ICONIQ | Growth

Engineering Leadership: A Hiring Blueprint

What to prioritize when hiring an Engineering executive from $50M ARR to IPO

July 2024

For Professional Clients Only. ICONIQ Partners (UK) LLP (973080) is an appointed representative of Kroll Securities Ltd (466588) which is authorized and regulated by the Financial Conduct Authority.

Confidential and Proprietary – Do Not Distribute
Copyright © 2024 ICONIQ Capital, LLC. All Rights Reserved.

Disclosures

Unless otherwise indicated, the views expressed in this presentation are those of ICONIQ Growth ("ICONIQ" or the "Firm"), are the result of proprietary research, may be subjective, and may not be relied upon in making an investment decision. Information used in this presentation was obtained from numerous sources. Certain of these companies are portfolio companies of ICONIQ Growth. ICONIQ Growth does not make any representations or warranties as to the accuracy of the information obtained from these sources.

This presentation is for educational purposes only and does not constitute investment advice or an offer to sell or a solicitation of an offer to buy any securities which will only be made pursuant to definitive offering documents and subscription agreements, including, without limitation, any investment fund or investment product referenced herein.

Any reproduction or distribution of this presentation in whole or in part, or the disclosure of any of its contents, without the prior consent of ICONIQ, is prohibited.

This presentation may contain forward-looking statements based on current plans, estimates and projections. The recipient of this presentation ("you") are cautioned that a number of important factors could cause actual results or outcomes to differ materially from those expressed in, or implied by, the forward-looking statements. The numbers, figures and case studies included in this presentation have been included for purposes of illustration only, and no assurance can be given that the actual results of ICONIQ or any of its partners and affiliates will correspond with the results contemplated in the presentation. No information is contained herein with respect to conflicts of interest, which may be significant. The portfolio companies and other parties mentioned herein may reflect a selective list of the prior investments made by ICONIQ.

Certain of the economic and market information contained herein may have been obtained from published sources and/or prepared by other parties. While such sources are believed to be reliable, none of ICONIQ or any of its affiliates and partners, employees and representatives assume any responsibility for the accuracy of such information.

All of the information in the presentation is presented as of the date made available to you (except as otherwise specified),and is subject to change without notice, and may not be current or may have changed (possibly materially) between the date made available to you and the date actually received or reviewed by you. ICONIQ assumes no obligation to update or otherwise revise any information, projections, forecasts or estimates contained in the presentation, including any revisions to reflect changes in economic or market conditions or other circumstances arising after the date the items were made available to you or to reflect the occurrence of unanticipated events. Numbers or amounts herein may increase or decrease as a result of currency fluctuations.

For avoidance of doubt, ICONIQ is not acting as an adviser or fiduciary in any respect in connection with providing this presentation and no relationship shall arise between you and ICONIQ as a result of this presentation being made available to you.

ICONIQ is a diversified financial services firm and has direct client relationships with persons that may become limited partners of ICONIQ funds. Notwithstanding that a person may be referred to herein as a "client" of the firm, no limited partner of any fund will, in its capacity as such, be a client of ICONIQ. There can be no assurance that the investments made by any ICONIQ fund will be profitable or will equal the performance of prior investments made by persons described in this presentation.

These materials are provided for general information and discussion purposes only and may not be relied upon.

In the European Economic Area, this presentation is only available to recipients that meet the description of a 'professional client' under Directive 2014/65/EU (as amended). In the United Kingdom (the "UK"), this presentation is only available to recipients that meet the description of a 'professional client' under Regulation (EU) 600/2014 as such Regulation forms part of UK domestic law, and who are (i) persons with professional experience in matters relating to investments falling within article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (the "FPO Order"), (ii) high-net-worth entities falling within Article 49(2) of the FPO Order, or (iii) any other persons to whom it may otherwise lawfully be communicated. Receipt, disclosure or publication of this presentation by or to any other person is strictly unauthorised. The information contained in this presentation does not constitute investment research or a research report and should not be relied on as such. Recipients must not distribute, publish, reproduce, or disclose this material, in whole or in part, to any other person.

Copyright © 2024 ICONIQ Capital, LLC. All rights reserved.

The Authors

ICONIQ Growth Analytics

Contact us at ICONIQGrowthInsights@iconiqcapital.com

Seeking to empower our portfolio with proprietary insights and advisory across business operations, hiring, and strategy

Series Lead

Christine Edmonds

Head of Portfolio Analytics

Ani Reddy

Portfolio Data Analyst

Caroline Brand

Portfolio Analytics

Claire Davis

Portfolio Analytics

Emre Garih

Portfolio Analytics

Katherine Dunn

Portfolio Analytics

Sam O'Neill

Portfolio Data Manager

Vivian Guo

Portfolio Analytics

About the research

We believe executive hiring is the final frontier within the modern organization that has yet to benefit from the proliferation of data. Despite having data to guide nearly every other business decision – and despite the criticality of executive hiring decisions – CEOs and Founders have heretofore largely relied on anecdotal guidance.

