THE SIFT

Building tech teams

A behind the scenes look at Europe's fastest growing startups, from seed to Series C

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Get in touch with Christopher Sisserian,
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Laying the foundations

One of the hardest things about growing a business is growing a tech team of the right people at the right time. Even if you think you have your team and tooling in a good place, it only takes hiring a few extra people or developing one new feature before plans are knocked out of place and need rethinking.

Europe's most successful startups have all been through this resource juggling act. But, unless you know someone who works there, it can often be hard to get a sense of how these successful businesses built their teams and tech stacks and why they made the choices that they did.

There is no reason for companies to navigate this challenge blindly. That's why we made this guide to take an in-depth look at how leading businesses ran their tech teams at different stages of growth from Seed, Series A, Series B to Series C. Interviews with cofounders, chief technology officers and early team members shed light on what went on behind the scenes, the challenges they faced and their approaches to solving them.

Foreword from CircleCI

We have never lived in a period of faster and more transformative technological innovation. A force multiplier for this has been the meteoric evolution of the software engineering field. Software delivery has become the core engine of value creation in many companies.

In this era of turbo-charged software-enabled innovation, the way companies build software can significantly influence business results. Studies show that the performance level of a software engineering function is now a key indicator of a company's success prospects.

For early-stage startups, increased productivity helps teams to bring products to market quicker and improves their ability to attract vital capital as they scale. Of course, early-stage startups have limited resources and need to be efficient with their cash, which is why they need to be strategic about the way they use their developer time and not waste it on something that can be done more cheaply through automation. Consider that the cost of a developer minute is roughly $1.65, whereas the cost of a compute minute for automating an otherwise manual process is only around $0.006.

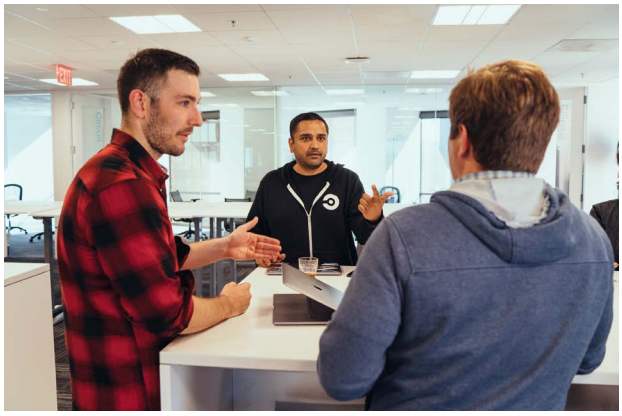
At a later stage, when engineering practices are more embedded in the company, operating a world class engineering team is a high-leverage differentiator. This single factor can create a strategic moat for the business and generate greater returns on invested capital. And for organisations operating at scale, a best-in-class engineering team can be the difference between plateauing growth and clear market leadership.

Put simply, technology and knowledge drive growth. But there is still work to be done. For the European tech ecosystem to sustain globally significant growth, the diffusion of knowledge around first-class software engineering practices is increasingly critical.

It is often asserted that European tech, broadly defined, is "behind" (primarily in comparison to North America) in its use of cutting-edge tools and advanced development techniques. Yet, at CircleCI, a software delivery platform, we see stand-out performers in established European tech hubs that benchmark favourably with global leaders in software development. We also see improving performance levels in teams in a diverse set of emerging locations; however, the median level of performance remains lower than in North America, and the highest performers are currently isolated in a small number of pockets (specific cities and sectors). This means that knowledge still remains siloed, skills are not evenly distributed and best practices are not being shared widely enough.

At CircleCI, we see stand-out performers in established European tech hubs that benchmark favourably with global leaders in software development.

Nevertheless, Europe already has numerous tech success stories, many of which have contributed to this guide, and an emerging wave of companies that are poised to reach considerable scale, such as TransferWise, Darktrace and Checkout.com. New data produced by the European Startups project reports that 38% of global seed funding is now invested in European startups. This is significant. Combined with the volume of increasingly large growth- and late-stage rounds, it shows that European tech companies can attract the financial capital to compete on the global stage.



CircleCI's office

Tremendous work has been done to cultivate startup communities and build the support systems needed to establish effective tech clusters in European countries. But, a recurrent theme I hear when talking to founders, incubators and accelerators is that technical founders (and their teams) are still greatly underserved by these programmes. Too often the focus is on the chief executive or founder and the help offered centres on business modeling, finance, funding, hiring etc.. And the few grassroot communities that aim to solve specific technical problems lack the support and guidance to scale at a regional level and impact wider growth trends.

However, the feedback suggests that we can materially improve startup success rates and make more productive use of financial capital if we increase support for chief technology officers and their teams at an earlier stage in the startup lifecycle. For example, the earlier a team instils good engineering practices and integrates best-in-class tools, the more effective they can be.

Without question, now is the time to accelerate investment in our human capital. To reach Europe's startup growth targets, we need to learn to better leverage the experience of our experts and tech luminaries to fast-track grassroots engineering talent and to cross-pollinate minds across sectors and countries.

This report synthesises the perspectives of some of the most innovative technology practitioners in Europe. It will reflect on how they led their engineering teams through critical stages of growth and what they learnt in doing so. It will share best practices and offer a roadmap for how these can be applied by Europe's startups today. Ultimately, this report aims to catalyse the open exchange of ideas around what makes the best software engineering teams stand out.

As Ursula von der Leyen emphasised in her State of the Union address, we have the people, we have the ideas, we have the vision. The more connected we are and the more openly we share, the faster we can develop the skills and knowledge required, and the more impact Europe's software engineers can have in shaping the world we want to live in.

Nick Mills
General manager, EMEA of CircleCI

Seed stage

The first steps

While there is much to do at seed stage, it's important that founding teams take the time to build a strong team of engineers. The founders we interviewed say their greatest successes can be traced back to technical teams that were empowered with the right tools early in the process and were encouraged to actively engage in decision making across the company.

During the seed stage a new company works to prove its concept and demonstrate market demand. Entrepreneurs sometimes self-fund, but they often approach potential investors for financial support (seed investment), including friends, family, angel investors and venture capitalists.

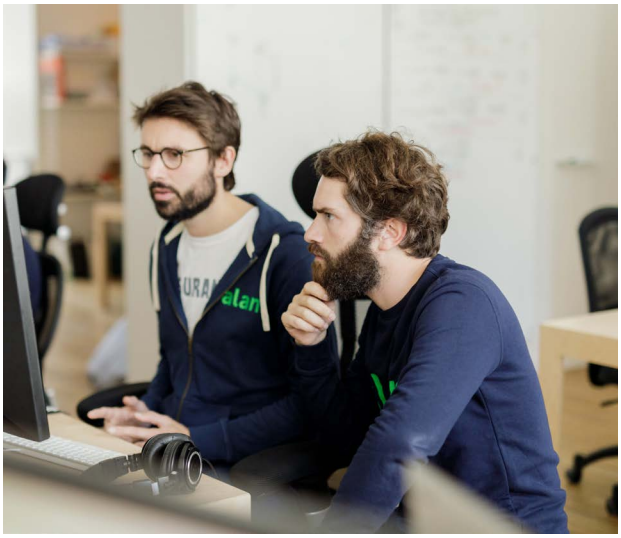
Finding and convincing the right people to get on board with the business is often the very first challenge a startup faces. That's because no matter how good, unique and marketable a business idea is, it cannot take off without the right team and technology behind it. The staffing choices, technical skills and tools brought to the table can set the tone for all that follows — which puts pressure on those early members to get it right.

When Charles Gorintin cofounded Alan in 2016, one of the first challenges he faced was to convince three Silicon Valley engineers to move to Paris. "I hadn't written a line of code and we had hired these people," says the chief technology officer, who spent five years working for Facebook, Instagram and Twitter in San Francisco.

Four years later, the French digital health insurance startup has more than 100,000 users, closed a €50m Series C round in 2020 and has hired a team of 200 people. But, in October 2016, when Gorintin and cofounder Jean-Charles Samuelian-Werve raised a seed round of €12m, there were only eight employees (including the three engineers).

