

Kyle Poyar and Sanjiv Kalevar — January 2021

The Usage-Based Pricing Playbook



We investigated how to grow to \$100M+ ARR with a usage-based revenue model



Key questions we'll answer:

- Why are SaaS companies increasingly adopting a usage-based revenue model?
- Which SaaS companies have been successful with a usage-based revenue model, and how do they behave?
- How can companies overcome GTM and operational challenges in scaling with a usage-based model?

Findings are backed by multiple sources:

- Conducted 15+ in-depth interviews with GTM and operations executives at top-performing SaaS companies that have a usage-based revenue model.
- Analyzed patterns in publicly traded companies.
- Leveraged OpenView's proprietary insights from working directly with usage-based portfolio companies.

Diverse set of interviewees



This playbook encompasses multiple flavors of usage-based revenue generation*



Primary focus of this playbook

Transactional

Flexible pricing where customers only pay for what they used during the period.



Usage-based subscription tiers

Customers commit to their desired level of usage. They can upgrade or pay overages for more usage. If they need less usage, they can change plans (subject to contract terms).



Third-party usage



Flexible pricing where customers only pay for what was used during the period. Usage is not controlled by the customer, but rather comes from behavior by a third party (e.g., the customer's end customer).

*Not mutually exclusive; many companies adopt multiple models for different customer segments

3 takeaways for CEOs, CROs, and CFOs



CEO

- 1. Ensure a usage model is right for your product.** Each use should generate a positive business outcome for customers. You are sharing in the customer's success.
- 2. Take the time to pick the right usage metric.** It should grow consistently across your customers, help you communicate your product's value, and be (somewhat) predictable.
- 3. Be prepared to build.** From billing to sales comp, many companies have had to build custom solutions to the operational challenges around their specific usage model.

CRO

- 1. Enterprises may push back on usage pricing, but there are ways around it.** Companies have found creative ways to offer predictability for the enterprise without hurting growth.
- 2. Pay reps beyond the first commit.** Reps need to be closing deals quickly and then letting usage grow in time. Include a tail based on actual usage after ramp.
- 3. You can't predict your largest accounts.** You're making a bunch of bets and some will pay off spectacularly. Invest in a great experience for all signups regardless of their initial spend.

CFO

- 1. Brush up on rev rec.** Unlike subscriptions, usage-based revenue is recognized as it occurs. You may need to maintain multiple rev rec policies to adapt to different pricing models.
- 2. Finance becomes tied with product.** Billing is part of the customer experience. Customers need to trust their bill, gain access to usage in real time, and see consistent amounts across systems.
- 3. Forecasting requires data science.** Leading practitioners predict usage at both a customer and cohort-level in order to gain conviction on future revenue.

The Usage Imperative

Why are SaaS companies increasingly adopting a usage-based revenue model?

Software buying has evolved



	1990s	2000s	TODAY
Infrastructure	Data Center	Cloud	Connected Cloud
Buyer	CIO	Executive	End User
Pricing	Large upfront purchase	Recurring annual purchase	Start for free, pay later as usage grows
Distribution	Sales led growth	Marketing led growth	Product led growth

Usage-based revenue models address these changes in buying behavior



Benefits of a usage-based model

Allows the customer to start at a low cost, minimizing friction



Google Cloud Platform offers \$300 of free credits to every developer account. GCP is at a >\$10B annual run rate.

Directly links the price paid with the value received



HubSpot charges based on a customer's leads. This links HubSpot's revenue with their customers' GTM success.

Allows more users to access the product within an account, making the software more ubiquitous and seeding new use cases



AuditBoard charges based on # of controls rather than users. They generate 10x the number of users in an account compared to legacy SOX software.

Expands TAM by making the product more accessible while uncapping the potential upside

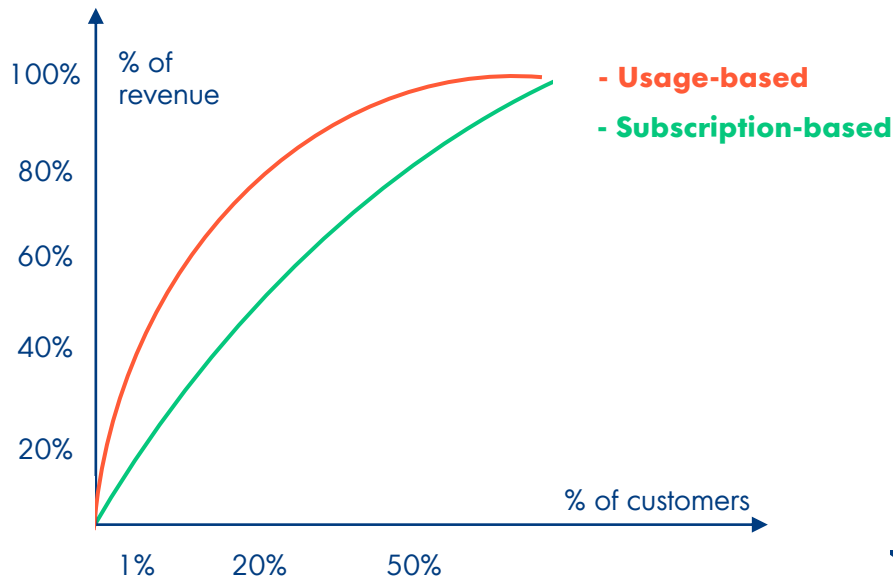


AWS has been able to reach traditionally cost-conscious SMB and middle-market customers. >1M customers to date.

The bet is that you lower the entry barriers, and a subset of customers grow rapidly



Typical software company revenue concentration



For further reading, we recommend this [article](#) from Nnamdi Iregbulem



Customers who spend \$100k+ represent 72% of revenue, but only 6.7% of customers



Customers who spend \$100k+ represent 46% of revenue, but only 0.8% of customers



Customers who spend \$100k+ represent 74% of revenue, but only 0.7% of customers

There's a 70-10 "rule" in customer concentration.

