

From Startup to Centaur

The founder's roadmap to
\$100 million ARR.

A book by
Bessemer Venture Partners

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Atlas reads

What entrepreneurs need to know when building, scaling, and leading their startups to \$100M ARR.

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From desk of the Atlas Editors

Atlas launched in 2019 with a mission to share venture insights that matter to founders. Since then, Bessemer Venture Partners has collectively open-sourced its investment strategies, memos, benchmarks, and deep thinking on the forces and operating best practices that have gone on to help audacious founders build enduring businesses in technology. But in those five years since Atlas' beginning, the tech and venture ecosystem has witnessed countless moments of upending change — whether that be a global pandemic that changed the way we work completely, the end of a 13-year bull market, or the collapse of Silicon Valley Bank.

There will always be headwinds. It will always been a feat to build a business. And no two founders have identical paths set before them. But today, we're hoping to make building a SaaS or AI-first business easier for entrepreneurs everywhere. By sharing research and insights, we can scale the connection between investors and the founders they hope to serve. And that's what we aim to do with Bessemer's first book:

From Startup to Centaur: The Founder's Roadmap to \$100 Million in ARR

In these pages, we offer entrepreneurs strategic advice on building businesses that last, including case studies and stories featuring some of technology's most legendary examples, including Shopify, Toast, Procore, and more. This book also includes counsel for CEOs focused on different stages of building, scaling, and leading startups to Centaur status, a term we coined in 2022 to celebrate companies that reach the coveted \$100 million ARR milestone.

In our chapters dedicated to the Centaur, our investors explain why revenue is important to prioritize over valuation metrics in today's market:

"At \$100 million ARR, a startup is an undeniable success. It is impossible to build a \$100 million ARR business without strong product-market fit, a scalable sales and marketing organization, and a critical mass of customer traction that allows the company to plan its next steps well into the future."

While there have been pioneers in the past and companies that have carved out new ways to build world-changing businesses from 0 to \$100 million ARR, we're well aware that every business has its own unique challenges and destiny. We hope this book can be a source of guidance and support on discovering those answers and solutions that are right for your business.

As stewards of venture insights that matter to founders, we are always interested in your feedback. If you have something to share with the team, send us a note at atlas@bvp.com.

*Forge ahead,
The Atlas Editors*

On building



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“Investors want to back a leader that can not just create the initial spark, but who can produce it repeatedly throughout the startup journey ensuring a steady flame of innovation and drive.”

— ADAM FISHER
FROM THE SPARK AND THE FLAME



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Four questions to ask before building

A framework for entrepreneurs to overcome
mental blocks and hone their business idea

BY ADAM FISHER



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A brainstorming framework for aspiring founders

Pattern recognition is a natural human inclination, but the paradox of venture capital is that investors are at their best—and their worst—when they rely on this cognitive skill. After interacting with a high volume of startups and founding teams, the urge is hard to resist as I see recurring patterns in how founders explore and consider new opportunities. Throughout my venture career, I've found framework-thinking a critical part of assessing investment opportunities. While founders, like artists, likely bristle at the idea of being classified, they too can leverage frameworks to brainstorm startup ideas to illuminate the many paths open to them and give them a greater sense of confidence in the path they ultimately choose.

The founders I interact with at this embryonic stage are typically second-time entrepreneurs and highly entrepreneurial individuals who are determined to create their own company and yet wise enough not to rush ahead with the first idea, or even the best idea at present. My role as an early stage VC is to challenge their assumptions and serve as a convenient, impartial sounding board that can weigh-in as they toss around ideas and directions.

This brainstorming framework is built around four core questions aspiring founders must consider throughout the process of startup ideation and creation.

I. A founder's relationship to product and market

Do you seek to solve a problem you know well as an "insider" or solve someone else's problem as an "outsider"?

The instinct of many founders is to address a problem they've personally experienced and dealt with before. It's tempting to lead with this because your familiarity with the problem generates immediate passion and conviction. You know enough to start working on a product spec and are able to move fast and deliberately. As an "insider" you are approaching the problem as a confident expert, which can give you a powerful edge when pitching investors and engaging customers.

The quintessential insiders are founders who've dealt with the problem they are trying to solve at their prior company and want to bring a solution to the wider market, such as the founders of LaunchDarkly*, PagerDuty*, and Axonius*. Having encountered the problem in their former roles, insider founders can speak to prospective customers as peers, which lends immediate credibility. The insider approach is most common among technology and infrastructure software startups, where founding CEOs usually have a technical background, but there are notable outsider exceptions.

Among application SaaS companies, there are several types of insider founders. One is a founder who previously worked in non-tech companies from the same sector, giving them a unique insight into the customer needs, such as the founders of ServiceTitan* (home service trades), Papaya Global* (global payroll), and Optibus* (public transportation). Others cut their teeth solving customer problems as an outsourced software service, including the founders of Zendesk, Jfrog, and Cloudinary*. Yet another type of insider are founders who, having previously worked at a company addressing the same problem, now see an opportunity for a "next generation" product to make a bigger impact, such as the founders of Zoom, DocuSign* and Forter*.



The primary disadvantage of being an "insider" is that you are less likely to think "out of the box" and challenge prevailing assumptions in both the product and go-to-market (GTM) strategies. And the worst part of this is that you likely won't realize it until an outsider arrives on the scene with something wholly disruptive.

Outsiders are akin to immigrants from a distant land. Immigrants often find success in a new country because survival requires that they be observant, skeptical, and innovative. So too can the industry outsider find success in a sector he or she has never considered before. Being an outsider in an established sector can be daunting and discouraging, but many successful startup disrupters came at the opportunity as underdogs and interlopers. Founders arrive in a new domain not merely out of curiosity but because they are fatigued with their area of expertise and lack the requisite passion to start something new in the field.

Since outsiders aren't experts that know the proverbial rules of the game, they tend to approach both product and the GTM in ways that insiders either wouldn't consider or wouldn't dare.

As an outsider you are blithely disobedient and non-conformist, if not naive. And naivete can be a key strength for the outsider founder provided you are self-aware and endeavor to learn fast and continually iterate. Outsiders believe expertise is overrated but are still relentless as they ascertain the opportunity as they rapidly become an expert in their own right.

A common outsider approach is to address a problem the founder has personally experienced as a client of their target customers, but in a sector in which they know very little. The founder of Procore* didn't come from the construction industry but he had indirectly experienced the industry's pain when struggling to manage the construction of his own home. Other prominent examples of founders solving a problem they personally encountered as customers include Shopify*, Intercom*, Canva*, Pipedrive*, VTS*, and Dropbox. These outsiders channeled their frustrations as users into a product that would benefit everyone else. Student founders are almost always going to be outsiders given their limited work experience, but even experienced founders sometimes choose to disrupt as outsiders. At the inception stage, the founders of both Toast* (restaurant POS) and Hibob* (SMB HRIS) were, to a large extent, ignorant of their respective sectors when they set out to transform those sectors and that was a key advantage.

At the same time, hubris and impatience have doomed many outsider founders given what is often a long and expensive learning curve. You may underestimate the competition, the depth of the product challenge or the obstinacy of the customer base, which means much more time and capital is required. As an outsider, the investors you pitch may be skeptical of your ability to win and even dismissive if they consult "industry experts." When attempting to solve someone else's problem, the key is not fooling yourself into thinking you already have the answer merely because you are a frustrated customer or an experienced entrepreneur. The best entrepreneurs find creative ways of closing the knowledge gap as Melio* did by running their own bookkeeping service or as Canva did by operating a yearbook business to test the usability of their design product.

Sectors already undergoing change are uniquely suited to penetration from outsiders who see an opportunity to accelerate that change and dislodge idle incumbents. This has been the case for many of the most successful fintech and payments success stories from Stripe and Square to Plaid and Melio. Vertical SaaS is another sector where outsiders have been able to quickly overshadow incumbent vendors whose products are outdated and unimaginative. Among SMB SaaS companies it is also common to see founding teams from outside the industry—examples include, the founders of Gusto in payroll, TripActions in travel management and Monday in project management. And as mentioned earlier, outsiders can also excel in technology infrastructure with examples including Tanium and SentinelOne in cyber security, SolarEdge in cleantech and DriveNets in routing.



There is a third type that falls somewhere in between the insiders and outsider archetypes, which is an outsider with a personal network of insiders.

These founders focus on a problem they know nothing about, but in a domain in which they are already well connected. Since this is not their problem they can't immediately get to work as an insider might but they know enough customers who've experienced this problem thereby accelerating their learning curve, while preserving the outsider advantage.

Not all startups fall neatly in this insider/outsider dichotomy and some founding teams may include a combination, such as a CTO insider and CEO outsider, or vice versa.

The key takeaway is that founders have full agency to choose whether they want to pursue something as an insider or outsider, or something in between. The power comes from the self-awareness of the archetype and how that can inform future decisions.

There is an additional angle to the insider/outsider consideration that relates to skill sets rather than industry/sector expertise. For instance, a founder with a strong background in enterprise field sales will feel in foreign when building a low-touch sales model for SMB despite remaining in the same sector. And a product-oriented founder with vast expertise in UX/UI will naturally feel a need to develop a product that leverages this expertise.

The "insider" in both cases feels a need to play to their strengths and experience versus developing new ones.

As a founder you must not fall into the trap of pigeonholing yourself based on memorable founder stories that are top of mind or that will make for a nice headline once successful. I've seen founders become passionate about opportunities they only learned about yesterday, so you owe it to yourself to explore. The charming idea of "founder-product-market fit" sounds insightful but is largely a retroactive observation of little substance, much like the notion of one's destiny.

The reality is that great founders can pursue ideas that belie their resumes and personal experience, and one's background (or lack thereof) shouldn't be seen as an impediment.

II. The extent of product innovation

Do you innovate in an existing product category or attempt to create a novel product category?

Innovating in an established product category has the advantage of a buyer intent and budget, a clear yardstick for competitive comparison, and familiar sector messaging and nomenclature. The purpose and value of the product to customers is well recognized thereby easing the sales and marketing motion for new entrants and their sales and marketing teams.



The opportunity for a new startup in an existing product category is one of challenging the incumbents head-on or expanding the customer universe beyond those customers currently addressed. Attacking slow and complacent incumbents is most common during times of technology transition, such as the move to cloud or mobile, but also when the market leaders have become too big to properly address their diverse customer needs.

Startups can find a wedge by modernizing a clunky user experience, productizing a key feature in a bloated product, or combining core functionality from different products that saves customers time and money (e.g. Dropbox, Wix*, Canva). Other startups choose to focus on a neglected subset of customers, especially those with unique or diverging requirements including specific industry verticals (e.g. Veeva, Klavyio) or geographies (e.g. TravelPerk, MessageBird). And yet other founders find a way to build a product that is more appropriate for SMB customers and better suited for a high velocity, low-touch sales model (e.g. Pipedrive, Yotpo*, Intercom). Of course, even modest product innovations can beat the competition head-on provided it is combined with innovative go-to-market innovations (e.g. Zoom, TeamViewer*).

The disadvantage in addressing an existing product category is overcoming the inertia of customers where the competition is entrenched, combating the noise of other competitor upstarts, and underestimating what it takes to reach minimal feature parity with the competition. Beyond myriad product features, matching the competition often includes support for third party integrations, advanced enterprise features (collaboration, security, reporting), and some level of professional services.

Wary of going head-to-head with industry giants, it is unsurprising that many founders are attracted to the allure of creating a "novel" product category with the potential for unimpeded growth and uncontested market leadership.

Novel product categories rarely emerge from scratch and there are often precursor product concepts that light the way for founders and customers alike.

For instance, astute founders will often focus their sights on an internal development effort that repeats itself across the ecosystem signaling an opportunity for a commercial off-the-shelf product. Many developer-focused startups emerged from this observation, including those in code management (e.g. Github, Atlassian), security (e.g. Auth0*), payments, billing, messaging and data management. In other cases, novel product concepts arise from productizing an existing cumbersome workflow or business process that relies on manual work or a mishmash of outdated technology solutions. Examples include Alloy* in KYC, Forter in fraud detection, TripActions and Papaya Global in remote payroll, Basis Theory* (data tokenization) and Checkr (background checks).

Another common opportunity for product category creation is found with the emergence of fast growing customer segments such as D2C ecommerce, fintech, marketplaces, crypto, and SaaS. As distinct tech verticals with unique needs, targeting customers in a segment offers the potential to catch the same wave of growth and excitement that has lifted them to great heights. A related opportunity is to focus on products for a newly empowered persona or a department in the organization that has gained greater autonomy and budget to achieve their goals (e.g. DevOps, RevOps, HR, CS, data science). For instance, a lot of "no-code" product ideas cater to newly empowered non-tech users within the organization (e.g. Zapier*, Intercom, Airbase).

The disadvantage of a novel product category is in the indeterminate amount of time and effort required to build a product spec that customers cannot easily grasp until they use it. Without a customer budget and with unproven customer value, it can be a real uphill struggle. Even when there are signs of product fit, the market can turn out to be surprisingly small. Companies attempting to create a novel category are advised to be conservative with their expenses until there are irrefutable signs of product-market fit and customer traction.



Of course, some of the examples in the charts above are companies whose products could be placed in more than one category. (Recall that this is a framework for brainstorming new ideas, not a taxonomy for established businesses.) It should be noted that some plans start as novel and back into more established product categories as they grow. Other plans start in an existing category but introduce enough innovation over time to effectively create a new product category (e.g. Twilio*). Regardless of what you choose there will always be tension between building a product that you believe in and solving a customer pain point as I've detailed in the [product-market journey](#).

III. TAM vs. focus

Do you favor a widely applicable product with a large market, or focus your product on a smaller, well-defined customer segment?

Intuitively, founders know they need to demonstrate a large TAM to entice investors and that's true especially if you need to raise a lot of capital. However, investors also know that attempting to make a product universally applicable may result in a product that is not a great fit for any customer. Unsurprisingly, investors want a large TAM as well as focus, which is why the most effective product plans strike a balance by focusing on a growing subset of a large market.

Customer focus enables a startup to better define the product and build the appropriate GTM strategy for that customer segment. There are various ways to narrow focus including customer size by revenue or headcount, by industry vertical or geography. In other instances, focus may involve targeting customers with a certain technology stack or customers with a specific buyer/user persona. The product should be tailored to your ideal customer profile (ICP), but relevant to those outside of that ICP profile. At the same time, you should also have a good sense of the types of customers you will not focus on or sell to.

It is a curious fact that founders and investors alike find a way to make any market look big enough to justify the investment. The reality is much more complicated as large markets are harder to penetrate and with enough patience non-existent markets can emerge overnight as massive new market opportunities. The more sober your assessment of the true addressable market, the better prepared you will be.

There is nothing wrong with targeting a specific market segment that investors may perceive to be too small as long as your fundraising and spending plans aren't a mismatch for this smaller opportunity. Markets can evolve rapidly and what was once dismissed as too small can later be revealed as one of the largest market opportunities.

A final piece of advice I give founders related to market focus is to choose their customers wisely, not unlike they might choose their investors. You must have a genuine interest in engaging with the customer but also a conviction in your customer's future. It's a very long-term commitment you're undertaking, and you can't easily divorce yourself from your customers, so if you don't like interacting with them, consider a new problem to solve.

IV. Riding macro trends

Do you jump on the bandwagon of a "hot trend" that has investor attention or pursue something under the radar and longer-term?

Macro trends help build conviction that the status quo is untenable and if you don't build it someone else will. They lend support to any startup pitch by providing justification for the inevitable question of "why now?" This is a compound question that probes whether customers are ready to embrace change and what facilitates the product innovation you are pitching. In considering this question, many founders focus far too much on what is now technologically feasible, neglecting the broader market, product and customer trends.



Macro trends include cutting edge technology developments, but also secular business and economic trends. Since most customers buy products, not technology, there is usually a business consideration driving the decision to purchase that is unrelated to the underlying technology that addresses the problem.

Too many founders start by thinking of a challenging and intriguing technology trend and the problem they can solve with it, when they should be starting with the problem. Startup success has more to do with timing than technology, which is why business trends generally outweigh technology trends.

Examples of long-term technology trends include the move to cloud and mobile or the use of automation technologies such as AI/ML. More recent technology trends can also work but carry the risk of being hype or difficult to monetize. Another type of technology trend may be the anticipated commoditization of an expensive technology which will enable something that was previously price prohibitive.

A long-term business or economic trend can provide wind in your sales for the foreseeable future, easing the GTM motion, fundraising, and recruiting. However, if it's a short term trend (like a recession or pandemic), not only will the impact prove fleeting, it will likely cause a distraction and lead to poor decision making. Long-term business trends may revolve around innovative pricing and payments (e.g. freemium, subscription, usage-based payments), changes in who has purchasing power or changes in who increasingly uses the product (e.g. employee, developer, SMB). Long-term economic trends may include industry digitization, international commerce, e-commerce, remote work, the changing employee/employer power dynamic, remote health, food scarcity/environment, or cyber security risks.

When considering a new product idea, a lot of founders start with macro trends, because they appear prominently in headlines about other startups that raise money. This is a problem because founders tend to conflate fundraising success with market validation. Positive investor sentiment can be an encouraging signal, but it will never be as compelling as positive customer sentiment. Founders should think foremost what customers are willing to pay for and only then figure out how to position it to investors in the most favorable light. Investors always notice customer traction, but customers don't care about investor traction.

The thrill of a new beginning

I love the brainstorming stage because it allows me to vicariously experience the thrill of startup ideation and creation alongside founders. There are many more topics to consider from capital needs and gross margins to pricing and distribution models, but in considering these four questions, founders can begin to narrow their focus by ruling out certain paths. Regardless of the path chosen, it should be comforting to know there are others who have taken a similar journey with familiar challenges and risks that await.

*Mentioned Bessemer-backed companies, A-Z: Auth0, Axonius, Canva, Cloudinary, DriveNets, Hibob, Intercom, LaunchDarkly, Melio, Optibus, PagerDuty, Papaya Global, Pipedrive, Procore, ServiceTitan, Shopify, TeamViewer, Toast, Twilio, VTS, Wix, Yotpo, Zapier.

The power of the cloud model

Quick fundamentals on why SaaS is a
historically good business model

BY KENT BENNETT & MICHAEL DROESCH



Venture insights that matter

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Before we dive in further on the benchmarks, case studies, and guiding principles for startup founders to build, grow, and scale their business to Centaur status (\$100M ARR) — let's go back to basics on the cloud model. SaaS allows businesses to deliver software through the internet, making it available everywhere, with products that continuously improve.

The subscription business model drives companies to focus obsessively on customer needs, and strive to earn their trust every day.

When a SaaS business achieves best-in-class sales efficiency and net retention metrics, they can generate net new recurring revenue with unprecedented efficiency. As a result, we believe this business model may be the best on the planet.

Let's go back to basics of the cloud model



For every dollar a SaaS business spends on its sales team, the company will see a dollar of recurring revenue materialize in less than a year and grow nearly in perpetuity. The power of the cloud model is why these businesses are often valued at 10 to 20 times their annual revenue, even in today's market.

At these multiples, each dollar invested in growth can create tens of dollars of enterprise value every year. In fact, the leading cloud companies turn \$1 of investment into \$18 of enterprise value in 12 months. In 2022, we calculated the annual return that BVP Nasdaq Emerging Cloud Index companies generated on a gross margin basis, relative to their sales and marketing investments last year.

Based on our conservative assumptions, the average BVP Cloud Index company generated a 68% internal rate of return (IRR) for every dollar poured into sales and marketing. In comparison with the average S&P 500 company that strives to reach a 20% return on capital, it's clear how much of an advantage cloud businesses have when it comes to efficiently recycling capital. In upcoming chapters, you'll gain the strategies and benchmarks to be ready to build an enduring SaaS business.

Building from \$1 to \$10 million ARR

An early stage playbook on the four pillars
every startup needs to get right

BY MARY D'ONOFRIO & JANELLE TENG



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From \$1 to \$10 million ARR

How do you lay the foundations of a business to scale into market leadership? It begins during the earliest innings of finding product-market fit and building go-to-market strategy.

We'll break down the steps required for a company to go from \$1 to \$10 million of annual recurring revenue (ARR)—and what these cloud businesses' operational metrics look like. Keep in mind that every business is different and has its own nuances, but these key elements characterize a business with strong growth potential, across each major business function:

- **Product**—strong resonance with your ideal customer profile (ICP), with early signs of a platform
- **Go-to-market strategy**—a repeatable, scalable sales motion with strong customer success
- **Finance**—strategic prioritization of investment to drive growth endurance and capital efficiency
- **Team**—a full bench of functional experts who complement the founding team's expertise

Companies at the \$1 million ARR stage generally do not have—and are not expected to have — these four pillars built out, but in this guide, we will share insights and tactics on how to get there.

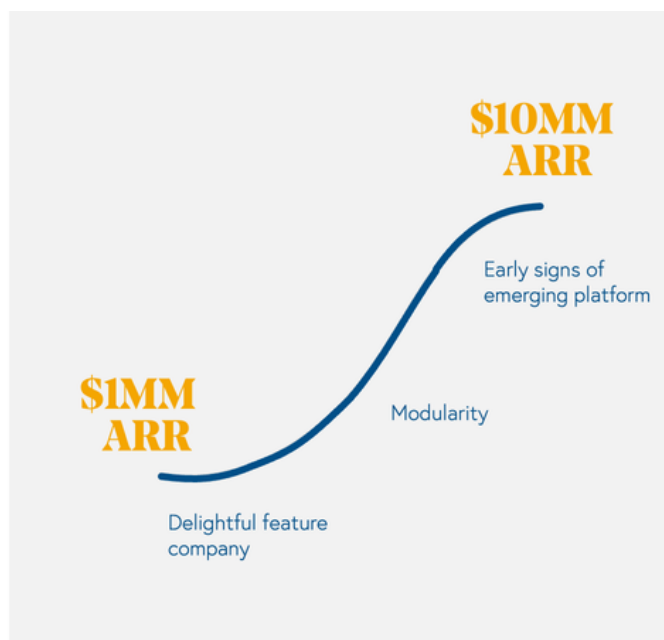
Product

In product,

transitioning from \$1MM to \$10MM of ARR is generally the transition from a delightful feature company to modularity and early signs of an emerging platform

BEST PRACTICES

1. Fulfill your product vision for your initial Ideal Customer Profile (ICP)
2. Begin exploring natural upsell triggers or opportunities for expansion
3. Sequencing is key to the success of your future platform vision



For product, transitioning from \$1 million to \$10 million of ARR is the journey from a delightful feature company to early signs of a platform.



At \$1 million of ARR, companies have generally shown product-market fit with some set of core users who love the product—but there are often material gaps. On the path to \$10 million of ARR, you should aim to fulfill the product vision for your initial ideal customer profile (ICP). This is exactly what the Netlify team did on their journey to the \$10 million ARR revenue milestone.

At \$1 million of ARR, Netlify promised developers an easier git-based workflow to build, deploy, and develop web resources without the need to worry about infrastructure and hosting. As revenue trended upward, Netlify deepened this commitment to the developer audience by releasing features like Deploy Previews, Netlify Functions, Netlify Drop, Netlify Large Media, and Netlify Dev. By relentlessly focusing on its developer ICP, Netlify grew its self-service user base from approximately 400K at \$1 million of ARR to approximately 1.5 million at \$10 million of ARR over a period of roughly two years.

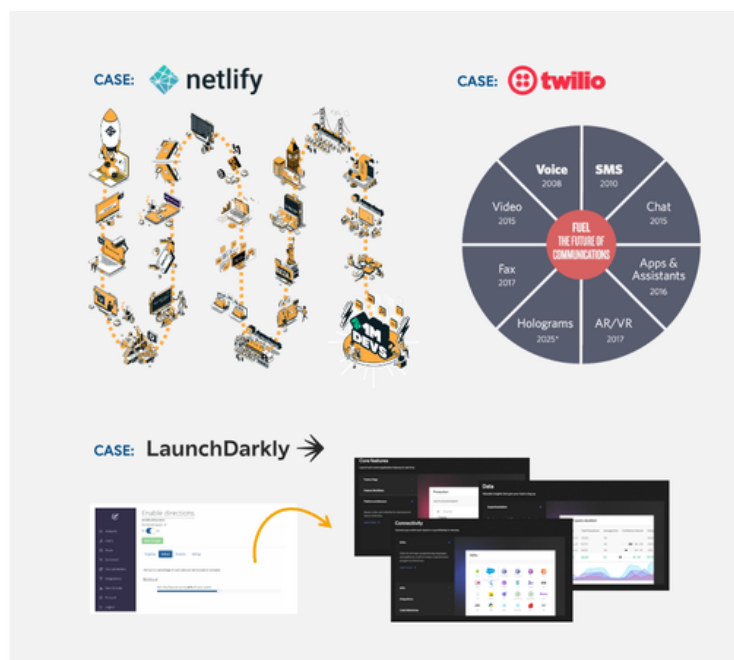
Early on at \$1 million, most companies' products tend to be minimally viable—a half-realized, half-vision with singular features—albeit with strong product-market fit. More than anything, a product at this revenue stage should demonstrate the ability to identify and establish an entry point into net new customers. But as you progress to \$10 million of ARR, it's time to explore natural upsell triggers or opportunities for expansion.

In product,

transitioning from \$1MM to \$10MM of ARR is generally the transition from a delightful feature company to modularity and early signs of an emerging platform

BEST PRACTICES

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During this process, companies should start to layer on modules and additional features that not only cement core champions, but also help product to expand to other adjacencies. This is a strong sign of an emerging platform.

As we highlighted in our Seed Investment Memo, Twilio illustrated this strategy in practice in its early days. In Twilio's first product iteration, customers could sign up for an account with Twilio, pick or port a phone number, and learn five simple building blocks to build a voice application. And while this \$1 million ARR product was well-loved, Twilio iterated constantly on its pathway to \$10 million of ARR by incorporating new features and product dimensions. The team kept a running list of frequently requested features from early adopters to advance functionality, like asynchronous call redirecting, SMS, and three-way conferencing. As Twilio layered on these features, the team unlocked upsell opportunities while also developing their emerging platform potential.



At the \$1 million ARR mark, you should think of your most engaging feature that captivates customers as a Trojan Horse. From there, sequencing new product launches is key in realizing your full platform vision. The initial feature wedge is likely not your ultimate company or platform vision, but through feature-led product expansion, you can get customers to rely on your products and guide them into seeing the full vision over time, without having to buy into a transformative vision up front. This approach has a secondary benefit of allowing the sales team to experiment with discretionary pricing to ultimately land on the right strategy.

LaunchDarkly is a shining example of this approach. Early on, LaunchDarkly positioned itself as a feature flagging tool, a helpful yet discrete tool that allowed developers to turn on and off specific features of a product without changing underlying production code. Deployment was simple, easy, and self-serve, allowing LaunchDarkly's flagging tool to be used in contained circumstances without an enterprise level deployment. Over time, however, more and more products within a company onboarded to LaunchDarkly, and it became the platform of record from which all products were released and deployed. It became core infrastructure with heavy customer reliance. From this position of strength, LaunchDarkly now delivers its entire feature management platform vision to its customers, inclusive of experimentation, data insights, and a connectivity suite.

Product success metrics

In addition to the qualitative indicators we shared above, there are quantitative metrics that product leaders can rely on to gauge its success in product.

- Gross retention—If customers renew their contracts, you know your product is valuable to them. You should evaluate gross retention on both a logo and dollar basis, tracking both the number of customers that maintain your service and how much money they represent.
- Net retention—Net retention is a strong signal of product value, as it reflects your customers' desire to renew and upsell within their organizations, often pulling product through other users and teams. A good rule is that you should have strong net retention (for your segment) in your core before you allow yourself to expand your product suite. The sequence is: get to product/market fit, establish strong net retention in your ICP customer base, then broaden your appeal.
- Product North star—In addition to gross retention and net retention, which are applicable to every cloud company, we suggest that companies determine their individual product North stars. This should be a product metric that is a leading indicator of revenue. For DocuSign it was signed envelopes, for Twilio it was API calls on initial messaging, for Zapier it was activations. For your company it could be these, monthly active users (MAUs), or something else altogether.

Metrics to gauge your success in product

METRICS

1. Gross retention
2. Net retention
3. Product north star



| Benchmarks from \$1-10MM of ARR | | | | |
|---------------------------------|---------|--------------|------------|-----------------|
| | Average | Top Quartile | Middle 50% | Bottom Quartile |
| Gross Retention | 85% | 95%+ | 85-95% | <85% |
| Net Retention | 140% | 145%+ | 105-145% | <105% |

| Metrics | |
|----------|------------------|
| DocuSign | Signed envelopes |
| twilio | API calls |
| zapier | Activations |



Go-to-market strategy

For GTM, transitioning from \$1 million to \$10 million of ARR is the transition from founder-led to sales-led sales.

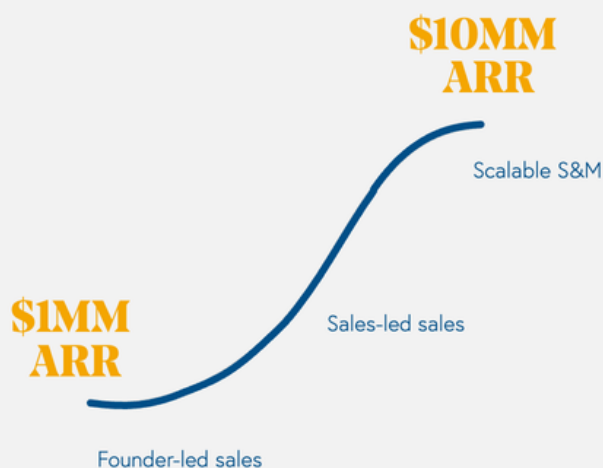
At \$1 million of ARR, it is typical—and expected—for a CEO to be in sales pitch meetings. They know the product and vision best, demonstrate gravitas by nature of their title, and can make accommodations that individual sales reps cannot. Also, at this juncture, logo acquisition and developing referenceable customers is so important that it is a worthy use of a CEO's time. However, it doesn't scale. A CEO or founder can only do so much alone, which is why early-stage cloud startups need to transition from a founder-led to a sales-led model. The major business risk during this transition, though, is that hiring salespeople is massively costly, yet you cannot guarantee ROI since the sales process is still unknown.

For GTM,

transitioning from \$1MM to \$10MM of ARR is generally the transition from founder-led to sales-led sales

BEST PRACTICES

1. Experiment early and quickly to hone your sales process and its components
2. Respect the sales and marketing learning curve
3. Formalize a customer success function



At this stage, your salespeople are trying to sell in the absence of any sales resources or a playbook, and the priority is to try to create that playbook as quickly and as effectively as possible. We therefore recommend that before scaling up a sales org you experiment early and quickly to hone your sales process and its components: What is your target average contract value (ACV)? Is it more effective to sell bottoms-up or top-down? How do you engage your champion, and what is the customer wedge? Equipped with this early sales playbook (which will stay iterative), many salespeople can start selling effectively and migrate sales responsibility from the CEO.

But not all salespeople will ramp quickly, if at all—all the while you are assuming incremental sales costs as you onboard more heads. We therefore recommend that you respect the sales and marketing learning curve as you ramp your sales team. Hire one or two salespeople to start and only continue to hire once those initial reps are hitting market quotas autonomously and lead velocity rate exceeds quota capacity. You should be putting metrics in place even during the rep ramp periods to track the effectiveness of their scaling.



CASE: **Teleport**



Teleport provides a great example of these principles in action. Teleport provides a unified access plane to developers and engineering organizations, allowing them to access distributed computing resources, but its software also provides audit and security benefits to chief information security officers (CISOs). As the business grew from \$1 to \$10 million ARR, it needed to understand how its ideal sales process combined bottoms-up developer acquisition with top-down sales wedges for security, compliance, and engineering before ramping up its sales team.

Teleport's CEO, Ev Kontsevov said: "Before we ramped sales, we needed a crisp answer to four questions:

1. What do we sell?
2. Who is our customer?
3. Why do they buy?
4. And why do they buy from us?"

This simple, yet critical exercise provides the clarity sales teams need to find prospects willing to buy, sell against specific use cases, and develop the pitches that will successfully respond to customer pain points.

After the Teleport team successfully answered those questions, and when prior reps were ramping effectively and hitting productivity targets, they hired more reps. By \$10 million of ARR, Teleport had a scalable sales and marketing organization that was achieving ARR targets with such predictability that the company felt confident it could invest further by hiring a new chief marketing officer and chief revenue office to oversee a huge ramp period. By combining the two steps of understanding the sales process with evaluating sales reps against rep productivity and performance metrics, founders and CEOs can ensure that sales expense is justified by topline ARR, rather than just being a cost center. By \$10 million ARR, investors want to see a repeatable, scalable sales motion with a clear lead funnel, reps hitting quota consistently and independently, and with a clear understanding of the customer wedge.



We have covered how scaling a sales team should look internally, but we should also speak to the customer perspective. As we mentioned in the product section above, a company's goal on the path to \$1 million ARR should be simply to build a product that someone will buy, then on the path to \$10 million of ARR, the mission should be to build more features and modules that your ICP needs.

The analog to this from the sales side is to formalize a customer success function, which has two primary benefits.

Through working closely with customers, taking feedback, and troubleshooting issues, customer success can partner with product to deliver feature requests and product roadmap suggestions, deepening product's ability to build towards an ICP and to find effective triggers for expansion.

The go-to-market org becomes a vehicle of not only revenue generation, but also of product iteration.

At Auth0, as we explored in our memo, co-founder Eugenio Pace emphasized the importance of customer success early and assumed the responsibilities of a VP Customer Success. The entire product team listened closely to early adopters to incorporate their feedback. They also provided self-serve documentation to streamline onboarding and troubleshooting, which was a key request that drove customer love.