THE IDEA IS THE LEAST IMPORTANT THING

Rapid growth often means that funding rounds become blurred, but seed funding is typically the first official equity investment startups receive from angel investors or venture capital firms. Typically, that investment will fall somewhere between $100,000 to $3m.



Charles Gorintin, Alan (right)

This early financial support is sometimes tied to an accelerator, such as Techstars, which invests $120,000 into startups as part of the three-month coaching and mentoring programme.

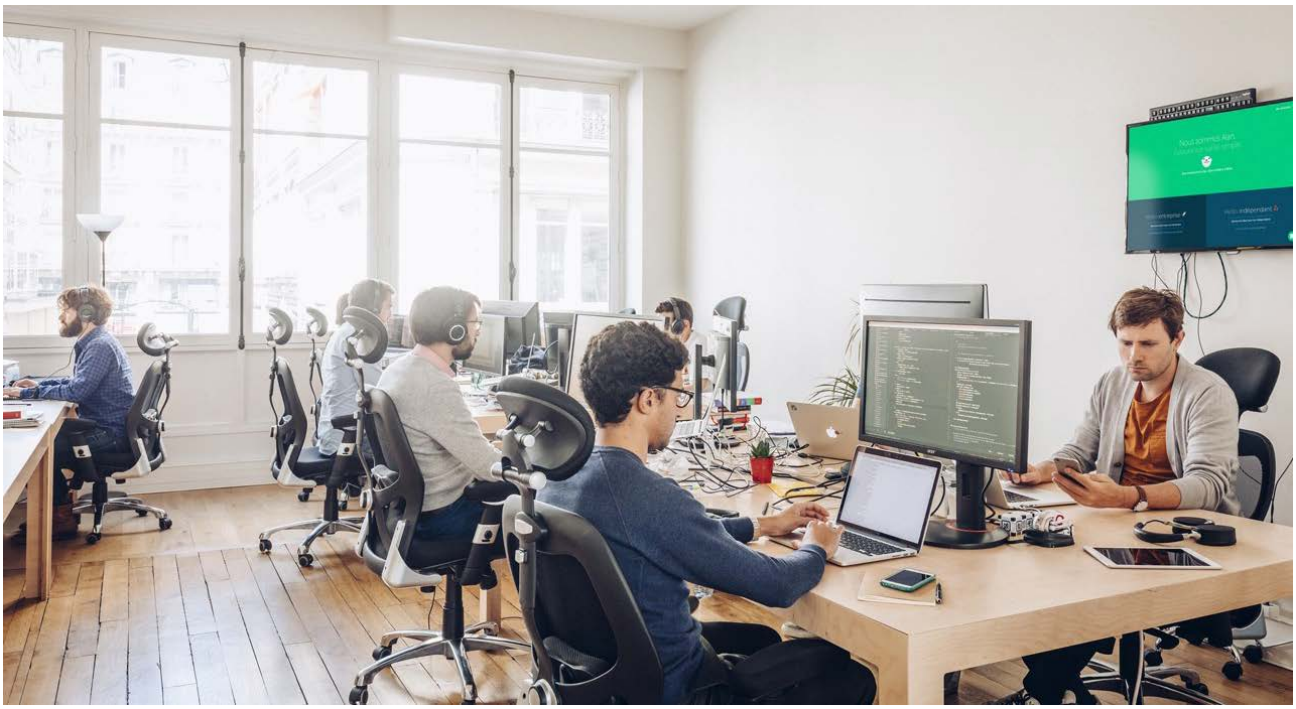
At this stage, Techstars' London managing director Eamonn Carey says they're looking for smart people who are coachable, resilient and have found some momentum, which their network and capital can accelerate. "The actual idea that companies are working on is frequently the least important thing because a lot of companies will have to pivot," he adds. "But, I [want to be] really enthused by the founders and the team that they're proposing to build around them."

"The actual idea that companies are working on is frequently the least important thing, because a lot of companies will have to pivot."

Eamonn Carey
Managing director of Techstars London

At Alan, Gorintin believes their impressive pace of growth comes down to instilling a culture of transparency, ownership and trust from day one — even down to publishing the organisation's salary grid, allowing the team to pick their own working hours and offering unlimited holidays. For the technology team, a culture of autonomy and an effective continuous integration (CI) and continuous delivery (CD) pipeline means "having as little friction as possible between having an idea and making it into production", Gorintin says. "At the same time, if there's a bug, we can fix it in less than five minutes."

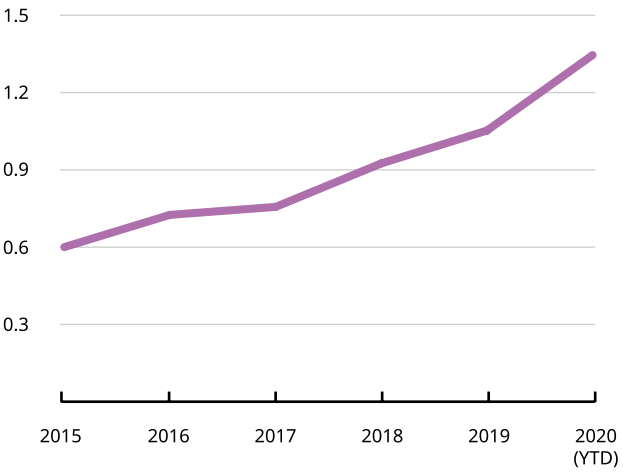
At times, that has felt uncomfortable — like laying the train tracks while the train is already running. For example, Alan launched without a way to invoice its customers, even though it was already providing insurance coverage. But it also helped them set the most urgent priorities. "Focusing on the biggest burning fires allowed us to move forward really fast with a tiny team," Gorintin says. The startup has built up a certain amount of technical debt, but he sees it as a worthwhile price to pay for speed. "[It's a] tool for us



Alan's office

to be able to move faster. Our idea is to focus on what matters today, not trying to solve scale issues that we might have in 10 years. We count on our future selves to be able to solve those problems."

In the technology world, that sort of pace and ability to adapt is important, says Patricia Hume, cofounder of venture capital firm Wisdom LLP. "We [use] an agile development concept around cupcakes versus wedding cakes — we like to see teams that are focused on building cupcakes," she says. "They're not trying to swallow the whole problem in one fell swoop with release one. It's an iterative approach — let me focus on what I understand to be the problem set and get that right. Then let me continue to build out, predicated on customer and market feedback."



Average European seed round (EUR M)

From 2015 to 2020 (YTD), the average seed investment has more than doubled. ***Source: europeanstartups.co***

TOOLING AND TECHNICAL DEBT

Getting the right CI/CD pipeline in place is also pivotal, says Hume. "In the old days, you could put together a development roadmap and you would do a new release every 18 months. Now, the market moves too fast. Elongated development cycles don't work," she says.

> ***"[Technical debt] is just companies not investing in good engineering practices that then haunt the organisation for a long time."***
>
> ***Matthew Skelton***
> *Head of consulting at Conflux*

Just because the business is early in its startup journey, doesn't mean it's too soon to start thinking about tooling and methodology, says Matthew Skelton, co-author of Team Topologies and head of consulting at Conflux. "You can be so focused on early growth and early customer acquisition, that you just bodge something together that sort of works. It's basically string and sticky tape, and then, of course, you never seem to have time to go back and fix it. So the system, product or service you're building ends up being increasingly creaky and risky."

What is often mistaken for technical debt – which is strictly speaking a deliberate choice to build something

without market awareness that has to be fixed later – Skelton adds, is actually just companies not investing in good engineering practices that then haunt the organisation for a long time.

"Good practices include continuous delivery, storing configuration in version control, making sure that we're integrating our code everyday and that we don't allow multiple different developers to go off and build separate things and then wait for weeks and weeks before merging it altogether," he says. "We know these lead to high performance. And there's no reason to be running any of this stuff ourselves, we should be using best-of-breed services that run in the cloud."