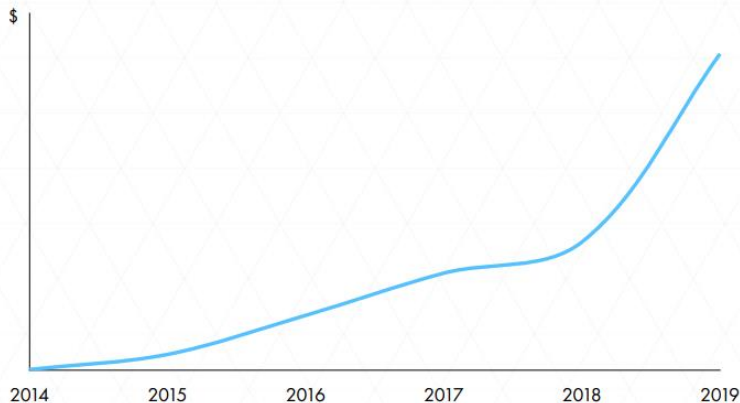
The top 10% of customers typically represent roughly 70% of revenue. Meanwhile, the top 1% represent 40%.

Example: Twilio sees low friction to adopt and massive expansion potential



2020 investor presentation

TYPICAL CUSTOMER REVENUE RAMP



Developer-first

Low friction and no upfront costs

Usage-based Model

Share in our customers' success

Land & Expand

More usage, more products, more applications

Note: Chart depicts annual revenue from an anonymized customer

30

Source: [Twilio 2020 Investor Day Presentation](#)

- Twilio has 10M+ developer accounts, 200k+ active customers, and a 132% dollar-based net expansion rate.
- Despite the larger user base, revenue is concentrated in top customers. 7 customers spend \$10M+ per year and 142 spend \$1M+ per year.
- 85% of Twilio's net expansion comes from usage and only 15% comes from new products.
- 76% of Twilio's revenue mix is from usage-based products.

Today's software trends mandate charging based on usage, not users



Automation

Software increasingly automates manual processes. The more successful a product is, the fewer user seats a customer needs.

Seat pricing doesn't scale with the value of automation.



Zapier reports 61% of all knowledge workers already rely on automation.

AI

AI takes automation a step further, eventually eliminating the need for whole teams of people for ongoing tasks. **Monetization can no longer be tied only to human users of a product.**



databricks

Databricks has seen over a million downloads per month for its machine learning product.

API

For many of the fastest growing software companies, the value is in the API—software talking directly to other software—rather than the UI. **There doesn't need to be a user to see value.**



In 2019 Twilio processed 600 billion API-based transactions.

Success Stories

Which SaaS companies have been successful with a usage-based revenue model, and how do they behave?

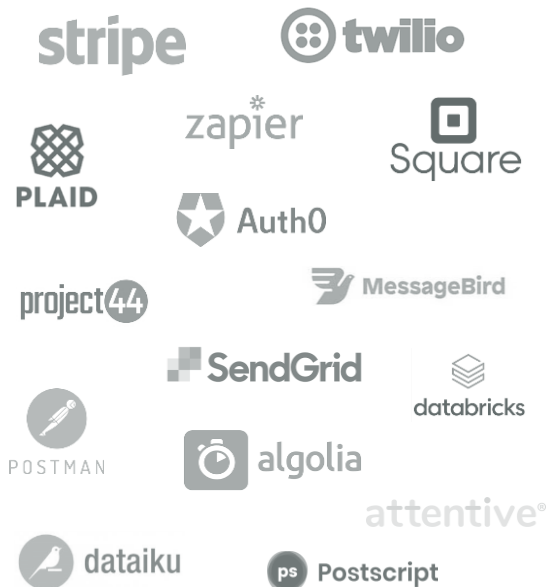
Usage-based SaaS companies can be found in all layers of the tech stack



