAAP Revenue** - To avoid a complex discussion about GAAP accounting rules, let's assume that the GAAP revenue for month 18 is simply a sum of the fees incurred during the month.

Example Calculations – Actuals ARR

Step 1) Calculate the GAAP Revenue for the Past Month

	One Time Fees
+	Monthly Subscription
+	Monthly Usage Fee
+	Monthly Payment Transaction Fees
=	GAAP Revenue

One Time Fees	= $0
Monthly Subscription Fees	= $2,000
Monthly Usage Fees	= $500
Monthly Payment Fees	= $1,000
GAAP Revenue	= $3,500

Step 2) Annualize the GAAP Revenue

ARR = GAAP Revenue for Past Month x 12
ARR = $3,500 x 12
ARR = $42,000

Note that the ARR calculated using Formula #3, Current Run Rate of $42,000 is higher than the ARR calculated using Formula #1 (Contracted MRR) of $24,000 and Formula #2 (Average Monthly Fees) of $31,333.

The difference results from including the usage fees in the annualized run rate calculation.

Example Calculations Summary

Below is a summary comparison of the calculation methods

	Method 1: Assigned ARR	Method 2: Average ARR	Method 3: Actuals ARR
Calculate/ Identify Inputs	Assigned MRR = $2,000	TCV = $94,000 Contract Term = 36 Months	GAAP Revenue = $3,500
Inter-mediate Steps		Average Fees per Month (AFM) AFM = TCV/Contract Term AFM = $94,000/36 AFM = $2,611	
Compute ARR	ARR = Assigned MRR x 12 ARR = $2,000 x 12 ARR = $24,000	ARR = AFM x 12 ARR = $2,611 ARR = $31,333	ARR = GAAP Revenue x 12 ARR = $3,500 x 12 ARR = $42,000

Select the Optimal Method for Your Business

Although this section was focused on comparing the advantages and disadvantages of the three different formulas, there is no one best approach to calculating ARR. The best option depends on the business model, pricing strategy, and revenue streams that your company offers. You should compare the different models and decide which approach results in the best representation of your projected recurring revenue.