Growth can be facilitated when you automate the process of building, testing and deploying, he adds, because "it's automated in a way that gives us a very good insight into what's happening. And it's all stored in version control so if something goes wrong, we can get back to where we were very quickly. That gives a solid foundation for being able to try new things, address new market opportunities and innovate".

DUE DILIGENCE

On the investment side, Carey at Techstars says there is an element of due diligence done at every stage. For startups looking for seed money, that typically includes investigating whether a team will be able to achieve their vision with "what most startups have, which is limited capital, limited resources and limited ability to recruit or contract out". There may not even be a tech team yet: "there are some things that can be almost tacked together in a no code way that allows companies to build something quick … No startup has ever come into being with a fully functional codebase," he says.

"No startup has ever come into being with a fully functional codebase."

Eamonn Carey
Managing director of Techstars London

That approach worked well for Koru Kids, a London-based digital childcare agency that closed a £10m Series A round in 2019. Rachel Carrell, the founder and chief executive, did not hire any engineers until

Rachel Carrell, Koru Kids

the end of the company's first year. "We were very much a no-code startup. We used Google Sheets and Google Maps. We used an email provider called Front, which was very good for customer service, and then we added Airtable and Metabase," she says.

She believes that focusing on the right product-market fit initially, rather than creating bespoke technology, built more investor interest. She was then able to recruit a 13-strong technology team after raising a seed round of £3.5m in 2018. "It could have been much more engineering driven," Carrell says of her approach. "[But instead], I hired a lot of commercial, operational and marketing people. The main fundraising proof points for us were: Can we get the right nannies? Can we train them in the right way? Do families actually want this proposition? That was what we had to prove."

On the flipside, some investors do want to see a balanced founding team that includes technical expertise, says Stephen Page, chief executive of SFC Capital. He backed three former Oxford University students in 2012 who went on to create the identity verification platform Onfido, which now has a market cap of £350m. "If a founder is a techie, you need to have a commercial person in the team, otherwise you're going to build something that people won't buy because you don't know how to market it," Page says.

One of the biggest red flags for him is when a technology startup has a minimum viable product (MVP) but no chief technology officer, and has simply outsourced the product build. "That is very dangerous, because there's no culture of technology building in the company. They're coming at it from a sales and marketing viewpoint, or maybe a product and industry viewpoint, [rather than] being able to build software properly. One is not looking for perfection at the seed stage but you are looking for the vision that they're going to put in place the right processes, the right standards and the right team to build software."

ENGINEERS ARE NOT DRONES

Today, the Koru Kids platform has evolved substantially. It comprises many different products, including a mobile app, recruitment and training service, and a nanny matchmaking tool. "I describe it as a marketplace plus Software as a Service (SaaS), but it's even more than that," Carrell says. The team, which was once split between operations, engineering and product, has now been reorganised into autonomous, multifunctional squads, which has helped to accelerate growth. "It was quite a big change, but it was so seamless; we've never looked back," she adds. "We'd found our engineers weren't close enough to the customer."

Including engineers in the decision-making process of what to build and how to build it has also paid dividends at Perlego, which aims to be the "Spotify of textbooks". "Engineers are not just drones, moving tickets across the board," says Matthew Davis, chief technology officer and cofounder of the digital library and subscription service. "The quality of their work life improves dramatically when you include them in the problem-solving stage. When we started, all of the technical discovery was taken care of by me and that was quickly unsustainable."

Matthew David and Gauthier Van Malderen, Perlego

"The quality of [an engineer's] work life improves dramatically when you include them in the problem-solving stage."

Matthew Davis
CTO and cofounder of Perlego

Giving the technical team more autonomy did involve changing the structure and methodologies used, including implementing good code and development standards, and ensuring the teams were aligned and working in a consistent way through good review and documentation practices. "DevOps was certainly something we didn't pay enough attention to, and our CI/CD was very poor to start off with," Davis says. "That led to us having messy infrastructure, slow, clunky build processes, [and] difficult releases that would last until two or three in the morning."

He wishes he had incorporated automated testing earlier, using tools like Cypress or Selenium. "It's a lot faster to write tests using those tools than it is to write API tests and unit tests for the code. It is important to have tests written at all levels, but starting off with those tools would have reduced a lot of pain in the very early stages."

A $4.8m seed round in 2018 enabled the technology team at Perlego to grow from five to 10 people, including web and mobile developers, a quality assurance engineer and designer. Adding more resources helped with team morale, and moving to a goals-based rather than a features-based roadmap helped to set priorities and minimise rework.

"[Before that] our planning sessions would last for several hours," Davis says. "All the key stakeholders would get into a room once a month and argue over which were the most important features to build at that time." By agreeing on measurable goals ahead of time, such as improving the conversion rate or improving search, the team found it easier to decide which features would have the biggest impact.

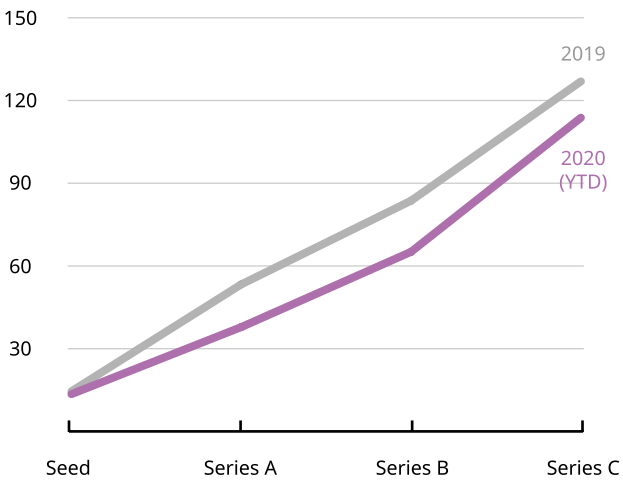
Perlego's team

NO MAGIC FORMULA FOR RECRUITMENT

Perlego's vice president of engineering, Callum Hubbarde, has played a key role in the expansion of the technology team, which has alleviated some of the pressure on Davis as chief technology officer. "For me, having a VP of engineering right from the beginning was crucial," Davis adds. "There's no real magic formula unfortunately for knowing how big your technology team should be and who to hire... but if your business depends on your product, it's important to grow your product team as quickly as possible according to what budgets allow for."

Hiring the best people that you can afford, rather than filling cheaper junior positions first, has been Gorintin's mantra at Alan too. "I don't think it's a gift to junior people to get them into a team that doesn't have much seniority because you don't help them grow," he says. The startup has also intentionally kept its engineers full stack, with fluidity between the teams so that a back-end engineer can fix or add something to the front end (and vice versa) when required. "At the beginning, I think it's important to have generalists that can touch everything they need to touch so that we can ship our product."

Alan added a head of talent to the organisation in 2018, but Gorintin stresses that recruitment has always been the responsibility of everyone in the company. He estimates that he spends around a third of his time on hiring. Alan also has a fairly unusual step in its recruitment process to evaluate culture fit — potential recruits spend a day working with the team before an offer is made. "The goal is not so much for us to know if we want to work with you, it's if you want to work with us," Gorintin says. From day one, he has been committed to hiring people that are better than himself. "It has forced me to lead with humility," he adds. "Having a strong vision and strong values from the get go has allowed us to be very deliberate in what we want to build as a company."



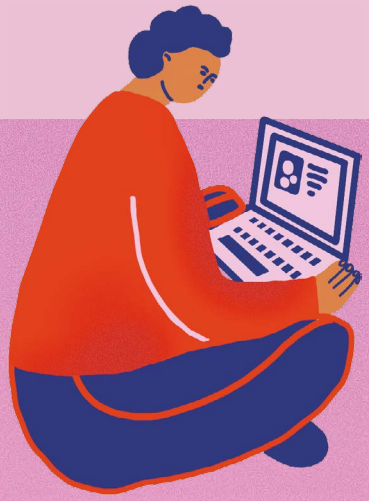
Median employees

The median number of employees has decreased by an average of 17% from seed-Series C. Are companies raising earlier, or has Covid-19 cut headcounts? ***Source: europeanstartups.co***

Series A

The training wheels are off

After a startup proves its concept, business model and the size of the market in the seed stage, Series A is when it becomes more serious: delivering product to market, scaling and turning a profit. Many companies find their engineering team moves in house (if previously outsourced) and grows as a matter of necessity. During this process, some founders found they have to make organisational changes to promote a positive culture and productivity.