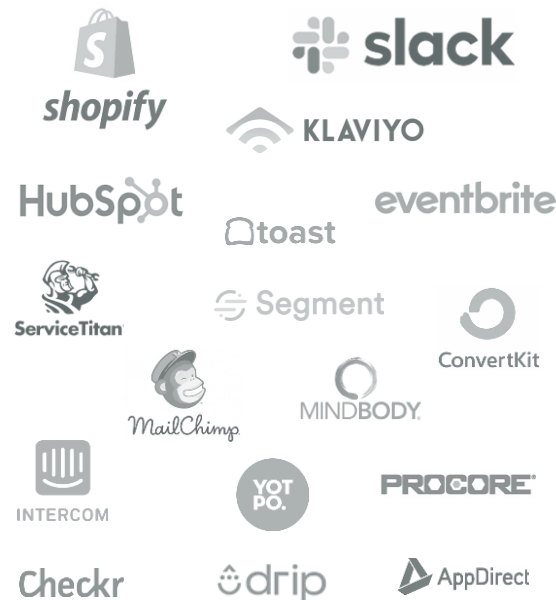
Infrastructure



Middleware



Application



Investors are rewarding usage-based companies in the public market



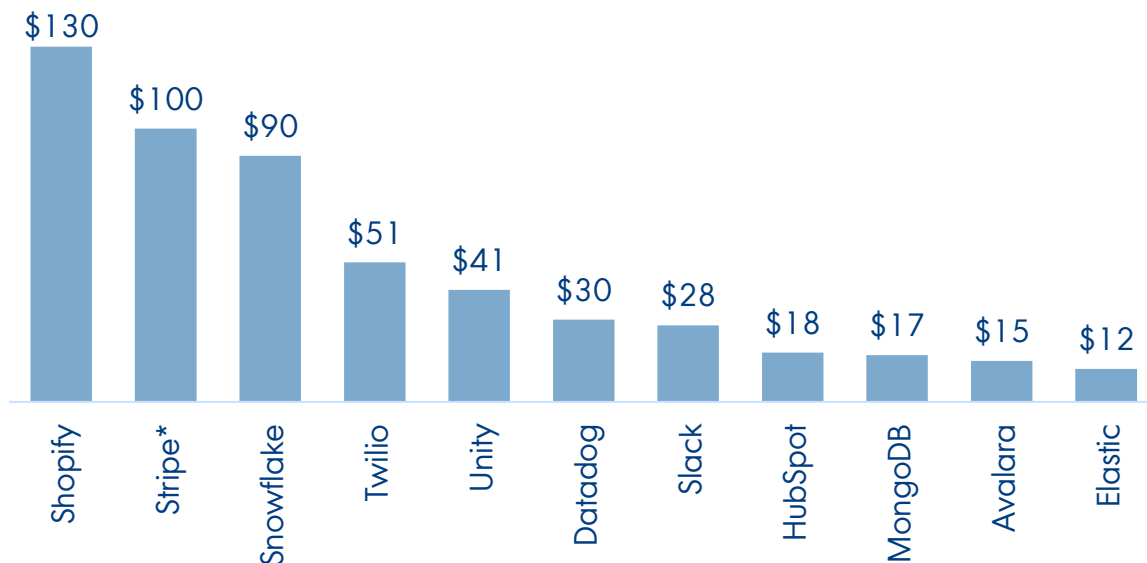
\$500B

Combined Enterprise value of largest usage-based SaaS companies

50%

Revenue multiple premium over the broader SaaS index

Valuation of select usage-based SaaS companies (\$B)



*Stripe is privately held. \$100B valuation based on TechCrunch press releases as of 11/30/2020.

Usage models correspond with faster net expansion and continued growth at scale



Comparison of usage-based public SaaS companies to the broader SaaS index

	Usage-based	Broader SaaS index	Difference (%)
YoY revenue growth (Forecast)	29.9%	21.7%	+38%
Net dollar retention	120%	110%	+9%
EV/revenue multiple	21.6x	14.4x	+50%
Revenue scale (\$, in millions)	\$578	\$434	+33%
Gross margin	73%	71%	+3%
Rule of 40	31.4%	29.1%	+8%

1. Usage-based businesses see continued growth at scale (29.9% vs. 21.7%) driven by best-in-class net retention (120% vs 110%).
2. They do this at even greater revenue scale with similar gross margin and rule of 40 profiles to their peers.
3. As a result, usage-based businesses are valued at a substantial premium (21.6x vs 14.4x revenue multiple).

*Summary financials based on public comparables. All values are medians of the comparable sets.

Example: Zocdoc's growth took off after adopting usage-based pricing



Before: Flat-fee pricing constrained growth

- Zocdoc, the Yelp of healthcare, was valued at nearly \$2B yet was on life support. Growth had flatlined and burn was up to \$40M+ per year.
- They charged a \$3,000 annual flat fee to providers. This was cheap for some and expensive for others. It didn't create a path to expand customers over time as they saw success with the platform.



After: Usage-based pricing accelerated land-and-expand

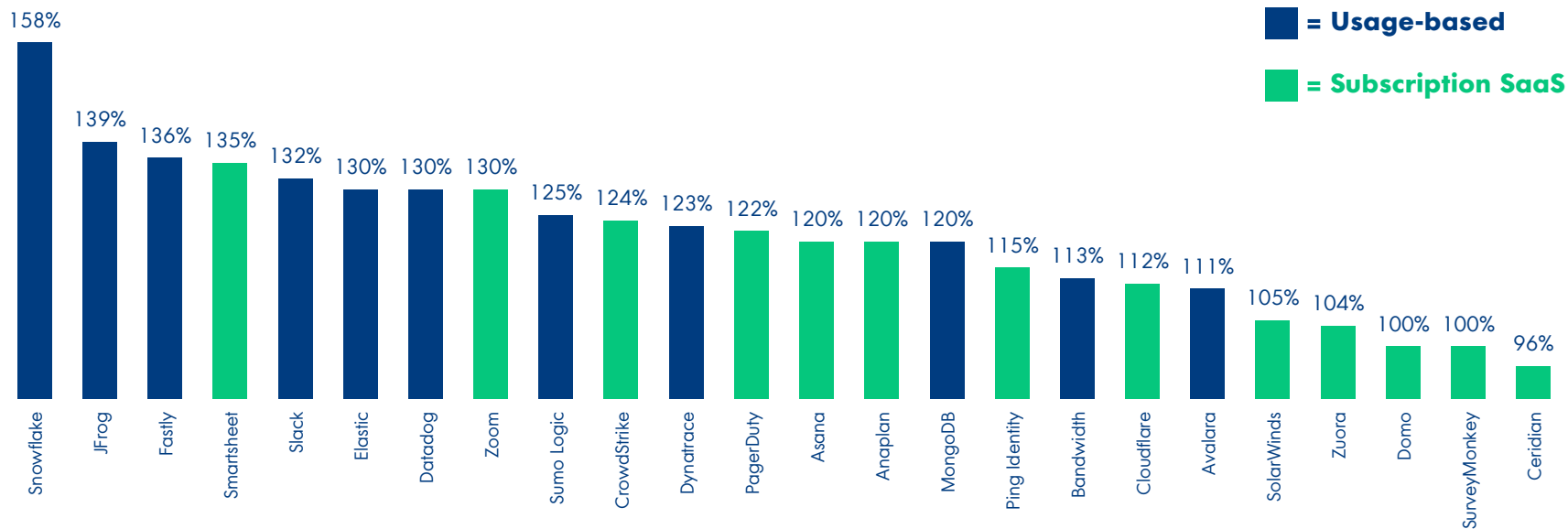
- Moved to usage-based pricing where providers pay for each new patient booking.
- The provider network grew by 50% in the first states that transitioned to the new model since it was more affordable to try out the service.
- Provider churn went down by 50% and sales productivity is up 4x.
- Zocdoc saw its first ever profitable quarter in Q4 2019 as growth rates were accelerating.

Source: <https://medium.com/zocdoc-corp/zocdocs-turnaround-from-an-unsustainable-path-to-profitable-growth-c3fc7ce2314d>

7 of the 9 public companies with the best NDR have a usage-based model



Net dollar retention (NDR) among recent* SaaS IPOs



*Companies must have gone public on or after 11/1/2017. Net retention reported from a company's 10-K or S-1, whichever is most recent.

Even traditional subscription companies are incorporating a usage element in their pricing



- Usage is a fence between packages
- Professional plan includes up to five Lightning Flow automation processes
- Platform editions have custom object limits



- Usage is a fence between packages
- Paid plans include a limit on storage, file upload size, version history, and number of API calls



- Usage is the fence between free and paid plans
- The free edition includes a 40-minute maximum time limit for group meetings

Navigating Roadblocks

How can companies overcome GTM and operational challenges in scaling with a usage-based model?