At Auth0, the tight product and customer success flywheel ensured that customers were deriving strong value from the product, which ensured not only renewals but also expansions. Auth0 achieved best-in-class net dollar retention throughout its scaling journey.

As you build your customer success muscle, note that generally CS does not begin as a formal function, but will rather be under the purview of a single individual.

It will then branch out as an independent function when you have enough customers coming up for renewal.

Through building a customer success function, you can promote both renewals and expansions.



GTM success metrics

In addition to the qualitative measures that we shared above, there are quantitative metrics that you should look at as you gauge your go-to-market team's success.

- **ARR Growth Rate**—ARR growth is a key signal to determine whether a company has the product, sales momentum, and demand to become a market leader. The strongest companies with the best products will find a market pull that lifts revenue year over year.
- **CAC Payback**—Customer-acquisition-cost (CAC) payback is the rate at which the costs spent to acquire a customer are repaid by that customer, after which the customer becomes profitable to you. It will vary by segment, and we suggest measuring it on a quarterly basis at both the unit and sales org levels to determine overall sales efficiency. The shorter the CAC payback, the better
- **CLTV / CAC**—Customer lifetime value (CLTV) helps to bound CAC as the total value that a customer represents to a business. After repaying CAC, your company will be able to count the delta between CLTV and CAC as its profit. Maximizing CLTV / CAC therefore is a powerful indication of strong sales efficiency and future growth potential, and only after CLTV / CAC is 1x is a customer profitable to you.
- **Gross Margin**—Gross profit is revenue after the costs of delivering software, which generally includes some customer success cost. The lower the services required to implement software the better for profit, and therefore gross margin becomes a metric for sales.

Metrics to gauge your success in GTM

METRICS

1. ARR growth
2. Gross margin
3. CAC payback
4. CLTV/CAC



| Benchmarks from \$1-10MM of ARR | | | | |
|---------------------------------|---------|--------------|------------|-----------------|
| | Average | Top Quartile | Middle 50% | Bottom Quartile |
| ARR growth | 200% | 230%+ | 100-230% | <100% |
| Gross Margin | 70% | 85%+ | 60-85%+ | <60% |

| CAC Payback Months | | | | |
|--------------------|------|------------|------------|----------|
| | SMB | Mid-Market | Enterprise | CLTV/CAC |
| GOOD | 12 | 18 | 24 | 3x |
| BETTER | 6-12 | 9-18 | 12-24 | 3-5x |
| BEST | <6 | <9 | <12 | 5x+ |



Finance

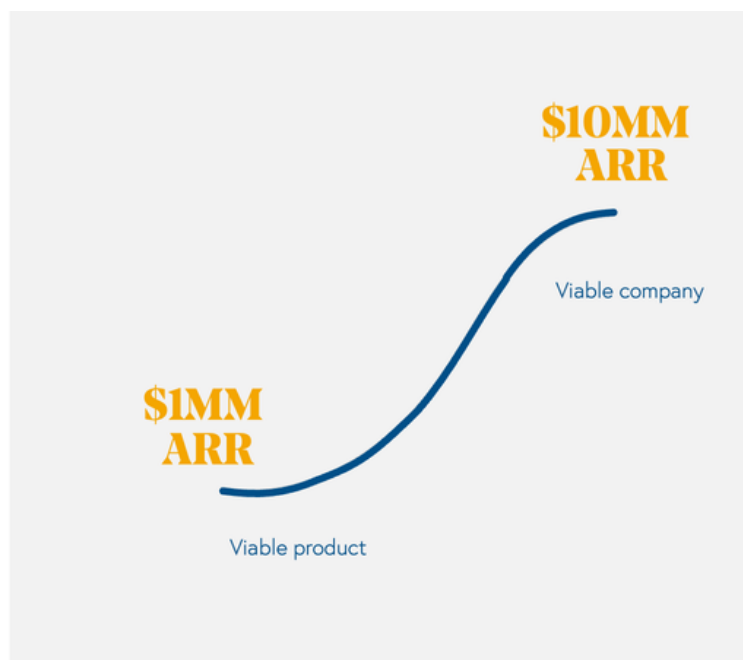
For finance, transitioning from \$1 million to \$10 million of ARR is the evolution from a viable product to a viable company.

For finance,

transitioning from \$1MM to \$10MM of ARR is the evolution from a viable product to a viable company

BEST PRACTICES

1. Map your runway to clear milestones
2. Drive strong growth endurance
3. Balance growth with profitability



At \$1 million of ARR, you likely have great product insights, but true company-building is not top-of-mind. You care more about getting your product in the hands of customers than about cash consumption, and more about interviewing your next CTO than about being interviewed by a VC for a financing.

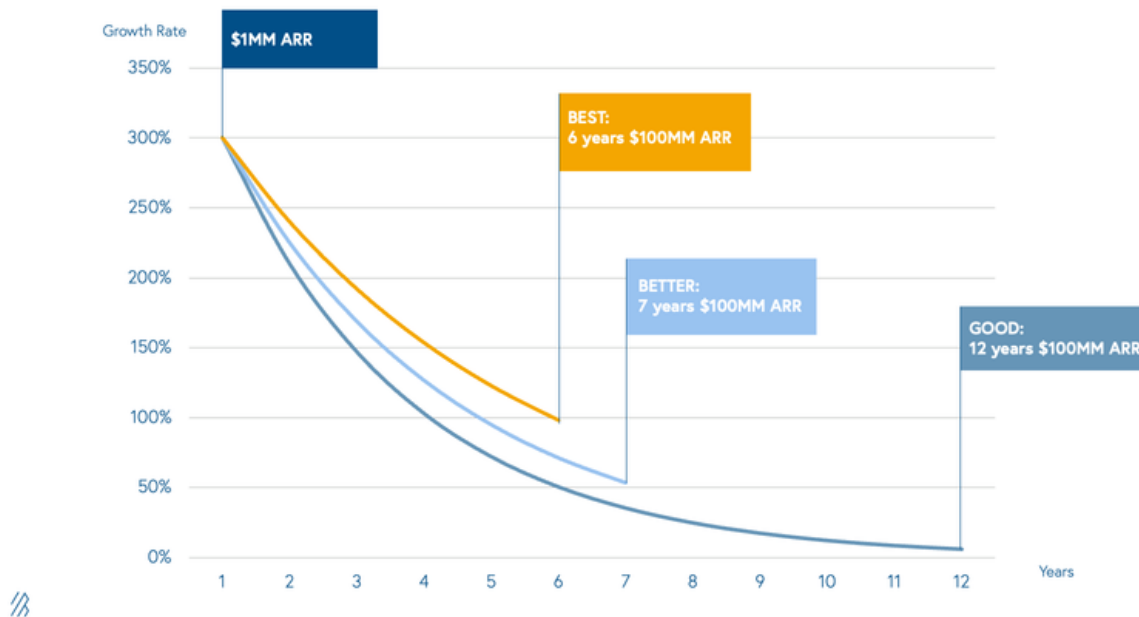
Yet on the path to \$10 million of ARR, these things become incredibly important: cash flow is a company's lifeline. We therefore recommend that on the journey from \$1 to \$10 million of ARR—and beyond—that you map your runway to clear milestones, which often comes in the form of creating an 8-quarter plan.

As you make your plans for hiring, product expansion, geographic expansion, etc., ensure that you are prioritizing such that you have enough cash—enough runway—to hit your highest priority business goals as well as the key metrics that drive a top quartile next round of financing.

Databook, a customer intelligence platform designed to drive enterprise sales performance at scale, is a prime role model of this best practice. In a very disciplined manner, the company uses a structured scorecard to track progress against its yearly priorities. Tangible metrics are tied to each priority, from growth and efficiency targets to clear hiring milestones. The leadership team reviews this scorecard in detail on a weekly basis with individual teams and during quarterly board meetings to ensure that all stakeholders across the organization have visibility into the company's progress.



Years from \$1-100MM by Growth Endurance



As you look to and achieve those milestones, it is important to drive strong growth endurance. While at \$1 million, a finance function might be only managing to the next quarter, or even the next month, the reality is that the decisions made early on will affect what financials look like at the \$10 million, and even \$100 million mark. We know this because of the consistency of growth endurance in cloud companies.

While not deterministic, growth endurance (the rate at which growth is retained from one year to the next) tends to be about 70% in private cloud companies, meaning that you should expect next year's growth rate to be approximately 70% of the current year. Assuming that you want your cloud company to be among the strongest growth stage opportunities at the \$10 million ARR market, growing 100%+, this implies a 140%+ growth rate the year prior.

On the pathway from \$1 to \$10 million of ARR, your finance function should be strategically thinking about Second Act products, go-to-market strategies, and hiring plans that will drive strong growth endurance in your market.

While topline growth is the primary metric against which cloud companies are valued, as a CEO, remember to balance growth with profitability. Investors expect that startups will start off by being cash consumptive rather than cash generative, but they look very closely at that relationship to ensure that the decisions being made (on product, go-to-market, or otherwise) are effective. Investors expect to see investment rationalized by topline growth.

Shopify exemplified this principle in their early days, as we explore in our Series A memo. At the time of Bessemer's investment, not only was the company demonstrating best-in-class ARR growth, but also it was doing so while growing its cash balance. As Shopify continued to scale, the company stuck to its efficient growth ethos and consistently outperformed even the top benchmarks for BVP's efficiency score.

Taken together, the strategic finance steps of mapping your way to the next milestone, driving strong growth endurance, and balancing growth with profitability creates a durable business—not one that is built on the hopes of landing a single customer in a single month, but one built for longer-term survival.



Finance success metrics

Below are quantitative metrics that you should look to to gauge your success in finance.

- Growth Endurance—As the retention of growth rate from one year to the next, growth endurance captures the extent to which your business will be able to build momentum to exit velocity. Driving growth endurance drives long term value.
- Efficiency Score—As the measure of growth to profitability, it helps companies to understand the tradeoffs between investment and cash generation. You want the investments you make to drive topline growth.
- FCF Margin—Free cash flow (FCF) limits the amount of runway that a company has without accessing the capital markets, and tracking burn is key to understanding capital efficiency.

Lastly, as a finance leader, it is helpful to understand the expectations for fundraising at your stage. We share typical valuation multiples, round sizes, and dilution metrics for companies between \$1 and \$10 million of ARR [here](#).

Metrics to gauge your success in finance

METRICS

1. Growth Endurance
2. Efficiency score
3. FCF margin



| | | Growth Endurance | Efficiency Score (<\$30MM ARR) |
|--------|--|------------------|--------------------------------|
| GOOD | | 70% | <0.5x |
| BETTER | | 75% | 0.5-1.5x |
| BEST | | 80% | >1.5x |

| Benchmarks from \$1-10MM of ARR | | | | |
|---------------------------------|---------|--------------|---------------|-----------------|
| | Average | Top Quartile | Middle 50% | Bottom Quartile |
| FCF Margin | -230% | -65%+ | -270- -65% | <-270% |



Team

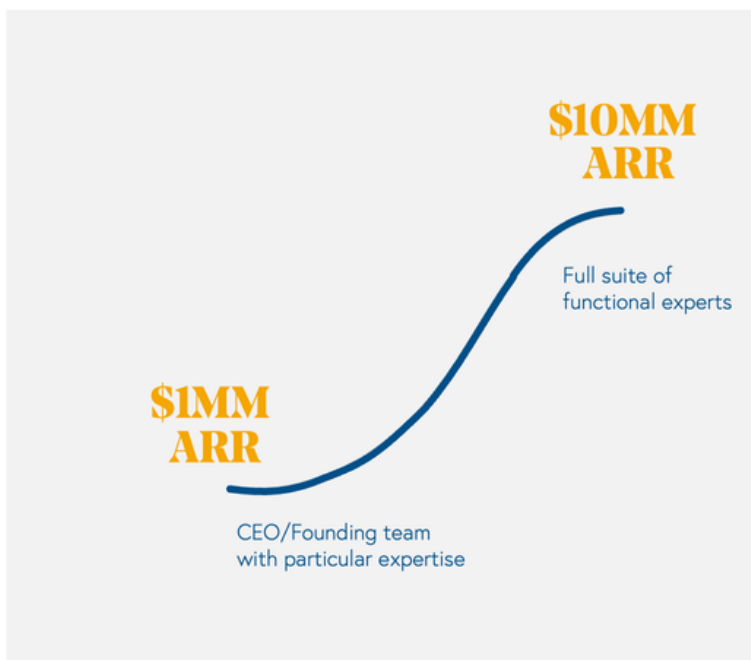
For team-building, the transition from \$1 million to \$10 million is the journey of complementing a CEO or founding team with a full suite of functional experts.

For team,

the transition from \$1MM to \$10MM is the journey of complementing a CEO or founding team with a full suite of functional experts

BEST PRACTICES

1. Know your superpowers, and your kryptonite
2. Prioritize complementary hiring
3. Hire a VP People or Chief People Officer



At \$1 million, a CEO or founding team will likely spike in some area, whether that is product, GTM, engineering, or otherwise. By \$10 million, however, they should surround themselves with functional experts that refine the org structure and fill in any skill gaps. In order to do so, businesses must know their superpowers and their kryptonite.

We recommend that founding teams prioritize complementary hiring. Founders should start by hiring leaders that have the skill sets and experience that they lack, which will allow them to overcome scaling obstacles without slowing down.

For example, Imply, founded by creators of Apache Druid, hired strong GTM executives early on to complement their technical brain-trust. Powered by this talented bench of leaders with complementary skills, the company scaled efficiently in its early years from \$1 million to \$10 million—and has now grown far beyond.



Absent of data, we use the following rules of thumb when to recommend hiring functional experts:

- Sales expert by \$1 million ARR
- Product expert by \$2 million ARR
- Marketing expert by \$4 million ARR
- Finance expert by \$8 million ARR

By \$10MM of ARR, you should have nearly a full bench of leaders that will propel the company in at least its next 18-24 months of scaling through \$25 million or \$30 million ARR.

Along this journey, expect to see team composition change from engineering-dominant to being sales-dominant, with middle management inserted across every function. In order to navigate those challenges, we recommend that you hire a VP of People or Chief People Officer, and you do so before these challenges arise. While that role is likely not first to be filled in the slate of senior leadership, we recommend it be in place by \$10 million of ARR to tackle priorities such as boxcar grants and equity compensation; performance reviews and 360s across the org; diversity, equity, and inclusion initiatives, among other responsibilities. This person will also help with employee retention.

Tackle is a great example of a company that prioritized hiring a VP People and Culture early in the journey and with great success. Tackle's product helps companies scale their GTM through cloud marketplaces, and as it successfully helped companies unlock new channels of customer acquisition, business boomed and the team expanded rapidly. Under Ellen's leadership, Tackle has grown its team by more than 2x to over 200 employees in the last year, while maintaining a cohesive, values-driven culture in a remote-first environment.

Team benchmarks

In addition to the qualitative measures that we shared above, we can look at the expense breakdown of cloud companies' profits and loss statements (P&Ls) in order to give us information about team composition.

- Research and Development—R&D is the income statement line item that captures product, including product management, product development, engineering, and design.
- Sales and Marketing—S&M captures sales expenses, sales compensation, content and brand marketing, demand generation, and customer success expenses related to sales, among other costs.
- General and Administrative—G&A includes the functions that run the back office of your company, including executive leadership, finance, legal and compliance, HR, information technology, and other administrative functions. G&A also includes outside costs for things like legal, travel, and auditing.

Benchmarks for team growth

BENCHMARKS

1. Research and development
2. Sales and marketing
3. General and administrative

| Benchmarks from \$1-10MM of ARR | | | | |
|---------------------------------|---------|--------------|------------|-----------------|
| | Average | Top Quartile | Middle 50% | Bottom Quartile |
| R&D % Revenue | 95% | <40% | 40-135% | 135%+ |
| S&M % Revenue | 95% | <45% | 45-140% | 140%+ |
| G&A % Revenue | 70% | <30% | 30-75% | 75%+ |





Making strong early decisions is key to scaling effectively

For founders, plotting your mid-to-late-stage success begins earlier than you might imagine.

While every business is different, taken together, these key areas of development across product innovation, go-to-market strategy, financial rigor, and team development will go on to lay the necessary foundation for a business to ramp toward the \$10 million ARR milestone.

**“Market leadership is the prize,
and there is one thing that
separates the good from the truly
great. The best companies build a
layer cake of new products that
drive continuous growth.”**

— BRIAN FEINSTEIN

FROM TEN LESSONS OF VERTICAL SOFTWARE



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Ten lessons from a decade of vertical software investing

Insights on how vertical software founders can choose their markets wisely, maintain enduring growth, and build industry-defining companies

BY BRIAN FEINSTEIN & CATY REA



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A few years ago, we published the initial version of our vertical SaaS manifesto. Since then, we have seen vertical SaaS continue to evolve—especially as new forms of monetization arise and augment the traditional software-based model. Accordingly, we have updated this piece to reflect the changing face of vertical SaaS, deeper insights into pricing and packaging, and the emerging importance of B2B payments in vertical SaaS in a new Bonus Law. At Bessemer, we are more confident than ever about the continued proliferation of software in every industry and we look forward to backing the next great vertical software founders doing so.

What we came to learn through investments like [Shopify](#), [Procore](#), [Toast](#), [ServiceTitan](#), [Mindbody](#), [nCino](#), [Disco](#), and many others, is that vertical software companies could grow to be much larger than we expected. By focusing on a vertical market, these companies are able to trade market size for market share and in some cases achieve 50%+ market penetration. In vertical markets, one or two vendors often dominate and capture most of the value.

Today, every industry runs on software, making the vertical software opportunity more valuable than ever before.

With the benefit of watching from the sidelines, we've tried to capture a decade of lessons on how to build industry-defining vertical software companies.

Lesson 1: The goal of every vertical software company should be to find a path to market leadership

For an aspiring vertical software business, market leadership is the prize. Over the past decade, we've seen three successful paths to market leadership:

1. Attack an underserved market: Historically, the most valuable vertical software businesses have been built by serving industries that have lacked access to software. Simply put, it's much easier to capture leadership in a greenfield market without incumbents.

In this spirit, [Procore's](#)* founder, Tooey Courtemanche, realized that the construction industry was woefully underserved by existing software products. He took advantage of mobile Internet access on the job site to build a modern way for the construction industry to collaborate in the cloud. Procore has grown to lead the industry with an end-to-end construction management platform, creating a multi-billion company in the process.

"Attacking an underserved market" can take different shapes in the trajectory of a startup:

- **Underserved industry:** Like Procore, ServiceTitan* attacked an entire field services industry underserved by modern software. Now a multi-billion dollar company, ServiceTitan provides a full management tool for owners who are fed up with running their plumbing or HVAC business on pen and paper.
- **Underaddressed market segment:** In markets with strong enterprise incumbents, we've seen startups win by catering to a neglected market segment. Companies like Mindbody**, *Clio*, and Weave* found their path to market leadership by starting in the SMB segments overlooked by incumbents.
- **New and growing industry:** New verticals lack strong incumbents, opening the door for startups to capture market leadership. Shopify* rode the wave of long tail e-commerce, Dutchie is attacking the emerging cannabis market, Aurora Solar is benefiting from growth in the solar installation market, and Mambu has built a multi-billion dollar business by catering to a new generation of fintechs and digital banks.



2. Address an overlooked problem: Once an industry has been served by a vertical market leader, they can be very difficult to unseat. In more mature markets, we've seen new leaders emerge by attacking problems that are poorly addressed by market-leading incumbents.

For example, nCino* found an opportunity to digitize the processing of commercial loans inside of banks. Banks had plenty of software vendors (including massive incumbents like FIS and Ellie Mae) but no one was paying attention to the commercial loan origination process.

Look under the hood of a company in any industry and you'll find dozens of business processes that have yet to be productized or poorly served. These are ripe for a best-of-breed market-leading vertical solution.

To get a taste for what underserved problems look like in a specific vertical, check out [Mike Droesch's supply chain roadmap](#).

3. Unseat sleepy incumbents: Existing market leaders have big advantages making it extremely difficult to unseat incumbents. In the auto industry, three 40+ year old software companies—CDK, R&R, and Cox—have chased away dozens of new entrants over the years and grown to over \$100 billion in value.

However, time and time again, we've seen exceptional founders leverage a platform shift to unseat incumbents. This is often driven by a technology catalyst that gives new entrants an unfair advantage.

*We saw our portfolio company Toast pull this off in the restaurant point of sale (POS) market. Many thought this market would be forever dominated by NCR and Oracle. But Toast's founders had three radical insights:**

- They could leverage Android hardware to build a better tablet-based experience for restaurant workers than the PC-based status quo;
- They could use cloud delivery to constantly make their software better than the legacy on-premise incumbents;
- By integrating payment processing and capturing payments revenue, they could sell their software at a much lower price point than incumbents and competitors.

With a vastly superior tablet-based product at a disruptive price point, Toast was able to take massive share from NCR/Oracle in less than a decade and build a \$500+ million revenue business. Unseating incumbents is difficult but with a product that is better or cheaper, new entrants can overcome the switching costs that give vertical incumbents their advantage. However, this is the toughest path to market leadership because it requires your new solution to be wildly cheaper or better (or both).

Examples include:

Developer platforms: In 2013, Bessemer published [the eight laws of developer platforms](#), a set of best practices for developer-oriented software companies, an emerging category at the time. In category's growth has since exceeded our wildest expectations. With every industry hiring developers and digitizing their business, we're seeing the emergence of vertically-focused developer platforms.

In financial services, APIs like Plaid, Stripe, Adyen, Marqeta, Alloy**, and Lithic facilitate payments, data sharing, and other payments-specific capabilities. In retail, "headless" e-commerce platforms and API-driven tools like Shippo* are giving developers more control over the retail experience. We're starting to see developer platforms emerge in other verticals like healthcare, travel, education, and telecom.

Looking ahead, we expect to see the rise of vertically-focused developer platforms as even the most traditional industries increase their investment in software and IT. For further reading on developer platforms, read [Ethan Kurzweil's newest laws](#) on this unique type of software model.



Lesson 2: The best vertical software companies build a layer cake of new products that drive continuous growth

There is one thing that separates the good from the truly great in vertical software—a "layer cake" strategy of building additional products to sell into their core vertical market.

To put this in perspective, look at Veeva, the leader in software for the life sciences industry. Veeva got its start by selling CRM software for pharma sales reps. Before the company hit market saturation in the CRM market, Veeva's founder started to work on the company's next act. In 2012, Veeva launched Veeva Vault, a new product line serving not only the sales function but also the research and clinical operations functions.

While Veeva's CRM product continues to grow at an impressive 10-15% annual growth rate, Vault has driven the majority of the company's recent growth. Year after year, Vault has steadily expanded in breadth with dozens of products. Thanks to this layer cake strategy, the company has sustained a revenue growth rate of about 30% over nearly a decade.

Today, Veeva has surpassed \$2 billion in revenue and showing no signs of slowing.

The key lesson from the Veeva experience is that vertical software CEOs need to start thinking about their "next act" years before their core product starts to slow. It can take two to three years to launch a new product and grow it to a meaningful scale.

When it comes to building new products to cross-sell into an existing customer base, we've seen a few tactics used successfully:

- Ask your customers. Leverage customer advisory boards, on-site visits, surveys, and feedback from your sales team. Don't just ask for product ideas but try to understand your customer's business problems and design software to solve them.
- Follow the P&L. Look at your customer's P&L from top to bottom to identify the biggest drivers of revenue and cost. Develop products that drive revenue or reduce expenses for your customers.
- Draw inspiration from the competition. Analyze what other software your customers are buying. Attack the most vulnerable competitors with a better, cheaper, and/or fully integrated alternative.
- Study other verticals. As you design your layer cake, draw inspiration from what market leaders in other verticals have been able to cross-sell—especially the integrated services we'll discuss later.

In the early days, it can be tempting to work on many products concurrently, but focus is key. The most important lesson we've learned from watching portfolio companies on this journey is that it requires ruthless prioritization. As a resource-constrained startup, limit yourself to one "next act" at a time until you've built a mature multi-product muscle.

However, once you get to \$100+ million of ARR, you no longer have the luxury of being hyper-focused. You're now dealing with the complexity of a multi-product company selling into multiple market segments.

Instead of trying to manage by committee, Veeva has a product owner and GTM owner for each of its products and market segments. These "two in a box" owners are focused full-time on their piece of the layer cake. Their financial incentives are tied to the success of the new product, and they are given an independent team to move quickly and execute without dependencies elsewhere in the company. Typically, their compensation is tied to the success of this new product and they are made to feel like true owners ([Working Backwards](#) does a nice job of explaining how Amazon does this). Having a clear owner (and arming them with resources to be autonomous) is the best way to manage multi-product complexity at scale.



Lesson 3: Some of the best layer cake opportunities are integrated services like payment processing. They are easy to cross-sell and feel "free" to your customers

Market-leading vertical software companies have the luxury of adding "integrated services" like payment processing to their layer cake. Most financial services like payment processing, payroll, and lending are a commodity. As the trusted software vendor to your vertical, you have the right to win against generic third-party providers by delivering a vertical-specific offering that is often more usable, more affordable, and better integrated with your software.

The beauty of this approach is that you're not asking customers to reach into their pockets and buy more software. Instead, you're replacing something that customers are already paying for which makes the cross-sell feel "free" and lowers sales friction.

Over the past few years, we have seen an explosion in these kinds of integrated services including:

Consumer Payment Processing:

By far the most common and valuable integrated service is consumer payment processing. Many of the vertical software companies in the Bessemer portfolio including Shopify, Mindbody, Toast, ServiceTitan, [Clio](#), and [Brightwheel](#). These companies earn up to half their revenue from delivering integrated payment processing solutions to their merchants and keeping a cut of the interchange revenue.

Payroll:

Like payment processing, payroll is a commodity service dominated by generic providers. Vertical software companies are in a unique position to build fully integrated payroll processing solutions like Restaurant365* and Toast are doing in the restaurant vertical. An integrated payroll offering can deliver industry-specific features, reduce the need for accounting reconciliation, and provide better service than generic legacy providers, like ADP or Paychex.

The dollars in payroll are massive—representing \$10-\$25 per employee per month depending on the industry and depth of functionality. And the opportunity has become much more actionable in recent years thanks to a new ecosystem of third-party providers that make it easier to deliver integrated payroll such as Gusto, CheckHQ, and Zeal.

Vertical software companies can further leverage card issuing to pay employees via debit card rather than check or direct deposit. Through this, employees access wages faster, employers benefit from happier employees, and the software company issuing the payroll cards captures interchange revenue in the process. Toast, for example, is launching the Toast Pay Card which provides employees with instant access to wages and tips once a shift is finished. The Toast Pay Card has a variety of benefits including providing instant and early wage access, reducing operational overhead of paper checks, and eliminating the requirement of a bank account for the employee which is important in an industry where many are unbanked.

Lending:

Software companies like Shopify are starting to source and underwrite business loans. Vertical software providers that have visibility into cash flows are particularly well-positioned to originate and underwrite loans. For example, Procore* is delivering loans to help construction companies finance the purchase of construction materials at the moment when a new job is awarded to them. Truckstop is providing loans to trucking companies after they've completed a job secured by the payment that is owed to them. Mindbody is offering cash advance against future payments processed through the Mindbody platform.



Communication:

No one loves their phone company. Vertical software businesses can replace commodity third-party phone service with an integrated VOIP/SMS offering. Weave, for example, has had success in the dental, veterinary, and medical verticals by bundling VOIP and SMS services with software tools to provide an end-to-end customer communication platform.

Managed Services:

Managed services are a dirty word in the software business. They are typically low margin, hard to scale, and deliver low-value non-recurring revenue. But there is a rare breed of high-margin, recurring, and scalable tech-enabled services that can be an attractive addition to a software business. Athenahealth and DocuTap* rode the wave of increasing complexity in medical billing by delivering a lucrative managed billing and collections service.

As vertical software companies explore ways to leverage their role as the "operating system" for their businesses, we see them branching out into other lucrative integrated services, which we dive into as the first prediction in State of the Cloud 2022.

Lesson 4: For consumer-facing software, there is a unique opportunity to monetize the end customer

Most vertical software companies built their businesses by solving problems for internal business users, often overlooking consumer end-users in the process. With many internal problems solved by a prior generation of software, we are seeing newer success stories in vertical software focus on consumer experience and "systems of engagement" to unlock new opportunities.

Take Brightwheel, a provider of software to the childcare market. Brightwheel's founder Dave Vasen realized that parents want to see what their kids are doing and communicate with their childcare providers. By focusing on the needs of the childcare consumer, Brightwheel created a new category for childcare software that did not exist before and is now bigger than most of the incumbents. Similarly, Blend built a multi-billion dollar public company by arming banks with software to process online mortgage applications. The industry was full of incumbent software providers but all were focused on internal use cases. Blend was the first to approach banking software from the perspective of the bank's customer.

The vertical software business that also interfaces with end-consumers can monetize those consumers in creative ways:

Consumer marketplaces:

Mindbody sells software to gyms and yoga studios to help them run their business. With over 50% market share, Mindbody built enough supply-side inventory to launch a consumer-facing marketplace for booking classes (much like OpenTable has done in the restaurant industry). Mindbody is able to monetize each booking and enhance the value of its software.

Consumer lending:

ServiceTitan has partnered with a lender to make it easy for its home services companies to provide financing for their end-consumers when they are making a big purchase. ServiceTitan helps its customers close more sales by providing the consumers with instant financing. And ServiceTitan earns a meaningful commission for facilitating the transaction.



Consumer products:

Blend powers the online mortgage application portals for banks. Because it knows when a consumer is applying for a mortgage, it is in a unique position to cross-sell other products consumers need as part of the mortgage process. To capitalize on this opportunity, Blend delivered a fully integrated title insurance experience for consumers as part of its mortgage application process.

Lesson 5: Data remains one of the most under-exploited opportunities in vertical software

Many of the most valuable vertical technology companies like FICO, Esri, Verisk, CoreLogic, Refinitiv, and IMS are data businesses at their core. They have grown to billions in revenue by selling data to vertical markets and have many of the qualities that make software businesses so attractive (high margins, recurring revenue, barriers to entry, operating leverage, etc.)

To date, few application software companies have built data businesses. But we think this is one of the under-served opportunities to grow revenue and build deeper moats.

Value creation can occur in a few different ways:

Building data plumbing:

Among the most valuable vertical software businesses are data networks which facilitate the flow of information between industry stakeholders. In the insurance world, Vertafore and Applied Systems have built vertical leaders by integrating with insurance carriers to provide agents with access to pricing and quotes. These data networks enhance Vertafore and Applied's dominance. To compete, a new entrant would need to build and maintain 100+ carrier integrations.

Benchmarking data to drive user insights:

Cloud deployment gives vertical software companies visibility into data across their entire user base. Guidewire, a publicly-traded provider of software to insurance companies, harnessed the power of benchmarking. Users can see anonymized operational metrics benchmarked across similar Guidewire customers. Benchmarking is difficult to execute but remains one of the biggest under-served opportunities in vertical software.

Leveraging data:

Vertical software companies can use data to improve the quality of their product. As an example, Disco uses computer vision and machine learning to extract data from corpuses of legal documents. As Disco collects more data, its e-discovery products become more powerful. Other companies like Procore are using data to power embedded financial services products like loans and insurance.

Selling data:

As discussed, many of the most valuable vertical technology companies sell proprietary data sets. If your software enables you to capture data that is unique and valuable, consider monetizing it as a subscription data service. As an example, VTS* is taking advantage of its commercial real estate software footprint to gather and sell real estate market data about activity in the real estate industry.

These plays (data plumbing, benchmarking, machine learning, and selling data) were tough to pull off in the on-premise software world. Data lived in the customer's server. Now data resides in the cloud and is accessible to software vendors in a way that was never possible before.



Lesson 6: Pricing and packaging is the biggest missed opportunity in vertical software

Pricing and packaging is hard. Most software companies default to gut decisions and rarely make changes. It is a missed opportunity. Pricing efforts are free ways to drive revenue growth, requiring no incremental R&D or GTM investment. In vertical markets, where logos are sparse, getting the most value out of each customer is critical.

We've found that many of our portfolio companies go years without revisiting pricing. Below are good signals that it's time to run new pricing experiments:

- You haven't made any changes in a year.
- You are rolling out new features.
- Your prospects are not pushing back on pricing.
- Other products your customers are using are priced much higher than your product.

Even when companies realize it is time to revisit pricing, oftentimes they become paralyzed by the complexity of pricing. Most pricing questions don't have simple answers. What is the right pricing model (e.g. usage-based, seat-based, two-part tariff, etc.)? What is the right price point for each customer persona? What are the right contract terms? How do I implement pricing changes?

If there is one piece of pricing advice we can impart it is this—pricing is never done.

As your product and company matures and evolves, so too should your pricing model. However, pricing is challenging and in the face of such complexity, it is easy to kick the can down the road. Instead, try the following:

- Build a small "tiger team" with stakeholders from product, marketing, sales, and finance.
- Have a dedicated pricing point person responsible for driving the agenda and monitoring performance.
- Run regular experiments on a monthly or quarterly cadence.
- Start with simple experiments and get more complex as you build confidence and credibility.

Simple experiments can include:

- Increase pricing for a subset of new customers by 10-100% and see what happens.
- Add an automatic annual price increase to your contracts.
- Introduce a new pricing tier.
- Make an add-on module opt-out rather than opt-in.
- Charge more for professional services/implementation to increase gross margin.
- Add a volumetric or consumption-based component to your pricing.
- Adopt a tiered pricing model (good/better/best) and use "price anchoring" in your highest tier to maximize revenue from your middle tier.
- Introduce pricing increases in the context of new feature releases to give customers the feeling that they are getting value in return.
- Glean pricing insights using a Van Westendrop Price Sensitivity analysis (see this [article by OpenView](#) on how to best leverage this model and its relative pros and cons).
- Add a self-service tier to reduce initial friction to adopt.