Startups use Series A funding to further develop their products and user base. As with the seed stage, potential investors are still focused on the quality of the idea and the leadership team, but they also show more interest in the company's strategy and how it plans to scale and monetise the business.

While seed stage companies are often prized for the agility of their founders and readiness to adapt ideas to fit market needs, a company will only reach the next phase when an idea is nailed down, proven and ready to scale.

Series A is "a weird stage", says Beata Klein, an associate at Stockholm-based venture capital firm Creandum. "You have seed stage on the one hand, where you're selling an idea, and then Series B, where you are selling your metrics. Series A is somewhere in between these points."

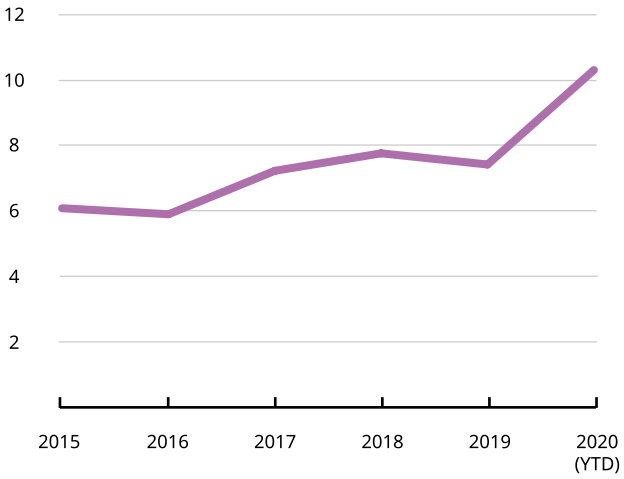
So what should founders and chief technology officers be making sure they communicate to prospective backers when seeking this round of funding? At this stage, one of the key selling points of a tech-focused startup should be its A-team of engineers. "We want to see this nucleus of people who are a magnet for great talent," Klein says. "Have they been able to recruit a stellar group of people who are even better than themselves?"

At this stage, one of the key selling points of a tech-focused startup should be its A-team of engineers.

In fact, failing to communicate the strength of the tech talent is a common pitfall. "We are cautious when there's not enough tech DNA in the core management team," says Fabian Heilemann, a Berlin-based partner at Earlybird Venture Capital. "In the businesses we seek, that's a fundamental value driver — not an add-on or something you could outsource."

For businesses that outsourced tech development at the very early stages, this is the time to bring things in-house. Both Klein and Heilemann say that, as a rough guide, they expect to see a tech team made up of between five and 15 engineers, with key functions including both the CPO and CTO roles fulfilled at the C-suite or just beneath.

"You want to have a holistic group of people who can provide you with a product," Klein says. After the Series A raise is completed, it's expected that these team members will start to specialise, and that a more sophisticated management structure will start to form.



Average European Series A round (EUR M)

The average Series A round jumped by 35% YoY to exceed €10m in 2020 (YTD). ***Source: europeanstartups.co***

"Usually from seed to Series A people are generalists. Maybe a dev leader would also spend 20% of their time coding," Klein explains. "After the Series A this will change, as you want someone who can take care of managing and hiring the developers."

When asked to pick examples of compelling tech investments from their respective portfolios, both Klein and Heilemann emphasised the importance of customer-centric tech. For Klein, Swedish health startup Kry demonstrates how demand for an entirely new market — doctor appointments by video — can be driven by an app that prioritises the customer experience. Over in Berlin, Heilemann says banking startup N26 has this selling point in common. "Although

Kry

both founders have a more general management background and are not software engineers, N26 from the early days had a strong focus on having the best UX/UI in the market. This was at the core of their DNA."

A CASE STUDY IN MANAGING TECH TEAM GROWTH: THRIVA

In the run-up to securing a £6m Series A investment in June 2019, Thriva cofounder and chief technology officer Tom Livesey knew he'd need to make some changes to the way he ran his tech team. The business as a whole had already grown from 14 to 50 people since raising £1.5m in seed funding in 2017, with the engineering team alone more than tripling in size to 17 members of staff.

When the team was a more modest five engineers, Livesey didn't need to worry about setting in place a proper organisational structure — there were few enough people (and priorities) that they could keep things moving along smoothly working as a single unit, focusing on the business priority of the day.

But as more people joined, this no longer proved efficient. Keen to replicate the camaraderie and cohesiveness of a smaller, cross-functional team, Livesey decided to restructure his team of 17 into smaller units.

Instead of organising these around functions — like UX, backend and DevOps — Thriva instead created cross-functional mini-departments that relate to different aspects of the product. One sits with the product and growth teams, taking on tasks like improving the onboarding process, and another focuses on the user experience, helping customers to access and understand their results. Finally, an "actions" team is tasked with making the product as sticky as possible. In Thriva's case, this means helping users to figure out what actions they can take to improve their health based on their blood test results, such as providing personalised supplement recommendations and health plans.

This model of creating cross-functional technical "squads" has been pioneered by Spotify. The music streaming platform has gone on to implement its

Thriva's founding team

'Spotify Tribe' method at a huge scale, with more than 30 agile teams across four offices.

One of the key advantages of this model is that dev teams don't end up getting siloed away from the rest of the business, meaning it's easier for non-technical colleagues to provide feedback. "We don't see engineering as a completely separate function," Livesey says. "That's not going to lead to the best product, you need to solve problems together."

"We don't see engineering as a completely separate function. That's not going to lead to the best product, you need to solve problems together."

Tom Livesey
Cofounder and CTO of Thriva

This setup isn't without its pitfalls. Livesey says having three separate teams working on different aspects of the product can sometimes end up "a bit Frankenstein-y". "Communication is the key thing to solve that, and a lot of that comes down to process," he says. "It's still an ongoing challenge, and the challenge of growing teams is that what worked well six months ago might not work now. The first stage is acknowledging that." To keep things running smoothly, Thriva uses Trello to manage its product

Thriva's office

inbox and filter in bug fixes and feature requests, JIRA for its technical planning and to manage sprint processes, and CircleCI to automate its CI pipeline.

When it comes to projects that cut across all teams — "like paying off technical debt or making big architectural changes" — Livesey sets up cross-team working groups.

HIRING HURDLES

Even with more cash in the bank, hiring remains one of his biggest challenges, Livesey says, particularly when it comes to widening the talent pipeline and ensuring a diverse set of CVs are coming through. "There are various tactical things we do," Livesey says, explaining that Thriva puts its job ads through gendered language decoders and works with recruiters that explicitly focus on putting forward a diverse range of candidates.

"Often you'll have engineers managing engineers, but management is a completely separate skill."

Tom Livesey
Cofounder and CTO of Thriva

Once a more formal organisational structure has been implemented, Livesey says it's also important to let team members know how they can progress through the newly-established ranks — a critical step to ensure staff remain motivated. "Often what you'll see, particularly at that stage going from seed to Series A, is that it might not make sense to say, hire dedicated engineering managers," Livesey says. "That poses a challenge for management. Often you'll have engineers managing engineers, but management is a completely separate skill."

Livesey says that Thriva has put two tracks in place: one for individual contributors who want to stick to coding, and another to train up and support those who see their future in people management.

For other chief technology officers transitioning through this growth stage, Livesey says it's important to remember that, naturally, "you're going to be further away from things day to day as the team grows".

"You need to hire really good technical leaders, so you feel comfortable and confident that you can give as much autonomy as you need to," he says. "Those first few leadership hires are really important, because they're going to be the people that then go on to hire people, that then go on to hire people."