The most common roadblocks are in strategy, GTM, and finance



Strategy & Pricing

- Is usage-based pricing the right revenue model for us?
- Did we pick the right usage-based value metric?
- What if customers don't like paying based on usage?
- How do we handle overages?



GTM Strategy

- What should be the role of self-service, sales and customer success?
- How do we navigate sales comp?
- How do we grow adoption and usage?



Finance & Operations

- Is usage revenue valued differently than subscription?
- How do we handle billing?
- How do we handle financial planning with volatile revenue?
- How do we handle cash management and rev rec?

Strategy & Pricing



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Strategy & Pricing: Executive Summary



1. **First, evaluate whether a usage model is right for your product and customers.**

Ideally the product will be so sticky that you won't need to bend over backwards to lock in a commitment from customers. Be mindful of the competitive dynamics, which influences whether your pricing will be viewed as disruptive.

2. **The issue could be with your usage-based value metric rather than usage pricing.**

Make sure your value metric meets the five key criteria: it's value-based, flexible, scalable, predictable, and feasible. Usage should grow steadily over time for the average customer and should be well distributed across accounts.

3. **You can get creative with pricing structures to give customers greater peace of mind.**

Snowflake allows customers to roll over their unused commitment, assuming that next year's commitment grows. Datadog charges based on the high water-mark of usage within a month, but excludes the top 1% to minimize the impact of spikes. Meanwhile, AWS allows customers to commit to a usage volume without requiring an upfront payment.

4. **Be thoughtful about how to handle overages when customers exceed their plan.**

There are at least five different overage models in practice. Some are more customer-friendly (e.g., giving the customer headroom before overages kick in) while others incentivize a larger commitment.

First, evaluate whether a usage model is right for your product and customers



When usage-based pricing works

- **Success-based:** Usage aligns directly with customers' business outcomes, allowing you to share in their success.
- **Sticky:** Product is highly sticky once it's adopted, with usage consistently increasing over time.
 - ▶ Communication API business Twilio finds that developers can quickly prototype ideas and develop product-ready applications. Developers pay once the app is live with customers—which they don't want to undo.
- **Customer-centric:** Customers prefer the flexibility to only pay based on what they use.

When it doesn't work as well

- **Taxi-meter effect:** Usage is discouraged when customers feel the marginal cost of consumption.
 - ▶ Hired found that recruiters only sent them a small share of their open roles when pricing was pay-per-hire. Unlimited models led to better adoption of the platform.
- **Variability:** Usage is highly variable or episodic.
 - ▶ In some cases (see Eventbrite), usage-based pricing helps acquire customers with a one-off use case, but this revenue may not be viewed as consistent or recurring revenue.
- **Customer concerns:** Customers are less savvy technology buyers and demand a simplified buying experience.

Ideally the product is sticky and hard to take away from end users



“Eventually, someone from procurement calls me saying, ‘I don’t know who you guys are, but we’re spending \$40,000 a month with you and we can’t budget our spend this way’... That negotiation with procurement is very different because the leverage is on my side. I’m happy to let [the pricing] ride with a higher unit-cost and I’m also happy to decrease it for an upfront commitment. **When you’ve already created a groundswell of usage, it’s powerful to say, ‘Okay, fine, I guess I’ll flip the switch and take my product away from your 1,000 engineers.’”**

–Commercial Leader

For many leading companies, the usage metric shares in the customer's success



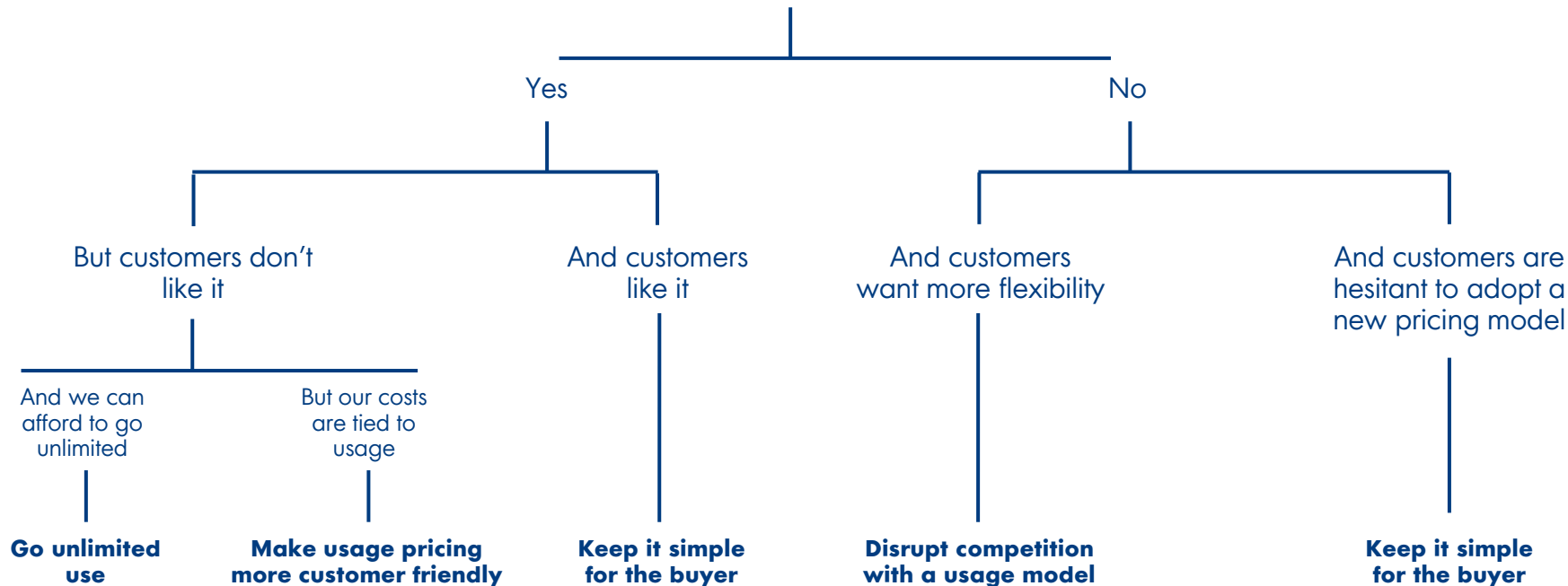
"Customers almost never tell us that our pricing is a 'success tax.' We charge based on the number of monthly users a customer has logging in. We help them attract those users and many times we can show that we help with conversion, bringing more users in the door... We also help with security each time someone logs in. **The way we charge is intimately intertwined with how we help customers and what customers are trying to do.**"

–Commercial Leader

Be mindful of the competitive dynamics in your market









Are competitors charging on usage?