For more on how to pick the right pricing and monetization strategy for your SaaS business, subscribe to our Pricing Course at bvp.com/pricing-course.



Lesson 7: Many verticals require a move up-market to sustain growth

Vertical software companies often get their start focused on the SMB or mid-market—selling four or five-figure deals. In some verticals, there are enough customers to build a massive business in this market segment, especially if you can deliver a great layer cake (Shopify or Toast are good examples). However, in many verticals, there are too few logos to build a big SMB/mid-market vertical software business. The only way to sustain high rates of growth is to move upmarket.

The commercial lending software company nCino began by catering to the small banks and credit unions willing to work with a startup. These were initially five-figure deals. As the product matured and nCino built a reputation in the industry, the company began to move up-market with six-figure deals to larger banks. Today, nCino has over 20 customers paying over \$1 million per year, including some of the largest national banks in America.

In nCino's case, there were only about five thousand banks in the US. Without six-figure deals, our portfolio company would have never achieved IPO scale.

The march up-market can also be dangerous—hijacking a company's product roadmap, distracting the team, and exposing the company to new risks. Adam Fisher recently discussed best practices to make the ascent upmarket.

There are a few winning strategies to moving upmarket:

- Follow the fastest-growing customers
- Let product lead the way (not sales)
- Don't fork the product (ever) or GTM engine (initially)
- Don't forfeit the low end

If you start on the march up-market, you will need to be thoughtful about adapting for the enterprise. You'll need to mature the product, harness an enterprise sales motion, reposition your marketing efforts, and build an implementation/success team to drive customer adoption. It can be hard to learn enterprise on the job and your best bet will be to hire team members with enterprise experience.

Lesson 8: Vertical software lends itself well to M&A but should be used cautiously

Acquisitions can be used to accelerate the vertical software layer cake. Given your vertical focus, you are in a good position to buy a product and cross-sell to your customer base. M&A can also help you consolidate the market and get to the coveted market leadership position. For these reasons, vertical software companies tend to be more acquisitive than horizontal players.

The majority of acquisitions are value destructive and M&A should be used cautiously. The best acquisitions have a very clear and immediate financial ROI. The worst are often rationalized using strategic value and optimistic future growth assumptions.



Most successful software acquisitions fall into one of two buckets:

1. **Acquiring a new product to cross-sell:** As you design your layer cake, it can be more attractive to buy rather than build. RealPage, a \$6 billion real estate software business, has been wildly successful at acquiring products and cross-selling these products to its large customer base. To assess ROI, make sure that the revenue from the acquisition multiplied by your expected exit multiple exceeds the acquisition price by a healthy margin.
2. **Consolidating market share:** In some markets, you have fierce competitors fighting for every deal. Both companies suffer from higher sales costs, higher churn, and lower win rates. If competitors can join forces, as we saw at VTS, it can be a value-maximizing event for all shareholders. Freed from bruising competition, VTS has been able to improve its financial performance, raise capital at attractive terms, and refocus its energy on product innovation. To assess ROI, make sure that the value of your stake in the combined business exceeds the value of your stake in the standalone company.

Even when the ROI is strong, acquisitions can destroy value due to weak post-merger integration. Any acquisition needs to have a thoughtful post-close game plan across three areas:

1. **Product:** Acquisitions struggle when the acquired product is poorly integrated. Before closing the deal, figure out what you will do with the product from a technology and product roadmap perspective.
2. **Customers:** Acquisitions fail when they disappoint customers. This is especially true in a market consolidation play where you are migrating customers over to your software. Before closing the deal, figure out how you will deliver the news to customers, how you will mitigate churn, and how you will handle the customer migration.
3. **People:** Executives often get excited about a deal but the people who are doing the day-to-day work may not be fully committed. Before closing the deal, you need to figure out the roles and get buy-in from both your team and the target's teams. Do not count on the founder of the company you're acquiring to stick around—they rarely do.

Find a trusted leader who will be accountable for building the plan and then owning the post-merger execution. Because the failure rate in M&A is high, make sure to start small. In our experience, the smaller deals tend to be the most likely to succeed.

Lesson 9: Once market leadership is established, enduring vertical software companies focus on deepening their competitive moats

If you ever find yourself in the fortunate position of being a market leader, don't wait for the next generation to take your throne. Over the years, we've watched vertical software companies use the following strategies to fortify their competitive positions:

1. Take advantage of scale

As a market leader, you have more revenue than the competition, enabling you to invest more in product and GTM than your competitors. This is a virtuous feedback loop. Use the revenue to build your layer cake and become the one-stop-shop for customers. Outmaneuver or commoditize adjacent point solutions before they can become real threats. Use your large GTM engine to outsell and out-market your competition. Amplify your brand to win over risk-averse customers who want to buy from the market leader, rather than an upstart.

2. Increase your switching costs

Your deepest competitive moat may be making it painful for your customers to switch (even if new entrants have better products or lower prices). We've seen a few smart approaches to driving higher switching costs:



- Capture customer data. Migrating data is painful and the stakes are high if the migration fails. Once an insurance agency has all their customer data in Vlocity, they're reluctant to switch CRMs.
- Encourage third-party integrations. If your customers have gone through the trouble of integrating your software with their ERP system, it becomes much more difficult to make a switch. Across our vertical software portfolio, companies like Procore with robust third-party integrations have much higher retention than those without.
- Extend across multiple departments. Instead of a single team making the switching decision, they now need to get buy-in from multiple departments. This is how healthcare software companies like Epic and Cerner stay so deeply entrenched in a hospital despite their shortcomings.

3. Build a platform

Vertical software companies can enable their customers to collaborate with other companies in their industry. This may be the deepest moat in software — by becoming the platform upon which the entire industry does its work, you can unlock powerful network effects.

The platform play often encompasses a few different strategies:

- Integration/API platform: Integrations and a developer-friendly API that makes it easy for customers to connect all their other software and pipe data into the platform. Samsara has quickly grown to \$500M+ ARR thanks to its many out-of-the-box hardware and software integrations.
- Application platform: An ecosystem for third-party application developers that can build tools and products that exist on top of the platform. Shopify has built a \$100 billion+ platform by enabling a robust "app store" of third-party applications and shipping/fulfillment providers.
- Collaboration platform: Multi-player functionality built into the platform that makes it easy for lots of stakeholders to collaborate. Canva* has built a \$40 billion+ business by making it easy for creative professionals to collaborate on design projects

This is the path that Procore is taking in the construction industry. Procore is making it possible for all the key stakeholders in a construction project to collaborate. It is delivering an open API with pre-built third-party integrations. And it is making it easy for developers to build applications on top of Procore. The company's long-term vision is for the entire construction process to be run on Procore. Its prize is to be the dominant platform for the \$10 trillion-dollar global construction industry.

In the early innings of your company's life, it's all about growth and customer acquisition. But once you've reached a market leadership position, draw inspiration from vertical leaders and work to deepen your competitive moats.

Lesson 10: Smart vertical software CEOs (re)position their business for multiple exit paths

Not all software companies are destined to IPO. As a CEO, you need to regularly take stock and work backwards from your desired path.

IPO:

The IPO path requires hyper-growth at scale. You need to be at \$100 million+ of recurring revenue and growing over 30% at a minimum. You need a massive TAM that can support a plan that gets you to hundreds of millions in ARR after the IPO so that buyers in the IPO see a credible opportunity to make a big return.

For most companies, this proves to be a tall order. Less than 30 vertical software companies have gone public in the past decade. Most simply do not have the growth rate or market size to support the IPO path.

There is no shame in getting off the IPO and steering your business toward a more viable exit strategy. There is nothing worse than burning lots of capital in a reckless attempt to maintain hyper-growth only to find that you're pushing on a string.



Strategic Exit

Once you're off the IPO path, your best bet is to position your business for acquisition by a strategic acquirer.

This involves a few key steps:

- Identify potential buyers.
- Build relationships with the CEO or P&L owner at those buyers.
- Emphasize your strategic value.

Identify buyers:

Identify the companies active in your market or those who may enter your market in the future. Get connected to their CEOs through your investors or advisors under the guise of a potential GTM partnership or informal conversation.

Build personal relationships with the individuals most likely to champion an acquisition (ideally the acquirer's CEO). Invest time in these relationships. Acquisitions are made by people, not by companies. You need to convince a CEO or P&L owner that you are the strategic solution to their problems.

Strategic value goes beyond financial value. It is driven either by competitive dynamics or a transformative growth opportunity. When building relationships with potential acquirers help them understand:

- How you can help them beat the competition
- How you can help them earn more money from their existing customers
- How you can help them enter an adjacent market and unlock dramatic growth in their business

Invest in the relationships. Do not hire a banker to put up a "for sale" sign. Instead, wait for one of the strategic acquirers to lean in with an offer. Once they do, you can hire a banker and use the inbound interest to catalyze conversations with other buyers to create a competitive dynamic.

Private Equity Exit:

When you're ready to exit, you should position for a private equity buyer while cultivating your strategic options. This way you have the luxury of both options. In recent years, there have been situations where PE buyers have been even higher multiples than strategics.

PE buyers are exclusively motivated by financial value and look at a specific set of metrics in a software business. To maximize value in a PE exit, you need to optimize for the following metrics:

1. Attain as much growth and profitability as possible: The sum of a company's revenue growth and FCF margin should be as high as possible (ideally above 40 which is often called the "rule of 40"). A company should be cash-flow positive as most PE buyers won't touch businesses that are burning cash.
2. Achieve high gross and net dollar retention: Gross retention should ideally be above 90% and your net retention should be above 100%. PE buyers and the lenders that fuel them are focused on gross dollar retention because it gives them confidence in the stability of your revenue and long-term profitability of your business.
3. Demonstrate attractive sales economics: Your CAC payback should ideally be under 24 months and driven by a scalable and repeatable sales engine.
4. Maintain high gross margins: Ideally above 80%. PE buyers want to achieve high levels of profitability when growth slows which is largely driven by your gross margin.
5. Unlock future growth vectors: PE buyers will pay a higher price if they are confident in future growth. Show ways that your business can sustain growth after you sell through a history of market leadership, cross-selling of new products, M&A, market expansion, and other new growth horizons. If you've positioned your business well, you can engage both strategic and PE buyers. By attracting as many potential bidders as possible, you can drive attractive auction dynamics and get top dollar in a competitive sale process.

If you've positioned your business well, you can engage both strategic and PE buyers. By attracting as many potential bidders as possible, you can drive attractive auction dynamics and get top dollar in a competitive sale process.



| PE Exit Criteria | |
|------------------------------|--------------------|
| ARR | \$20M+ |
| ARR Growth % + FCF Margin %* | 40%+ |
| TAM | \$100M+ |
| FCF | Cash Flow Positive |
| Gross Margin | 80%+ |
| Gross Retention | 90%+ |
| Net Retention | 100%+ |



To attract the largest number of prospective buyers and the highest valuation, it helps to be a "rule of 40" company (ARR growth % + FCF margin % is greater than 40; the higher the better) and to show profitability (cash flow breakeven at a minimum).

Businesses that are growing and profitable command the highest multiples but at a minimum, you want to either position as a 40%+ growth company operating at breakeven (trading on a revenue multiple) or a low-growth company that is highly profitable (trading on an EBITDA multiple). A <30% growth company running at breakeven or burning cash will attract the lowest level of interest among PE buyers.* If your DNA is oriented toward growth and you're struggling to maintain growth, hire a CEO who knows how to drive profitability and is willing to do the heavy lifting to maximize value for your team and your shareholders.

Bonus lesson: B2B payment is the newest layer cake opportunity in vertical software

As we look to the next horizon of vertical SaaS, embedded fintech providers have made it easier for software companies to deliver innovative B2B payments and spend management products.

B2B Payments

Paper checks still account for half of B2B payment volume in the United States. Vertical software providers are uniquely positioned to digitize these payment flows online and help payors pay their vendors electronically. Given that traditional ACH and paper checks are largely seen as free, the most significant issue is how to make money from those payment flows.

We've seen a handful of business models emerge in B2B payments in recent years:

- **Software subscription fee:** Companies charge for access to their B2B payment modules through software subscription fees. Coupa, an enterprise spend management software provider, launched its B2B payment module in 2018. Coupa charges customers an annual subscription fee for the module in addition to transaction fees for each payment.
- **Enhanced ACH:** AvidXChange, a publicly-traded provider of AP automation software offers "enhanced ACH" in addition to its standard ACH (aka eCheck) and paper check offerings. Enhanced ACH pairs the ACH transaction with additional data such as invoice amount and vendor name and makes this data available to the receiver's ERP system. AvidXChange can charge for this appended data because it makes it much easier for receiver of the funds to reconcile their incoming payments with the underlying invoice.



- **Faster payment methods:** The most profitable forms of B2B payment monetization largely rely on charging for speed of payment. Faster payment options include virtual credit cards, fast ACH, and fast check. For example, AvidXChange's most profitable payment mechanism is virtual credit card. This is a one-time virtual card that is sent via email or API to recipients of B2B payments. Fund recipients pay extra for virtual credit card (in the form of credit card processing fees) because it gives them access to the funds within 1 day rather than waiting up to 3 business days for an ACH to clear. In addition, virtual cards also entail rich remittance data and reduce the risk of fraud as compared to ACH transfers. Similarly, Bill.com offers both 'Pay Faster by ACH' and 'Pay Faster by Check' which are faster forms of traditional payments by leveraging Same Day ACH and expedited shipping of checks to deliver faster payments. Bill.com is able to charge \$9.99 for faster ACH and \$9.99-\$19.99 for faster check.
- **Cross border payments:** In an increasingly global economy, companies are looking for ways to send payments to foreign counterparties and are willing to pay a premium for this service. Melio*, for example, an SMB-focused AP automation platform, charges senders a flat \$20 fee per international transaction.
- **Lending or early payment discounts against receivables:** Companies that enable B2B payments are often able to provide value through financing options and take a cut of revenue for facilitation. Coupa Pay for example monetizes through Early Payments Discounts. In this form of financing, Coupa facilitates the matching of buyers and sellers interested in discounts offered in exchange for early payment (e.g. 5% off the invoice if the seller pays immediately rather than 30 days later) and takes a cut of this revenue from the buyer's savings.
- **Credit card payments to pay vendors:** Companies, such as Melio, enable businesses to pay their bills and other expenses by using their credit card instead of ACH or check. This can be a compelling offering for SMBs that are cash constrained and stand to benefit from an additional 30 days of float (for example, if the SMB pays via credit card on day 30 of a net 30 invoice then the payment won't be due until day 60). Melio is able to monetize these transactions by charging the sender a credit card processing fee.

Spend management

We're also seeing a new frontier of B2B payments emerge in the form of companies like Brex, Ramp, Divvy (now part of Bill.com), etc. These combine expense management software with company-issued debit/credit cards to make it easier for their employees to pay for things.

The spend management vendors replace the traditional employee purchasing process. Rather than using purchase orders/invoices or by paying for items out of pocket and then getting reimbursed, spend management vendors arm employees with virtual and physical cards to buy things.

This can be a lucrative business model because the issuer of the card (Brex, Ramp, Divvy, etc.) captures a % of the spend on those cards ranging from 1%-3% (before processing fees). The rise of embedded card-issuing platforms like Marqeta, Lithic*, and Stripe, have made it easier than ever for software companies to issue cards to its customers.

We may see vertical-specific spend management platforms will emerge to provide software and debit/credit cards that are tailored to their end users through offerings like:

- **Integrations with third-party software** (for example, a construction-focused spend management provider might link each expenditure to its job cost code in the construction accounting system, which is a huge reconciliation problem for many construction firms who use a traditional expense report reimbursement process)
- **Unique rewards** (for example, a creator-focused solution could partner with brands and service providers to deliver unique rewards that a standard card doesn't offer)
- **Customized spend management capabilities** (for example, a retail-focused spend management solution might provide dashboards that show performance by channel and let users set highly specific spending restrictions by channel based on that performance)

The opportunities in B2B payments and vertical-specific card issuing remain highly speculative. We haven't yet seen many vertical software businesses unlock the potential of B2B payments, but we expect it will inspire a new wave of opportunity in the years ahead.



With more than a decade of investing in vertical software companies under our belts, we have grown increasingly enthusiastic about the future potential for vertical software. If you're a founder building a software company and are raising capital or have questions about this white paper, please reach out at brian@bvp.com and crea@bvp.com.

Special thanks to Trevor Neff, Mary D'Onofrio, Ethan Kurzweil, Kent Bennett, Charles Birnbaum, Connor Watumull, Ariel Sterman, and Christine Deakers for their contributions to this piece.

Appendix

*Indicates a Bessemer portfolio company

Six product strategies to catalyze your Second Act

Here's how category-defining cloud companies expanded their total addressable market and increased market leadership

BY JANELLE TENG AND ELLIOTT ROBINSON



Venture insights that matter

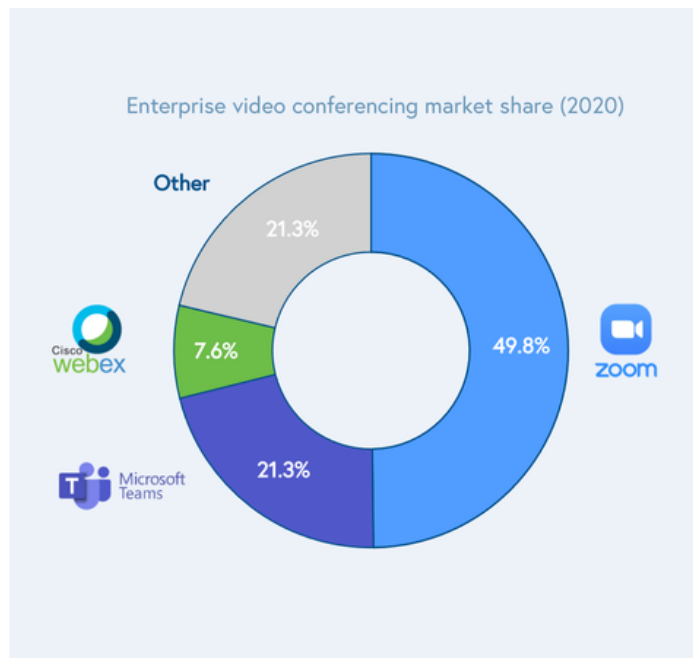
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Six product strategies to catalyze your Second Act

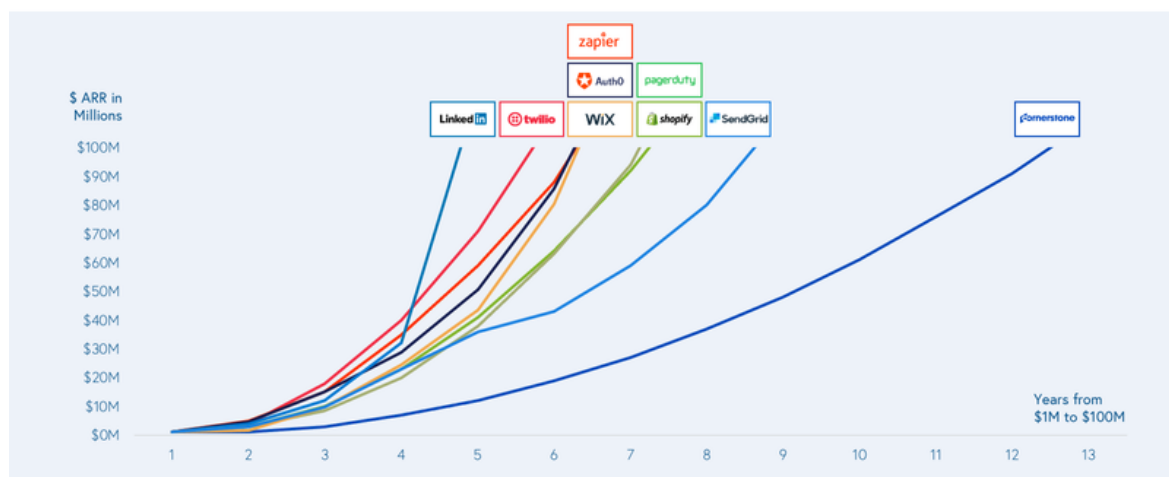
Scale wins in the cloud economy. From Law 1 in our 10 Laws of Cloud, market leaders generally command half or more of a total market's enterprise value. Second place captures less than 30% and third place is lucky to get 20%.

Example of market leadership in the enterprise video conferencing space



While some of the best cloud companies take four to eight years on average to reach the \$100 million ARR milestone, many market leaders are able to accelerate to \$1 billion ARR in seven years or less after they cross the \$100M ARR mark. Businesses achieve these hyper-growth rates because scale helps to create a virtuous cycle of pricing power, customer awareness, and talent attraction that further widens a company's lead over the competition.

Years from \$1MM to \$100MM ARR



Source: Bessemer Analysis



Building and maintaining scale requires constant product innovation. At Bessemer, we often see the fastest-growing businesses employ what we call the "Second Act" strategy—where leaders use product innovation to expand their initial core market and further cement their category dominance.

On the Bessemer Growth team, we've observed this phenomenon repeatedly as we've partnered with cloud leaders to execute on this strategy as they enter their scaling phase. We've witnessed that there is no one-size-fits-all strategy to your next act. More often than not, market leaders don't just apply one method, but a combination of strategies in a comprehensive platform play.

In this guide, we dive into six of the most effective scaling strategies we've seen from some of the most iconic cloud companies. All have gone on to become market leaders, thanks to powerful Second Acts.

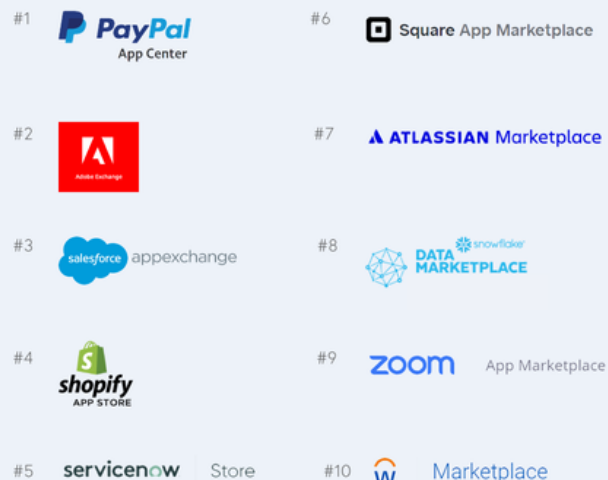
I. Launching a robust partner ecosystem

From Salesforce's AppExchange marketplace to Okta's Integration Network, building out a third-party ecosystem is a tried-and-true next act strategy. Many established cloud leaders have used it to achieve unprecedented scale—and by "many established leaders," we mean almost all.

One hundred percent of the top 10 BVP Cloud Index companies by market capitalization offer an app or data marketplace. A majority implemented this strategy after reaching the \$100 million ARR mark. This methodology is ideal for companies in the hyper-growth stage since you likely have already attained a baseline of market awareness at this point such that other third-party partners want to work with you. Building a partner ecosystem creates infrastructure that allows others to participate in and accelerate your growth.

Ecosystems have many compounding benefits. They reinforce your leadership message (many companies want to work with you), inspire stickiness and retention (more reasons to stay), deepen your product's capabilities, and produce a steady stream of success stories.

Ecosystem plays from the Top 10 BVP Cloud Index companies





Case study: Shopify

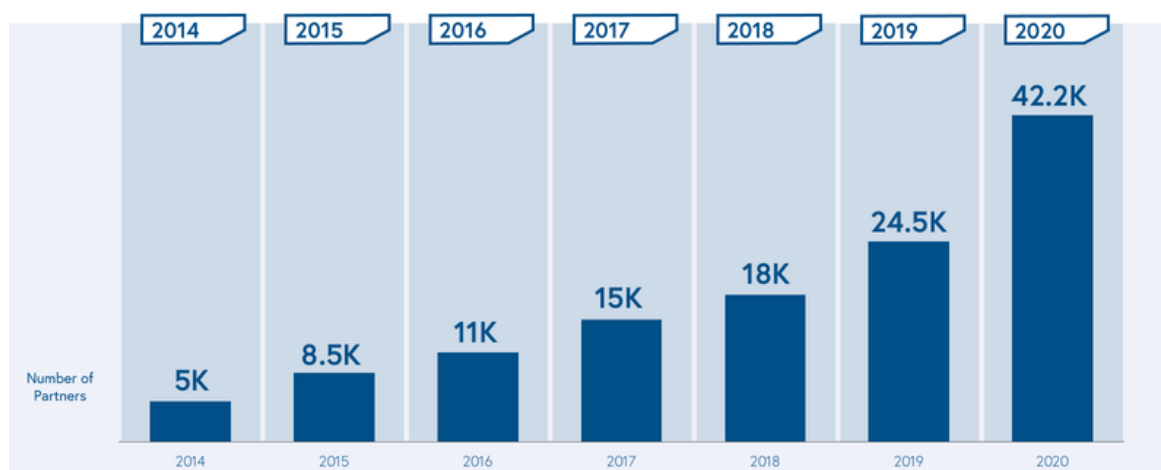
Launched in 2009, Shopify's App Store had a very clear purpose: To generate new merchant referrals from partners, and to extend the functionality of Shopify's platform. The team understood that allowing independent developers to build apps meant having thousands of additional product teams solving niche problems for their customers.

The number of publicly available apps on Shopify's marketplace has exploded from 500 in 2013 to its present number of over 6,000. Eighty-five percent of Shopify merchants now say they rely on at least one App Store solution to run their business, with an average of six apps per merchant. Shopify partners, including developers, designers, and agencies, earned \$12.5 billion in revenue in 2020 which was a staggering 4x of Shopify's total revenue.

Shopify takes a commission on developer and theme revenue, and also makes money from other ecosystem-related channels such as App Store advertising fees. While the App Store has been an attractive revenue-generating next act initiative in and of itself, its most valuable contribution is how it has helped to expand Shopify's core merchant base and solidify Shopify's market leadership. Since 2014, the number of partners referring at least one new merchant to Shopify has increased by almost 750%!

Active ecosystem partners referring new merchants to Shopify have accelerated over the years

CASE:  **shopify**



Source: Company public filings

II. Developing a layer cake with integrated services

With one of the largest vertical software portfolios in venture, Bessemer has worked with over 30 vertical software companies in the past decade. We've been lucky enough to have front-row seats to what can only be described as a vertical software tsunami, with the market capitalization of public vertical software companies exploding from \$71 billion to more than \$650 billion in the past ten years alone.



This is astounding since conventional wisdom suggests that vertical software companies should be more TAM-constrained than horizontally-focused peers given their more narrow focus. How have the best vertical software companies overcome this challenge?

As our partner Brian Feinstein noted, there is one thing that separates the good from the truly great in vertical software—the "layer cake". This is the phenomenon of creating a multi-product strategy to layer in new products and cross-sell these capabilities to the existing customer base as a Second Act.

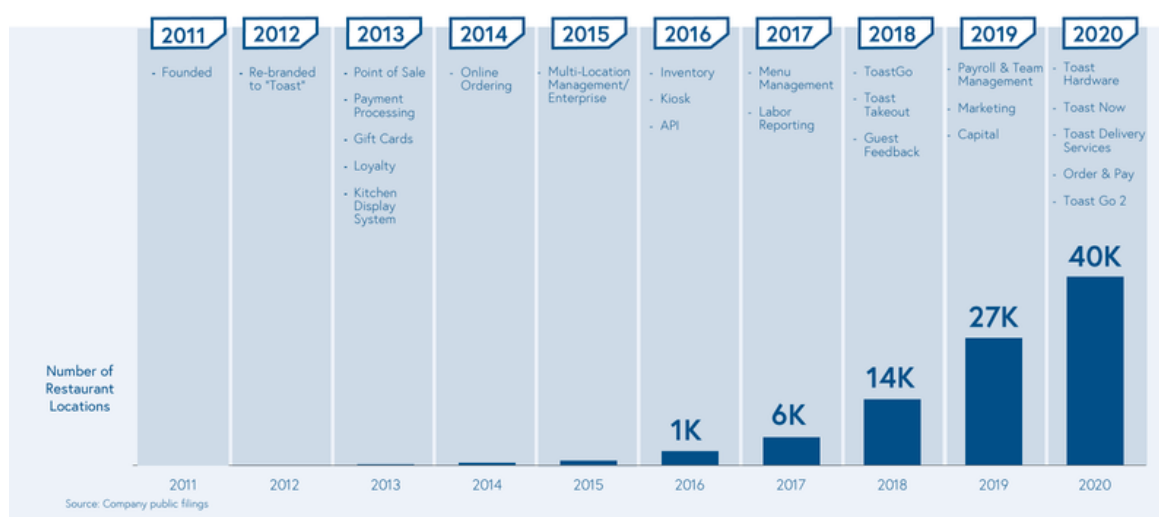
Case study: Toast

Toast's mega IPO in 2021 set the record for the largest vertical software IPO in history. (This is even more impressive when you consider all the challenges the restaurant industry has experienced over the past few years with COVID-19.)

Our partner Kent Bennett led Toast's first institutional investment in 2015 and recognized early on that the founding team had unmatched product chops. Indeed, since inception, this vertical software market leader has constantly introduced new products year after year to deepen capabilities on Toast's platform for existing customers. On top of a point-of-sale hardware and software subscription, they layered solutions for back-of-house (the kitchen), back-office, digital guest engagement, and most recently, touchless guest experiences.

Toast's accelerated customer growth via product development

CASE: 



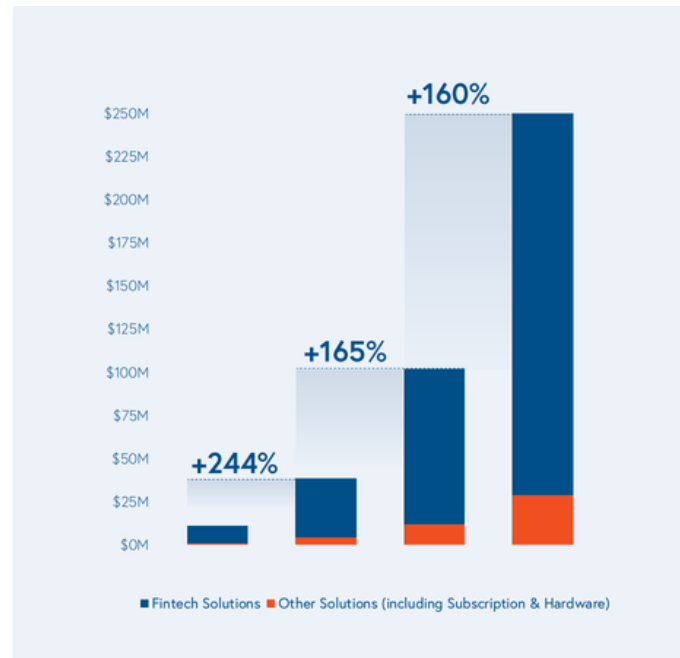
Toast keenly identified that some of the most highly monetizable layer cake opportunities involve adding integrated services such as payment processing to an existing platform. These integrated services tend to create a better end-to-end user experience than generic third-party point solutions. They're also easier to cross-sell to existing customers because they supplant competitive offerings that customers are already paying for.

Toast was able to execute flawlessly on this strategy by integrating payments solutions on top of its traditional software subscription and hardware offerings. The payments channel served as Toast's largest contributor to revenue during its scaling phase and today, Toast's platform processes over \$14 billion in gross payment volume each quarter.



How integrated services unlocked revenue growth for Toast during its scaling journey

CASE:



III. Creating value from data to evolve into a system of action

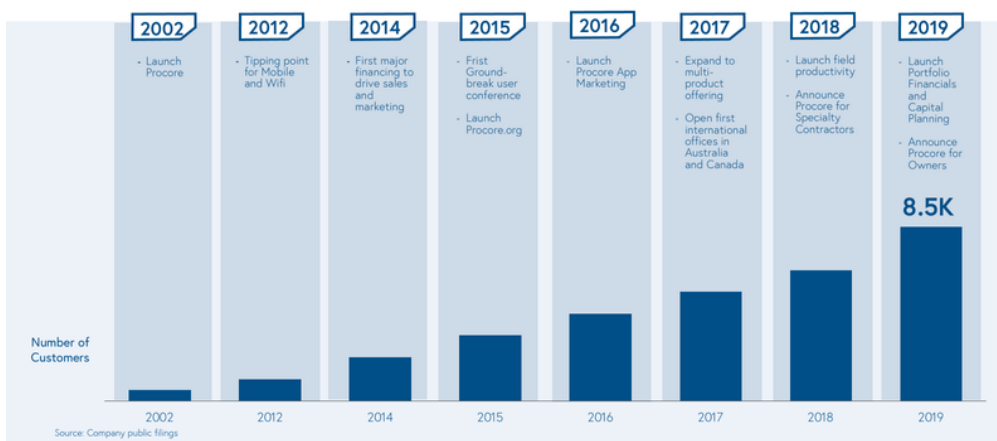
As a company's product usage begins to grow, so too does the volume of user-generated data its product captures. This is especially true for products that start off as a system of record for customers. Finding a way to harness the value of this accumulated data to help customers make smarter decisions (and grow more dependent on those insights) at the growth stage makes for a great Second Act.

Case study: Procore

Procore is a prime example of this strategy. The business began in 2002 as a project management solution for general contractors. Even as one of the first cloud-enabled vertical software solutions for the construction industry, the team understood that a single product would only get the business so far. Procore CEO and Founder Tooey Courtemanche developed a customer-centric product organization centered on the mission of connecting everyone in construction on a global platform and constantly executed on a multi-product strategy over the years.