BUILDING BY BOOTSTRAPPING

Startup growth and funding patterns come in many forms. Take, for example, Polish innovation consultancy and software development firm Netguru. Since launching in 2008, it has built its team up to over 700 people, and in that time it's not taken a single cent in venture capital funding.

"There were some [years] where we grew 100% year on year," reflects Wiktor Schmidt, cofounder and executive chairman. "It has been a strain on the business at

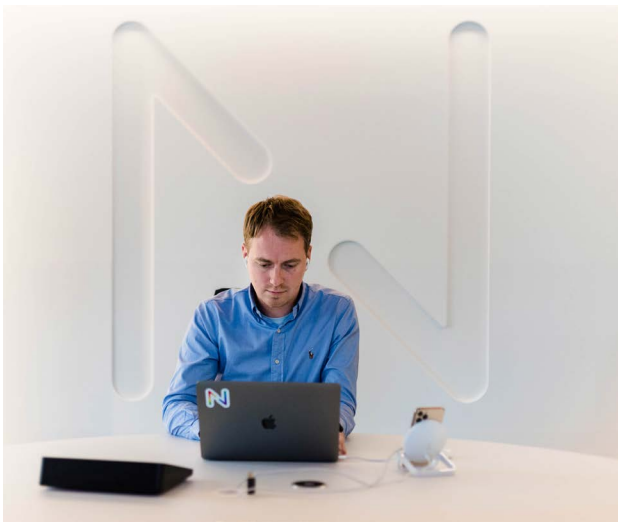
Netguru's office

Checkout.com's office

times, but it has helped us put the processes in place that would allow us to continue to grow [sustainably]."

Netguru is not the only successful tech business that's chosen to build by bootstrapping, following in the footsteps of Mailchimp, Basecamp and Shopify. The choice to go down this path is often dictated by market forces — when time is of the essence, it may make sense to take the money and snap up some market share.

But if a business can afford to take things more slowly, Schmidt says it can make for a stronger organisation in the long-run. "It allows you to build your team slower and do more thinking about building the culture and building the [structure]," he says. At Netguru, this means emphasising what the business can offer prospective employees beyond a big fat paycheck, such as exposure to building different types of products for clients, an acceptance of remote working and an open and collaborative culture.



Wiktor Schmidt, Netguru

Riaz Bordie, chief technology officer at Checkout.com, says that having a limited runway can also help bring focus and discipline when it comes to setting the tech team's priorities. "You can do machine learning and all sorts of crazy stuff, but you probably don't want to do that as early as possible because you want to be focused on what you're going to deliver. There needs to be a healthy balance between your pipeline and what [actually makes sense] to build in-house."

"There needs to be a healthy balance between your pipeline and what [makes sense] to build in-house."

Riaz Bordie
CTO of Checkout.com

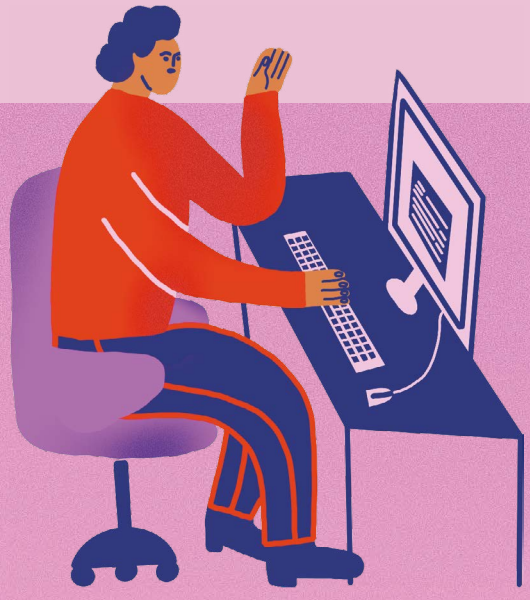
He suggests zoning in on what's mission critical for the business to build and adding the bells and whistles to the product later (if at all). "It's going to make you very disciplined as an organisation, as managers. You get better at truly measuring and valuing what really matters versus what's fluff, or what could add value, but later. You end up with small but reliable modules that become your foundation."

In May 2019, seven years into its lifetime and with over 200 employees across eight offices, Checkout.com raised $230m in investment. According to European Startups, it was the largest ever Series A round for a European fintech at the time. The company has since gone on to raise a further $150m. But Bordie says he's not letting the cash get to his head: "Limitation is the best friend of focus."

Series B

Welcome to the real world

The Series B stage is all about preparing a startup for success at a larger scale. The development stage is now in the rear view mirror, markets have been proven and entered, and a user base has been built. There is greater demand for the company's products and Series B funding is needed to meet it. At this stage, successful companies say having the right technical team and tools becomes even more important, especially to iterate the product as user feedback grows.



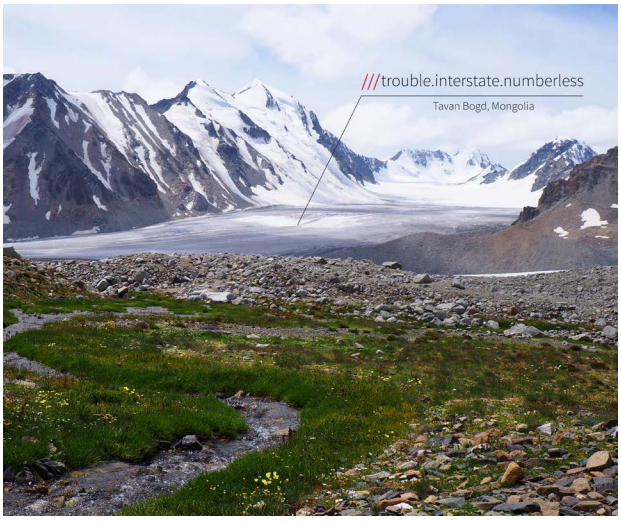
The Series B funding process is not too different from Series A. Often the same investors are involved. But to secure Series B funding, founders will need to emphasise their past accomplishments and prove their ability to accomplish much more in the future. If the leadership can demonstrate a detailed business plan, Series B investors will usually pay a higher price than those who invested in earlier stages as there is less calculated risk involved.

At Series B stage, startups will typically have proven product-market fit, moved beyond those few early adopters to attract more mainstream customers and started to recruit specialists that can build an organisation capable of growing rapidly.

"Series B is still early, but the tolerance for stuff that's a bit rough around the edges reduces," says Ed Lascelles, partner and head of technology investment at AlbionVC.

"Investors will interrogate the scalability of the business and want to see an alignment between the product goals and the commercial strategy on the roadmap. You'll begin to bring in people who are professional at honing the product — a product lead and head of engineering, for example. A core competence of almost any successful Series B company is also their ability to identify, recruit and then motivate those senior team members."

Series B funding is intended to take a startup past the development stage and into a growth phase where it can meet growing demand. It's still considered early-stage capital, but the average deal size in 2019 was $23.3m. That's grown significantly in recent years, according to one private equity group, but there has also been speculation about a funding gap in the UK at Series B because of tax incentives — such as the Enterprise Investment Scheme (EIS) and the Seed Enterprise Investment Scheme (SEIS) — for early-stage investment.



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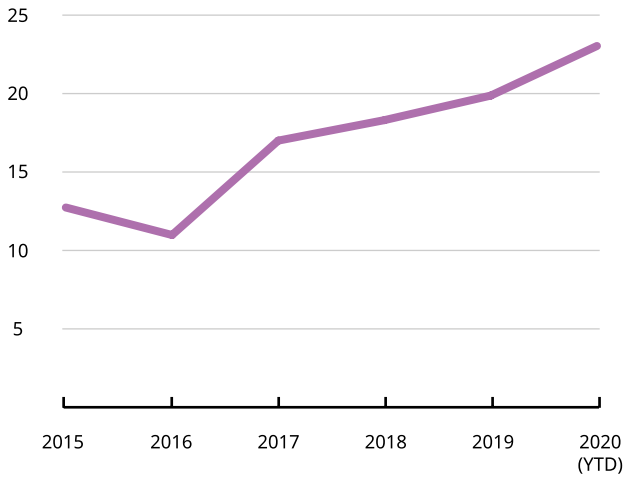


Average European Series B round (EUR M)

Source: europeanstartups.co

GROW THE TEAM, SUSTAIN THE CULTURE

For the geocode system startup what3words, raising $8.5m at Series B in 2016 allowed the founders to start to bring their technology team in-house, having built the first version of the platform with an external web development company. "I think Series B allowed us to think ahead for the first time," saus Jack Waley-Cohen, cofounder and chief operating officer. "We were gaining momentum, the horizon for the technical decisions went a bit further and we could start clearing some of the technical debt from the inevitable hacking that you do in the early days."