There are many potential usage metrics that you could use in your pricing



Company	Usage-based value metric(s)
	<ul style="list-style-type: none">- Number of SMS messages
	<ul style="list-style-type: none">- Compute resources- Volume of data
	<ul style="list-style-type: none">- Number of external active users
	<ul style="list-style-type: none">- Number of tasks automated through the platform- Number of zaps
	<ul style="list-style-type: none">- Number of marketing contacts
	<ul style="list-style-type: none">- Number of hosts (infrastructure monitoring)- Amount of ingested or scanned GB (log management)

A **value metric** is the unit of value that determines how much you charge and how much a customer pays for your product. It could be based on customer size, usage, users, or another criteria.

Take the time to pick a usage-based metric that meets these 5 criteria



Value metric checklist

Criteria	Explanation
Value-based	<ul style="list-style-type: none">• Aligns with how customers derive value from your product and how they see success• Helps you communicate your unique product value
Flexible	<ul style="list-style-type: none">• Allows the customer to choose and pay for their exact scope of usage• Helps overcome buying constraints and budget thresholds
Scalable	<ul style="list-style-type: none">• Generates more spend from a customer over time as they use more of the product• Revenue scales naturally with customer growth
Predictable	<ul style="list-style-type: none">• Provides billing and budget predictability for customers large and small
Feasible	<ul style="list-style-type: none">• Possible for you to monitor, administer, and police with your customers• Tracks with your COGS so that you do not have consistently unprofitable customers

Examples: VTS and HubSpot adopted new value metrics to help them scale



From per building to per square foot pricing

- With per building pricing, customers were incentivized to cherry pick which properties they managed through the platform.
- Now pricing is more closely aligned with customer value from the product as well as how customers make money from tenants.
- Average price per square foot increased significantly without hurting adoption.



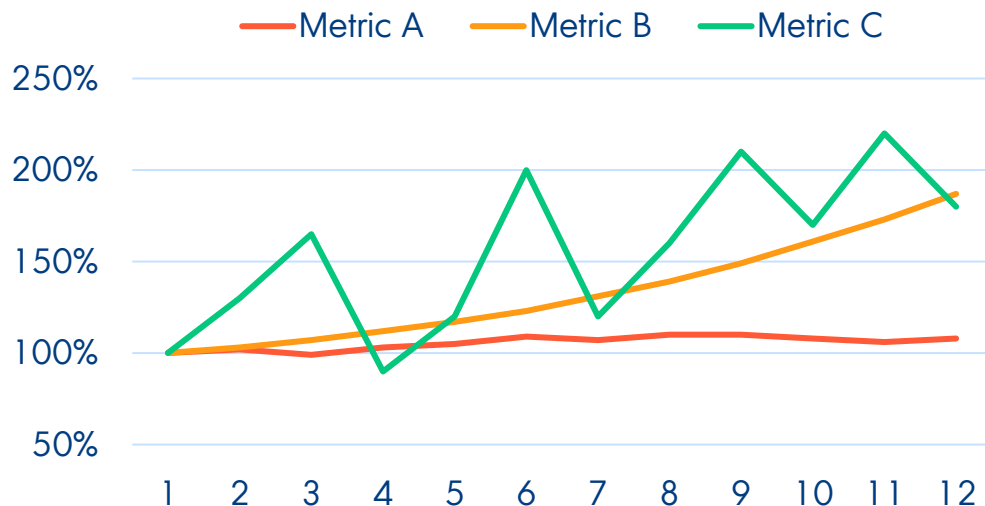
Contact pricing increased net retention from 75% to 100%

- HubSpot originally only had fixed packages rather than usage-based pricing. They saw a low upgrade rate and net revenue retention of 75%.
- Prior to IPO, HubSpot introduced contact-based pricing where customers pay more as they generate more leads through the platform.
- Net revenue retention increased to 100%.

For many successful startups, usage grows steadily over time for the average customer



Example net usage retention by month



Metric A is too flat as time elapses, indicating that customers won't expand after they land.

Metric C is growing, but is highly spiky and unpredictable. Customers will have a difficult time estimating their usage needs and budgeting appropriately.

Metric B is the best fit for pricing purposes. It grows steadily over time and growth even accelerates at scale after the customer is fully implemented.

There's normally a subset of customers who account for a large share of usage



Portfolio theory: Treat signups as a portfolio. Many will cluster at the low end with modest usage. A subset will scale rapidly.



"One of our customers started off spending \$15 per month. **That grew to \$40,000 per month** all before procurement ever got involved."



70/10 "rule": It is normal—and healthy—for the top 10% of accounts to represent 70% of overall usage when a company hits scale.



"We get thousands of signups every month, but most just use the product manually for less than \$50 per month. **We don't talk to them until they start spending \$1,000 per month.**"



Scalability: There should be the potential for usage to scale substantially within an account as they move from individual to team to org-wide adoption.



"We have two potential KPIs for usage-based pricing. **In reality, nobody needs more than 20 [of KPI 1].** The only one that ultimately matters is [KPI 2]."

Some enterprise buyers may push back around lack of predictability







“From a customer’s perspective, they want to have consistency for budgeting purposes. It’s a big concern for these larger companies when you go through legal and procurement and they have a really tough time wrapping their head around how much is the purchase... I’ve seen deals stall because they got stuck with procurement. They couldn’t procure a purchase for something when they didn’t know what the cost was.”