Procore accelerated customer growth alongside its expanded product portfolio

CASE: **PROCORE**

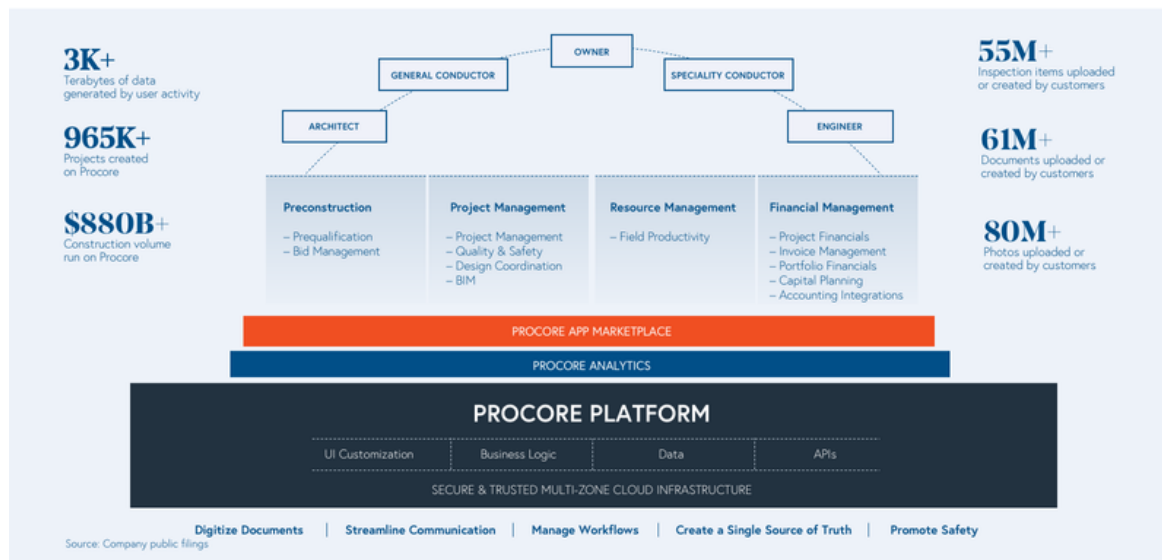




By 2019, user activity on Procore's platform generated a staggering 3,000 terabytes of data with an average of 110 terabytes being added per month. Procore identified that its platform was accumulating a wealth of data that could be valuable to customers. In 2019, Procore acquired Construction BI and launched Procore Analytics, which helped customers capture value from Procore's data layer through advanced business intelligence, including pre-built reports based on underlying data and the ability to develop custom visualizations and configurable dashboards.

Procore's platform layers

CASE: **PROCORE**



After a multi-decade journey, Procore has evolved from a system of record into a powerful system of actionable insight—one that allows its customers to use their own data to make better business decisions. In 2020, Procore went public after crossing the \$400 million ARR benchmark and is now valued at approximately \$13 billion in market capitalization.

IV. Leveraging a unified vision to expand use cases

Company visions are not merely the realm of public relations professionals. A strong vision championed by a founder or executive can also help direct the business' attention to future opportunities to grow its product portfolio and use cases while still being centered on a unified aspiration.

This works because an inspiring vision can plant a flag on a long-term goal and challenge those within the business to reach this, irrespective of the state of its current product. For instance, rather than ask, "How can we improve our CRM product?," workers are encouraged to ask, "How can we help salespeople sell more?" The latter question leads to more meaningful innovation.

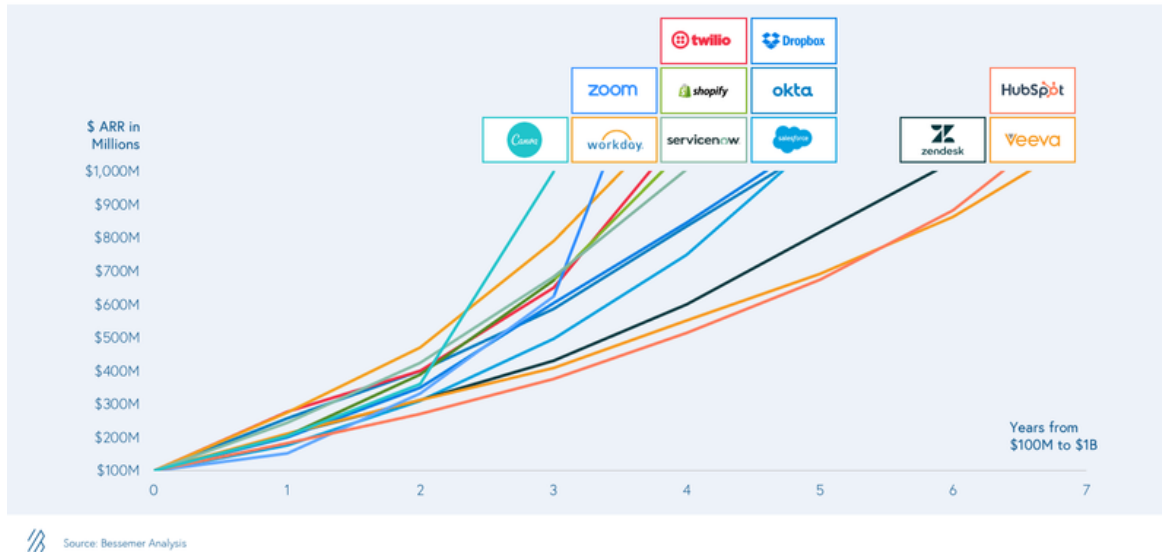
An outstanding example of this practice is embodied by Canva, the global visual communications platform. Launched in 2013, Canva had an ambitious vision to empower the world to design anything and publish anywhere. Its initial product focused on providing an easy-to-use drag-and-drop design tool aimed at the mainstream target audience including hobbyists, social media influencers, and students.

Fast forward a few short years, Canva is now the most valuable female-led startup in the world, and is on track to exceed \$1 billion ARR by the end of 2021 at breakneck speed while generating positive free cash flows. The Canva community has created more than 7 billion designs, with 120 new designs created every second using the platform's expansive library of more than 800,000 templates and over 100 million design ingredients including graphics and audio tracks.



Case study: Canva

Years from \$100MM to \$1 billion ARR



Let's look more closely at Canva's approach. Much of its rapid success can be attributed to its well-executed product expansion strategy based on its core vision. Over the years, Canva has expanded its use cases:

- **Mediums:** Canva has expanded its design catalog to offer templates spanning social media collateral, video, documents, printed designs, and much more.
- **User personas:** While Canva initially appealed to individual non-professional creators, it has now expanded its feature set through offerings such as asynchronous collaboration to target other personas including startup founders and marketers in enterprise teams.
- **Geographies:** Canva's platform is available in approximately 100 languages and is used in over 190 countries.
- **Devices:** Beyond its initial browser-based experience, Canva can now be used on a variety of phone and tablet operating systems.

Canva has executed faithfully on its Second Act strategy by only introducing extensions that are aligned to the company's initial value proposition of democratizing design for everyone.

For instance, all offerings offer the same easy-to-use UI/UX. This has allowed Canva to stay true to its North Star and maintain a consistent customer experience even in the midst of rapid platform expansion.



V. Leapfrogging to adjacent verticals

Growth-stage companies that have established a strong reputation in an initial industry can capitalize on this to take on adjacent verticals, in a Second Act known as "leapfrogging."

Case study: ServiceTitan

ServiceTitan, the world's leading vertical software solution for the home and commercial services industry, is one good example. The company's original product targeted three core trades including residential heating and cooling (HVAC), electrical, and plumbing. It rose to prominence thanks to an outstanding product and a deep sense of customer empathy that emanated from its founders. (Both had close family members who worked in these trades.)

Leveraging its strong, initial reputation within their first verticals, and a track record replete with referenceable customers, ServiceTitan began expanding to adjacent verticals like water treatment, landscaping, pest control, and franchise brands. They did this through a mix of acquisitions and product adjustments (e.g. mobile capabilities) to cater specifically to new trades.

By 2021, ServiceTitan's Second Act propelled it to and through the \$250 million ARR mark. After filing its S-1, ServiceTitan is poised to go public, with over \$350 million in revenue. Today, its platform is used by more than 11,800 businesses that are run by technicians serving the HVAC (heating, ventilation and air-conditioning) sector.






How ServiceTitan expanded to adjacent verticals through M&A

CASE:  **ServiceTitan**



INITIAL TRADES: Plumbing, HVAC, Electrical

M&A INITIATIVES:

| Dec 2019 | May 2020 | Oct 2020 | Feb 2021 | Jun 2021 |
|--|--|---|--|--|
|  Water Treatment |  Mobile suite for field service management |  Franchise Brands |  Pest control and Arbor |  Landscaping |

Source: Company announcements



VI. Moving across the tech stack to become an end-to-end solution

The first product for many startups tends to manifest as a point solution in a broader customer value chain. This makes sense — in the early days, it is prudent for startups to be highly-focused due to limited resources. But as a company enters its growth stage, it is important to adapt this product strategy and dedicate more resources to new product development in order to take advantage of emerging market leadership.

For companies that have already established credibility within a niche, moving across the tech stack from an initial wedge and evolving into a one-stop-solution for a category is an effective way to establish your Second Act.

Case study: Yotpo

Ecommerce marketing platform Yotpo is a terrific example of expanding across the tech stack. Yotpo's initial product was a point solution focused on user-generated content (UGC), including reviews, ratings, and visual content for SMB ecommerce brands. Yotpo maximized velocity early to win the hearts and minds of its core SMB customer segment, and grew alongside its best SMB customers.

As SMB customers grew their underlying business, Yotpo anticipated that its customers' business needs would expand as well. The company began building out an end-to-end eCommerce marketing stack starting with natural functional adjacencies to its UGC product, which included launching a new Loyalty and Rewards solution and acquiring SMSBump, to move into SMS marketing and automation.

Today, this one-stop-shop approach has paid dividends, with a majority of Yotpo's customers using at least two of its product offerings to run their business. Brands that use two or more Yotpo products have grown 54% faster than those that use only one, further reinforcing the virtuous cycle of growth for Yotpo.

Yotpo has now crossed the \$100 million ARR threshold, driven by levers such as best-in-class net dollar retention and increasing average contract values as customers continually add new product usage to their existing platform adoption.

Start early on your next act

As we've explored, building organically or making acquisitions are both viable strategies to execute on your Second Act. Whether you choose to build new products in-house or to acquire them, keep in mind that it can take several years for those new product innovations to be viable.

The best cloud companies begin experimenting with their Second Act years in advance of their core product slowdown, so we recommend that you keep your Second Act top of mind even if you are still executing on your First Act.

Scaling to \$100 million

The definitive benchmarking report on how cloud companies grow operationally efficient businesses to Centaur status

BY MARY D'ONOFRIO



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Introduction

As growth investors at Bessemer, we hear the same benchmarking questions over and over from portfolio companies as they mature: What should my gross margin be? How much should I be spending on R&D as a percent of revenue? How does my growth rate compare to peers in the market?

When it comes to building and scaling a cloud business, founders, CEOs, CFOs, and board members alike want to know what "typical" and "best-in-class" look like. Leaders like you want to model their businesses around these benchmarks to achieve their goals.

There is a problem, though. Private market financial benchmarks are some of the most elusive financial data points in the world. They are also some of the most helpful. If you're a cloud startup seeking to emulate the success of companies like Shopify, Procore, and Twilio, understanding how your predecessors grew and achieved key milestones is a critical part of the equation. But not everyone has access to this type of information. Private companies lack reporting requirements that would make their benchmarks known, and backers of private companies hold their portfolio company information close to the chest. Considering these factors, only the highest-flying, venturebacked companies have the opportunity to learn from the stories of the past, leaving other startups at an inherent disadvantage—until now!

We're releasing "Scaling to \$100 Million" as the industry's definitive benchmarking report for cloud companies looking to scale to new heights. For more than a decade, Bessemer has made over 200 cloud investments and has one of the largest cloud portfolios of any venture firm in the world.* As we share this information with leaders like you, we hope this body of analysis proves to be a valuable resource for what growing your cloud business looks like at every stage.

*The data you see in the report is based on financial information from Bessemer's cloud portfolio from 2010-1H21; it is not a random sample of the entire private market.



Takeaways from Scaling to \$100 Million

Lesson 1: ARR is the North Star. Growing ARR (or CARR) is every cloud company's North Star metric. The average growth rate for companies between \$1-10MM of ARR was nearly 200%, decreasing to 60% for companies over \$100MM+. Growth endurance measures the rate at which cloud company growth is retained YoY, which tends to be a predictable 70% in the private cloud universe. Strong gross retention and net retention, which average ~85%+ and ~120%+ across cloud company lifetimes, contribute to maintaining strong growth rates.

Lesson 2: Win by Wide Margins. Optimizing your costs and expenses is key to building a winning cloud company. In cloud, gross margins measure how effective companies are in delivering their software to customers, and they average 65-70% across company lifetimes. While COGS are primarily variable costs, you should expect to get leverage from operating expenses: Research & Development (R&D), Sales & Marketing (S&M), and General & Administrative (G&A). By \$100MM of ARR, these expenses average 35%, 50%, and 20% respectively of cloud company revenue. As spend decreases, cloud companies get closer and closer to free cash flow (FCF) positivity, reaching an average of -35% FCF margins by \$100MM+.

Lesson 3: Know Your Worth. Over the past decade, cloud company funding rounds have priced at an average of ~30x ARR between \$1-10MM of ARR, reducing to ~15x ARR beyond \$10MM+. Between 2020/2021, though, the average multiple has increased to 20x, and top private cloud companies (measured by the Cloud 100) are receiving an even higher 34x. As ARR scales, round sizes tend to increase while dilution decreases.

Lesson 4: The TL;DR - Plot Your Way to the Next Milestone. Use our benchmarks to plot your company's progress, and download our templates to include in your next board or fundraising deck.

Bonus Lesson 5: Run the Public Playbook. Target \$100MM+ of GAAP revenue and visibility to FCF breakeven within 1-2 years before eyeing the public markets.

The Public Playbook

| | LTM Revenue Growth | LTM Revenue (\$MM) | Net Retention | Gross Margin | S&M % Revenue | R&D % Revenue | G&A % Revenue | FCF Margin |
|-----------------|--------------------|--------------------|---------------|--------------|---------------|---------------|---------------|------------|
| Average | 65% | \$170 | 120% | 70% | 55% | 30% | 20% | -20% |
| Top Quartile | 85%+ | \$170+ | 135%+ | 75%+ | <35% | <20% | <15% | 0%+ |
| Bottom Quartile | <40% | <\$80 | <110% | <60% | 65%+ | 35%+ | 25%+ | <-30% |

*Public Playbook companies include all previous and current RFP Resides Emerging Cloud Index companies at time of IPO. Data manually taken as of most recent FY provided in 3-1. Example companies are within 5% of averages.



Lesson 1: ARR is the North Star

Annual Recurring Revenue (ARR) is the annualized amount of recurring software revenue that a cloud company has at any point in time. It is the main metric used to determine private cloud company valuations.

While GAAP (generally accepted accounting principles) revenue only accounts for the ratable amount of annual contract value that cloud companies earn in a given period (whether recurring or one-time revenue), ARR gives full credit for the annualized recurring contract and nets out non-recurring revenue. As a result, revenue generally lags ARR, but in the private cloud markets, most investors are comfortable giving companies forward credit because ARR will manifest in revenue eventually, assuming the high retention rates which are common in cloud. ARR gives cloud companies credit for their customer growth that GAAP revenue alone would not capture. CARR (Committed ARR) builds on the ARR concept by adding committed but not yet live contract values to total ARR and netting out forecasted churn or downsell. CARR can be an even better indicator of topline momentum than ARR for some cloud businesses, as it captures more customer information than does ARR, but CARR-to-ARR-lag for companies with long implementation timelines can be a drawback.

As you acquire more customers and generate more ARR or CARR, generally the valuations you receive will, in turn, increase. In the [10 Laws of Cloud](#), we explain how scale wins in cloud economics—the larger you are, and the more revenue you have, the more defensible your cloud business. Market leaders create a virtuous cycle with pricing power, talent, and product that reinforce their lead. Growing ARR should therefore be your company's top priority. In this lesson, we explain the main ARR drivers that matter as your cloud company grows: ARR Growth, Growth Endurance, and Net and Gross Retention.

ARR Growth Rate

ARR growth rate is a key signal private investors use to determine whether a company has the product, sales efficiency, and market leadership to become a market leader. While metrics like CAC payback for sales efficiency or monthly active user (MAU) growth for product usage are more exacting measures, the growth rate is a good proxy for the overall performance of a cloud business—not just historically, but also in the future.

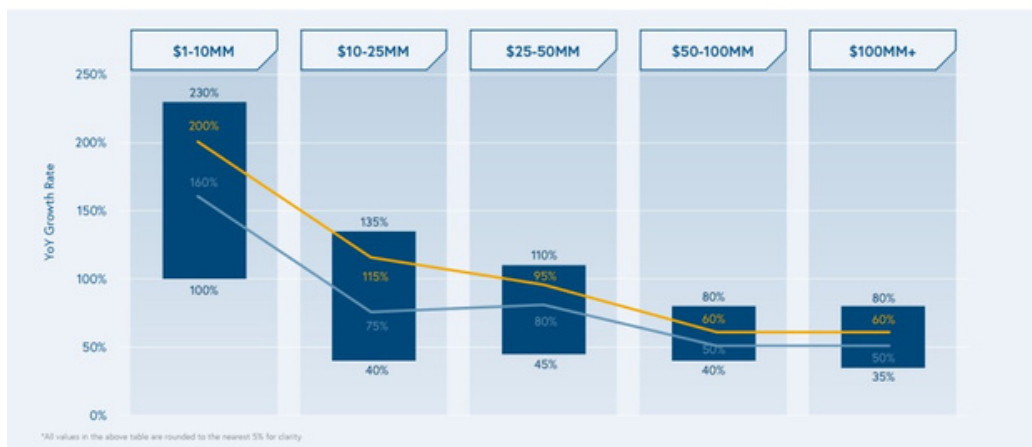
While it's generally accepted that more ARR will result in a higher valuation, the less intuitive reality is that the growth rate of that ARR matters almost as much as the quantum of ARR itself. The higher your growth rate, the quicker your company will "grow into" its valuation; therefore, investors are willing to pay higher prices for a higher growth rate. Maintaining an average or best-in-class ARR growth rate is a key driver of success. So what does that look like over time?



Lesson 1: ARR is the North Star

Average Median Top Quartile Bot Quartile

The YoY Growth Rate Trends by ARR Scale



Examining Bessemer's cloud portfolio over the last decade, we find that the expected growth rate for companies decreases over time, as it is easier to grow at a higher rate on a smaller base of revenue and the marginal dollar is always harder to acquire. The average growth rate for companies between \$1-10MM of ARR was nearly 200%, and this average decreases to 60% for companies over \$50MM of ARR. We also find that the middle 50% of cloud companies have a tighter and tighter band of growth rates as ARR scale increases:

the middle 50% of companies from \$1-10MM of ARR are growing from 100-230% while the middle 50% of companies from \$50MM+ of ARR are growing from 30-80%.

While there is some selection bias for companies that are at the higher ends of the ARR range (the companies that make it to that scale are the most successful ones), an important note is that average growth rates continue at high rates, even at scale. We find that this tends to happen because of two reasons.

First, by \$50MM or \$100MM of ARR, the Cloud Giants are crowned. Given the virtuous cycle of market leadership, the leaders that emerge are able to further consolidate their markets, accelerating growth. For example, when Bessemer first funded [PagerDuty](#) in its Series B in 2014, it was at \$12MM of ARR and had material competition from VictorOps, OpsGenie, and xMatters. By the time PagerDuty crossed \$100MM of ARR in 2018, all of these competitors had either been acquired or fell behind, leaving PagerDuty as the only true standalone company in the incidence response category and allowing it to capture more of the pie.

Second, market leaders tend to accelerate their growth and expand their total addressable markets (TAM) by adding "Second Act" products, so even if there is growth decay in the core product, there are constant second, third, and even fourth winds behind company growth as a whole. Cloud leaders tend to be multi-product companies. For example, our portfolio



company [Toast has successfully layered Payments and Capital](#) onto its already-large point of sale (POS) business.

Examining our cloud company data, we also note that it is very rare to see a best-in-class growth rate company quickly devolve into a laggard. Similarly, it is very rare to see a mediocre grower evolve into a high-grower. Generally, companies' modus operandi are set early, and reorientations of the magnitude needed to change growth trajectory are difficult. Taking the recent example of Toast, throughout its entire journey from \$1-100MM+ of ARR, it stayed within the top quartile growth range (or very close to it). But, the jump is possible, and Procore provides a good example of a company with the product-market fit and go-to-market muscle that was required to make it. Procore went from being a bottom quartile grower between \$1-10MM of ARR to a top quartile grower by \$25-50MM of ARR, going [public in May 2021 for over \\$10 billion](#).

Growth Endurance

While we know the average growth rate for a cloud company tends to decrease over time, as investors we are often tasked with modeling out the future growth of a company based on imperfect information. A helpful heuristic that we like to use is the idea of Growth Endurance, which we explored in this year's [State of the Cloud 2021](#). Growth Endurance is the rate at which growth is retained from one year to the next, which tends to be very consistent in cloud companies. As the analysis below shows, when we plot the percentage of ARR Growth lost between each year, we find that it decays at a fairly predictable 30%. As a private cloud company, you should expect next year's growth rate for your business to be ~70% of the current year.

Lesson 1: ARR is the North Star

Growth Endurance

Growth Endurance = $\frac{\text{Current Year's Growth Rate}}{\text{Last Year's Growth Rate}}$



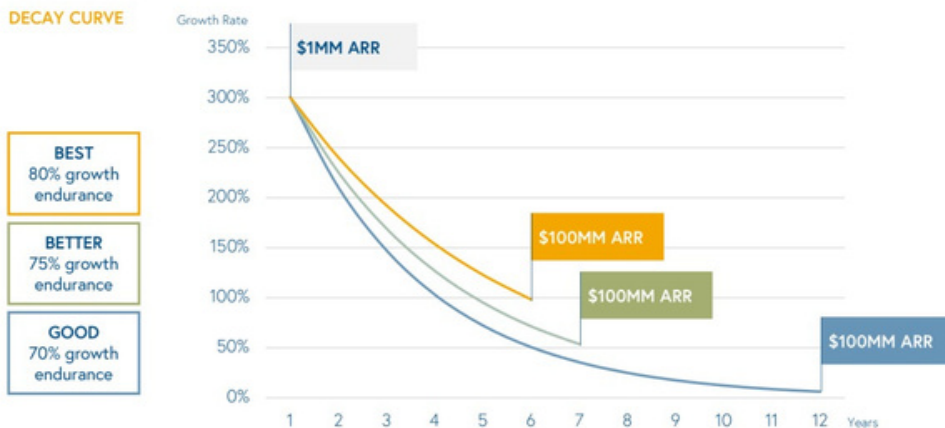
While Growth Endurance in the private cloud market is strong at ~70% YoY, within the public cloud landscape as measured by the [BVP Nasdaq Emerging Cloud Index](#), it is even



stronger. Among that group, Growth Endurance is ~80%. Below we show the impact of growth endurance on when a company should reach \$100MM of ARR, assuming that it triples to \$1MM of ARR in year 1 (a typical trajectory at that scale).

The Good, Better, and Best of Growth Endurance

Implications for growth deceleration



Gross and Net Retention

In the cloud business model, companies pay upfront customer acquisition costs, but are generally only able to monetize monthly thereafter, creating a negative cash flow dynamic. However, given the fantastic margin structures for cloud companies, these customers generally end up being incredibly profitable and generate large streams of high-margin recurring revenue in the long run —if, and only if, they can be retained.

Retention is one of the most important measures of your cloud business' health, as it preserves the unit economics of historical customer acquisition. Furthermore, when you retain existing customers, you do not need to use valuable sales and marketing dollars to refill a leaky bucket but can use that capital to generate net new revenue (and therefore net growth). Every cloud company quickly learns that every percentage taken out of your retention is taken out of your growth rate.

Gross retention (dollar basis) tells you what percentage of revenue your cloud company has maintained over a given period. It nets out the revenue from customers who turned off or downgraded your service, but does not account for any expansion. Looking at gross retention by ARR range, we find that it is relatively consistent at 85-90%.

While it would be easy to conclude that gross retention is a negligible metric, it is actually quite the opposite: It is difficult to build a successful cloud business without having high gross revenue retention. That said, gross retention will vary based on customer segment, and we have seen successful cloud businesses that address SMB segments -- such as HubSpot (in its 3 years pre-IPO) -- with 70-80% gross retention. In cases like these, you should make sure to keep



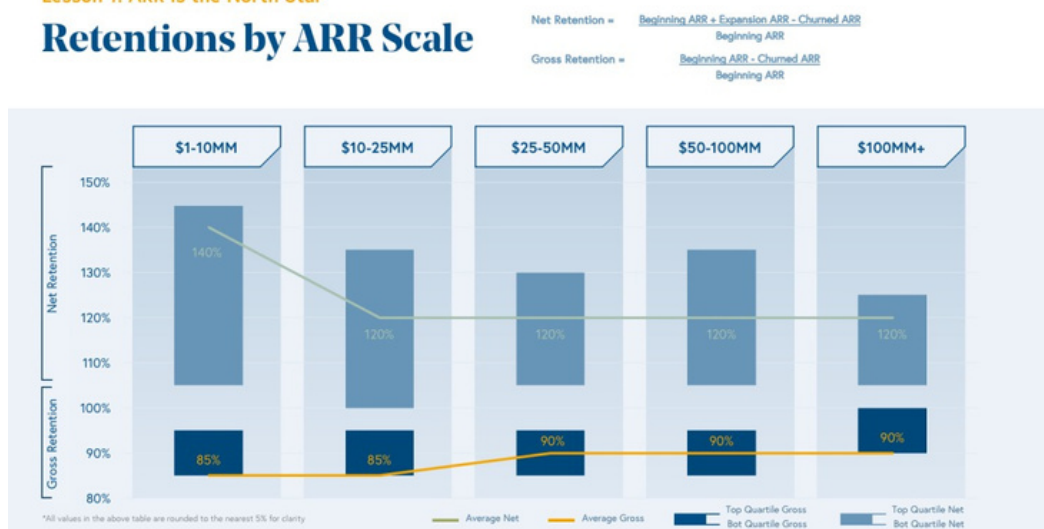
a close eye on CLTV / CAC to ensure that the unit economics of incremental customer acquisition remain healthy.

Net retention, meanwhile, differs from gross retention by accounting for the upsells and expansion revenue that your cloud company earns over a given period. Unlike gross retention, the data for net retention shows more variance over time, ranging from 105-140% between \$1-10MM of ARR and decreasing slightly to a range of 105-120% by \$100MM+ of ARR.

For net retention, it's worth noting that the middle 50% range, regardless of ARR scale, still exceeds 100%. Only the bottom quartile of cloud companies have <100% net retention rates. That is, the middle 50% of cloud companies experience a dynamic in which their existing customers pay them more over time, not less, to the extent that upsell/expansion revenue is greater than any downsell/churn. The average net retention is 140% between \$1-10MM of ARR, decreasing to 120% for \$10-100MM+. Again, net retention often differs by segment, with SMB segments experiencing lower net retention rates than enterprise segments. For example, when [Mindbody](#) went public it had 109% net retention on ~\$2K ACVs—compare that to Okta which had 123% net retention on \$50K+ ACVs.

Lesson 1: ARR is the North Star

Retentions by ARR Scale



Cutting the data by industry rather than ARR range, we find that gross retention largely hovers in a similar range but net retention varies much more across industries. [Developer tools have the greatest average and median net retention rates across our portfolio](#), in line with what we would expect from a bottoms-up sales strategy that expands seat count and usage as it permeates an org. Collaboration software shows a similar dynamic.

Though there are exceptions, industries such as sales and marketing software, customer experience software, and finance / legal tech tend to have lower net retention, likely because land ACVs are higher and expansion over time is lower (often these tools sell a complete platform, rather than individual seats or usage tiers).



Lesson 2: Win by Wide Margins

While ARR and growth rate are the North Stars when it comes to evaluating cloud businesses, these metrics are not enough to capture how well your company is performing. If we have two companies with the same growth rate and revenue, but one of them is spending \$10MM on sales and marketing and the other is spending \$50MM, it's pretty obvious which has a more compelling product.

To understand how your cloud company is operating under the hood, you need to roll up your sleeves and dive into costs and expenses. The most relevant numbers are gross margins and free cash flow margins, with operating expenses—including sales and marketing, research and development, and general and administrative costs—all contributing directly to profitability. In this next lesson, we delve into each of these costs and expenses to help you target the appropriate margin structures for your scale.

Gross Margin

The beauty of software is that there is practically \$0 marginal cost to replicate and distribute it. Gross margin, a company's revenue after the cost of goods sold (or gross profit) divided by revenue, is an incredibly important metric for cloud companies because it measures the effectiveness with which companies can deliver their software to their customers. The aim is to make it as high as possible, reflecting the lowest marginal cost. A high gross margin means that a cloud company can invest more into operating expenses rather than product delivery, leading to more selling, product iteration, and ultimately, growth. Typical expenses that you will find in COGS for cloud companies are hosting costs, software implementation costs, and services costs, including customer success—these are all variable costs.

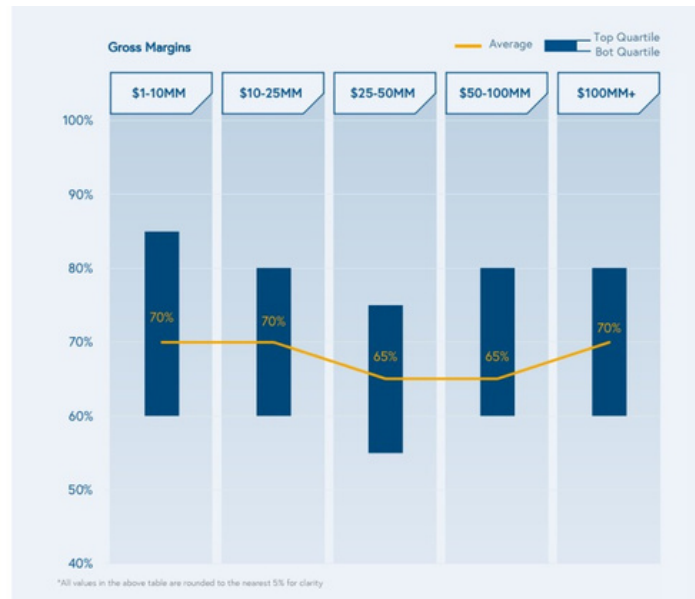
Given that the marginal cost for delivering software should be very low, investors expect gross margins for cloud companies to stay within a fairly tight band. It is perhaps the only operating or cost metric which has very little wiggle room—the average gross margin for a cloud business regardless of maturity is 65-70%, and the distribution of the middle 50% stays within ~60-80%.

That said, some of the strongest cloud companies in our portfolio have been ones with gross margins below that range. For example, throughout much of its life in the Bessemer portfolio since the seed round in 2009, [Twilio's gross margin was ~50%](#), which accounted for the fact that it had to pay telecom service providers in its COGS. Twilio continues to be one of the strongest BVP Nasdaq Emerging Cloud Index performers today with a market capitalization of over \$60 billion.



Lesson 2: Win by Wide Margins

Gross Margins by ARR Scale

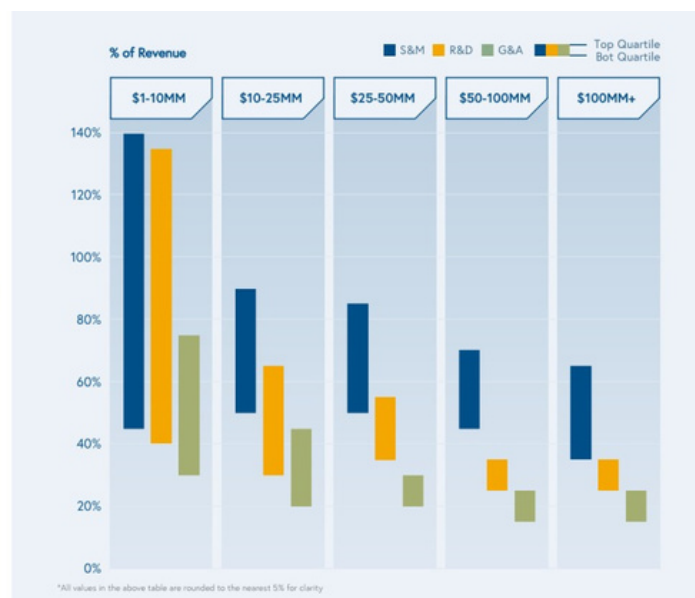


Operating Expenses

After you deliver your product and incur the cost of doing so, you can spend the remaining amount of money—your gross profit—on operating expenses and retain any residual as cash flow. These fall into three major buckets: sales and marketing (S&M), research and development (R&D), and general and administrative (G&A).

Lesson 2: Win by Wide Margins

Margin Structure by ARR Scale



R&D expense is the income statement line item that captures product, including product management, product development, engineering, and design. It is the core of what your



cloud company is, and in turn, core to what you will be able to sell. Given its importance to your business, the irony is that R&D tends not to be the major cost driver for most cloud companies, representing an average of 95% of revenue in the early years but decreasing to only 35% by \$100MM+ of ARR. This is generally because an investment in the product—and product innovation—propels a company's growth in the early years, but ongoing investment in R&D does not scale linearly with revenue growth over time. There will be product enhancements and "second act" products that require investment, but maintenance and improving the core never costs as much proportionally as creation.