"We could start clearing some of the technical debt from the inevitable hacking that you do in the early days."

Jack Waley-Cohen
Chief operating officer and cofounder of what3words

As well as hiring their first in-house developer, who would later become their first chief technology officer, what3words also hired a head of HR. Seven years after their initial launch, they now have 120 employees spread across offices in London and Mongolia (a key testing ground and launchpad for the Asian market), including a technology team of 14. "I think one of the things I'm most pleased about is that while company culture has evolved, it has not changed," Waley-Cohen says. "It's not like we raised however many millions of pounds and suddenly everything changed."

Klaxoon's office

Culture fit has been something chief executive and founder of Klaxoon, Matthieu Beucher, has also prioritised when hiring. The French software engineer had the idea to revolutionise how meetings were held in 2009, but after struggling to get investment, he grew one project at a time using the €4,000 he put in himself. In 2018, Klaxoon raised €47m from investors in Series B funding and is on track to be France's next unicorn.

"From the beginning, we needed to have a product that was very reliable and could cope with millions of users," he says. From an initial five engineers, the technology team has since grown to more than 100 people. Klaxoon signed a partnership with Dropbox in 2019 and was selected as Microsoft's 2020 partner of the year in the Apps and Solutions for Microsoft Teams category after its user numbers skyrocketed during the Covid-19 lockdown. Somewhat surprisingly for a fast-growing technology company, the original five engineers are still there, as well as the project lead who introduced the agile methodology and many of the structures they still use today.

"We have a very low turnover rate, people stay longer than usual in the tech sector. I believe that's because we explain to them where we're going, we care what they think and invest in their training and skills," Beucher says. As well as good staff retention, around a third of the workforce has been referred by other employees. Trust is also very important in startups, he adds, because of the nature of the issues you're likely to face. "There's no magic around hiring a good team, especially in tech," he says. "Sometimes you're going to build something, but for whatever reason it's not going to work. So you have to have a lot of trust within the team to be able to face this and say, 'okay, we've made a mistake, this is normal'. When it's only about money and salary, that's not going to work."

GOOD COMMUNICATION = GOOD DECISIONS

And while a culture of open communication was quite rare in the technology sector 10 years ago, Beucher has run weekly round tables from the very beginning. "The idea is to avoid siloes, so people are able to understand the bigger picture," he says. "We believe everyone's opinion matters." It's an approach he says impressed the chief technology officer of Amazon and people of that calibre when they visited the company along with potential investors during the due diligence for Series B. "It was really inspiring for the team and gave us a lot of confidence," he adds.

Series B is the time that startups need to take a step back and think about introducing structure to facilitate good communication, says Meri Williams, DevOps expert, former chief technology officer of Monzo and Moo, and current chief technology officer at AI-powered rare disease treatment company Healx. Williams says there are key pain points that need to be addressed as startups grow. "At a certain size — say under 10 or 20 people — a lot comes for free. Everybody knows what everyone else is doing, you're so constrained that people can't be off mission, they can't be distracted, there's only one thing to do. The first thing that tends to happen as startups get a bit bigger than that is that

sense of disconnection, people not being sure what other people are doing. The mistake I see a lot of companies make is just to add more meetings."

"Series B is often when things feel different enough that you need to be a bit more explicit about what matters to you as an organisation," she adds. "Larger organisations that are successful are really just well-coordinated collections of smaller teams. So if you can get a small, multidisciplinary team to have sufficient context to make good decisions, sufficient alignment to the mission so that they're trying to build the right thing and the right expertise so that they're building it in the right way, and if you can network those together, then you can get really amazing results."

"Larger organisations that are successful are really just well-coordinated collections of smaller teams."

Meri Williams
Chief technology officer of Healx

German startup Pitch, which specialises in collaborative presentation software, has grown significantly since being founded in 2018. Its $30m Series B round closed in 2019, enabling the team to launch the product in private beta. "Right before that we moved from one large development team to small cross-functional teams, working on different aspects of the product," says Åsa Lidén, vice president of engineering. "Today, we are 90 people across the company with 15 product teams, so we've had to learn and adapt a lot as we've scaled to optimise for speed and efficiency."

The company had a strong technical focus from the start, Lidén says. Pitch's chief executive and cofounder Christian Reber previously founded the task management application Wunderlist, which was sold to Microsoft in 2015. "Four of our eight cofounders have a technical background and most of our early hires were engineers and designers. The perspective the team gained from building and selling Wunderlist has given us a real advantage I think. The cofounders have been very deliberate in hiring more senior talent and intentionally building a transparent and inclusive culture."

Pitch's founding team

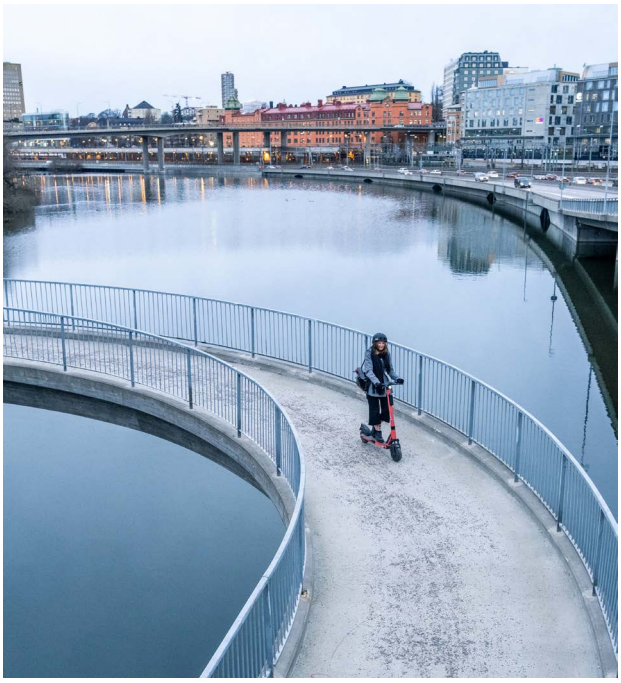
ITERATE WITH USER FEEDBACK

At Pitch, a lot of attention was paid to user feedback from the start, as well as testing and iteration. Only one year after the company launched into private beta, it publicly launched with more than 25,000 teams already using the product all over the world. "I think we've seen [that early user involvement] really pay off now," Lidén says. "Both the general encouragement and specific feature requests have helped us make Pitch better."

Continuous user testing, iteration and using the right tooling has also played a key role in the development of VOI Technology, an e-scooter startup founded in Stockholm in 2018. Despite only being two years old, the company has already raised $135m in funding and has 400 employees (50 of whom are engineers). When the team raised $85m in Series B funding in 2019, it already had four million registered users who had taken 14 million rides, and operated in 38 cities across 10 European countries.

"The minimum viable product (MVP) was what paved the path to success for us," says Adam Jafer, one of the four cofounders and the company's technology lead. "You need to know when the product is good enough, so that you can launch and actually get it into the hands of users to start learning. At the beginning, we hadn't really built out the functionality to do advanced analytics, but we were standing on the street talking to users, watching how they used the app, then running back into the office to fix it. Of course that doesn't scale, but it worked."