–Commercial Leader

You can get creative with pricing structures to give customers greater peace of mind



Pricing structure	How it works	Example
Larger discount for a bigger commitment	Customers commit to a spend level for the year and get a better price for a larger commitment.	
Rolling over unused credits	If the customer doesn't use their committed credits, they can roll some over assuming the next year's commitment remains at least as large as the last one.	
Commit now, pay later	Customers can choose between whether they want to pay for their commitment fully upfront, partially upfront, or monthly in arrears. They can save if they make a bigger commitment or choose to pay upfront.	
Flexible usage draw-down	The customer can choose between a monthly usage subscription or an annual allotment that can be consumed flexibly. With the annual option, a customer can grow into their commitment over time and not get penalized for periodic spikes.	

Example: AWS has reached \$45B+ in revenue with extremely flexible pricing







- **Affordable entry pricing:** AWS offers free versions of 85 different products. There are three types of free offers—always free, 12 months free, and short-term free trials.
- **Usage metrics:** AWS charges based on different usage metrics depending on the product. The core Compute Cloud is priced by the hour of compute instances. Usage is billed in per-second increments to give the customer even more flexibility.
- **Flexible pricing structures:** Customers can choose to pay-as-you-go or save money by making a commitment. Discounts can go as high as 75% off the published price.
- **Flexible payment structures:** Independent of the commitment, customers can choose their contract length and whether they want to pay fully upfront, partially upfront, or in arrears. For example, a 3-year term gets a 62% discount when paid upfront or 57% discount when in arrears.
- **Overages:** AWS offers robust cost management functionality so customers can set their own rules and budgets to control costs across their teams.



- AWS is the fully realized version of usage-based pricing, allowing customers to pick and choose products and their exact usage needs (prices are as low as \$0.0042 per hour).
- They will generate \$45B in revenue in 2020, up 30% year-over-year. To put that in perspective, Snowflake generated \$265M in revenue in 2019.
- AWS has over 1 million customers spanning startups to the largest global enterprises.

Creativity can also apply to overages when a customer exceeds their plan



Overage Model	Example	Rationale
Allow the customer to go over at the pay-as-you-go rate	 Skytap	<ul style="list-style-type: none">• Incentivizes the customer to increase the size of their commitment• Provides the most monetization potential
Allow the customer to go over while maintaining their discount	 mongoDB	<ul style="list-style-type: none">• Makes scaling feel less punitive to the customer• More customer centric if the customer may experience significant usage fluctuation across months (for example, due to seasonality)
Give customers some headroom before overages kick in	 Auth0	<ul style="list-style-type: none">• Gives the customer peace of mind in the event of unanticipated spikes that may be out of the customer's control• Greater price predictability for enterprise procurement teams
Throttle customer usage unless they choose to upgrade their subscription	 zapier	<ul style="list-style-type: none">• Usage may balloon if the customer sets up the product incorrectly; charging for overages would feel extremely punitive• Very small businesses have greater difficulty affording overages
Give the customer control to choose their preferred overage practice	 aws	<ul style="list-style-type: none">• Puts control in the customer's hands—they can set up their own budgets by team or department and manage spend accordingly• Allows the company to serve a broader spectrum of customer types

Best practice for Enterprise: Give customers headroom and re-up their commitment



“We didn’t like to use the term ‘overage’ with customers; we used ‘flex’ instead. We found that a minimum commitment is necessary for the enterprise motion, but that customers should be able to flex before their minimum. **They would get a grace period of 2–3 months before they would have to decide whether to pay for the one-time flex usage or to re-up their contract at a higher commitment and higher discount. If they re-up, the flex usage is forgiven.**

–Commercial Leader



Benefits to the customer:

- Greater predictability in the buying process
- Fewer surprise fees they didn’t budget for
- Don’t have to worry about the administrative burden of small overage payments



Benefits to the vendor:

- Lock-in a greater future subscription commitment with better LTV
- Gives the sales or AM team leverage to re-engage the customer in an upsell (feels like they’re doing the customer a solid)
- Fewer billing and administrative headaches

Go-to-Market (GTM) Strategy



Strategy & Pricing

- Is usage-based pricing the right revenue model for us?
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- What should be the role of self-service, sales and customer success?
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GTM Strategy: Executive Summary



- **Self-service and free offerings open the top of the funnel (product led growth).**
Free trials and free credits allow signups to try before they buy. High-quality support and a rapid time to value help customers adopt the product. Based on a PQL methodology, the highest potential self-service users get sent to sales. These PQLs need to fit the ideal customer profile and a minimum usage threshold.
- **Sales generates new committed subscriptions—without slowing down deals.**
While the AE's focus should be on the initial subscription commitment, their compensation should include a tail of consumption so that reps don't get too greedy on the first bite of the apple. Reps are technically-versed, empathetic, and have great follow-through to navigate legal, procurement, and security.
- **Post-sales owns product adoption and “organic” expansion.**
CS takes over to drive customer adoption and the usage of key features that create stickiness. They are goaled based on a mix of MBOs and net dollar retention. Account managers or AEs stay with accounts that have “inorganic” growth potential—other teams, workloads, use cases, divisions, etc. Their responsibility is to systematically map out the account and create connections with new stakeholders.

The usage-based customer journey



For further reading, we recommend this [article](#)

Self-service and free offerings open the top of the funnel



Product led growth

KPIs = Signups, activation rate, free to paid conversion

- Free trials and free credits allow new signups to try before they buy—without needing to talk to a rep.
- Great user experiences and rapid time to value become critical.
- Individual users, personal accounts, and open source projects stay on self-service.
- High-quality support is available to all because it's unclear which signups will go on to see dramatic growth.

"Over three-and-a-half years ago, one self-serve customer went from \$15 a month to \$40,000 a month... I don't think they talked to any rep when they first closed... They were what's known as a bluebird. You never know how it'll work out... Those \$100, \$200 a month accounts can grow like that."

–Commercial Leader

"Over half of our employees are in our support organization and we offer free support to every one of our customers... it doesn't matter if you're spending \$5 or \$5 million a year, just pick up the phone and dial it... This support is something that our customers value and that we value. We differentiate on customer experience because it takes 24, 26, 28 months for our accounts to really peak in spend."