For example, when we invested in PagerDuty in 2014, R&D expense was almost 60% of revenue; however, by the time it went public, it was only about 35%.

The general and administrative (G&A) expense line item on the income statement generally includes the functions that run the back office of your company, including executive leadership, finance, legal and compliance, HR, information technology, and other administrative functions. G&A also includes outside costs for things like legal, travel, and auditing. Early on, G&A tends to be high as a percentage of revenue, since you need to establish these functions and hire leaders such as a CFO or CHRO; however, G&A costs reduce dramatically over time as these functions generally reach a growth plateau. No matter the size of the company, it will only have one CFO! Average G&A expense goes from being 70% of revenue from \$1-10MM of ARR to only 20% at \$50MM+.

Lastly, we turn to sales and marketing expense (S&M), which is the most important operating expense for cloud investors and founders to pay attention to. Sales and marketing expense is the income statement line item that captures sales expenses, sales compensation, content and brand marketing, demand generation, and customer success expenses related to sales, among other costs. This represents the highest cost centers in cloud companies, representing over 50% of the total revenues brought in every year, even at maturity, as salespeople and marketing talent scale more linearly with revenue growth.

Lesson 2: Win by Wide Margins

Average Margin Structure by ARR Bucket





As an example, when we invested in [Adaptive Insights in 2013](#), the company spent almost 90% of <\$20MM revenue on S&M, which had only reduced to about 70% on \$100MM+ of revenue when it sold to Workday in 2018. As a consequence, you need to ensure that as your sales and marketing organizations are being funded, the ARR that they are generating justifies the cost.

CAC Payback

Given the large share of revenue that sales and marketing expenses represent in cloud, sales efficiency is capital efficiency. It is impossible to have a rational amount of burn in a cloud company without sales and marketing efficiency. The primary metric that we like to use to evaluate S&M efficiency is Customer Acquisition Cost (CAC) Payback. CAC payback is the rate at which the costs spent to acquire a customer are repaid by that customer, and it usually includes sales, marketing, and customer success expenses (at least the portion that ties to renewal/upsell/cross-sell). That timeline matters because it is only after you repay CAC that you are generating profit on that customer. During the payback period you are simply recovering the money that you expended to acquire the customer. We also measure CAC payback against gross margin-adjusted ARR given that the variable costs associated with selling a cloud software product do not accrete to profit.

Lesson 2: Win by Wide Margins

Average CAC Payback by ARR Bucket

CAC Payback = Prior Quarter S&M Expense / (Net new MRR) * Gross Margin



What we find is that the average CAC payback in the \$1-10MM ARR bucket is 15 months, and this slowly increases over time, generally because early adopters are cheapest to acquire, and typically as a company matures it starts needing to compete for business with additional spend. However, by the \$100MM+ scale, cloud businesses have generally unlocked a go to market model that rationalizes its S&M expense with strong Customer Lifetime Values (CLTVs). CLTV is the gross margin-affected value of a customer to a business over the course of its relationship, and it matters because the longer the lifetime, and the higher the lifetime value, the more profitable a customer is.



It provides a guideline for how high customer acquisition costs can be, as only after 1x CLTV / CAC are customers profitable to a business; if CAC exceeds CLTV, you should not acquire incremental customers. We recommend investing in customer acquisition when CLTV / CACs are 3x+, and if much under that, continuing to experiment until you have unlocked stronger unit economics.

While we present the averages across Bessemer's cloud portfolio, CAC paybacks can range materially, generally due to customer segment. For cloud companies selling into SMB-focused accounts, you should target CAC payback <12 months; for mid-market-focused accounts, target CAC payback <18 months; and for enterprise-focused accounts, target <24 months. The three segment buckets tend to have different annual contract values (SMB the smallest, enterprise the highest) and churn rates (enterprise the lowest, SMB the highest), allowing enterprise-focused companies to support longer payback periods than SMB-focused ones. Put another way, enterprise segments tend to have long lifetimes and therefore high CLTVs and SMB short lifetimes and therefore lower CLTVs, thereby supporting significantly different customer acquisition cost structures.

Irrespective of the customer segment though, shorter CAC payback periods are always better than longer ones, since it's only after the CAC payback period expires, that customers become profitable to your cloud business.

Free Cash Flow Margin

Free cash flow (FCF) represents the cash that your company generates, or loses, after netting out its COGS, operating, and capital expenses, and adding back non-cash expenses. The reason FCF is so important is that in cases in which businesses are consuming capital—they are burning cash—free cash flow limits the amount of runway that a company has without accessing the capital markets. For cases in which businesses are generating cash, free cash flow is capital that can be either reinvested in the business to catalyze additional growth or doled out to shareholders as returns. Free cash flow determines profitability. As such, FCF margin, which is the measure of cash flow divided by revenue, is a core cloud KPI. As investors, we want to ensure that as a business consumes money for product, go-to-market, and administrative needs, it is doing so prudently.

While it is favorable for businesses to generate cash, in the cloud economy, sometimes generating that cash sacrifices revenue growth that might otherwise be acquired with more aggressive spending. As investors, we compare a cloud business' ARR growth to its burn in order to determine its capital efficiency, and sometimes we actually trade off profitability for growth.

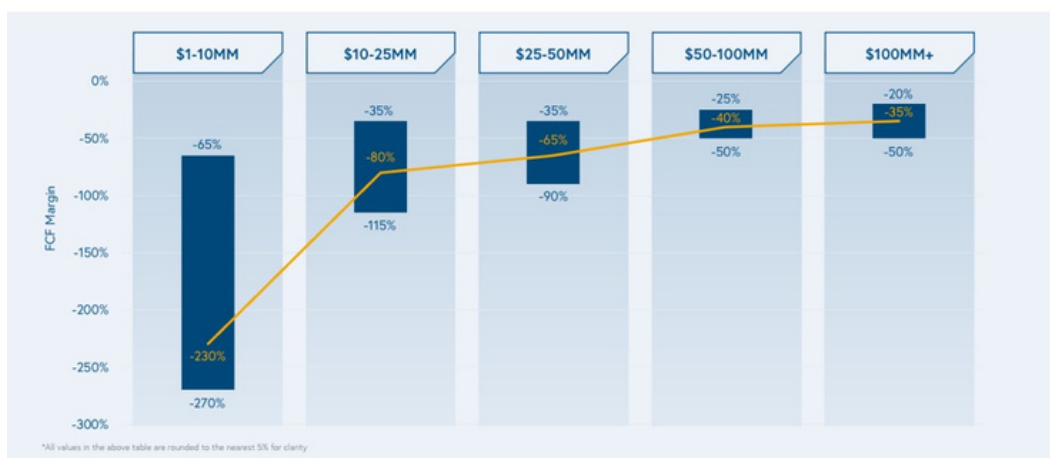
For example, at IPO, the top quartile of BVP Nasdaq Emerging Cloud Index companies operated at cash flow breakeven. Snowflake, however, burned over \$100MM but in the process grew revenue by almost \$170MM and over 170% YoY, which is certainly also in the top quartile.



Lesson 2: Win by Wide Margins

Average Top Quartile Bot Quartile

FCF Margin of Revenue by ARR Scale



Efficiency Score

When looking at burn for a cloud business, we want to consider it in the context of growth. Burning \$100MM a year sounds high, but what if a company burned \$100MM and added \$1 billion of net new ARR? In that context, it doesn't sound so bad. As this hypothetical suggests, investors look at the cash consumption of a business relative to the revenue that it generates, which is why the efficiency score becomes a helpful metric. Efficiency score equals FCF margin of ARR plus ARR year-over-year growth rate—as such it helps to show the tradeoffs between growth and profitability, but it is generally only applicable after achieving \$25MM+ of ARR (before which revenue bases are too small for it to be meaningful).

We encourage Bessemer portfolio companies to target 70% efficiency scores between \$25-50MM of ARR, and a slightly lower 50% at \$100MM+ as YoY growth rate drops off dramatically and companies find the right balance of profitability against a "grow- at-all-costs" model.

$$\text{Efficiency score} = \text{FCF margin of ARR} + \text{ARR YoY Growth rate}$$

Younger companies tend to have higher growth rates and higher burn rates, and companies at maturity have lower growth rates and lower burn (and sometimes cash flow positivity).

The "Rule of 40" is often referenced—that companies should have efficiency scores of 40%+ – but the average BVP Nasdaq Emerging Cloud Index efficiency score is actually closer to 50%, anchored up by the likes of Zoom, Shopify, Datadog, CrowdStrike, and other high performers. For example, even at over \$3.8 billion of LTM revenue, Shopify is still growing ~60% YoY with ~10% FCF margins for an efficiency score of close to 70%. (Read to learn more about Bessemer's Rule of X")



Cash Conversion Score

The [Cash Conversion Score \(CCS\)](#) is another metric that we often use to evaluate whether or not the capital that cloud companies raise and consume is generating a meaningful return. As the ratio of the ARR to total capital invested into a company minus cash, the Cash Conversion Score is effectively the return-on-investment of each dollar ever invested into a company. For both founders and investors, the Cash Conversion Score is, therefore, a powerful proxy for returns. If a company has a CCS of 1.0x, one dollar of investment into the business yields one dollar of topline recurring revenue. If we assume that the average cloud company gets a 10x revenue multiple (more in-line with historical norms vs. the 23x revenue multiple of ^EMCLOUD today), the one dollar of revenue multiplied by the 10x multiple equals \$10 of enterprise value. Every dollar put into the company is getting a 10x return. Similarly, a company with a 0.1x CCS would only return the capital invested. ROI is not driven by Cash Conversion Score directly, but CCS indicates multi-year trends in a couple of incredibly important things, including product-market fit and a scalable sales and marketing organization. It is therefore a core KPI we track in evaluating cloud businesses.

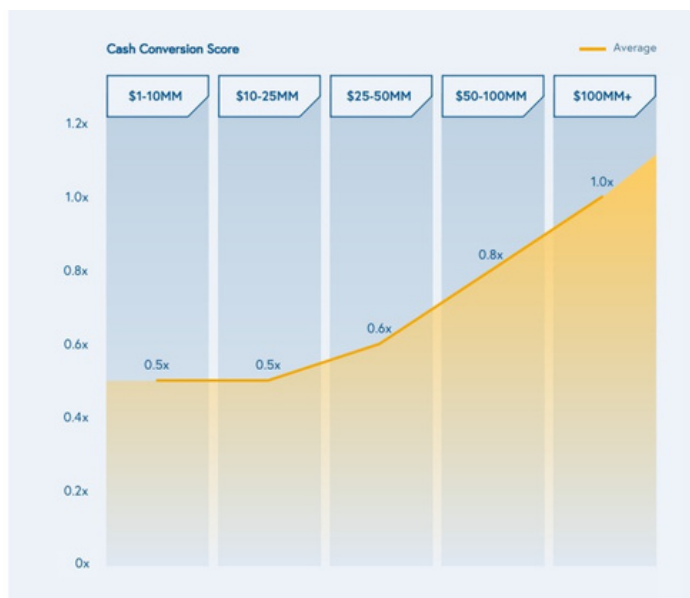
The average Cash Conversion Score for cloud companies tends to increase as it matures, from an average of almost 0.5x from \$1-10MM of ARR to almost 1x at \$100MM+. For cloud companies, revenue generation tends to lag spending and only the strongest companies will scale to the \$100MM+ mark where they are seeing the most leverage from their operating model.

One of the strongest companies on this metric—from the start—has been our portfolio company Zapier, which has raised only \$1.3MM in its lifetime and announced in [March 2021](#) that it [exceeded \\$140MM of ARR](#). While we don't hold every company to this CCS efficiency, we look for companies with best-in-class CCS of 1x+.

Lesson 2: Win by Wide Margins

Cash Conversion Score by ARR Scale

$$\text{Cash Conversion Score} = \frac{\text{ARR}}{\text{Total Capital Raised to Date} - \text{Cash}}$$





Lesson 3: Know Your Worth

As investors and board members of emerging cloud companies, one of the most frequent questions founders ask us is, "What are we worth?"

Knowing the worth of a company matters to different constituents for different reasons: For founders, a higher round valuation might mean less dilution and ability to raise more capital and fund a new product or geography; for prospective employees, a lower valuation might mean more opportunity for upside and runway for career growth; and for current employees, a higher valuation might mean more value to their stock options.

But just as company metrics are obfuscated in the private markets, so too are private company valuations. In this lesson, we will dig into what private investors are willing to pay for cloud companies, looking at valuation multiples, round size, and dilution.

Valuation Multiples

For cloud founders and executives looking to fundraise from VCs, understanding what multiple they will get is one of the biggest unknowns. In cloud, it is almost always a function of one thing: growth. In the private markets, investors are generally willing to pay ahead of ARR acquisition, betting on the company's ability to "grow into" its valuation—but the higher the growth, the faster it "grows into" that number. For example, If a company is growing at 300% YoY, a 40x valuation multiple will become a 10x valuation multiple in just one year. As a consequence, the general rule is that higher growth rates command higher multiples. As growth rates steadily go down across ARR buckets, we therefore generally see that later stage companies raise at lower valuation multiples—and when they are still able to grow 100% at scale, they command premium valuations.

Across the past decade, Bessemer portfolio cloud companies have been priced at an average of over 30x ARR between \$1-10MM of ARR, reducing to about 15x ARR beyond \$10MM+. You might note that the valuation environment of the past decade was more conservative than that of 2021, as we analyzed in the [Cloud 100 2021 Benchmarks Report](#). The average Cloud 100 multiple in 2021 was 34x (up from 9x in 2016). Below, however, we take a decade-long view in which the middle 50% of cloud companies priced at ~10-20x ARR, and, unlike in the Cloud 100 list, this data set is not limited to the 100 best cloud companies in the world in any given year.

The valuations that different industries command can vary widely as well, oftentimes due to the size of TAM itself, but also because the specifics of selling into those markets correlate with different underlying growth rates.



Lesson 3: Know Your Worth

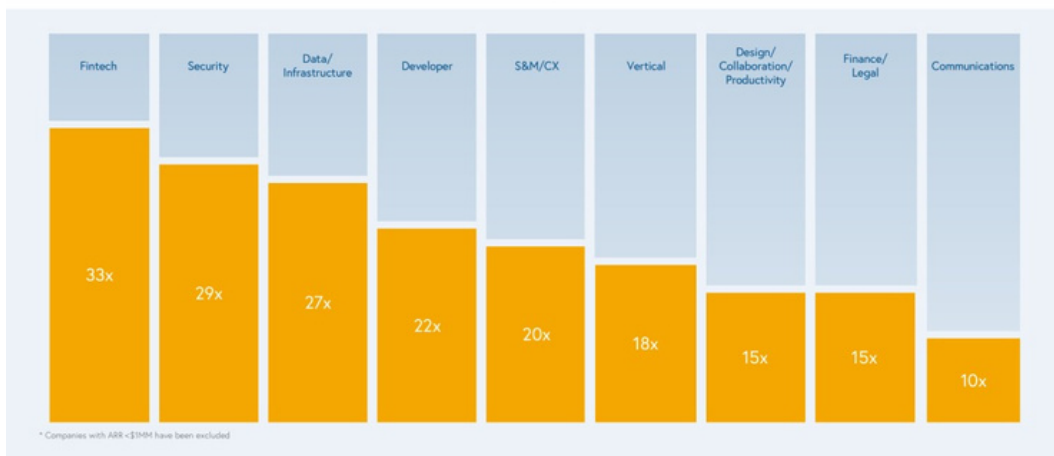
Cloud Valuation Multiples by ARR Scale



The industry that has commanded the highest multiples in the Bessemer portfolio over the past decade is fintech, with a 33x average, followed by security at 29x and data infrastructure at 27x; however, we have seen multiples as high as 50x, 100x, and even 200x in all 3 of these categories.

Lesson 3: Know Your Worth

Cloud Valuation Multiples by Industry



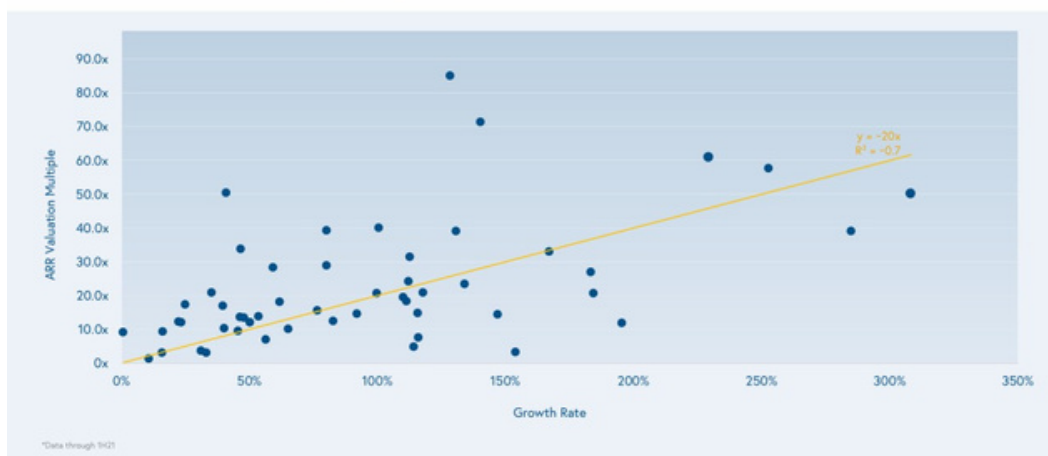
Today, though, we see a step-function change in the valuation environment for cloud companies, which we largely attribute to an increased quantum of capital in cloud, strong investor demand, and ongoing tailwinds that are driving growth rates to new heights. Below, we look at only the Bessemer portfolio companies in cloud that transacted between 2020-



2021 and plot their growth rate relative to ARR. Regressing the two, you find that multiple is ~18x growth rate.

Lesson 3: Know Your Worth

2020-2021 Company Growth vs Valuation



Round Size

Round size is the other major lever that cloud companies can toggle when structuring a fundraise. Knowing how much to raise at each stage of growth while balancing the tradeoff of dilution and runway is a tension that you will likely have to grapple with.

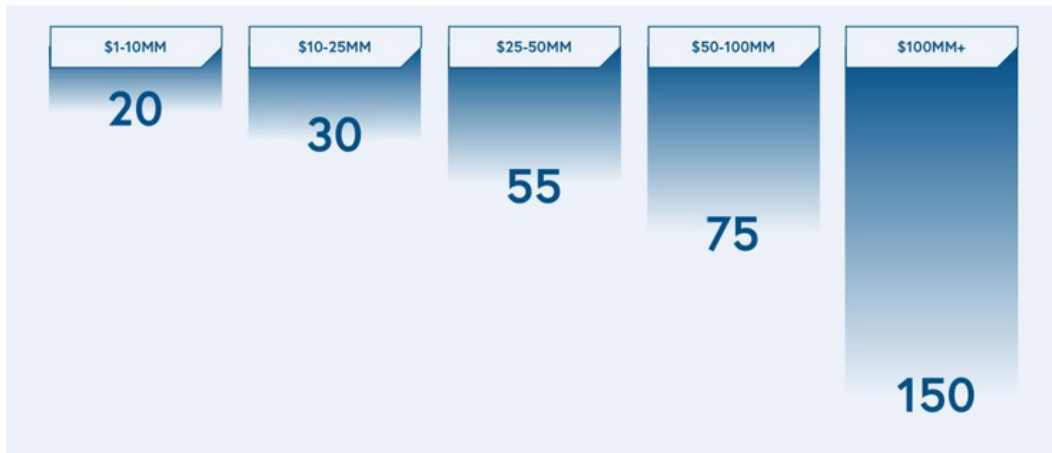
For most companies, the ability to raise money is a key to success. Without financing, you could not hire the engineers, salespeople, and other talent you need to grow. Given the negative cash flow dynamic that we covered in Lesson 2, cloud companies are often reliant on the capital markets to maintain enough runway for operations. The irony, though, is that as companies prove their abilities to grow, raising money gets easier and easier. Access to capital is easiest for those that do not need it. Over the course of a company's maturity, we therefore see round sizes increase. Investors are willing to give companies more money as their investments are de-risked, and companies are more willing to take it as it represents less dilution.

Looking at the data validates this trend: As companies generate more revenue, their round sizes go up. The average round size for a Bessemer cloud company from \$0-10MM of ARR is \$20MM, but by the time a company is \$50-100MM of ARR, the average round size is north of \$75MM. Interestingly, even though the ARR buckets go up non-linearly, the round sizes go up linearly. That means larger companies are not raising larger rounds proportional to the size of their ARR. While this data extends over the past decade of Bessemer's cloud investments, many have noted the recent increase in round sizes in 2020 and 2021 that exceed even the averages below.



Lesson 3: Know Your Worth

Average Round Size by ARR Bucket



As companies mature and their valuations grow, they understandably have to sell less of their businesses for the same quantum of capital—price per share goes up. As a consequence, we see the dilution that founders take decreases with scale. From \$1-10MM of ARR (which roughly translates to Series A or B), companies generally sold about 20% of their businesses, but by \$100MM (roughly Series E or F), they sold only a bit more than 5%.

Lesson 3: Know Your Worth

Dilution Percentage by ARR Scale





Lesson 4: The TL;DR – Plot your way to the next milestone

Building a business is not for the faint of heart—the founder's journey is fraught with both professional and emotional highs and lows, as we've seen firsthand from dozens of category-defining companies, such as Toast, Shopify, Twilio, Procore, and PagerDuty. We are open sourcing this proprietary data with the hopes that these benchmarks serve as a reference point for founders who are shaping their businesses and want to know what they should be driving towards.

In the following sections, we lay out the exact metrics founders, CEOs, CFOs, and board members should track, based on our research and experiences in the Bessemer portfolio over the past decade. While the work to achieve these milestones may still be ahead, we hope we've painted a picture of the goals cloud companies should strive for.

Average Benchmarks by ARR Scale

Lesson 4: The TL;DR – Plot Your Way to the Next Milestone

Average Benchmarks by ARR Scale

| | \$1-10MM | \$10-25MM | \$25-50MM | \$50-100MM | \$100MM+ |
|-----------------------|----------|-----------|-----------|------------|----------|
| ARR Growth Rate | 200% | 115% | 95% | 60% | 60% |
| Net Retention | 140% | 120% | 120% | 120% | 120% |
| Gross Retention | 85% | 85% | 90% | 90% | 90% |
| Gross Margin | 70% | 70% | 65% | 65% | 70% |
| S&M % Revenue | 95% | 70% | 70% | 60% | 50% |
| R&D % Revenue | 95% | 50% | 45% | 30% | 35% |
| G&A % Revenue | 70% | 40% | 30% | 20% | 20% |
| CAC Payback (Mos) | 15 | 24 | 20 | 21 | 30 |
| FCF Margin | -230% | -80% | -65% | -40% | -35% |
| Cash Conversion Score | 0.5x | 0.5x | 0.6x | 0.8x | 1.0x |

*All margin and growth rate values in the above chart are rounded to the nearest 5% for clarity



Benchmarks for companies with \$1 – 10MM of ARR

The top-performing cloud companies with \$1 to \$10MM of ARR have an ARR growth of 230%+, Net Retention of 145%+, Gross Margin of 85%+, and FCF of <-65%.

Benchmarks for \$1-10MM of ARR

| | ARR Growth | Net Retention | Gross Retention | Gross Margin | S&M % Revenue | R&D % Revenue | G&A % Revenue | FCF Margin |
|-----------------|------------|---------------|-----------------|--------------|---------------|---------------|---------------|------------|
| Average | 200% | 140% | 85% | 70% | 95% | 95% | 70% | -230% |
| Top Quartile | 230%+ | 145%+ | 95%+ | 85%+ | <45% | <40% | <30% | -65%+ |
| Middle 50% | 100-230% | 105-145% | 85-95% | 60-85% | 45-140% | 40-135% | 30-75% | -270--65% |
| Bottom Quartile | <100% | <105% | <85% | <60% | 140%+ | 135%+ | 75%+ | <-270% |

*All values in the above chart are rounded to the nearest 5% for clarity

Benchmarks for companies with \$10 – 25MM of ARR

The top-performing cloud companies with \$10MM to \$25MM of ARR have an ARR growth of 135%+, Net Retention of 135%+, Gross Margin of 80%, and FCF of <-35%.

Benchmarks for \$10-25MM of ARR

| | ARR Growth | Net Retention | Gross Retention | Gross Margin | S&M % Revenue | R&D % Revenue | G&A % Revenue | FCF Margin |
|-----------------|------------|---------------|-----------------|--------------|---------------|---------------|---------------|------------|
| Average | 115% | 120% | 85% | 70% | 70% | 50% | 40% | -80% |
| Top Quartile | 135%+ | 135%+ | 95%+ | 80%+ | <50% | <30% | <20% | -35%+ |
| Middle 50% | 40-135% | 100-135% | 85-95% | 60-80% | 50-90% | 30-65% | 20-45% | -115--35% |
| Bottom Quartile | <40% | <100% | <85% | <60% | 90%+ | 65%+ | 45%+ | <-115% |

*All values in the above chart are rounded to the nearest 5% for clarity



Benchmarks for companies with \$25 – 50MM of ARR

The top-performing cloud companies with \$25MM to \$50MM of ARR have an ARR growth of 110%+, Net Retention of 130%+, Gross Margin of 75%+, and FCF of <-35%+.

Benchmarks for \$25-50MM of ARR

| | ARR Growth | Net Retention | Gross Retention | Gross Margin | S&M % Revenue | R&D % Revenue | G&A % Revenue | FCF Margin |
|-----------------|------------|---------------|-----------------|--------------|---------------|---------------|---------------|------------|
| Average | 95% | 120% | 90% | 65% | 70% | 45% | 30% | -65% |
| Top Quartile | 110%+ | 130%+ | 95%+ | 75%+ | <50% | <35% | <20% | -35%+ |
| Middle 50% | 45-110% | 105-130% | 85-95% | 55-75% | 50-85% | 35-55% | 20-30% | -90--35% |
| Bottom Quartile | <45% | <105% | <85% | <55% | 85%+ | 55%+ | 30%+ | <-90% |

*All values in the above chart are rounded to the nearest 5% for clarity

Benchmarks for companies with \$50 – 100MM of ARR

The top-performing cloud companies with \$50MM to \$100MM of ARR have an ARR growth rate of 80%+, Net Retention of 135%+, Gross Margin of 80%+, and FCF of <-25%+.

Benchmarks for \$50-100MM of ARR

| | ARR Growth | Net Retention | Gross Retention | Gross Margin | S&M % Revenue | R&D % Revenue | G&A % Revenue | FCF Margin |
|-----------------|------------|---------------|-----------------|--------------|---------------|---------------|---------------|------------|
| Average | 60% | 120% | 90% | 65% | 60% | 30% | 20% | -40% |
| Top Quartile | 80%+ | 135%+ | 95%+ | 80%+ | <45% | <25% | <15% | -25%+ |
| Middle 50% | 40-80% | 105-135% | 85-95% | 60-80% | 45-70% | 25-35% | 15-25% | -50--25% |
| Bottom Quartile | <40% | <105% | <85% | <60% | 70%+ | 35%+ | 25%+ | <-50% |

*All values in the above chart are rounded to the nearest 5% for clarity



Benchmarks for companies growing beyond \$100MM of ARR

The top-performing cloud companies growing beyond \$100MM of ARR have an ARR growth rate of 80%+, Net Retention of 125%+, Gross Margin of 80%+, and FCF of <-20%.

Benchmarks for \$100MM+ of ARR

| | ARR Growth | Net Retention | Gross Retention | Gross Margin | S&M % Revenue | R&D % Revenue | G&A % Revenue | FCF Margin |
|-----------------|------------|---------------|-----------------|--------------|---------------|---------------|---------------|------------|
| Average | 60% | 120% | 90% | 70% | 50% | 35% | 20% | -35% |
| Top Quartile | 80%+ | 125%+ | 100% | 80%+ | <35% | <25% | <15% | -20%+ |
| Middle 50% | 35-80% | 105-125% | 90-100% | 60-80% | 35-65% | 25-35% | 15-25% | -50--20% |
| Bottom Quartile | <35% | <105% | <90% | <60% | 65%+ | 35%+ | 25%+ | <-50% |

*All values in the above chart are rounded to the nearest 5% for clarity



Bonus Lesson 5: Beyond \$100MM – Run the public playbook

So what happens after \$100MM? Just as we offered the Public Playbook as a Bonus lesson in our [10 Laws of Cloud](#), we offer it again here.

As you build a cloud company, we bet that you hope that it will go public one day. As investors at Bessemer, whether we are making an early-stage Series A bet or a late-stage Series D investment, we partner with founders who have long-term visions, and to go the distance generally requires becoming a publicly traded company. M&A outcomes will happen along the way as companies develop strategic positions in the market and build features that could add to acquirers' product portfolios, but we invest in companies believing that they can and will turn into the platforms that can be standalone public companies. You probably are building your company to change the world and dream of ringing the NYSE or Nasdaq bell.

So how do you get there? What is beyond \$100MM of ARR? We put together the same benchmarks that we tracked above for the past decade of Bessemer's private cloud software companies for Bessemer's public cloud index companies, tracked by the BVP Nasdaq Emerging Cloud Index.** These are the metrics that Toast, Amplitude, and Freshworks have already worked to as they prepare for their upcoming IPOs.

Very consistent with what we noted in the \$100MM+ ARR buckets in the sections above, we find that at IPO, the average LTM revenue growth rate is 65%, net retention is 120%, gross margin is 70%, R&D % of revenue is 30%, S&M % of revenue is 55%, G&A % of revenue is 20%, and FCF margin is -20%.

What is new, however, is that to run the public playbook, you need enough GAAP LTM revenue. The average LTM GAAP revenue that cloud companies had in their last fiscal year before going public was \$170MM. This number has ranged widely, from Ellie Mae with <\$50MM of revenue when it went public in 2011 to Square with over \$850MM in its last fiscal year before becoming a public company, but the 2020/2021 cohort average is even higher at \$220MM. While there is no "magic number," we recommend targeting \$100MM+, which signals to public market investors a company maturity that will allow it to stand the test of time and a high enough market cap to warrant investor interest and attention. Note that per their preliminary IPO prospectuses, Freshworks has generated \$308MM of LTM revenue, Toast \$1.1 billion, and Amplitude \$129MM.

To run the public playbook, you also have to understand that while the private markets generally expect a lot of up front investment and growth, the public markets tend to expect enough maturity that companies have visibility into operating leverage and profitability. We recommend that cloud companies only target going public when they have visibility into being free cash flow positive within about 1-2 years. The top quartile of cloud companies were actually already at FCF breakeven or positivity at IPO, and these companies include the likes of Atlassian, JFrog, and Zoom.

Running the public playbook and targeting these metrics will take you beyond \$100MM ARR and to life as a public company!

*Any company that is currently or has ever been on the index.



The Public Playbook

| | LTM Revenue Growth | LTM Revenue (\$MM) | Net Retention | Gross Margin | S&M % Revenue | R&D % Revenue | G&A % Revenue | FCF Margin |
|-----------------|--------------------|--------------------|---------------|--------------|---------------|---------------|---------------|------------|
| Average | 65% | \$170 | 120% | 70% | 55% | 30% | 20% | -20% |
| | | | | | | | | |
| Top Quartile | 85%+ | \$170+ | 135%+ | 75%+ | <35% | <20% | <15% | 0%+ |
| | | | | | | | | |
| Bottom Quartile | <40% | <\$80 | <110% | <60% | 65%+ | 35%+ | 25%+ | <-30% |
| | | | | | | | | |

*Public Playbook companies include all previous and current BVP Nasdaq Emerging Cloud Index companies at time of IPO. Data manually taken as of most recent FY provided in S-1. Example companies are within 5% of averages.

Show us your metrics

Are you about to raise your next round of financing as a venture-backed cloud startup? Download our templates so you can show us where your company lands as you scale your cloud business to \$100 million in ARR and beyond, or use them in your boardroom as you track your business' growth.

[Download Benchmarking Templates](#)

If you have any questions, would like to dive deeper into the metrics, or have a company that has best-in-class metrics, we would love to hear from you! Email Mary D'Onofrio at mdonofrio@bvp.com.

On Centaurs



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“We need a milestone that is rooted in business fundamentals and reflects a startup’s command of its business. The milestone that makes the most sense is \$100 million in ARR, which we at Bessemer are naming a Centaur.”

— MARY D'ONOFRIO
FROM THE AGE OF THE CENTAUR



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The age of the centaur

Why the \$100 million ARR milestone
matters and the case studies
showcasing a path to winning

CONTRIBUTIONS FROM MARY D'ONOFRIO, ADAM FISHER, ELLIOTT
ROBINSON, SAMEER DHOLAKIA



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\$100M ARR is the new cloud valuation milestone

Today there are over 1,200 private companies valued at \$1 billion or more by their investors.

When the term unicorn was originally coined 10 years ago, it provided a vaunted distinction for the 14 private startups that were valued at \$1 billion or more at the time; and, only four unicorns were added yearly. Back then, it was an exceptional accomplishment and a genuine proxy for success that signaled to customers, partners, employees and the media that this company should be taken seriously because it would likely endure.

The list included the likes of Palantir, Pinterest, Uber, Square and Airbnb, all of which continue to be active influencers of how we live and work. But even the original unicorn list had some companies that did not stand the test of time as meaningfully, such as Fab.com.

By 2021, our team at Bessemer realized the proliferation of unicorns has gotten out of hand. Thanks to a 13-year bull market that propelled software IPO and M&A outcomes to new heights, and an abundance of capital in the venture ecosystem, private software valuation multiples have skyrocketed. Where a \$1 billion valuation was once a distinction, it is now prosaic.