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How to Get Started

Three Ways to Calculate ARR

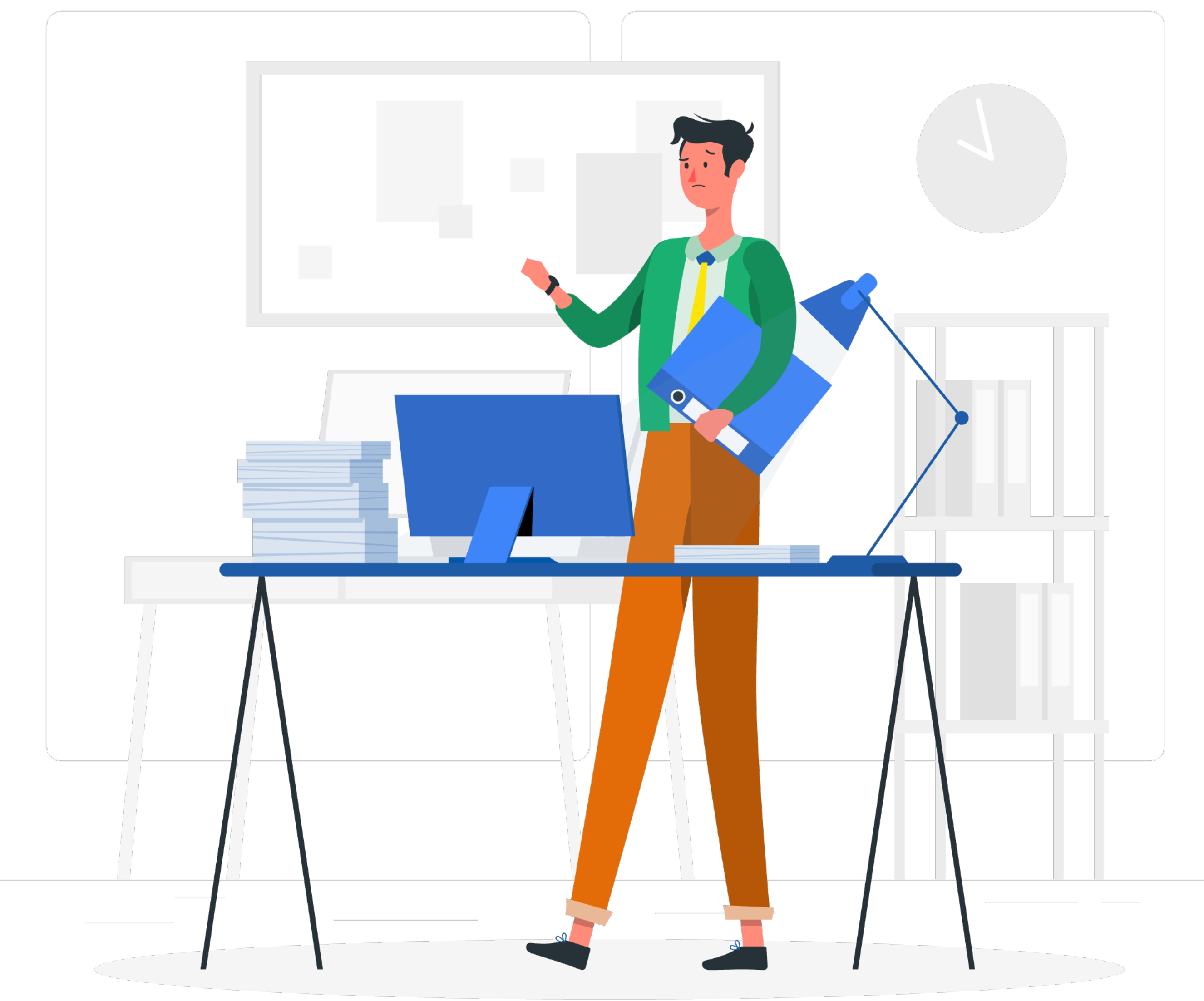
Research and Evaluate Options

How to Get Started

In this guide we have walked through the three different approaches that companies are taking and share examples to highlight the differences. We'll also explained the various policy elections including when to start and stop reporting. Armed with an overview of the various models, we recommend you consider:

Conducting Research

Identify a peer group of companies with similar pricing models, contract structures, and product mixes. Think beyond your immediate competitors to adjacent sectors. For public companies, study investor disclosures to understand their approach. For private companies in your peer group, try to network with other finance leaders to understand the approaches they are taking



Evaluating Options

Review the different reporting start/end dates and the policy elections that other SaaS companies are using. Consider which might be most appropriate for your company to adopt based upon your pricing models, contract structures, and product mix. Perform the ARR calculations using several different models then compare the results.

Systems, Policies, and Controls

If the model you are currently using turns out to be the best available option then stick with it. But if there is a better approach, consider adopting it. In either scenario, it is advisable to:

Define Policy

Just like you have a documented revenue recognition policy for GAAP ((ASC 606 and/or IFRS 15) you should consider defining a policy for ARR that outlines how you think about it, policy elections and calculation formula.

Document your ARR policy including the reporting start/end dates, policy elections, and formulas used. Share the documents with key stakeholders on the management team, board, and investors.

Automate Reporting

Define a system of record for ARR that is the single source of truth for ARR reporting. Establish controls within the finance team to ensure the data is accurate in the system for all new bookings, expansions, contractions, and churn events.

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The Finance Platform for Innovative Business Models

Ordway is a billing and revenue automation platform that is specifically designed for today's innovative, technology-centric business models. With Ordway you can automate billing, revenue recognition, and investor KPI reporting for recurring revenue models based on subscriptions or usage-based pricing.

To learn more visit www.ordwaylabs.com.