–Commercial Leader

"Our growth team is all about retention. Even if the lead barely pays us... In the future they will pay you for something, but we don't know what. We have to treat everyone the same because some of those accounts will bloom eventually."

–Growth Leader

Grow by mixing sales with self-service at the right part of the customer journey



“There are so many developers signing up that we have to tier them. We tier on two metrics: fit and usage. Fit is static—it’s based on your email domain and takes in things like employee count, industry, all that stuff. Usage is dynamic and changes day-to-day based on product signals. We only work with accounts that reach a certain threshold on both fit and usage. **Regardless of tier, we won’t even offer commitments until you’re spending \$25k a year or so... It is all pay-as-you-go until then.**”

–Growth Leader

Sales generates new committed subscriptions—without slowing down deals



Sales

KPIs = New subscription commitments, exit revenue

- Sales gets involved for larger self-service accounts as well as new signups that fit a pre-determined profile (e.g., executive at a large enterprise).
- Their focus is on the initial subscription commit as well as purchasing services that generate more revenue in the future.
- Reps are technically-versed, empathetic, and have great follow-through to navigate legal, procurement, and security.

"The customer success team doesn't usually get involved until they're already around \$20,000 or so in annual spend... Once we identify them as a high-potential account we'll pass that along to sales saying, 'I helped this customer, it seems like they have some pretty big ideas, and it looks like they're a pretty decent name, what do you think?'"

–Commercial Leader

"Once you start spending \$1000, \$2000 a month, you're seeing pretty healthy potential. That's where we kick them over to our account management. What those customers are looking for is two things: discounting and predictability. That is, looking for a better price than what we're putting on our website, and knowing what that'll be in the future."

–Commercial Leader

"It's easy to predict who will be a good sales rep... They need to be willing to be technically-versed, deeply empathetic, have great follow-through, and be willing to run through walls for legal, procurement, and security. I think the technical side is particularly important, and the more developer-related your product is the more important it is."

–Commercial Leader

Sales comp usually balances commitments with realized usage



New committed bookings are usually the primary KPI



Committed bookings are ideal for cash flow purposes, predictability, and customer lock-in.



Don't overly penalize non-commit spending if you can afford it



Ultimately a dollar is a dollar and it's best to do right by the customer.

Committed bookings get a higher commission rate and they get paid out in advance while flex/overage gets paid quarterly in arrears.



Include a tail of consumption so that reps get upside if the customer expands



Encourages sales reps to close deals quickly vs. waiting and potentially over-selling the customer.

The tail period depends on consumption behavior and can range from 4 months to 12+ months.

Example: Snowflake changed sales comp before the IPO to incentivize better behaviors



Added a consumption revenue component to sales compensation

- Initially Snowflake compensated the field sales team based on bookings, which is when they collected cash; however, Snowflake only recognized revenue on consumption and customers could roll-over their credits.
- The financial success of a company with usage-based pricing is ultimately tied to consumption, so it made more sense to align sales incentives to the same goal.
- Snowflake changed compensation to be split between committed bookings and recognized consumption, which gets paid out as it's earned based on a customer's consumption.
- Most of the first contracts are a proof of concept and at some point the customer will spike consumption or bring on more workloads. As such, the sales reps stay with accounts rather than handing them off.

See Snowflake S-1

Post-sales owns product adoption and “organic” expansion



Post-sales

KPIs = Adoption of key features, organic expansion

- CS usually takes over to drive customer adoption. They are initially focused on driving adoption of key features that create stickiness (e.g., Slack integrations).
- Their end goal is organic usage-based expansion within existing use cases.
- Account managers stay with high-potential accounts to sell new use-cases. They ask for intros to other teams and navigate “inorganic” expansion revenue.

“We gathered feedback from our best customers about what features are most important and what were the leading indicators of growth. We learned that it’s things like setting up particular integrations, whether it be with Slack because it’s a collaboration tool or AWS or PagerDuty for alerting... **We’ve defined the journey that a CSM should aspire to bring a customer on and we would be really prescriptive in trying to engage our customers to help them do it.**”

–Commercial Leader

“**One issue we ran into is that there was a lack of urgency for customers to start using the product.** Even if they committed to something on paper, there was no stick if they delayed implementation... The goal of Customer Success was to reduce the number of days to get them to onboard. After that, it was about identifying as many sticky and new features that they could use to achieve their expected outcomes.”

–Commercial Leader

“**Our CS team is compensated for hitting their MBO’s and they have a net retention goal based on seeing a certain organic growth out of their customer...** But they didn’t take ownership in terms of the commercial relationship. Their soft skills are around building relationships and they have a high level of empathy. We didn’t want them to then come in and have a tough conversation about the commercial relationship.”

–Commercial Leader

Example: How one API company systematically generates expansion



Requiring an account plan to keep a customer after 12 months



The AE has 12 months to continue to sell into the deals that they closed—finding new use cases, geographies, business units, etc.



If the AE wants to keep the account after 12 months, they need an in-depth account plan and must commit to an expansion target that gets added to their annual quota. Needless to say, this doesn't happen often.



Enterprises with untapped potential get passed from the AE to expansion-focused account managers. The account managers collaborate with the CSM and AE to develop an approved, customer-specific plan to systematically expand high-potential accounts.



CSMs stay focused on adoption and renewal; however, part of their compensation is tied to net dollar retention. This creates alignment with company-wide goals and encourages them to pull in the AE or AM when they spot a potential upsell opportunity.



This approach has many benefits: (1) keeps the AEs focused on new business, (2) avoids over-compensating for organic, usage-based growth, (3) designates a clear expansion owner for relevant accounts, (4) is process-oriented rather than ad hoc, (5) recognizes that account expansion is a team sport.



Strategy & Pricing

- Is usage-based pricing the right revenue model for us?
- Did we pick the right usage-based value metric?
- What if customers don't like paying based on usage?
- How do we handle overages?



GTM Strategy

- What should be the role of self-service, sales and customer success?
- How do we navigate sales comp?
- How do we grow adoption and usage?



Finance & Operations

- Is usage revenue valued differently than subscription?
- How do we handle billing?
- How do we handle financial planning with volatile revenue?
- How do we handle cash management and rev rec?