With the recent market correction, we knew that as an industry it was time for a new metric of success — one that was rooted in business fundamentals and divorced from the ebullient market sentiment of the moment. We need one that belongs entirely to the company and reflects its command of its business. The milestone that makes the most sense is \$100 million in ARR, which we at Bessemer are naming a "centaur." So, why is becoming a centaur the correct milestone for cloud founders to strive for?

At \$100 million ARR, a startup is an undeniable success. It is impossible to build a \$100 million ARR business without strong product-market fit, a scalable sales and marketing organization, and a critical mass of customer traction that allows the company to plan its next steps well into the future.

In fact, a majority of Cloud 100 are Centaurs and we have been longtime champions of enduring cloud businesses that have carved unique paths to becoming a Centaur. Companies such as HashiCorp, Zapier, and Toast have all grown their revenue at unprecedented rates and continue to live on in the Centaur Hall of Fame.

The reality, however, is that there is no one way or even one right way for your company to reach \$100 million of ARR. We've seen companies accelerate revenue through a number of strategies, such as expanding their addressable market through new product lines, entering new markets and geographies, introducing product-led growth strategies, layering on enterprise sales, and even selling their products through channels like cloud marketplaces.

So in this On Centaurs section of the book, we share the five case studies of legendary cloud business that have gone on to reach the coveted Centaur status of growing to \$100 million in ARR: ServiceTitan, Calendly, LaunchDarkly, Cloudinary, and Axonius.



How ServiceTitan expanded through new solutions and adjacent verticals

ServiceTitan (#5 on the 2023 Cloud 100) is a standout leader as the go-to vertical software solution for the home and commercial services industry.

After a successful product launch for residential plumbing businesses in 2013, ServiceTitan recognized the opportunity to expand organically into adjacent verticals, first with heating and cooling (HVAC), and then electrical, as those trades shared many of the same problems that its original market, plumbing, did.

ServiceTitan achieved all of this organic growth via new products and enhancements added to the platform to cater specifically to new trades. It's a great example of a type of "Second Act" known as "leapfrogging."

There are many different types of Second Acts that cloud businesses can launch, such as adding on CRM tools, payments, lending, or other embedded fintech solutions. Oftentimes, you'll see cloud companies layer several "Next Acts" on top of one another over time to further drive revenue and bolster their market leadership.

Leveraging its strong, initial reputation within its first verticals, and a track record of referenceable customers, ServiceTitan built a platform that extended capabilities for its customers through many new fintech products, like payments and financing, and "Pro Products," such as marketing, payroll, and most recently Schedule Engine. The team also began expanding to adjacent verticals such as residential water treatment, chimney and garage maintenance, landscaping, pest control, and beyond.

What's important for Cloud 100 companies to remember is that growth-stage businesses that have established a strong reputation in an initial industry can capitalize on that foothold, and the customer trust they've created, to take on additional problems, by building new products, and reaching new customers in adjacent verticals.



How Calendly surpassed \$100 million ARR through the power of product-led growth

Not all early stage cloud companies make the decision to raise a ton of venture capital throughout their growth journey. Calendly (#34 on the 2022 Cloud 100), the cloud scheduling company founded by CEO Tope Awotona, is one such example: It achieved Centaur status by leveraging a small seed round and using revenue as fuel for growth.

Initially launched in 2013, Calendly was met with skepticism by some who didn't think a scheduling app could become a big business. But Tope and the team proved all of the skeptics wrong.

By bootstrapping, Tope helped to instill capital efficiency as a core operating principle at his company from the very beginning. This operating principle strives to balance the tradeoffs between revenue growth and profitability. This DNA helped him focus on delivering Calendly's core value prop and encouraged everyone at the company to be customer-obsessed.

Calendly's story is a textbook example of what's possible when four key growth factors are executed in concert.

- The freemium model—Calendly successfully maintained a healthy balance when it came to offering a great, free-to-use product, while also presenting various avenues for converting users into paying customers who were looking to get even more out of the platform. With this in mind, Calendly demonstrated how valuable it is to maintain transparent pricing and an upsell motion that allows the business to grow with their customers as retention and usage scales overtime.
- Product expansion and customization—Over the years, Calendly has expanded its core scheduling tool into a comprehensive automated platform with advanced meeting features and branded interfaces that deliver more value directly to their customers. Building a platform broadened Calendly's scope and addressable market, which positioned the platform as the go-to destination for all things meeting and scheduling-related.
- Partnerships, integrations, and extensions—The team at Calendly began to work with other tech companies whose products naturally fit into the scheduling workflow. It now has integrations with Cloud 100 companies such as Stripe for payments, Zapier for app automation, and Intercom for customer engagement, just to name a few. In [building an ecosystem](#), Calendly also made sure to work nicely with the biggest players around, ensuring interoperability with Google Calendar, Apple iCloud, and the Microsoft Office Suite.
- Enterprise GTM—Calendly built a world class enterprise sales team so that the business could move upmarket. [Introducing enterprise sales into a product-led growth](#) operation is a natural evolution once a company reaches a particular scale, but it's also an extremely delicate inflection point. Calendly is a great example of a company that understood the timing just right as their enterprise segment, defined as customers who pay one hundred thousand dollars or more annually, has grown tenfold in the last year alone.

So what was the result of all these initiatives? With remote work tailwinds progressing even further due to the lasting effects of the COVID-19 pandemic, Calendly has secured its place as the clear leader in the scheduling market. Before the announcement of their most recent financing in 2021, Calendly grew to \$70 million of ARR in seven years, having only raised \$550,000 in its seed round.

Last summer, Calendly reached Centaur status and Tope became a Cloud Giant in the eyes of his peers. Calendly's efficient path to \$100 million of ARR serves as a shining example of what happens when a cloud company leverages a stellar freemium product to set the pace of innovation in the market while building an organization that can effectively serve the enterprise.



How LaunchDarkly focused developer happiness to accelerate revenue to new heights

Celebrating its newly attained Centaur status, LaunchDarkly (#62 on the 2023 Cloud 100) is the world's leading software feature management platform, which achieved Centaur status through a thoughtful combination of product excellence and market evangelism.

When LaunchDarkly first started in 2014, developers were drawn to its new, easy way to deploy and manage feature flags. At the time, feature flagging was an "aspirational" practice in software development, but was only implemented at large enterprises or companies that could set aside development resources due to the pain of instrumentation, with systems haphazardly designed, error prone, and hard to maintain.

However, LaunchDarkly transformed the complicated internal systems into an easy-to-use and scalable product platform. They did this by providing a UX that could turn specific product features on-and-off through feature toggles, and in doing so, this methodology allowed for scale, compliance, and lack of latency. Suddenly, feature flagging at scale was possible for organizations of any size.

LaunchDarkly used developer word of mouth to characterize feature flagging as a best practice in CI/CD and software development. This practice has led to increased ROI for teams by not maintaining internal systems, increasing developer productivity and happiness, and democratizing development to other teams (including marketing), all while also increasing velocity and decreasing risk.

Feature management became a best practice in software development, and the best tool for feature management was LaunchDarkly.

The close tie between product development and market evangelism allowed LaunchDarkly to create a category from what was once only home grown solutions. Its intense focus on customer satisfaction led to quick expansion within its own customer base, and new customer adoption increased in part due to developers switching jobs from one company to another. It expanded its target customer profile from software companies that have development at the core of their competitive advantage, to all companies.

Today, every company is a software company, and LaunchDarkly's clients include Domino's Pizza, Priceline, TrueCar, IBM, and Atlassian. LaunchDarkly now offers a full platform to its customers, inclusive of experimentation, data insights, and a connectivity suite.



tl;dr — Centaur keys to growth

ServiceTitan's keys to growth

- Developed new products and enhancements added to the platform to cater specifically to new trades and adjacent audiences.
- "Leapfrogging" helped the company with:
 - Expanding total addressable market
 - Deepening customer retention
 - Expanding total account contract value

Calendly's keys to growth

- Offered a low friction, freemium model with transparent pricing
- Enhanced core product expansion and customizations
- Forged new partnerships, integrations, & extensions
- Captured enterprise demand and augmented PLG business with enterprise selling

LaunchDarkly keys to growth

- Delighted developers through product excellence
- Evangelized within developer communities
- Developed a full platform via multiple Acts
- Expanded target customer profile

By illustrating Centaur case studies through ServiceTitan, Calendly, and LaunchDarkly, we hope cloud founders out there see that building your path to \$100 million ARR will vary overtime—depending on your market, sales motions, and product architecture, among other factors.

What's ultimately encouraging to see is that when you do focus on what matters most—customers, revenue, growth, and efficiency—founders will not only get on the path to \$100 million of ARR, but also work towards building a category-defining company that can thrive in any macroeconomic environment.

Bootstrapping to \$100 million

Lessons on how audacious builders can grow and scale without VC dollars—and what the Clouddinary story illustrates for founders of different stripes

BY ADAM FISHER



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Clouinary's story of growing to \$100 million ARR

The term "bootstrapping" applies to founders who steer clear of venture dollars, skip the seed stage, and find alternative means of financing their product development and initial sales, which include side gigs, consulting, credit card debt, and custom development. But startups that enjoy initial success bootstrapping eventually encounter the far more costly challenge of scaling customer growth and simultaneously pursuing new product development without external funding. Raising money at this stage—typically when revenues reach around \$5 million—can hardly be considered surrender as the founders will likely retain control of their company for the foreseeable future having skipped the most dilutive financing stages of a startup's life.

The wholly bootstrapped startup has become a true mythical creature.

But with access to venture capital both plentiful and inexpensive in recent years, the wholly bootstrapped startup has become a true mythical creature. Names such as Atlassian, Mailchimp, and Zoho come to mind in the bootstrapped Hall of Fame, and now Clouinary is one of them, too.

Clouinary belongs to an extremely small group of cloud startups that managed to hit the \$100 million ARR milestone without ever raising a dollar of equity. Valued at \$2 billion based on its most recent secondary transaction, Clouinary stands out among its venture-backed unicorn peers; they demonstrate how cloud businesses can choose a middle path between the anti-investor bootstrappers and the classic VC-backed founders. Such an approach to secondaries has proven great for employees, while preserving founder autonomy and latitude.

For the Clouinary founders—Itai Lahan, Nadav Soferman, and Tal Lev-Ami—bootstrapping wasn't a plan or philosophy, but a result of a fortunate set of circumstances that allowed them to start and remain bootstrapped through today. And as they will attest, how and why they did it isn't very instructive for fellow entrepreneurs, but some lessons are still appropriate for the current environment of efficient company building. As the first and largest institutional shareholder of Clouinary via multiple secondary purchases, we've gleaned some unique insights into the advantages that are gained from remaining, for lack of a better word, "bootstrapped." And for the founders who have taken VC dollars, the lessons can be enlightening.

Fundamentals to bootstrapped success

Most bootstrapped startups that successfully reached the growth stage leveraged a "freemium" model to sell products that have powerful network effects that drive down customer acquisition costs (e.g. SurveyMonkey, Qualtrics, MailChimp, TeamViewer). But lacking powerful, compounding network effects, most bootstrapped startups ultimately abandon the self-funded path and tap venture capital for continued scale.

For instance, Shopify, Squarespace, and GitHub each leveraged freemium models to attain impressive revenue momentum, but each eventually sought outside investment to help with the next stage of growth.

Occasionally, however, the freemium model also facilitates a word-of-mouth distribution channel that endures and deepens with time creating an insurmountable competitive moat. Two notable examples here are Atlassian and Clouinary, and it's no coincidence that both target the developer community.

We think freemium companies that target a community of customers have a higher likelihood of achieving market dominance without expensive sales and marketing operations.



Because bootstrapped companies have to live within their means they must operate based on sustainable SaaS KPIs including high gross margins, a fast payback on CAC, and healthy cohorts. This often puts them in a disadvantage to startups that use venture capital to fund growth with ever growing losses. It's an unfair battle in some sense, but the bootstrapped company gains certain things from their efficiency that cannot be bought with venture dollars, including focus, alignment with employees and less exposure to changes in market conditions or investor sentiment.

Cloundinary's beginnings

The company we know as Cloundinary emerged as a result of development work the founding team was doing with a handful of customers. Noticing the repetitive development work involved in setting up an image management system, they acquired domain know-how and expertise required to develop an API-based product for developers. The low-cost scaling of Cloundinary's business stemmed from a strategic decision to provide a generous free offering across use cases and customer size. This decision created an extremely high bar for the competition that would continually grow, making developers around the world enamored with the Cloundinary offering. The final strategic decision was a usage-based pricing model that gave rise to strong customer cohorts with net negative revenue retention (NRR). Like many of the aforementioned companies, Cloundinary practiced and mastered product-led growth (PLG) before that acronym had been coined by venture capitalists and fed back to the startup community.

But none of this would have been possible with good old-fashioned luck that came in the form of a since removed TechCrunch article in 2012 soon after launch, which announced the availability of Cloundinary. (The article was so glowing that critics accused TechCrunch of posting a promotional article.) Those several hours of "controversy" were just enough to get the developer community talking and provided the initial boost every startup covets.

Motivations for bootstrapping

When you ask Itai Lahan why he never raised capital, he will tell you it wasn't a conscious decision but rather a reflection of the fact that it was never required to achieve the goals they had set for themselves. Despite dozens of overtures over the years, Cloundinary never saw cash as an obstacle to growth, but also never ruled it out. Of course, a more risk averse team might have preferred a larger cash cushion and a more aggressive team might have seen value in spending more and faster. The company's north star was what they defined as "healthy growth," which took into consideration the costs that unrestrained growth can have on the organization and indirectly on customers' satisfaction.

Cloundinary never saw cash as an obstacle to growth.

Having worked closely with the founders since 2015 there is little doubt that Cloundinary cared foremost about their employees and the impact that rapid growth can have on their well-being and satisfaction. This can also be seen in how the company always made their employees a major part of each secondary transaction. Cloundinary treats its employees as owners, which might sound quaint to a capitalist, but worked extremely well for them in terms of productivity, retention, and creating the kind of work environment that has won them accolades.

All venture backed startups have several constituencies, including investors, employees, and customers, and while these startups aren't necessarily beholden to any one of them, the presence of investors on the cap table and in the boardroom can certainly change the dynamic of a successfully bootstrapped company.



Takeaways for venture-backed founders

Despite startup culture tending to be very prescriptive in how to build a SaaS company, founders have myriad choices in how they choose to fuel their growth over time. Founders not only choose their product and GTM strategy, but also the pace of growth that allows them to realize their goals and build shareholder value without assuming an uncomfortable level of risk. Bootstrapped companies enjoy more latitude in this regard, but the same applies for venture-backed companies that easily adjust their spending level without stunting growth. To say there is no downside to pushing the limits of growth is incorrect. As environmentalist Edward Abbey said, "Growth for the sake of growth is the ideology of the cancer cell."

Staying bootstrapped over the years has insulated Cloudinary from the capital markets and eliminated any pressure to perform merely to please future investors. But having witnessed Cloudinary grow 15x in ARR since our first secondary purchase, they also know how to delight shareholders. Cloudinary knows that growth is essential to stay competitive and the best way to generate value for their shareholders, be it founders, employees, or those who purchased secondary shares.

We are incredibly privileged to be a part of the Cloudinary journey and thrilled with their ongoing success and market leadership.

Lessons from Axonius

Reflecting on how the breakout cybersecurity startup rose to Centaur status in four and a half years

BY AMIT KARP



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How Axonius grew to \$100 million ARR and beyond

For years, we've been exploring the evolving state of cybersecurity and CISOs' growing demand to find comprehensive security platforms as cyber attacks keep proliferating. But my interest in the world of cybersecurity predated my time at Bessemer Venture Partners.

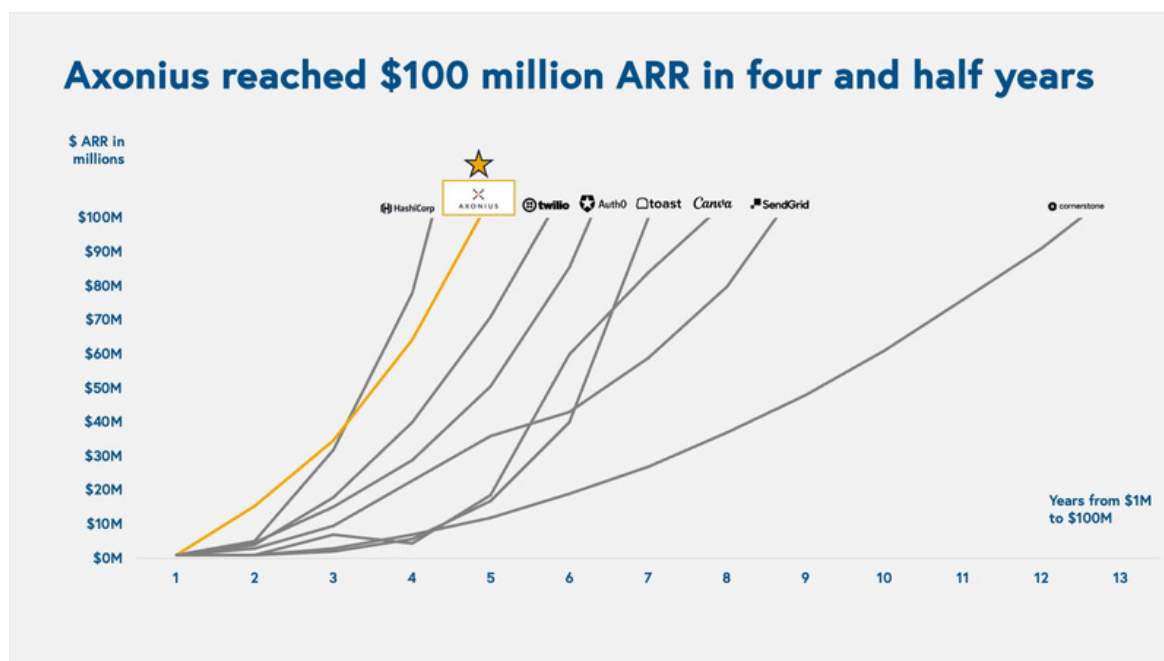
In 2012, I had my final project at McKinsey. Our goal was to help a large pharmaceutical company streamline their IT and software expenses, along with the software running on all devices. We were shocked to learn that the company had no consensus or source of truth for its own IT and asset management. Every department had different information, and this critical gap in their IT infrastructure reflected a broader industry challenge.

Just a few years later, I met Dean Sysman, Ofri Shur, and Avidor Bartov — an unforgettable team of entrepreneurs highly recommended for solving a seemingly obscure problem: "asset management for cybersecurity." Their mission resonated instantly with me, addressing the very problem I witnessed at McKinsey. And with time, I knew the challenge had only intensified. It was no longer confined simply to on-premise managed environments like it was in early 2010, but was now a much more complicated and dynamic environment — which also included cloud, software, SaaS applications, employee devices, many IoT devices, and more.

When Co-founder and CEO Dean Sysman presented the partnership in December 2018, he showed us how Axonius provided one comprehensive view of a cybersecurity environment and security posture of all existing assets. But most intriguing was the clever and elegant approach Axonius developed. Instead of deploying another agent on the network or endpoint, Axonius offered a unique and lightweight adaptor-based approach. It connected with existing security and management systems, aggregating their data into a single, comprehensive dashboard — like Kayak for all other security and IT tools.

When we invested in Axonius at the Series A in early 2019, they had only about five customers and \$400,000 in ARR. But it was very clear that these customers just LOVED the product and couldn't stop using it. In a short five years, it's been incredible to witness the team's meteoric growth, scaling their business to over \$100 million in ARR.

As we recognize Axonius joining the ranks of other legendary Centaurs, I also wanted to highlight three important building lessons for other founders leading in today's environment. The Axonius Leadership team were not just exemplary technologists, but they also showcased to other cybersecurity startups what's possible in their category.





Build something undeniably excellent, no exceptions

When you hear of a business having an NPS score of 83, you likely think of a consumer brand like Apple or Starbucks. So you'd be surprised to learn that a cybersecurity company delighted customers to the level of pulling numbers that rivaled today's consumer earthquake startups.

Axonius' consumer-like user experience is derived from the core of their product philosophy — to delight security practitioners with elegant solutions while solving a critical problem they encounter. Cybercrime and burgeoning cyber threats has cast a spotlight on a critical need: comprehensive visibility into an enterprise's environment. Understanding what assets exist within an organization is paramount. Without accurate and up-to-date visibility of these assets, it becomes virtually impossible to ascertain what is adequately protected and what remains vulnerable. This clarity is essential not only for immediate security, but also for formulating a robust and responsive cyber strategy.

Axonius' approach to this complex problem was both ingenious and elegant. It allowed them to demonstrate value to their customers within hours, which is rare for a security product. Rather than adding complexity, they opted for integration with existing security and management systems. Axonius' solution is based on the underlying idea that all the information required to enable full visibility already exists across multiple security and management systems that are deployed across the organization, but with no seamless way to cross-correlate the siloed data into a single view. So instead of deploying another sensor in the network to analyze traffic, or deploying additional agents across multiple endpoints, Axonius plugs into existing security and management solutions (mostly via APIs) and aggregates their data into a single view. While the approach may seem simple, it is quite a difficult problem to solve, which is where the majority of the company's IP lies.

Their approach to product innovation allowed for a very simple and easy deployment, as Axonius only needed the credentials to other security and IT systems to immediately provide full visibility and generate a wow effect. Security teams could suddenly and easily answer questions which were impossible to answer before without major manual effort. Simple questions like, "How many machines I have connected onto my enterprise network?", and "Which ones don't have the latest patch of CrowdStrike installed?" were impossible to answer before without manually tapping into four or five different systems and trying to correlate the data between them which would require a major effort.

Build something undeniably excellent, no exceptions

With its commitment to innovation at the core of Axonius' DNA, Dean and the leadership team set out to build an innovation arm. For most businesses, internal ventures like this happen at the later stage, but in Axonius' case, they set out to build a separate business unit focused on research and product development for next generation products.

In 2021, the team realized the power of their underlying platform and launched AxoniusX, led by entrepreneur Amir Ofek at the helm as CEO, with the purpose to explore new market opportunities and applications of Axonius technology, and then bring them to market. Together, he hired a founding team to explore and develop solutions for emerging IT and security challenges, enabling the business to fully support current customers and their changing needs.

Many early stage founders try to build their second or third acts within the existing organization, often leading to de-prioritizing them over near-term product roadmap and supporting the existing customer base. Axonius realized the benefit of having a dedicated and experienced team focused only on future opportunities, which will be separate from the core team yet will work closely together. And indeed, less than a year ago, the team launched a SaaS Management product. It's already growing very fast, and could one day be a unicorn by itself if it was an independent company. This is very encouraging, as Axonius' single platform vision will provide more and more products in a unified and easy to consume approach to solve the ever growing security needs.



What has been evident through this innovation arm during its early phase is that, while Axonius mostly caters the security team, it is already used by other groups in the organization such as IT, Legal and Finance. Axonius has become the "system of record" where organizations manage their entire assets. This creates a real opportunity to build an enduring, standalone company — something rare in the cyber universe, which tends to skew towards niche products.

Build a culture of mentorship to drive the flywheel of innovation

Since its earliest innings, Dean knew the importance of making sure everyone on the team had someone they could learn from, confide in, and aspire to be more like. Building a culture of mentorship has been a prevailing thread throughout the trajectory of Axonius's growth. In fact, all executives get mentorship, and for good reason — promoting people from within and giving them a path for growth is what continues to sharpen your edge in a highly competitive and crowded market, such as cybersecurity.

As we've often championed at Bessemer, people are the drivers of technology and talent recruitment. Engagement is the most critical priority for any CEO to focus on during his tenure.

The Axonius founders have always championed that development is superior when it happens "in house." They've demonstrated how prioritizing industry innovation, always, is what helps attain and keep you as a market leader. They constantly prioritize smart and ambitious up and comers with strong cultural fit over anything else.

Built by a legendary founding team

Every early stage investment depends on the excellence of the team.

At Bessemer, we always knew Dean, Ofri and Avidor were unique — in our many references, people who served with them in the special units of 8200 referred to them as rockstars. They were always considered the smartest among what was already a very smart and capable group. But seeing them grow and develop so quickly over the past five years was even more remarkable.

It goes without saying that when you see a founder and CEO navigate a company through a number of global crises, it illustrates the quality and excellence of leadership. From a worldwide pandemic in early 2020, to the burst of the COVID tech bubble that followed, to a war in Israel where most of the R&D team resides, these true catastrophic conditions never deterred Axonius from staying true to their mission — helping businesses control cybersecurity complexity in today's digital world.

In the short amount of time they've scaled from \$1 million to over \$100 million ARR (best-in-class), the team has raised \$595 million in funding with a valuation of \$2.6 billion. Accolades from Forbes Cloud 100 list, Deloitte Technology Fast 500™, and beyond merely validate the indelible change they've made in cybersecurity. With this kind of growth trajectory — including a unique product, natural expansion opportunities, and an ambitious team — who knows what the future holds for Axonius. We can't wait to see what's on the horizon.

On leading



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“When you get out of startup mode and move into the growth stage, your approach must change radically if you’re going to continue to be an effective leader. What got you here won’t get you there.”

— SAMEER DHOLAKIA

FROM SIX CEO LESSONS TO HELP YOUR 'TEENAGE STARTUP' THRIVE



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Resiliency lessons for doing business in any market

These growth stage tactics can make
your business ironclad in any
macroeconomic environment.

BY JANELLE TENG & ELLIOTT ROBINSON



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2023 was a crucible year for the tech community. We witnessed one of the most tumultuous times in the history of software – from macroeconomic uncertainty, to banking collapses, to geopolitical instability, to recession fears. Yet, in those challenging months, we gained new insight into how to build enduring businesses. Much of the industry's reflections and benchmarks from the past decade plus of bull-market exuberance has failed to accurately capture the nuance and conditions of operating through a volatile period. But one truth remains if you work in this industry long enough:

All cloud leaders will inevitably experience up and down markets depending on the market cycle.

With that in mind, we reflect on seven lessons about resilience based on actions that growth-stage SaaS leaders took over the past year to equip founders to weather any future storms.

Seven SaaS resiliency lessons

- 1 Leverage expansion as a durable growth driver
- 2 Revisit pricing strategy especially when headline value becomes top of mind
- 3 Develop a granular understanding of end-market exposure
- 4 Engage customers with a mission-critical narrative
- 5 Position as a platform to counteract vendor consolidation
- 6 Index on margin quality, not growth-at-all-costs
- 7 Renewed focus on employees as the heart of your organization

Lesson 1: Leverage expansion as a durable growth drive

During recessionary periods, companies should be prepared to face "double whammy" headwinds impacting both new customer acquisition and existing customer expansion.

First, on new customer acquisition, it becomes unsurprisingly harder to land new logos in an uncertain market environment due to frictions such as:

- Lengthened sales cycles.
- Delayed deals.
- Increased budget scrutiny, e.g. requiring C-suite sponsor sign-off for new deals.
- Required additional justification for new procurements.
- Frozen budgets that block new software purchases.
- Turnover of key stakeholders.

All of these headwinds take a fast-acting toll on sales efficiency. For instance, in 2022 we saw CAC payback periods for EMCLOUD companies extend significantly to an average of 30 months, even skyrocketing to 40 months in Q1 2023. These statistics were dismal when compared to the benchmarks for CAC payback periods during more exuberant market periods which are closer to <12 months for SMB-market focused accounts, <18 months for mid-market-focused accounts, and <24 months for enterprise-focused accounts.



EMCLOUD: Median CAC Payback (Months)



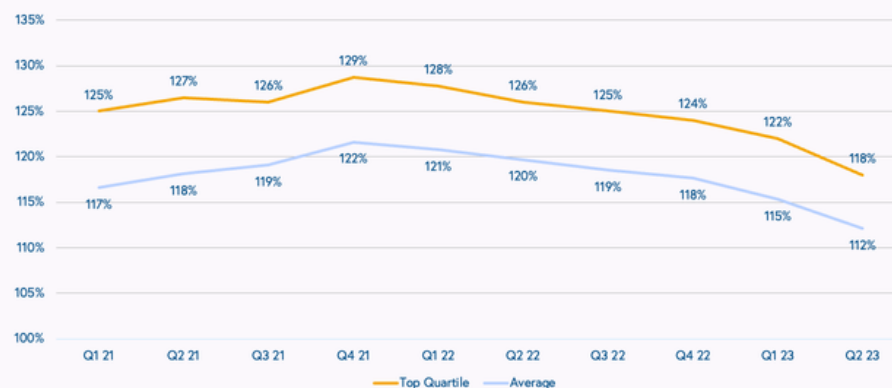
Source: BVP Cloud Index, CIQ
Note: CAC Payback = Prior Qtr S&M / [(Change in Annualized Total Revenue x Current Qtr GM %)/12]

Second, while existing customer expansion motions are also not immune from headwinds, there are more levers to pull on this front, such as:

- Upselling tiers, add-ons, or upgrades.
- Cross-selling products.
- Adding more seats or users.
- Increasing volume or consumption.
- Raising prices at renewal.

Each of these levers exhibits differing levels of sensitivity to macro conditions. For instance, seat-based expansion dynamics could be more impacted during recessions as customers reduce headcount. But on average, during the current pullback period, EMCLOUD companies have quickly experienced an overall deterioration in net dollar retention (NDR) fundamentals from 120% in Q2 2022 to 112% in Q2 2023 — reinforcing how eeking out incremental growth within the current customer base becomes demonstrably harder in weaker demand environments.

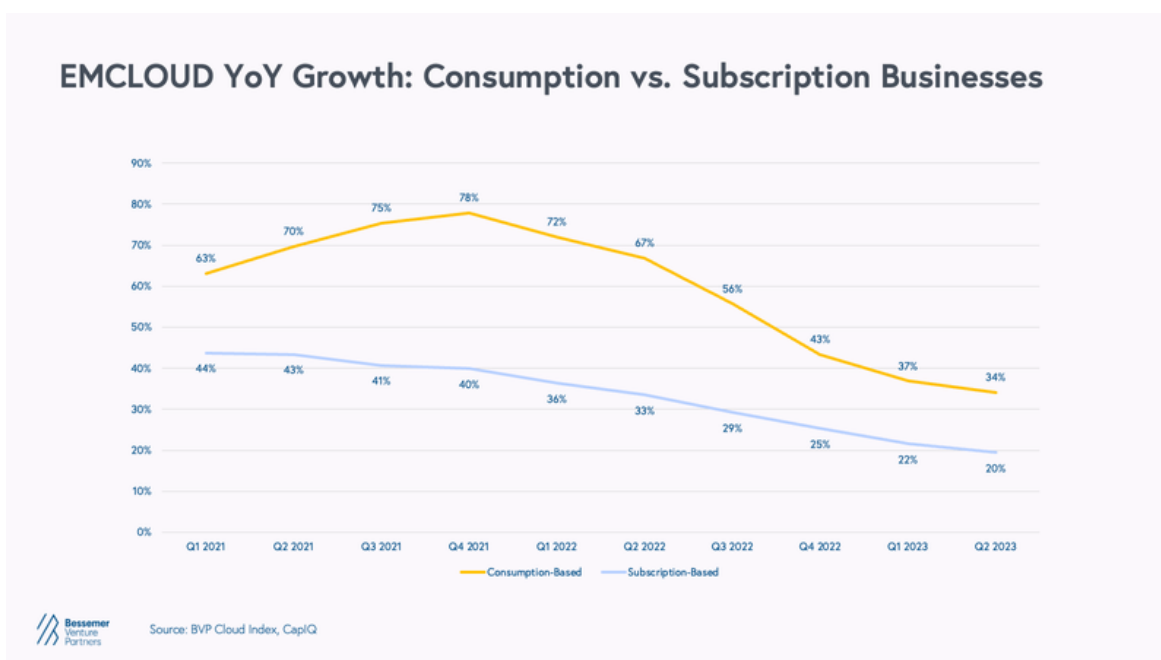
EMCLOUD: Net Dollar Retention



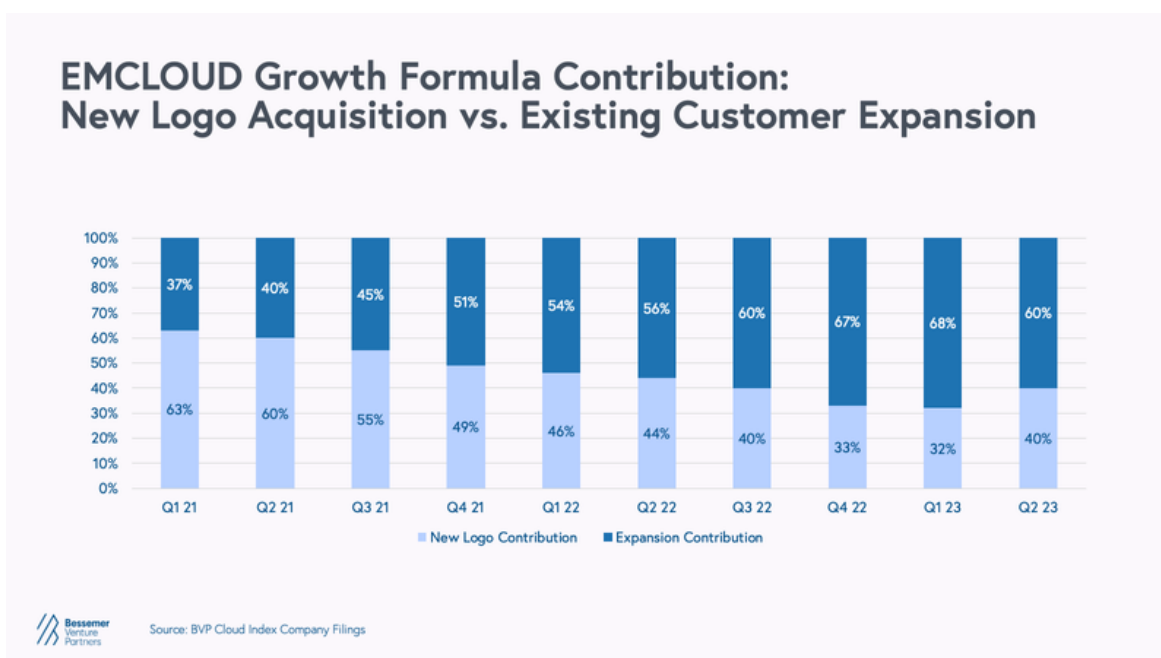
Source: BVP Cloud Index, Company Filings



Notably, companies that employed a business model based on consumption pricing saw significantly more impact compared to subscription pricing peers. This intuitively makes sense since while consumption models are structurally poised to benefit from bull markets, the reverse also holds true during market pullbacks, since customers can instantaneously cut back on usage to reduce spending during tough economic times. This impact will show up right away since revenue recognition in a consumption model is a function of usage and time. Subscription pricing models, on the other hand, generally recognize revenue ratably, making such revenue more durable during downturns since demand impacts are spread out over time.