In the first few months of building the company, the technology team consisted of Jafer and Filip Lindvall, cofounder and chief technology architect. "It was



VOI Technology

always a trade off between when we had time to bring in someone new to the team, because obviously there's a lot of effort and costs [that go] into onboarding new people into the process you're working with," Lindvall says, adding that 2019 marked a change in terms of more rapid growth. When they started bringing on those first engineers, they found they quickly needed to start working with more organisational tooling. "I think we started off with just working with Trello in the beginning to get some ticket tracking, and start to see how we could distribute the workload over more people and set focus areas so people could run independently of each other," he adds.

ENABLING GROWTH WITH TECHNOLOGY

Jafer says one of the things that served them quite well was working with proven technologies that scale well, rather than trying the latest, coolest database. "That comes with both a lack of existing infrastructure and existing knowledge out in the market. When we started building out tooling in the beginning to handle continuous delivery and continuous deployment, it also really helped to know and understand what our actual requirements were. We'd start small and then fit those pieces together to build something that works."

"We also moved towards squad-based engineering teams to enable efficiency and scalability," Jafer says. "When you're scaling very, very quickly, priorities can shift from day to day. So having that autonomous, agile team that's very light on their feet and able to shift and be flexible [is essential]." What's also helped VOI grow is having clear roles, responsibilities and paths of communication. "Engineers are not building something for the sake of building something, they also understand why they are building it. They're more motivated and there's more empathy from non-technical stakeholders about where in the development process engineering is."

There will be an element of due diligence done by investors with companies at Series B stage, says Healx's Williams, who is also a technical advisor for Kindred Capital. "The things that people are often surprised to be asked about tend to be version control and true backups — when's the last time you actually checked that you can restore your backups? When's the last time you actually checked that you can roll back a change that you've made? What are your security policies? What are your data protection policies? What does your business continuity look like? It's the point when people start to want to be able to see how you got to the decision that you've got to. These are very silent successes, but very noisy failures. Nobody cares at all about your GDPR policy till you've got a leak."

The right tools can make a big difference, she adds, although many founders at Series B are still stuck in a scarcity mindset and don't want to spend the money. "That's a classic mistake people make when they're going from this super early stage to growing. Getting some additional funding can change the equation, but quite often people's instincts don't change as quickly as the funding situation changes. If they're still in this scarcity mindset of we lack money, we lack people, we lack time, it's better to build it ourselves, [that can be damaging]. Pretty much anytime you can pick a tool that's going to reduce manual work, it's like gaining extra team members."

> ***"Quite often people's instincts don't change as quickly as the funding situation changes."***
>
> ***Meri Williams***
> *Chief technology officer of Healx*

Series C

All grown up

Arguably, by Series C a startup is no longer a startup, but a full-fledged business. At this point, it has established itself and is looking to scale efficiently and at speed to enter new markets, make acquisitions and more. The founders we interviewed say this is the point when duplicating success becomes more complicated and expensive. A blend of programming and principles helps to keep processes lightweight, they say, and there should be no cut corners when hiring technical staff — and managers — to keep the engine running.

Companies seeking Series C funding are in the late stages of development, have solid revenues and are looking to expand to reinforce their existing success. Investors are now prepared to spend a lot more for less equity and bigger spenders like institutional investors are now potential backers. Founders should be prepared to show how funding will be used to execute expansion plans — and increasingly this includes their strategy for technical hiring and investments.

What are companies raising a Series C round looking to spend their cash on? According to Xavier Lazarus, cofounder of Paris VC firm Elaia, it's all about executing expansion plans.

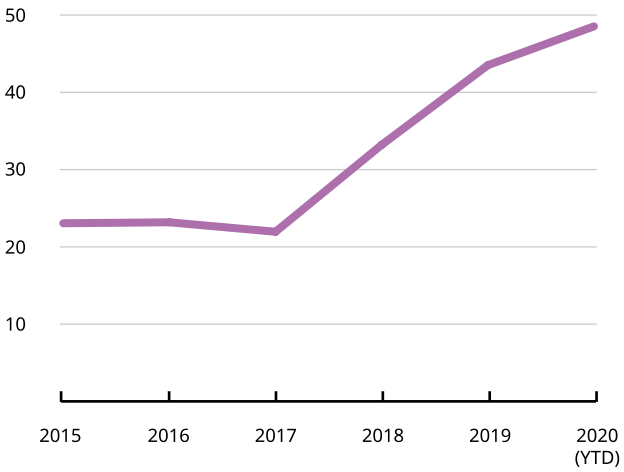
"The number one issue that they're facing is hiring," he says. "It's very hard for someone to hire outside of their safe zone of confidence." Cash — and tapping into the network of an experienced VC firm — can help solve this problem, giving startups access to talent beyond their shores and enough money to source the expertise needed to navigate these unfamiliar talent markets.

When startups approach venture capital firms for backing at this stage, Lazarus says it's important to demonstrate that an international hiring spree can kick off as soon as the cheque is received — if it's not already in motion. Often, this means having enough senior leaders supporting the chief technology officer to make decisions on who should join the team next, as well as having a robust people or talent team that can do the hard yards when it comes to sourcing talent from every available nook and cranny. "It's about speed of execution," he says. "If I put €30 million into a company [I don't want to wait] six months to have it grow."

It's important to demonstrate that an international hiring spree can kick off as soon as the cheque is received — if it's not already in motion

"You've gone through the real survival part of the jungle," says Johan Svanström, a partner at EQT Ventures. "Now it's about how do you put an accelerator to [the business] from here?"

Svanström says when companies approach him at this stage, he wants to understand how they're thinking about their transition to sophisticated operation, even if not all the plans are in place yet. This is particularly important when it comes to how the leadership team sees their individual roles going forward, and how they're thinking about the development of their employees. "A question I typically ask is what kind of career tracks have you developed for your tech product teams?" he adds.

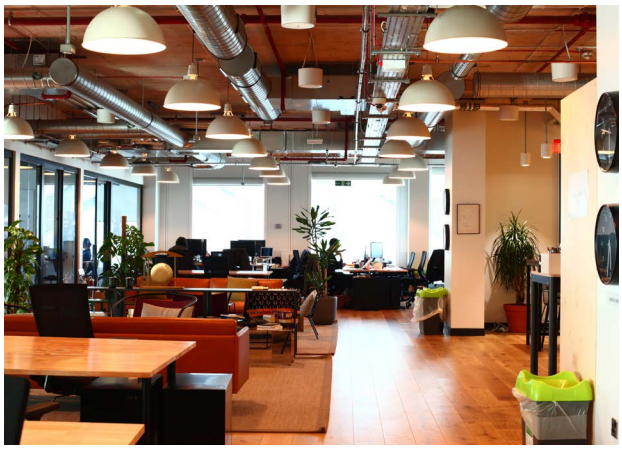


Average European Series C round (EUR M)

Series C rounds have more than doubled over the past 5 years. ***Source: europeanstartups.co***

A CASE STUDY IN SCALING TECH MANAGEMENT: SIGNAL AI

When media intelligence startup Signal AI raised its $25m Series C round in October 2019, it was already moving at breakneck speed. The company had just doubled both its year-on-year revenues and customer base, and grown its employee headcount to over 150, with offices in New York and Hong Kong in addition to its London HQ. "There are three primary opportunities the funding will provide us with," the company said in a blog post announcing the raise. "It will allow us to continue to invest in our core vision, and therefore the core underlying platform of the business: the technology, the data and the ability to [turn] those insights into value."



Signal AI's office

The person tasked with ramping up the technology team and speeding up its operations was chief technology officer Luca Grulla. Since the Series B round in June 2018, the team had already grown from 15 to 35 members, and, at the time of writing, Grulla says he is actively recruiting for 10 more roles.

"At the time we went to raise the Series C round, we understood that because we were ramping up the number of independent contributors we have, we [also] had to invest in building some lightweight governance — a way to connect all of the teams in a unified story," he says.