Finance & Operations: Executive Summary



- 1. Usage-based companies typically focus on five financial metrics.** These include revenue, remaining performance obligations (RPOs), billings, dollar-based net expansion rate, and active customer accounts. Each has its own role in demonstrating the underlying financial health of the model.
- 2. Usage revenue is valued by investors if it is predictable, growing, and high margin.** It is a known quantity particularly in infrastructure software given the success of companies like Twilio and AWS. Demonstrating predictability isn't easy, and forecasting consumption revenue becomes a data science exercise as companies prepare to go public.
- 3. Handling usage-based billing is a consistent pain point.** Billing becomes an important part of the customer experience and accurate billing is critical for generating trust with the customers. Most usage-based companies have built their own in-house billing systems and have dedicated product and engineering resources who focus just on billing.

Public companies typically focus on 5 financial metrics



Metric	Description
Revenue	<ul style="list-style-type: none">- Consumption revenue gets recognized as the consumption occurs.- Contracted subscription revenue gets recognized consistently over the contracted period.
Remaining performance obligations (RPO)	<ul style="list-style-type: none">- Contracted future revenue that has not been recognized yet.- Particularly important in a consumption-driven model where usage can fluctuate.
Billings	<ul style="list-style-type: none">- The total amount billed or invoiced, which represents the cash to be collected. Billings usually happen in advance, but may happen monthly or quarterly in arrears.- While this is important in the early days, highly capitalized businesses focus less on billings and more on revenue and RPO.
Dollar-based net expansion	<ul style="list-style-type: none">- Dollar-based retention including the benefits of upsells.- Calculated based either on annual recurring revenue (Datadog) or GAAP revenue (Twilio).
Active customer accounts	<ul style="list-style-type: none">- Number of accounts with at least [\$X] in revenue in the last month of the period.- Since customers can stop using the product without directly churning, active accounts are a better representation of the size of the customer base.

Usage revenue is valued by investors if it is predictable, growing, and high margin



snowflake® Q3 2020 Investor Presentation

WE ARE NOT A SAAS MODEL

- 93% of revenue is consumption-based¹
- Revenue recognized variably only as consumption occurs
- In many cases, rollover of unused capacity permitted
- Contract durations increasing along with larger customer commitments
- Primarily billed annually in advance with some on-demand in arrears
- Seeing a shift to quarterly in advance and monthly in arrears billing for largest enterprises

¹ For the nine months ended October 31, 2020.



"The market doesn't view a consumption model as an issue.

It's a known quantity in infrastructure software because of Twilio and AWS. Predictability and margin will be bigger hang-ups... For investors, they look at the net retention dollars and see that clearly customers are getting value out of the product or they won't be using it."

If revenue is consumption-based, you have to invest heavily in predicting consumption



"Forecasting isn't as visible as in a pure SaaS model. There's more

variance in revenue each quarter and it requires multiple years to model... A few years ago we might be off by 6-8%. Now it's down to 3-4%... The finance team is mostly data science. They're forecasting at an individual customer view and a cohort view factoring in ramp."



Accurate metering, billing, and financial planning is necessary to IPO. These can be major

operational challenges for scaling usage-based businesses.



FP&A and customers both want the same thing: predictability. Financial planning is intimately tied to

product and customer success.



IPO-ready FP&A teams treat forecasting as a data science exercise. Teams are digging into valuable

revenue signals on the cohort and customer level.

Handling usage-based billing is a consistent pain point



"I still haven't seen a great company on the finance ops side of things, to be honest. Consumption-based billing is really tough. **I've now been at three companies where billing is usually one of the biggest negatives in the model** around the customer experience because it's really hard to explain the bill to a customer. And usually if you dig in hard enough, it's not 100% accurate... And it's not that you're ripping them off, they're usually getting a lot of free things... My advice is to invest in a robust billing system. Don't try to hack something together with manual invoices or you'll lose trust very fast."

–Commercial Leader

Advice for handling billing roadblocks



There are no silver bullets

- "We were previously using a utility company's billing software.... It was meant for an energy company. We hacked it together and, frankly, it was terrible." –Commercial Leader
- "We've used homegrown billing solutions... We've used legacy enterprise solutions. **I spent a ton of time doing this. They all suck.**" –Growth Leader

Billing is part of your customer experience

- "I've been at three companies where billing is one of the biggest negatives in the customer experience. There's so many complexities around it. **At the end of the day, customers need to be able to trust their bill.**" –Commercial Leader
- "**If you miss on the billing experience you can botch the account...** Folks on both sides need to see the same thing" –Commercial Leader

Dedicate engineering resources

- "**We had an entire engineering team dedicated to running and updating our billing code.** It's a massive lift." –Commercial Leader
- "**You need a product billing team.** Designer, PM, Engineers—the whole thing." –Commercial Leader

Wrap Up

3 takeaways for CEOs, CROs, and CFOs



CEO

- 1. Ensure a usage model is right for your product.** Each use should generate a positive business outcome for customers. You are sharing in the customer's success.
- 2. Take the time to pick the right usage metric.** It should grow consistently across your customers, help you communicate your product's value, and be (somewhat) predictable.
- 3. Be prepared to build.** From billing to sales comp, many companies have had to build custom solutions to the operational challenges around their specific usage model.

CRO

- 1. Enterprises may push back on usage pricing, but there are ways around it.** Companies have found creative ways to offer predictability for the enterprise without hurting growth.
- 2. Pay reps beyond the first commit.** Reps need to be closing deals quickly and then letting usage grow in time. Include a tail based on actual usage after ramp.
- 3. You can't predict your largest accounts.** You're making a bunch of bets and some will pay off spectacularly. Invest in a great experience for all sign-ups regardless of their initial spend.

CFO

- 1. Brush up on rev rec.** Unlike subscriptions, usage-based revenue is recognized as it occurs. You may need to maintain multiple rev rec policies to adapt to different pricing models.
- 2. Finance becomes tied with product.** Billing is part of the customer experience. Customers need to trust their bill, gain access to usage in real time, and see consistent amounts across systems.
- 3. Forecasting requires data science.** Leading practitioners predict usage at both a customer and cohort-level in order to gain conviction on future revenue.

About the authors



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Thank You!

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