Still, a silver lining in an uncertain market is "incumbency bias": customers tend to stick with existing vendors instead of taking risks on new suppliers. That is why we have found that expansion tends to be a more reliable growth driver in down markets. Overall, many companies' growth formula tends to weigh expansion more heavily in challenging times:





Many companies have recognized the critical importance of this observation and are increasingly leveraging existing customers as a growth lever. Over the last 18 months, companies have double down on the philosophy that "customer success is company success" by:

- Ensuring that customer success divisions had adequate resources and support to keep the current install base happy, and even adjusted quotas to reward expansion.
- Revisiting or establishing a Customer Health program with specific dashboards to keep a close pulse on current customer accounts, assess seat utilization, track customer feedback, renewal likelihood, and churn risk.
- Instituting new churn deep dive sessions with the board on a monthly basis to stay proactive and keep all stakeholders updated on the progress of major accounts in between quarterly board meetings.

2. Revisit pricing strategy especially when headline value becomes top of mind

As IT budgets have changed in the last 18 months, we're seeing the C-suite get involved in granular amounts of spend—as small as several thousand dollars. The perception of absolute value matters to key buyers more than ever before.

For new customers, many sales conversations break down in the quoting process as decision-makers balk at big headline prices, which could even be a non-starter during uncertain times. Similarly, for key decision-makers evaluating renewals, if the list price of a contract is \$100k for an entire organization—even if the effective price per user is likely meaningfully lower—reducing a handful of these contracts could generate significant cost savings versus a tool that perhaps has a smaller list price.

Throughout the downturn, companies have comprehensively revisited their pricing strategies to ensure their headline prices are tied more closely to perceived value. These are some creative examples:

- Several introduced "starter packs" to make it more frictionless to land new customers as companies selling initial \$1M+ annual contracts faced a disproportionate lengthening of sales cycles.
- Others that had existing large enterprise contracts worked very closely and flexibly with these key accounts to reconfigure contract prices to prevent full churn. Note that a down-sell is perhaps a better alternative than having to win-back a fully churned account at a later date.
- Some introduced a freemium tier to allow customers to downgrade for a period of time, but still stay within the product ecosystem until their budgets could be unlocked.

3. Develop a granular understanding of end-market exposure

During the recent downturn, many companies have taken a fine-tooth comb to examine their customer base in order to glean actionable insights on where the most pain has been felt and adjust accordingly. For instance:

- SMB vs Enterprise exposure
 - In a recessionary environment, the SMB segment faces more pressure than usual, and some SMBs may go out of business altogether.
 - However, in some cases, enterprises may have longer approval cycles, pricing leverage, and additional processes that could result in longer deal cycles and delays.
- Vertical sensitivity
 - Certain software markets are particularly exposed to the cyclical nature of the verticals they serve (e.g. slowdowns in construction or consumer spending).
 - Companies selling primarily to other high-growth startups also saw more friction, as they were hit particularly hard by macro headwinds.
- B2B vs B2C
 - As elevated inflation drove a pullback in consumer spend, many B2C companies were hit faster than their B2B peers.



- Public sector vs Private sector
 - Revenue from government revenue streams (e.g., federal, state, and municipal) emerged as slightly more resilient compared to commercial streams as public sector budgets remained more intact over the last year. Some federal budgets even expanded significantly based on the government's spending priorities.

We saw companies institute extra strong hygiene around customer segments at a highly granular level, distinguishing accounts by vectors such as industry, company size, division budget, penetration of number of users vs. addressable user base, etc. Following this exercise, companies formed specific plans of attack and assigned an accountable leader based on the strategy built for each segment. Companies that had meaningful concentration in high-risk segments also proceeded to reduce this risk through diversification and targeting different segments.

4. Engage customers with a mission-critical narrative

In boom times, customers do not always check if they are using software they have paid for, but this switches quickly during bear times as discretionary budgets become limited and all usage is scrutinized closely. During the past 18 months, many customers have dug into product engagement metrics as a "north star" for whether a software solution is considered "mission-critical" to the organization, or just a "nice-to-have", within the stack.

In response, companies have:

- Collaborated proactively with customer champions to set specific engagement metrics and holding teams accountable to these thresholds. Product metrics such as engagement data are "leading" indicators (forward-looking, predictive drivers) which send signals about "lagging" indicators (after-the-fact, measured outcomes).
- Identified "power-users" (based on usage data) at customer organizations and leveraging them for evangelism.
- Reoriented product strategy to further integrate into day-to-day user workflows and habits. For instance, launching mobile widgets for users that are on the move or launching email plug-ins to reduce click paths for users.
- Armed reps with usage data during renewal conversation to supplement tangible ROI calculations.

5. Position as a platform to counteract vendor consolidation

During bull markets, many companies had the luxury of procuring multiple point vendors to have the most nuanced, best-in-class solutions for their workflows. But during the pullback, we saw many organizations take rational action to reduce their tech stack and cut spend, especially around vendor consolidation to generate cost-savings.

Consequently, many products that were point solutions and not full-platform plays became significant casualties during budget cuts. To counteract this, companies began building out their platform narrative to position themselves strategically by:

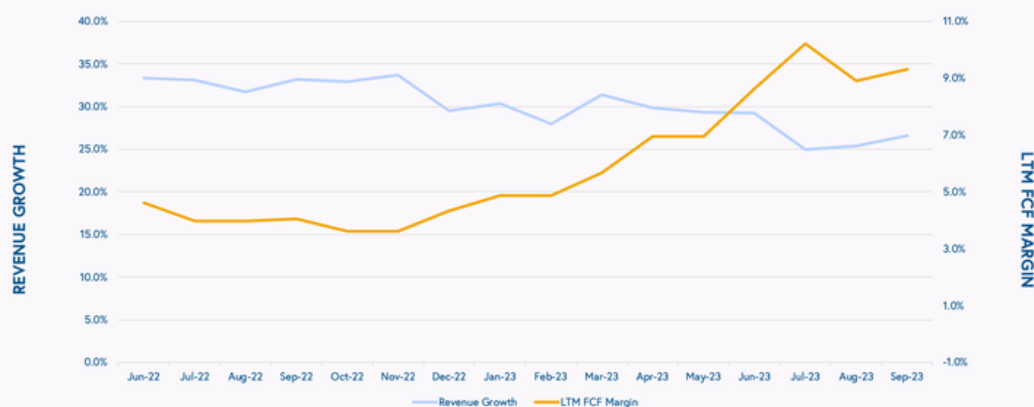
- Re-designing marketing and sales playbooks to emphasize their products as a system of record or system of action; combining tactical and strategic selling narratives to sell the vision of what your product can be, and weaving product roadmap into the selling conversation.
- Accelerating platform initiatives on their product roadmap.
- Creatively partnering with other platforms for leverage. For instance, some companies invested in efforts to further embed into the wider ecosystem, including opening channel/partnership programs with broader category incumbents and also tighter integration partnerships. Others even went one step further by establishing formal SPIFF and go-to-market programs with partners.



6. Index on margin quality, not growth-at-all-costs

In the past 13-year bull-market run, cloud companies have over-indexed on growth. In the face of one of the toughest years in the history of the cloud economy, we saw companies adapt very quickly in a paradigm shift from the age of excess to the age of efficiency. Within the year, we saw many cloud companies shift their focus away from growth at all costs towards profitability.

EMCLOUD companies pivoted quickly to focus on profitability instead of growth-at-all-costs



Source: BVP Cloud Index

Margin quality and demonstrating a path to profitability is not just critical in terms of a company's ability to weather any impending storm, but also in terms of the impact on a company's valuation. In the public cloud markets, valuations became more tightly coupled with efficiency scores than absolute growth.

We observed that this efficiency premium on valuation is material with "Rule of 40+" EMCLOUD companies trading ~1.7x higher than less efficient peers.

Similarly for private companies, not only is growth at all costs no longer being rewarded by investors, but managing margins and cash could quite literally mean the difference between life and death as fundraising activity becomes more uncertain and exit windows freeze. We saw the top growth-stage cloud companies of the Cloud 100 embrace this efficiency mandate very quickly.

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7. Renewed focus on employees as the heart of your organization

Over the past 20 months, EMCLOUD companies have not just seen valuation fall from peak levels, but also a majority of the cohort have conducted at least one RIF. The biggest cost to an organization during challenging times is often the impact to employees and company culture. Valuation pullbacks, restructuring, and compensation changes often take a big toll on human capital, morale, and focus.

Regardless of the size of reduction or stage of organization, RIFs are never going to be easy. There is no one-size-fits-all approach to executing upon such a difficult decision, but all actions should stem from compassion and preparedness. Here are a few real-life examples demonstrating these guiding principles:

- Cut once and deep quickly instead of making many small cuts over a prolonged period of time. This is to provide more peace of mind and to minimize periods of instability for employees.
- Lean on your board members for support. For instance, having board members address the employee base in a post-RIF town-hall to offer perspective on the market and the company's future ahead could help to boost morale.
- As a rule of thumb, we recommend at least 5 months of thoughtful planning before announcing a RIF and be sure to plan for even the most granular detail (e.g., an exact hour-by-hour timeline for the Day of RIF around location, access, last paycheck, etc).
- Coordinate RIFs with other business decisions (e.g., merging a team or shutting down an office location) to reduce the frequency of organization shocks.
- On the Day of the RIF, proceed with immense empathy and give individuals room to express themselves. For instance, it is okay if a conversation runs long or if individuals need time to step out of the room to process.
- The Day after the RIF is perhaps the most important day in addressing the organization. Leadership, HR teams, and comms teams need to be in lockstep around messaging and announcements. It is important for leaders to have 1:1s with their remaining employees during this period.
- Track KPIs such as attrition metrics closely post-RIF; data can give you signals about the aftereffects.
- Care for people after the fact! For individuals who were impacted, be thoughtful about how you can help them land their next role. Some actions companies have taken include giving LinkedIn premium access, pro-rating bonus payments, creating an opt-in contact list to be distributed, and asking board members to leverage their firm's talent network to place impacted individuals at other portfolio companies.

The cloud model is one of the most resilient business models ever invented

At Bessemer, we've partnered with the world's best cloud companies since the inception of cloud computing from Twilio to Shopify to Toast. We are believers in long-term tailwinds, rather than short-term market turbulence. We fundamentally believe that the cloud model, with its recurring revenue nature, low marginal distribution costs, and strong net-dollar retention dynamics, is perhaps not just one of the most attractive business models to be invented, but also one of the most resilient.

Some of the most iconic cloud companies we've partnered with not just survived, but thrived through uncertain times, such as the Dot.com bust, Global Financial Crisis, and Pandemic period, giving us even more conviction that we will see a new crop of cloud leaders emerge stronger than ever following the turbulence of the last year.

A CEO's tactical guide to driving profitable growth

40 practices SaaS leaders can employ across
their business to improve operational efficiency
and profit margins

BY BRIAN FEINSTEIN, CATY REA,
SAMEER DHOLAKIA, JANELLE TENG



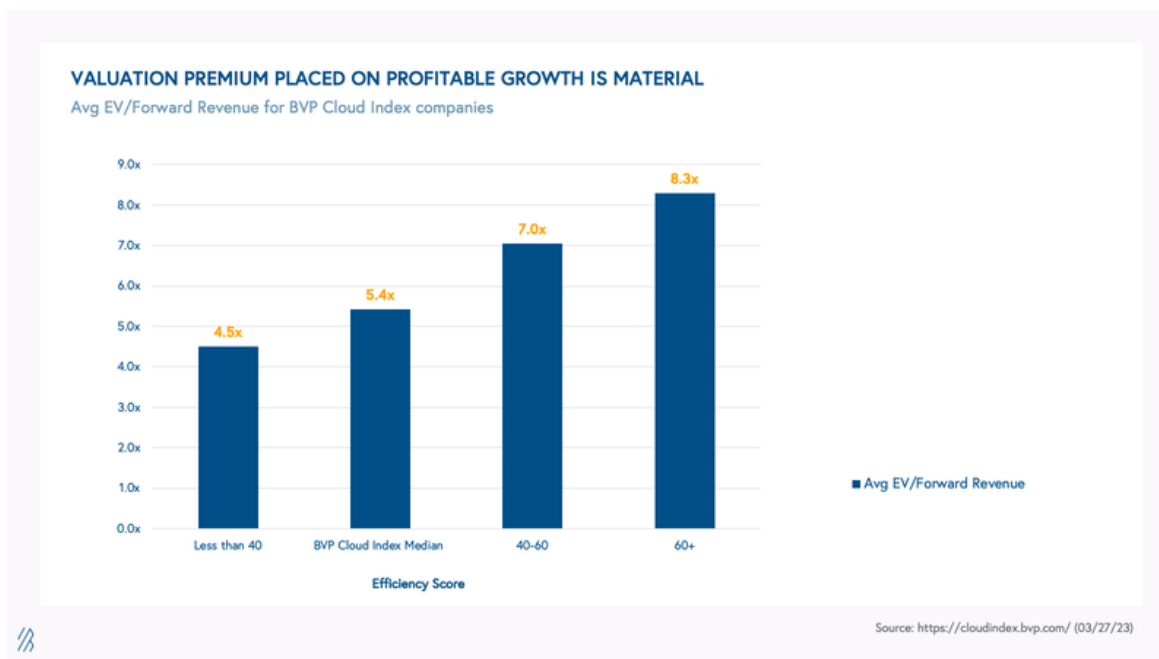
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Driving profitable growth

In the software world, a "growth at all costs" mindset has given way to "profitable growth." Building a venture-backed business was easier when only growth mattered. But now CEOs need to drive both growth and profitability. In the public markets, the companies with the highest growth efficiency (which we define as ARR growth rate + free cash flow margin) command the highest multiples:



In this guide, we unpack a software profit and loss statement (P&L) into its component parts. Much has been written about how to drive growth, but here, we provide tactical steps for CEOs to follow in order to drive more efficiency and profitability.

I: Gross Margin

Gross margin acts as the limit to the ultimate profitability of your business and has an enormous impact on your valuation. It's a great place to start because improving gross margin rarely comes at the expense of investment in growth.

The median gross margin for high-growth public cloud companies is 77%.

Case example: Take two identical software businesses. One is an 80% gross margin business that operates at 40% profit margins at scale. Holding all other factors constant, that same business with 60% gross margins will have only 20% profit margins. The difference between 80% gross margin and 60% gross margin cuts the value of the business by at least 50%.



Tactics to grow gross margin

Cloud Hosting Costs

- Negotiate with hosting providers to take advantage of reserved instances, pre-purchasing programs, and multi-year contracts to reduce cloud spend.
- Monitor and optimize cloud usage. Once your annual cloud hosting bill crosses over \$1 million, consider having a dedicated full-time employee (FTE) responsible for monitoring spend, capacity planning, reviewing potential redundancy, restricting access, and reducing unnecessary usage. Consider applying FinOps or Cloud Cost Management tools such as [Aimably](#), [Bluesky](#), [Cloudhealth](#), [Datadog](#), [Finout](#), [HashiCorp Terraform](#), [Infracost](#), [Kubecost](#), [Spot](#), [Vantage](#), or [Zesty](#).
- Improve code to unlock performance and cost improvements. Review your code base to understand the most 'expensive' components (in terms of consumption of compute, network, or storage) in the architecture and review potential optimizations. Explore refactoring the code, changing the database architecture, and using different instance types to drive performance through strategic caching and cost gains such as limiting data transfer fees, especially if you're in a multi-cloud environment.

Implementation

- Automate implementation to reduce the work required to get customers up and running. Build data migration tools, great onboarding materials, out-of-the-box integrations, self-service experience, and customer templates to increase speed to go-live and reduce implementation expense.
- Charge more for implementation as most software companies fall into the habit of giving away implementation for free as a sales incentive. Experiment with charging more for implementation to see if you can get professional services margins breakeven at a minimum.

For instance, [Veeva](#) has been able to deliver 20%+ gross margin on its professional services. If you are losing money on flat fee implementations that balloon in scope, consider shifting to an hourly billing model where you are targeting 80%+ utilization of your available professional service hours.

- Shift implementation work to third parties so you don't have to worry about losing money on implementation work. Customers can contract directly with service providers and you avoid losses on implementation work. This approach has the added benefit of scalability since you don't have to worry about growing your services team.

Customer Success and Support

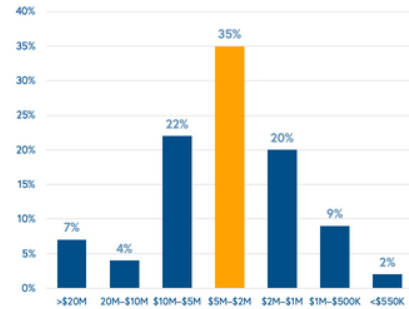
- Benchmark your ARR per CSM by leveraging [these benchmarks by Gainsight](#). If you are off the mark, consider reducing your CSM headcount or freezing CSM headcount to "grow into" the appropriate benchmark.

The median amount of ARR that an Enterprise CSM manages is \$2 million to \$5 million.

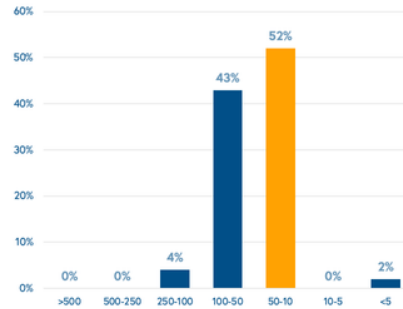


HIGH-DOLLAR/ENTERPRISE SEGMENT RATIOS

ANNUAL RECURRING REVENUE

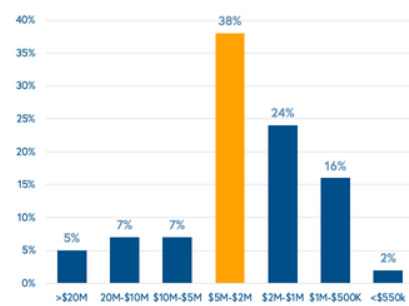


CUSTOMERS

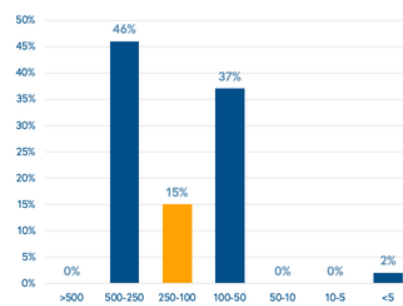


MED-DOLLAR/MID-MARKET SEGMENT RATIOS

ANNUAL RECURRING REVENUE

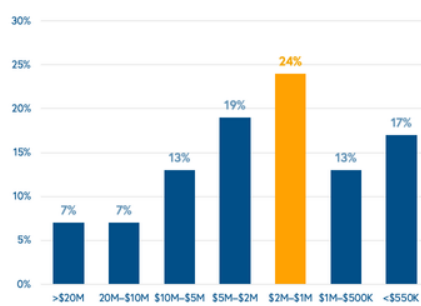


CUSTOMERS

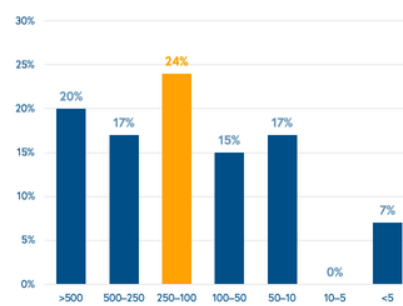


SMALL-DOLLAR/SMB SEGMENT RATIOS

ANNUAL RECURRING REVENUE



CUSTOMERS





- Reduce the burden on customer support resources by creating a) self-serve motions, b) online documentation, c) customer forums, and d) in-app tooltips for lighter touch customers to self-onboard. (Here is a [case example from Netlify](#) on how to embed such self-serve levers into product architecture.)
- Explore customer support automation using platforms like [Ada](#) to automate support using AI or leverage recommendation engines to increase support rep productivity.
- Monitor support agent activity and utilization to make sure you are efficiently staffed. The goal is to find a balance between responsiveness and profitability.
- Explore a premium support subscription to help subsidize your customer support staffing. For example, consider "Standard Support" for normal business hours (M-F, 8am-5pm), and "Premium" for 24/7 Support.

Customer Profitability

- Review each customer's profitability and develop a plan for how to increase your lowest margin customers. This is typically done by changing the customer's pricing (see Part V).

II. Sales & Marketing

As a guiding principle, we suggest you use CAC Payback benchmarks to assess your GTM efficiency. CAC payback benchmarks range by scale of the business and whether you are selling into an SMB or enterprise customer base, as sales cycles differ across segments.

Here are the good-better-best benchmarks we have aggregated from private cloud companies

| CUSTOMER ACQUISITION COST (CAC) PAYBACK (MONTHS) | | | |
|---|------|------------|------------|
| Understand how effective your S&M organization is | | | |
| | SMB | Mid-Market | Enterprise |
| GOOD | 12 | 18 | 24 |
| BETTER | 6-12 | 9-18 | 12-24 |
| BEST | <6 | <9 | <12 |



At scale, one of the most powerful drivers of S&M efficiency is improving retention. It is always cheaper to retain and upsell existing customers than to acquire new customers. Moreover, if gross retention is low, refilling a leaky bucket makes it tough to maintain profitable growth.

Tactics to improve S&M efficiency

Sales

- Review your sales attainment on a rep-by-rep basis. A good rule of thumb is that a well-functioning GTM organization should target 80%+ quota attainment for ramped reps. Most software companies transition out sales reps who have over two quarters of underperformance.
- Review non-quota carrying sales team headcount for potential efficiencies. A good rule of thumb for enterprise organizations to target is a 1:1 ratio of quota carrying to non-quota carrying expenses. In mid-market, this ratio should be ~2:1 and in SMB ~4:1.
- Review your quotas and sales comp with a common benchmark that on-target earnings:quota should be 4-5x.
- Clearly define and relentlessly focus on core ideal customer profile (ICP) since these are likely to have the highest conversion yield. This also means having the discipline to say no to low-converting prospects. (Here is a [case study from Imple Data](#) on how to crystalize your ICP). You could also consider giving your highest quality inbound leads to your best reps to increase sales conversion. Your best leads are precious and may be best served by your sellers with the highest close rate.
- Leverage enablement and standardization to boost productivity. (Here is a [case study from Teleport](#) on how to transition to a 'process-driven' environment where scalable strategies are leveraged over bespoke motions)

Marketing Efficiency

- Invest in product-led growth (PLG) efforts in order to reduce your CAC. While PLG has proven to be particularly effective in the developer economy, this strategy has gained momentum in many other categories, including collaboration tools and customer engagement software. (Recommended reading: [10 Product-Led Growth Principles](#) and [Software Powering the PLG Era](#).)
- Review CAC at a channel-by-channel level to understand which channels are performing best and shift spend accordingly. In general, marketing organizations should be tracking spend-to-pipeline ratio as the ultimate test, with 8-10x as the ideal target.
- Consider reducing marketing spend that is tough to measure, such as PR, brand marketing, and in-person marketing.
- Align marketing and sales goals and processes to tie them closely to ARR goals. Unweighted pipeline out of period (based on deal close date) ideally should be 3-5x ARR goal, and in-period weighted pipeline would be 2x+. Closely monitor your sales-accepted pipeline generation each month/quarter to make sure that marketing is delivering strong pipeline growth.

III. R&D

Research & Development (R&D) is the most fraught area to cut spending to drive profitability: overcutting in R&D can lead to short-term wins but degrade competitive advantage over the long-term. Management teams should apply discretion when looking at R&D benchmarks given unique factors such as product complexity and market competitiveness.

The median R&D as a % of revenue is 20% for high-growth public cloud companies.



Tactics to improve R&D efficiency:

- Drive product roadmap prioritization by force-ranking all current projects, cutting lower ROI projects, and reallocating resources to the highest ROI projects. [ProductBoard](#) has a number of [helpful frameworks](#) to structure thinking around product prioritization.
- Blow up everyone's calendars. Stop all recurring meetings (except for quick stand ups) to give your products and engineers time to build. They can schedule meetings on an ad hoc basis.
- Drive engineering effectiveness through better performance management. Engineering contributions can be hard to measure. Metrics-driven heuristics like [DORA](#) can help. However, McKinsey's Relative Contribution framework is valuable in its simplicity. Start by looking at the relative contributions of each individual on a team. For example, on a five-person team, we would expect each individual to contribute 20% of the work in each sprint. You should be managing out those who are contributing far less than 20% and promoting and heavily retaining those who are contributing far more than 20%.
- Consider using tools to visualize, assess, and benchmark engineering productivity or developer OKRs such as [Allstacks](#), [Faros.ai](#), [Jellyfish](#), [LinearB](#), or [OKAY](#).
- Create a culture that values ingenuity over headcount growth. When your R&D team finds clever ways to build something with limited resources or eliminates a low ROI project, make sure they are celebrated. Build a culture that understands that profitability drives company value and ingenuity is rewarded over headcount.

IV. G&A

G&A is a ripe target to drive efficiency given that it is a cost center.

The median G&A as a % of revenue is 12% for high-growth public cloud companies.

- Reduce real estate expenses by reducing your physical office footprint, subleasing unused office space, and renegotiating rent costs.
- Negotiate and optimize vendor spend. Take rational action, such as consolidating or reducing the number of licenses, or switching to cheaper alternatives. Companies such as [Zylo](#) can help to rationalize your SaaS usage. You can also optimize vendor spend through contract re-negotiation. Make a list of all your vendors from largest to smallest and renegotiate contracts from top to bottom. Negotiation is not just about discounts, but can also incorporate flexible contract terms, extended payment terms, or moving from a subscription to consumption pricing structure. Companies like [Vertice](#) and [Vendr](#) can be helpful in negotiating lower prices for software purchases.
- Leverage software and automation to reduce the headcount needed to run a high performing finance, IT, and HR team.
- Explore ways to optimize net working capital, which can be accomplished through means such as extending vendor payments, initiating payment plans, or focusing on collections.

V. People

Throughout your company, people-related costs tend to be the biggest area of expense. Making sure you are staffed appropriately across the entire organization is critical.



Tactics to improve the overall efficiency of your people

- Freeze headcount for a period to understand the impact on business. This pause allows leaders to focus on productivity, performance management, and doing more with less. Growing revenue while keeping costs flat is also a straightforward way to drive profit growth.
- Look at your span of control (the ratio of managers to individual contributors). A rule of thumb for managerial span of control is five or more direct reports per manager. This varies widely organization to organization, but if your spans of control are below 3 direct reports per manager, there may be an opportunity to gain efficiency here.
- Require managers to make a case for any backfills by describing why they need to replace any team members who leave voluntarily. The process of having to make a written and persuasive case will help identify roles that do not need to be backfilled. This should not apply to involuntary churn because you don't want to disincentivize managers from moving out underperformers. To this end, healthy involuntary attrition at a high performance company is generally above 5%. An involuntary attrition rate below 5% may be a signal that performance management could be optimized.
- Harness the innovation of your workforce by explaining the company's profitability goals to the organization and asking all employees for ideas and suggestions on how to cut costs and drive free cash flow. The most creative ideas come from individual contributors who are educated on and aligned with the company's profitability focus. Rewarding or publicly recognizing these contributions is a great way to rally the team around this exercise.
- Leverage zero-based budgeting and an incremental approach. Look at each department as if you were building it from scratch today and use that to determine the right org chart and headcount. If things are working, certainly double down, but if there are signals that spending isn't providing a good return on investment on the margin, adjust quickly to reroute cash to other areas.
- Move to lower cost onshore and offshore talent to reduce cost while maintaining quality. Some practices we have seen work well include focusing on moving support/ops roles before engineering (as they are easier to offshore), hiring a local leader who has experience working with a US company, ensuring cultural and technological consistency in your chosen offshore location, and avoiding business process outsourcings (BPOs).
- Streamline overlapping projects. In large organizations, disparate teams are often working on similar problems. Remove duplicate efforts to get more performance from your organization.

VI. Pricing and Packaging

Pricing is one of the most important drivers of revenue growth and profitability. It is one of the most efficient ways to drive margin because any price increase drops straight to the bottom line. If you're a SaaS leader looking for new levers of revenue growth, [take our B2B SaaS Pricing course](#).

Tactics to drive better pricing and packaging

- Experiment with raising prices for new and old customers. Experiment with a price increase for new customers to find the "right" pricing level. Many software companies neglect pricing because it is cross-functional and complicated. Make an effort to test pricing for new customers regularly. Bring your older customers up to parity over time while mitigating churn by explaining how the product has improved and giving them generous grace periods. You could also add an automatic annual price increase that auto-renews each year. Most customers understand that your costs are growing each year and are comfortable seeing a modest increase in price each year (e.g. 3%-7%).



- Consider adding volumetric or tiered pricing components (grows with volume, usage, revenue, etc. or "good, better, best" packages) to help align your pricing with the value you are creating for customers. Learn more about different usage-based pricing models in [this report](#).
- Default to annual upfront prepayments charged immediately after contract signing. This will drive much stronger cash flow (see point 30) than other contracting models (e.g. paid monthly or quarterly instead of annually, or paid upon customer go-live rather than at contract signing). You can always add flexibility but start here as a default.

A note about stock-based compensation

The benchmarks we leverage for this article do not include stock-based compensation. However, it is important for founders to understand the impact of stock-based compensation. Although it does not immediately impact cash flow and profitability, it will inevitably at a future point. Further, looking at benchmarks inclusive of stock-based compensation also mitigates any noise resulting from different stock vs cash compensation structures across companies (e.g., the same company that gives 70% stock and 30% cash will look much more efficient than one that gives 50% stock and 50% cash). Lastly, the role of stock-based compensation is becoming an increasingly common topic of discussion for public market investors and has an increasing impact on valuation. We recommend benchmarking your business by including stock-based compensation or benchmarking against companies with a similar equity burn to fully understand relative cost structure and profitability.

Parting thoughts on achieving profitable growth

As a CEO, it is important to remember:

- Focusing on both growth and profitability is hard. Business was easier when only growth mattered. But a focus on profitability presents a new set of challenges and opportunities for your team to shine. The teams that can successfully transition from "growth at all costs" to "profitable growth" will make themselves richer. They will also walk away with the pride of having pulled off a transition that only the highest performing teams have been able to make.
- The gold standard is a 40+ efficiency score ($\text{ARR/revenue growth \%} + \text{EBITDA/FCF margin \%} > 40$). The scoreboard has changed and we've moved from a market that exclusively valued revenue growth to one where both revenue growth and profitability matter. The median [BVP Cloud Index](#) company has an efficiency score of 33%. Most software companies managed by experienced PE firms have an efficiency score of 40+. This is what investors and buyers of software companies have come to expect. If you find yourself deviating from this benchmark, it is important to assess why and whether you have a clear path to get there.
- Avoid death by a thousand cuts. As of Q1 of 2023, we are seeing a second wave of layoffs and cost reductions rippling through the software ecosystem. If you're going to reset your cost structure, make the reset substantial enough that you can avoid making painful changes in the future.
- Culture and communication are key. Your team needs to understand that software companies are ultimately valued on their profits. Revenue multiples are just a proxy for future profit generation. If you can create a culture that focuses on growing revenue while keeping expenses as low as possible, it will be much easier to generate profit later.
- Give your executive team ownership over the problem. As you think about how to roll out a cost reduction plan, one approach is a top-down edict from the CEO or CFO. This can be effective but may create an adversarial relationship with your execs. Consider letting your team take ownership of the problem by framing the goal (e.g. "we need to get to rule of 40") and challenging them to figure out how to get there. Use that as the foundation for a cost savings strategy.

The Rule of X

The proper way cloud leaders should think about the growth vs. profit tradeoff

BY BYRON DEETER AND SAM BONDY



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Why the traditional Rule of 40 math is dead wrong

As interest rates have returned to historical norms, the world has returned its focus to cost of capital and free cash flow generation. Businesses are working hard to conform to traditional heuristics like Rule of 40 (a metric that Bessemer helped popularize, i.e., that the sum of revenue growth and profit margin should equal 40%+). Executives of both private and public cloud companies often believe free cash flow (FCF) margins are just as important as (if not more important than) growth and that the tradeoff is 1:1. Many finance executives love the Rule of 40 for its clarity, but assigning equal weighting to growth and profitability for late stage businesses is flawed and has caused misguided business decisions.

Our take?