Grulla had already split his tech talent up into cross-functional squads (for more on this, see our case study on Thriva, page 15), narrowing down their specific remits as more team members joined and more squads were formed to "deliver a more in-depth, complete product". But he says the biggest change around this time was adding an additional layer of management that could provide the "glue" between teams working on separate, but connected challenges.

Signal's technology team is now split into two macro blocks — one focusing on user experience, another on building the data and AI platform — each with a head of technology in charge. These managers not only facilitate communication between the teams, but they also provide Grulla with additional support at a leadership level, enabling decisions to be made quickly, while also making sure teams aren't so autonomous that their work starts going off on tangents.

"The more you scale, the bigger you become as an organisation, as much as you try to maintain autonomy, your work will be very connected to what's happening in another team," Grulla points out.

THE SAME, BUT FASTER

Speed is crucial for Signal AI to take the aggressive rate of growth it was achieving even before the Series C round to the next level. And while Grulla says that many of Signal AI's processes around hiring and decision making aren't radically different to what they were when the business was smaller, iterations have had to be made along the way.

Luca Grulla, Signal AI

"From a decision[-making] perspective, we use a blend of extreme programming and lean principles to try and keep our processes as lightweight as possible given our size," he says, adding that Signal AI is on the "CD spectrum" in order to make sure team members are always working on the latest code. "Your process needs to be good enough to support your next six months of growth, but flexible enough to change."

"Your process needs to be good enough to support your next six months of growth, but flexible enough to change."

Luca Grulla
Chief technology officer of Signal AI

When it comes to hiring, Signal has stopped working with external recruiters, bringing this function in-house to make sure its three-stage interview process (which includes a 30-minute phone call, a three-hour coding test and a face-to-face interview with a further coding task) keeps moving as quickly as possible.

"It's important for a CTO going through this journey to fully embrace change," Grulla reflects. "Things will keep growing and keep accelerating, so embrace the change, embrace the fact you're going to change your processes and models every six months or so and don't feel bad [about the decisions you made earlier on]."

Hire with purpose

Four experts weigh in with their advice for hiring at scale — and maintaining a harmonious company culture.

Greg Orlowski
Former chief technology officer at Deliveroo and Peanut

PRIORITISING DIVERSITY

"You can't just put out a job posting and expect people to come to you," says Greg Orlowski, cofounder and former chief technology officer at Deliveroo warns. "You'll never get the best people that way."

This means not only searching far and wide for talent, but also reflecting on the inherent biases that hiring managers at startups and larger companies — or even you yourself — might have that result in you leaving exceptional talent on the market. It also means rethinking what it means to hire around "culture fit". In other words, it's not just about finding people you want to go to the pub with, but screening for the qualities that will help build a cohesive, collaborative and intellectually curious team. "If a company doesn't look diverse early on, for whatever reason, that company will struggle to retain talented people who may not feel like they fit culturally in the team," Orlowski says.

April Hoffbauer
Senior manager, recruiting operations and insights at GitLab

Olivier Bonnet
Chief technology officer of BlaBlaCar

Katerina Cerveny
Talent acquisition leader at UiPath

HIRING AWAY FROM HOME

At Gitlab, the fully remote software company founded in the Netherlands, April Hoffbauer searches the globe for talent. She says that while this can be done from anywhere (she is based in Nebraska), having experts with on-the-ground knowledge is crucial in managing candidate's expectations. It's how you answer questions like "Is Glassdoor a tool [people] even use when looking at a prospective company in Japan?" she says.

These experts don't have to work in recruitment (they could be your country managers), and don't even need to be based in the market you're hiring in. "In Europe, you can find [lots of candidates] who are based in the UK, for example, but have lived in other countries and have a very good understanding of [those markets]," Hoffbauer says. "Our senior director of people is based in Ireland and a lot of her career was based in Europe, so she has a very good understanding of a lot of the nuances of [that] market."

DON'T JUST HIRE — ACQUIRE

It can be difficult bringing a team of people together in a foreign market and keeping tabs on not only how productive they are, but how well they are getting on together. For BlaBlaCar, there was a simple solution: don't hire a team, acquire them. In 2019, for an undisclosed sum, BlaBlaCar bought Ukrainian company Busfor and its 150 employees. "With remote teams, I make sure they have a super clear mission, and we actually write [that] down — this is your scope, this is what you're responsible for, and this is what success looks like for the product or service [you] are owning," BlaBlaCar chief technology officer Olivier Bonnet explains.

The team in Kiev was already building a complementary product to BlaBlaCar's car-sharing service, making defining the scope of their work simple, and, before the acquisition, BlaBlaCar had already formed a commercial partnership with the firm. "That was a good first step in having the teams collaborate and defining what each team was responsible for," he says.

SPEEDY PROCESS, HAPPY CANDIDATES

At UiPath, talent acquisition leader Katerina Cerveny has got the hiring process down to just three to four weeks between someone submitting a CV to finding out that they got the job — beating the average 33 days it takes European startups to hire developer talent.

To make the process as swift as possible, and to keep applicants informed of what's going on, UiPath relies on a stack of software. "Besides using HackerRank to assess the specific skills for technical roles, we [also] use Lever as our applicant tracking system (ATS) and Sterling for background verification, and we've introduced Survale to help us capture feedback from our candidates about our hiring process," Katerina says. "As [you might] expect, we [also use] software robots to help with repetitive tasks — for example, our employee referral process is fully automated."

The building blocks

No matter what industry you are in, the adoption of advanced software engineering practices should be seen not only as table-stakes for operating your business today, but as a critical enabler of your success in the future.

Interviews with the investors and founders behind successful startups suggest that early support for engineers and their integration into the wider business are some of the most important factors driving growth — and increasingly some of the biggest selling points when it comes to getting investors on board.

There is no single approach to building and tooling technical staff, yet some themes emerge: a strong, agile technical staff with autonomy and tooling to scale, efficient use of technical teams with emphasis on automation and testing, an in-house team that chips away at technical debt, a strong culture and low turnover, and good leadership that can manage efficiencies as businesses scale and workloads grow and complicate.

All of these are hard-earned outcomes, but the foundations can be laid and updated at every stage of business development. It is also advantageous for startup communities, incubators and accelerators to place more emphasis on how to educate technical founders to achieve these outcomes and share best practices — and for startup founders to ensure their technical leaders have access to the networks that can empower them.

We would like to thank the following for contributing their time and insights to the report:

Matthieu Beucher, chief executive and founder, Klaxoon | **Olivier Bonnet**, chief technology officer, BlaBlaCar | **Riaz Bordie**, chief technology officer, Checkout.com | **Eamonn Carey**, managing director, Techstars London | **Rachel Carrell**, chief executive and founder, Koru Kids | **Katerina Cerveny,** talent acquisition leader, UiPath | **Matthew Davis**, chief technology officer and cofounder, Perlego | **Charles Gorintin**, chief technology officer and cofounder, Alan | **Luca Grulla**, chief technology officer, Signal AI | **Fabian Heilemann**, partner, Earlybird Venture Capital | **April Hoffbauer**, senior manager, recruiting operations and insights, GitLab | **Callum Hubbarde**, vice president of engineering, Perlego | **Patricia Hume**, cofounder, Wisdom LLP | **Adam Jafer**, cofounder, VOI Technology | **Beata Klein**, associate, Creandum | **Ed Lascelles**, partner and head of technology investment, AlbionVC | **Xavier Lazarus**, partner and cofounder, Elaia | **Åsa Lidén**, vice president of engineering, Pitch | **Filip Lindvall**, chief technology architect and cofounder, VOI Technology | **Tom Livesey**, chief technology officer and cofounder, Thriva | **Greg Orlowski**, former chief technology officer, Deliveroo and Peanut | **Stephen Page**, chief executive and founder, SFC Capital | **Wiktor Schmidt**, chairman and cofounder, Netguru | **Matthew Skelton**, head of consulting and founder, Conflux | **Johan Svanström**, partner, EQT Ventures | **Jack Waley-Cohen**, chief operating officer and cofounder, what3words | **Meri Williams**, chief technology officer, Healx

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