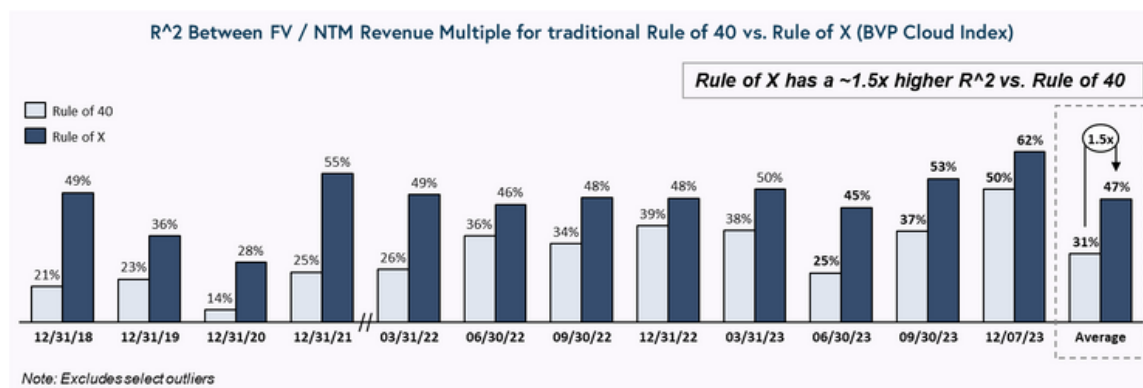
Growth needs to remain the primary priority for businesses with adequate FCF margins. While the focus on efficiency is well-founded, the traditional Rule of 40 math is dead wrong as you approach breakeven and turn free cash flow positive.

The world has over-rotated into a FCF margin mindset over a growth mindset, which is backwards for growing efficient businesses. Long-term models show that even in tight markets, growth should be valued at least ~2x-3x more than FCF margin.

Why?

While a margin increase has a linear impact on value, a growth rate increase can have a compounding impact on value. We show the detailed math below, and it's confirmed by public market valuation correlations when you backtest the relative importance of growth vs. FCF margin. The actual ratio fluctuates massively in the short term—ranging from ~2x to ~9x in the past handful of years—but over the long term, the ratio typically settles at 2x to 3x more value for growth over profitability.

We recommend that even the most conservative financial planners can safely use a ratio of ~2x growth over profitability for late stage private businesses; public companies with lower costs of capital can use a ~2-3x multiple (as long as the growth is efficient).



Introducing The Rule of X

At Bessemer, we wanted to introduce a new metric that more accurately represents a cloud business's valuation by placing a more accurate weight on its growth and future recurring revenue.

Introducing the Rule of X. As the name suggests, the Rule of X is an adjusted form of Rule of 40 taking composition (and weighting) into account.



The Rule of X = (Growth Rate x Multiplier*) + FCF margin

* = multiplier on growth rate which today is ~2x for private companies and ~2-3x for public companies

Our advice to founders, CEOs and CFOs: as you do your own financial business planning for the future, it's critical that you keep a growth mindset and the proper math in mind, to ensure that you're maximizing the value potential of your business. Let's further explain the Rule of X, the analysis and fundamentals of our thinking, and why leaders need to optimize for growth—at appropriate costs!

Breaking down the Rule of X

Let's look at a hypothetical scenario to illustrate the point — if someone offered you A) \$1 today, or B) to invest that \$1 now and get back \$1 starting next year and every year after that, you should take Option B every time. This is the power of the cloud model. For every dollar an efficient Cloud SaaS business spends on sales and marketing, the company will see a dollar of recurring revenue materialize ideally into perpetuity. Even if you adjust these cash flows for gross margins, e.g., \$1 in FCF today vs. \$0.70/year (70% GM x \$1 of new revenue) for 10+ years, the math is still compelling at \$7 returned for the \$1 invested.

Admittedly some current public market investors are behaving more like kids in the marshmallow study and demanding their FCF now, but we encourage you to think longer term.

The Rule of X is a valuation metric used to explain this concept mathematically taking composition (and weighting) into account.

But first, let's compare the two:

The Rule of X = Growth Rate + FCF margin

As Rule of 40 states, businesses with a Rule of 40%+ are deemed increasingly valuable. For example, if you are growing 30% per year and your profit margin is 15%, then your Rule of 40 is 45%.

The Rule of X = (Growth Rate x Multiplier*) + FCF margin

In comparison to understand the math, if we were to take the Rule of X (*where the growth rate multiplier is 2x), it would be 75% (30% x 2 + 15% = 75%).

To now highlight the differences, all else being equal, a business with 30% growth and 15% FCF margins should be valued more highly than a business with 15% growth and 30% FCF margins (same Rule of 40, different Rule of X). This is validated by fundamental discounted cash flow analyses and confirmed by public market data (examples shown at the end).

For a public cloud business in today's market, this means that a 1% increase in growth rate has 2.3x the positive impact on valuation multiple versus a 1% increase in FCF margin.



Growth v. burn tradeoff

The traditional Rule of 40 has been deployed historically to help value a business, but the metric alone—and even the Rule of X—cannot be used in a vacuum. As venture investors, we focus on additional factors such as market size, economic moat, unit economics, customer quality, retention, product roadmap, balance sheet strength, financing environment, and much more.

We know that for CEOs, every decision is a tradeoff. For cloud businesses, the most common tradeoff is between growth and burn (e.g., what will we get for our burn?). Keep in mind, some fuel sources burn more cleanly than others. Ultimately, burn is a form of investment and can be used for product development, sales and marketing, G&A, and other areas that will ideally go on to yield future revenue.

We'll warn you that it's harder to apply the Rule of X math to earlier stage private businesses that are growing >125% and burning >75% for extended periods and instead we'd refer you to some of our other materials at www.bvp.com/cloud for the relevant metrics for these stages. However, in periods with lower cost of capital, the math holds even at earlier stages. Snowflake is an extreme example — the company famously burned \$1+ billion ahead of becoming FCF profitable in FY 2022. Snowflake, which was the largest cloud IPO of all time, raised ~\$3.4 billion with a first-day closing market cap of ~\$70 billion. The moral of the story? Burning \$1+ billion yielded a ~\$60 -70 billion business which is still compounding at 30%+.

Market analysis on growth vs. FCF margin for cloud businesses

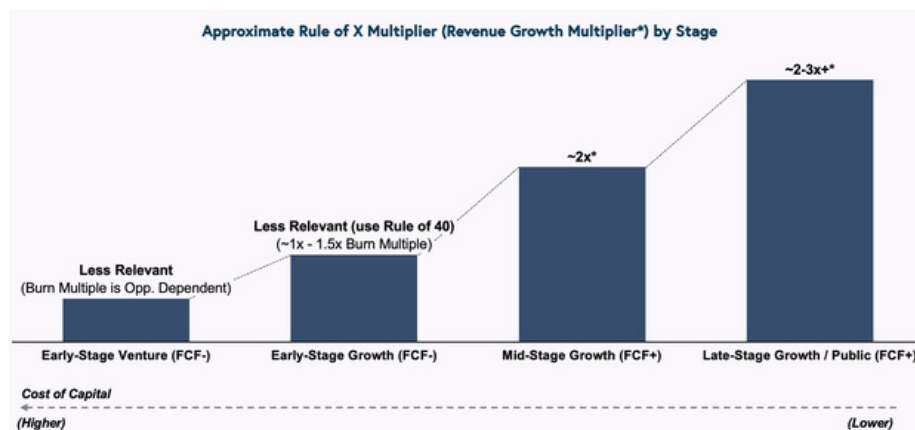
If we look at the BVP Cloud Index through the lens of a multiple regression over the past ~5-6 years, the weighting of revenue growth vs. FCF margin on determining valuation multiples has ranged from ~2x to ~9x. In our view, 2020 and 2021 were outlier periods (as Bessemer's Janelle Teng highlighted in her 2022 analysis), where investors placed a significantly higher importance on growth vs. FCF margin, emphasizing the "growth at all costs" mindset. In a normalized period, we offer up ~2x to ~3x as a conservative base assumption, but encourage you to tailor the multiplier on revenue growth based on current market dynamics and your future assumptions (hence the "X", in The Rule of X). This multiplier will float over time, so do not get distracted by short term fluctuations. Your Rule of X will also change depending on the stage of your business. Logically, businesses with higher cost of capital will place a relatively lower premium on growth over margin.

For an early-stage venture/growth investment with negative FCF, we should note that the Rule of X is less relevant, and we still think in terms of the business achieving an attractive burn multiple (ideally ~1x-1.5x). If you look at two businesses:

- Company A: 100% NTM growth and (100%) NTM burn: 100% Rule of X* and ~2x burn multiple
- Company B: 150% NTM growth and (200%) NTM burn: 100% Rule of X* and ~3x burn multiple

(*assumes 2x revenue growth multiplier)

In the above example, most companies would choose the profile of Company A. Additionally, becoming "default alive" and crossing into FCF+ territory can help build independence as well as create a bump in valuation.





As of late 2023, the average Rule of 40 for the BVP Cloud Index was ~31% and the average Rule of X is ~50% (the respective medians are similar to the means). Whereas top decile cloud businesses trade at a ~48% Rule of 40 (with the top few being 50%+) and a ~80% average Rule of X (based on a 2.3x multiplier ... with the top few trading at ~90%+). A basic good, better, best framework for the current public markets is below. Private companies and newly public companies will obviously tend to have a higher growth profile and lower FCF, but this is what awesome looks like for scaled public companies, and those should be your ultimate targets.

Good, Better, Best framework

Good, Better, Best: Rule of X = (Growth Rate x Multiplier*) + FCF margin

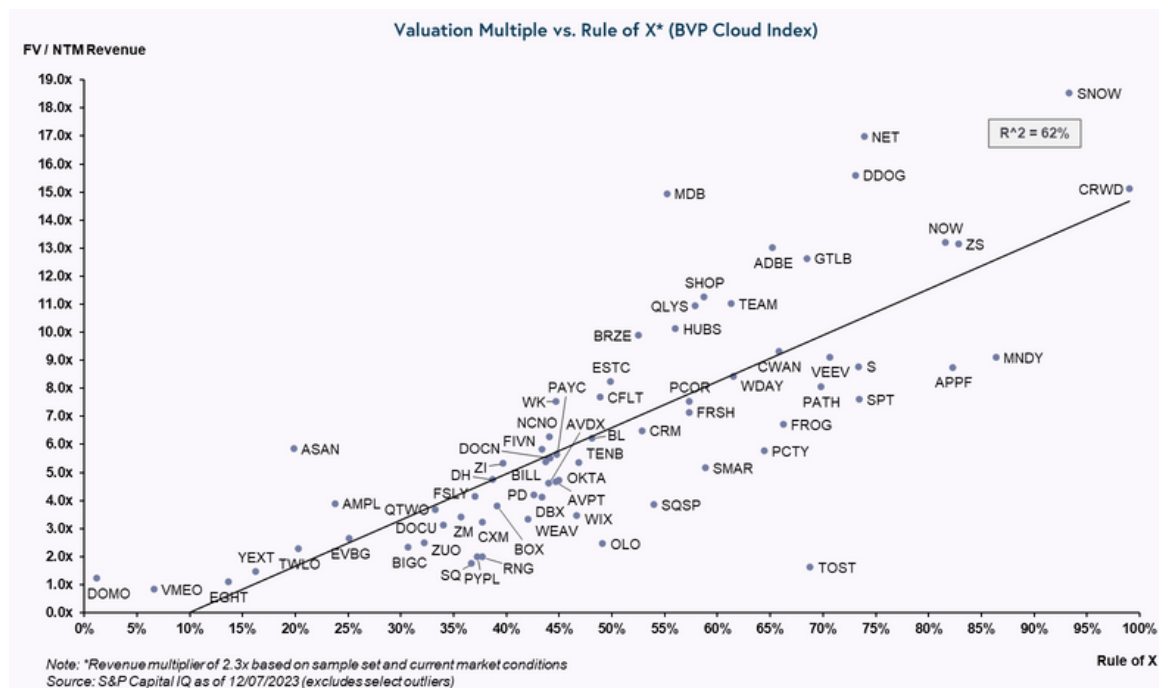
Best: $\sim 25\% \times 2 + \sim 20\% = \sim 70\%+$

Better: $\sim 15\% \times 2 + \sim 20\% = \sim 50\%+$

Good: $\sim 12\% \times 2 + \sim 16\% = \sim 40\%+$

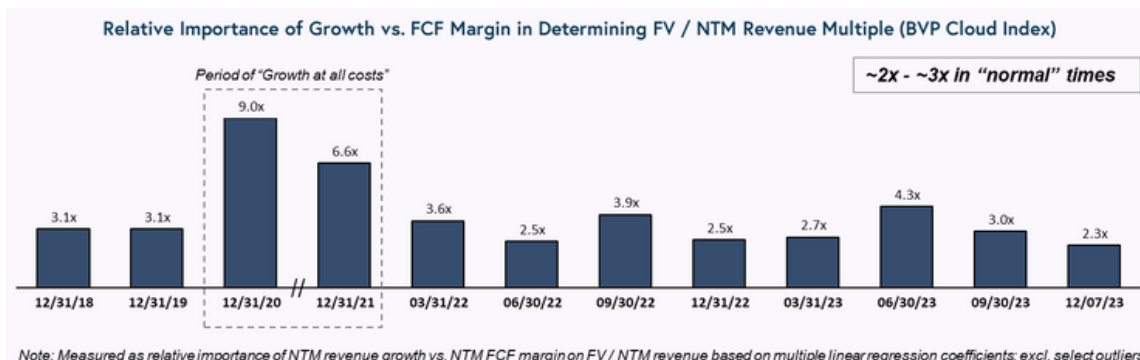
*Note: Based on BVP Cloud index; *Revenue multiplier of 2x for simplicity (guidelines for late-stage growth / public FCF+ companies)*

To further test this on public data, the valuation multiple correlation has proven to be much stronger for the Rule of X vs. the Rule of 40. Note that FCF margin should be apples-to-apples with your peer group, but the advanced form of this could use Net Income and be fully burdened for stock-based compensation.





In today's environment, Rule of 40 vs. FV / NTM Revenue R^2 is 50% whereas Rule of X yields a 62% R^2 . Rule of X has consistently shown higher correlations vs. the traditional Rule of 40 over time (e.g., Rule of X > Rule of 40). On average, the coefficient of determination for Rule of X is ~1.5x stronger vs. the traditional Rule of 40. This indicates how well Rule of 40 or Rule of X predicts the variation in FV / NTM Revenue Multiple – higher is better.



Good, Better, Best framework

Before many great businesses gain market dominance, they often require significant investment. We've been fortunate to work with many industry defining companies at Bessemer Venture Partners including Shopify, LinkedIn, Twilio, Canva, Pinterest, Toast, ServiceTitan, and numerous others that have collectively invested billions of dollars into their businesses before IPO and before achieving profitability.

Efficiency is critically important to building a healthy business and you should manage your five C's of cloud finance closely, but don't be afraid to lean into growth to secure and maintain a foothold in your market. Putting the Rule of X to good use means making judicious long-term investments in your business, be it a new Second Act product, robust partnerships strategy, or research and development. As venture investors, we use the concepts within the Rule of X to collaborate with our portfolio companies and recommend that you also use The Rule of X to maximize value in your business.

If you've got a great team and an awesome Rule of X score, we'd love to get in touch — reach out to Byron Deeter and Sam Bondy (sbondy@bvp.com).

The research behind this new metric would not have been possible without the collective thinking and contributions from our Bessemer partnership and team. Special recognition goes out to Kent Bennett, David Cowan, Sameer Dholakia, Mary D'Onofrio, Mike Droesch, Jeff Epstein, Brian Feinstein, Adam Fisher, Talia Goldberg, Jeremy Levine, Elliott Robinson, Janelle Teng, Hansae Catlett, Caty Rea, Grace Ma, Alex Yuditski, among others.

PARTING THOUGHTS FROM SAMEER DHOKALIA

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If you're a CEO responsible for scaling a business into double-digit ARR, chances are it's your first time. Very few growth-stage CEOs have the benefit of experience when they rise to this daunting challenge. So it's natural to feel a huge weight of responsibility on your shoulders—to employees (and their families), to your management team, to investors and your Board, and to yourself. And, yet, at the same time, there's no guidebook to prepare you for the one-of-a-kind challenge of scaling your particular business. The next best thing, however, is talking to folks who have done it before.

That's why I wanted to write this guide—to share the surprises I encountered to prepare you for your startup's "teenage years." And while I recognize that every situation is unique, and my lessons learned may not map one-to-one to yours, I do hope that some of the generalized lessons here will prove useful.

When I joined SendGrid in 2014, it was a ~\$30 million dollar business with 150 employees and big ambitions to grow to over \$100 million (what we now call a Centaur) and go public within three to four years. By the time I left in 2020, we had scaled to over 400 employees, had taken the company public, then got acquired by Twilio, all while building from a business with tens of millions of ARR to one with hundreds. The number one question fellow CEOs on the same journey would often ask was, "What changes when you grow a business past \$10M ARR?" My answer? Nearly everything.

The way you lead when you're going from zero to \$1 million in ARR is wildly different from \$1 million to \$10 million, which in turn is wildly different from \$10 million to \$100 million.

When you get out of startup mode and move into the growth stage, your approach must change radically if you're going to continue to be an effective leader. You have to let go of the tactics that led to your success to date because they're often directly contradictory to what you need to be doing for the next stage. The adage "what got you here won't get you there" is particularly poignant here.



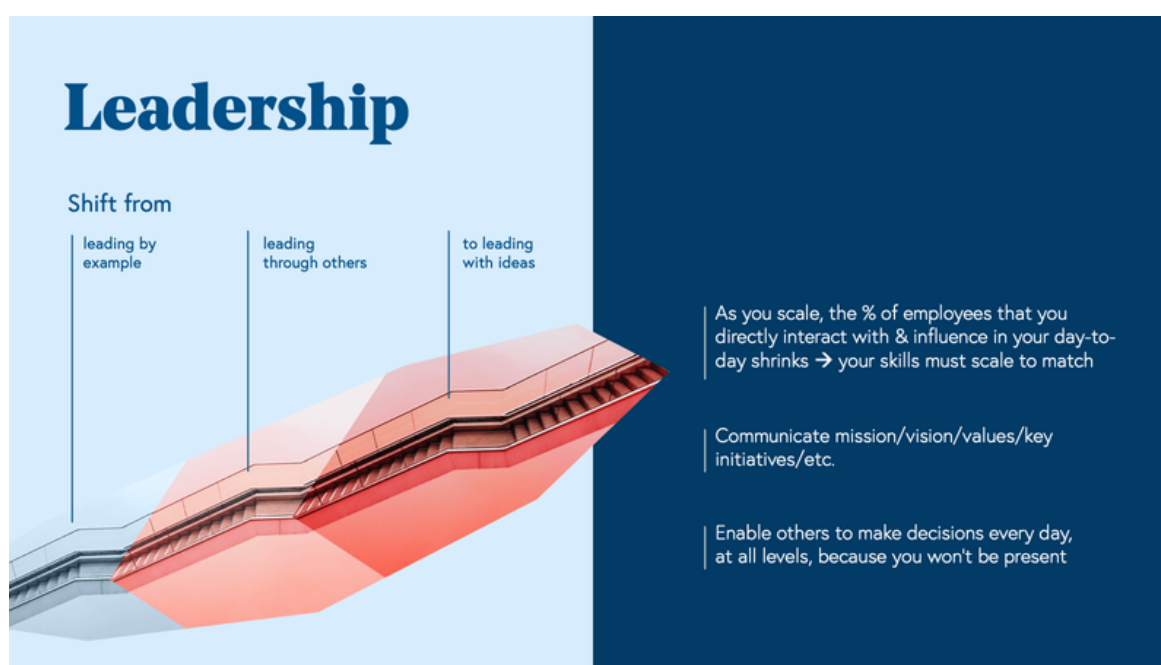
One note before we dive into the lessons I learned: I encourage you to read on with a very open mindset and remember that new business goals require different leadership skill sets. Humans brains have evolved to be very comfortable with routine. We are resistant to meaningful changes. Unfortunately as you are building a company, for every next summit you ascend, everything is going to change. The sooner you can welcome change, the better of a leader you'll be. Read on as I share six radical changes you need to make to your leadership style to remain successful as you scale from double-digit ARR to triple-digit ARR and beyond.



Lesson 1: Lead by ideas instead of example

In the early days of a startup, as the CEO, it's natural to lead by example. It's likely you'll personally interact with most of your employees on any given day, so they can observe how you think, how you problem-solve, and how you embody your company's values. But as you grow your team, the percentage of employees you'll personally interact with on a daily basis will shrink. This means you need a new leadership approach. At the \$1-10 million stage, this usually takes the form of leading through other leaders—setting direction and trying to lead through your executives who in turn are leading their teams.

Once you reach the \$10-100 million stage, your most efficient route to reach all employees is to lead through ideas. By sharing meaningful concepts via stories, you'll allow your employees to quickly make decisions that support your vision without needing to physically be in the room.



I felt the need to shift to ideas-based leadership when I was at SendGrid. In the early days, all employees felt a great degree of ownership. Problems would get surfaced immediately—they would get yelled about, complained about, talked about over lunch. But as we grew to hundreds of employees, folks would see the same problems but wouldn't feel empowered to voice their concerns. They might think, "Well I'm just an individual contributor, that's somebody else's / management's job."

At our next company kickoff in 2017, I told about 400 of our employees, known as Gridders, a story about automotive manufacturing in Japan (and implored them to bear with me, promising it would relate back to software in the end!). In the 1980s, Japanese cars were renowned worldwide for being top quality and efficiently made—therefore much more affordable. The rest of the world marveled at how that level of quality at such a low cost was possible.

Japanese automotive manufacturing became the subject of much study, and researchers learned about a powerful methodology employed by one of the carmakers, called the Toyota Production System (TPS). One of the key innovations of the TPS was that in all manufacturing plants, there was a cord called the Andon cord hanging next to all employees on the assembly line. If any employee yanked it, it literally shut the production line down. Employees were told to pull this cord when they noticed a quality issue.



As soon as an employee pulled the Andon cord, managers and workers would flock to them... and the first thing they were trained to do was to say, "Thank you." Why? Because this person was preventing the entire assembly line from replicating a problem that would be much more expensive to fix later in QA. Then the team would work to get to the root of the problem. Empowering hourly wage workers to shut down a production line generating tens of millions of dollars a day was very contrarian in its day. But empowering workers on the floor who were closest to the problem to flag problems was Toyota's key to success.

"Empower employees to pull the Andon cord."

The room full of Gridders got it right away. I told them, "I need you all to feel empowered to pull the Andon cord when you see something that is broken in our company. If you are brave enough to do this, every leader in this room will thank you." This story really stuck. For years to come, Gridders would say, "I need to pull the Andon cord" when they spotted an issue—or opportunity! It's one thing to simply tell your employees what the company's values are, but it's entirely another to communicate an idea through a story. By giving employees a common language to name challenging issues, and a story that got lodged in their memories, I found a way to lead in rooms where it was impossible for me to be physically present.

2. Widen your aperture drastically to think long-term

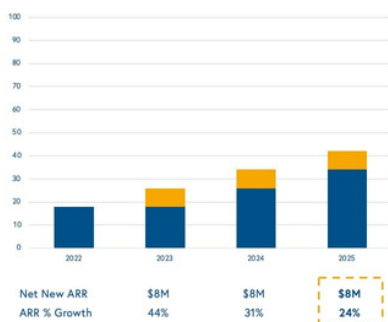
At an early stage startup, a founder is likely pondering questions like, "Am I gonna make payroll next month? Are we getting new customers signed up? Are they validating our vision?" Most of these questions are very near-term and their progress will likely be measured on a weekly and monthly basis.

But as your company matures, the aperture starts widening. From \$1-\$10 million, you'll probably start thinking in quarters and one fiscal year (welcome to the "Annual Board Plan"), versus weeks and months. But you're still rarely thinking about anything beyond the year ahead. But when you begin scaling from \$10-100 million, it's time to start thinking about multi-year plans.

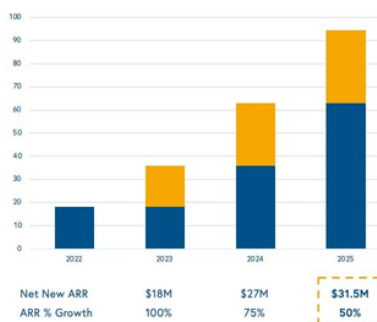
The question becomes, "How does this year's activity position us for next year's success?" If you don't make the right investments now, there's no chance you'll have planted the right seeds to be where you need to be in two years.

It can often be hard for employees to wrap their heads around what it means to maintain a high growth rate, at scale, in the years to come, with a narrow aperture. That is, it's hard for them to internalize how the law of large numbers puts an inherent downward pressure on their future growth rates. At first blush, they may assume that simply continuing the hard work that they've already been doing and winning customers in the marketplace at roughly the same scale year after year is sufficient. But mathematically, a constant amount of growth will yield an ever-declining growth rate. It's just math. A constant numerator (absolute dollars of a new revenue) over a growing denominator (the absolute dollars of the total business) will lead to a smaller percentage. So if employees are not thinking big, the growth rate will decelerate rapidly. At a high growth SaaS company, this would be failing at our goal to scale the business and become an IPO-worthy company. But you wouldn't see that unless you took a multi-year view of the problem.

SCENARIO A: CONSTANT NET NEW ARR



SCENARIO B: AVG. SAAS GROWTH RATES





That's why I'd circulate a version of the graph above to help employees understand the long view. The graph on the left simply shows what would happen to a growth rate if a constant ARR amount is added each year (drops precipitously, in this example, from 44% to 24%). The graph on the right shows how much net new ARR is required to hold a high level of growth. In this example, it shows that the company would need to add ~\$35 million in new ARR in year three, which is literally the size of the entire company in year zero! (In other words, this company would have to add as much revenue in year three as they did life-to-date, just to hold a reasonably high-growth rate). Helping them see a multi-year vision allowed my employees to understand that we were going to have to think bigger, and make big bets and investments now in order to generate meaningful revenue streams in the future to hold our growth rate.

Annual planning is another example of an area where you need to see the bigger picture. As an early stage startup, annual planning is typically pretty minimal. After all, the focus is more about getting through the year than planning the next one. At a later stage startup, planning for the coming year might start to feel relevant around November or December. But when you're scaling beyond \$10 million, the date moves further and further back in the year because you recognize that your investments are always impacting the next calendar year—and that these investments take time. For example, once we got to \$50 million at SendGrid, our annual planning process would begin in June or July.

3. Find your communication rhythm

In my humble opinion, the hardest part about scaling a business from \$10 million to \$100 million is orchestrating hundreds of humans to work together, in concert, on the right set of goals. As the leader, you need to establish the right rhythm of communication for the business.

The rest of the SendGrid leadership team and I believed that the more we communicated, the more we were empowering employees to make better day-to-day decisions. It's impossible to expect your individual contributors and managers and directors to make the right calls tactically if they don't understand the strategy. But we had to find a way to do this without consuming too much time or effort. When I joined SendGrid and the company was at \$30 million in ARR, we had a weekly all-hands meeting. But as we kept growing, we realized we weren't able to keep delivering high quality and impactful content that frequently. There was just too much happening. So we decided to move to a monthly cadence.

In addition to these monthly updates, we decided we were going to have two major all employee events—an annual kickoff in January and another event in the summer. In January, we laid out the major priorities and initiatives for the year and explained in detail why they mattered and how they fit into the big picture. Each initiative had clear owners, goals, and metrics associated with it. We ensured that everybody understood the relative importance of the project so that they could make trade-offs. Then in the summer, we gave progress updates on how each initiative was tracking, and made periodic reassessments of our goals and plans based on things like changing market conditions. This allowed everybody to put their heads back down and finish the year strong.

4. Expect increasing role specialization—and be prepared for personnel switch-ups if needed

Role specialization is a tough topic for many early-stage startup employees because many are drawn to the fun of getting to wear "multiple hats." If you're in marketing at a startup, one day you'll be changing something on the website, the next day you'll be planning an event, the next day you'll be figuring out the positioning. But a more mature business demands specialization.

Once you pass \$10 million in ARR, you need to shift away from having employees who are general athletes—that is, good at many things, but not excellent at one thing—towards having Olympic-level athletes at one sport. You need to narrow the swim lanes to focus on landing talent that is world class at a single discipline. This specialization often prompts many early employees to start looking for their next exciting series A startup. And there's absolutely nothing wrong with that. As a leadership team, you should be supportive of these folks and help them find their next role so you can recruit the right person for the seat.



As you're backfilling these roles, aim to bring on talent with a proven track record at a business that's two to three years ahead of yours. Many leaders make the mistake of hiring people for the skills that they need today. But the problem with that logic in a high-growth business is that it takes three to six months to hire the right person and then another three to six months for that person to become productive. Your company will be incredibly different in 12-24 months, so you always need to hire for who you want your company to be a year or more from now. But those hiring ambitions need to be aligned with the reality of the business. You want to hire for the future, but not too far out.

Too often scaling leaders hire for an incredibly impressive resume of an exec at a multi-billion-dollar company. It's not a given that it won't work out, but my experience is that they've just been too far away from smaller scale businesses to deal with the lack of infrastructure. At this stage, you still need a leader to roll-up their sleeves and get stuff done.

It's also extremely valuable to hire people who have succeeded at even later stage companies because they "have seen what great looks like" (as we use to say), and can use that experience to advise on how to operate to prepare for what's coming in the future. On the other hand, it's also very meaningful to have employees who stay with you for the whole journey. The early stage employees are typically culture carriers. They know the DNA of the company and have the deepest possible context for all past and present business decisions. You just have to make sure they're excited to start upskilling to specialize in one area. A healthy mix, in my experience, is the best recipe.

5. Don't let interdependencies slow down decision-making

Large companies are notorious for making decisions at a glacial pace. When you're running an operation with even hundreds of employees (let alone thousands), the sheer volume of dependencies for every decision you make is staggering. Let's say you want to update the pricing for a product. In order to make this decision, you have to get feedback from the sales team on how they think the market will react to the change, talk to the website team to make sure they have time to adjust the pricing page, make sure the billing team can change back office systems to make sure the invoices are correct, and more. The days of quick and easy decision-making huddled around a whiteboard are over.

Everybody hates bureaucracy. Nobody enjoys when decision making slows. So at SendGrid, we adopted the RAPID decision-making framework from Bain & Company. You can pick any decision-making framework, including RACI, DACI, among others. It only matters that you pick one and stick to it. We told employees that if they were being held up on making a decision for more than 48 hours, then they should "call a RAPID."

Employees were encouraged to talk to their immediate manager and identify the people that need to come together to make a decision. They'd figure out who had the decision-making authority and identify a timeline over which that decision would be made. This process really accelerated the velocity of our decision making. It gave everybody a framework to get themselves unstuck.

6. Bake culture into every stage of the employee lifecycle

When scaling a company, nearly everything changes. But one of the few things that stays the same—if you make it a conscious choice and get it right—is culture. And I'll say this here—you cannot scale your business if you do not scale your culture. If left to chance, you can lose control of your culture very quickly. If you have 100 employees and you plan to hire 100 more by the end of the year, more than 50% of the people in every interaction will be brand new. Every time that somebody deviates from the culture without being called out, you give tacit approval to the behavior. You can imagine how quickly your culture can morph if you're not proactive in managing deviations.



At SendGrid, I would personally spend 45 minutes with every new batch of employees as we scaled from 100 people to 400 people. I would talk about why culture mattered so much to us and implore each of them to become a steward of the culture. I told them they needed to call out deviations and celebrate great examples of our values being lived. The investment of my time made it very clear to every Gridder, I believe, that this was not just talk or posters on the walls — that we were deeply invested in culture as a company.

To reinforce our culture, we built a systemic set of processes across the entire employee life cycle. For example, we included a whole section about our values on our Careers page that introduced our company values, "the four H's": Happy, Hungry, Humble and Honest. We included a video where I talked about the kinds of people that I thought would love the SendGrid culture and people that wouldn't (because your culture has to have some edge to it—it can't be for everybody!)

In our hiring process, each interviewer was assigned one of the H's and given questions to ask to assess whether or not we thought this candidate demonstrated this quality. For example, we might give the prompt, "Tell me a little bit about a professional accomplishment of which you're most proud." Then we'd listen and do a pronoun count - how often did they say "we" and how often did they say "I." If they spoke more about themselves than others, we'd give them another chance: "Wow - that's amazing! You must have been working with a great team to accomplish all that?" If they gave credit and praise to other team members, it was a positive sign. And if they didn't, it was an indicator they weren't likely to be a fit (might be lacking the Humble H).

As part of our quarterly all employee meetings, we had our "Four H Awards" where employees could nominate their peers and vote for the person who best exemplified our values. The awards ceremony sent a strong signal to everybody in the company about how important it was to us to celebrate culture carriers. (These awards were invariably every Gridder's favorite part of our All Hands! It is so much fun to celebrate the teammates who make coming to work everyday a joy!) Our annual reviews also had a whole section based on culture, and exemplifying these values was a major factor in who got promoted. The investment that a leadership team needs to make to scale culture is significant, but unquestionably worthwhile to create the environment where excellent work happens. We often said, "if we can make SendGrid a place where every Gridder can come and do their best work, every day, with obstacles removed and opportunities created, there is nothing we can't accomplish together."

Scaling successfully is about seeing the longview

Scaling a high-growth company is not for the faint of heart. If you don't get ahead of the changes that start coming at you hard and fast, it'll be chaos at your company. One of two things may happen—either it'll be dysfunctional because you haven't orchestrated all the humans in the right way or it'll show up in the financials. (And if you hit a growth wall, you might be in the penalty box for two years while you build your way out of it, since business initiatives have such long lead times.) With some thoughtful planning—and a willingness to evolve each year as your business scales—together, your team can successfully navigate those awkward "teenage years" of a company's life. It's all part of development! This change will lead to growth before a company is ready to take on the complexities of a public company life.



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