In the Leadership Analytics series

Determined to help de-risk hiring decisions by empowering CEOs and Founders with data, we are studying every leadership hire between Founding and IPO at dozens of SaaS companies. We segment each hiring decision by growth stage in order to deliver relevant insights. To date, we have collected 50,000+ datapoints on over 1,500 leaders to examine key profile characteristics and understand how these impacted a functional leader's longevity.

The result is a series of first-of-their-kind playbooks that help guide decision-making across the entire private company lifecycle – whether you are making your first leadership hire or evaluating the skillsets needed to adeptly enter the public markets.

In this report

We hope this analysis, which examines the backgrounds of Engineering executives at SaaS companies from $50M ARR to IPO, serves as a north star as you build and scale your engineering organization.

Access the Full Engineering Series

Chapters in The Series

ICONIQ Growth's Engineering Series provides detailed answers to **key questions across the following operating and executive hiring topics** utilizing proprietary data[1] and industry perspectives from 200+ B2B SaaS leaders and 100+ engineers at SaaS companies.

★ Focus of this report

The State of Engineering	• The future of engineering • DevOps maturity • Developer experience • Impact of AI
Product Leadership	• Hiring your next Head of Product from $0-$50M ARR • Hiring your next Head of Product from $50M ARR to IPO
Engineering Leadership	• Hiring your next Head of Engineering from $0-$50M ARR • **Hiring your next Head of Engineering from $50M ARR to IPO** ★
Building Engineering and Product Teams	• Org structure and make-up of engineering teams • Typical headcount ratios • Diversity in engineering
Compensation & Incentives	• Compensation for engineering and product teams • Performance evaluation
Engineering Operations	• Developer productivity • Capacity allocation • Tooling and DevOps

Guide The Engineering Reporting Guide

Template Engineering Board Slides

Notes: (1) Please refer to page 6 for methodology and data sources for the Engineering Leadership Study.
There can be no such assurances that any plans or operational characteristics of a company discussed herein will continue or be realized on the terms expressed herein or at all, and such plans are subject to uncertainties and risks.

The Dataset

We studied ***Heads of Engineering hired at these 68 B2B SaaS companies from the day they were founded to the day they went public**, capturing the entire private company lifecycle[1]:

ICONIQ Growth Portfolio Companies[2,3]

alteryx, Bill.com, braze, coupa, CROWDSTRIKE, DATADOG, enfusion, fastly, GitLab, HashiCorp, MARQETA, PLURALSIGHT, PROCORE, snowflake, sprinklr

Other Companies[3]

Amplitude, Anaplan, appfolio, APPTIO, asana, ATLASSIAN, Avalara, BIGCOMMERCE, blend, box, C3.ai, Carbon Black., CLOUDERA, CLOUDFLARE, CONFLUENT, DigitalOcean, DOMO, Dropbox, elastic, FORESCOUT, freshworks, JFrog, Livongo, Medallia, mimecast, mongoDB, MuleSoft, ncino, NUTANIX, okta, PagerDuty, PURESTORAGE, RAPID7, samsara, SendGrid, SentinelOne, shopify, slack, smartsheet, sproutsocial, SQUARESPACE, Square, sumo logic, talend, tenable, toast, twilio, UiPath, unity, User Testing, yext, zscaler, zuora

*We defined **"Head of Engineering" as the senior-most executive responsible for managing the day-to-day engineering organization**, agnostic of title. This includes Chief Technology Officer, S/VP Engineering/Technology, Chief Architect, Director of Engineering/Technology, Head of Engineering/Technology and others, depending on organizational structure and engineering responsibility at each company.

Throughout this analysis, **we use "Head of Engineering" as a catchall term.**

Company Inclusion Criteria:

- SaaS business model
- Went public after 2015 via IPO or Direct Listing
- Raised venture capital prior to going public

Trademarks are the property of their respective owners. None of the companies illustrated have endorsed or recommended the services of ICONIQ. Not all companies on this page are ICONIQ Growth portfolio companies. For a complete list of ICONIQ Growth portfolio companies, please see page 34 of this report. Insights from some but not all ICONIQ Growth portfolio companies as well as companies not part of ICONIQ Growth's portfolio.

1) Data sources for this analysis included LinkedIn profiles, company websites, press releases, articles, and others.
2) Includes fully realized investments.
3) Includes companies that have been de-listed. Please see full list of ICONIQ Growth Portfolio companies at the end of the presentation.

Executive Summary

Head of Engineering Overview (p. 8-12)

- **Throughout various technological inflection points**, including the dot-com era, mobile revolution, cloud computing, and now the emergence of AI/ML, **the core responsibilities of a Head of Engineering have remained largely similar**. However, in the context of the specific technology change we are seeing unfold today, **our Technical Advisory Board suggests that leaders should invest more time in understanding the long-term impacts on their business** and **maintain a strong grasp of the underlying technology**. For this current AI/ML trend, this means having some degree of literacy in data systems, pipelines, and infrastructure.
- From founding to IPO, **companies typically have 2-3 Heads of Engineering, with co-founders often leading the organization initially**. Nearly half of the companies with 2 leaders transition to their 2nd Head of Engineering after $50M ARR.
- Heads of Engineering externally hired between $50M ARR to IPO have a median tenure of 4 years[1], which is the longest we've observed to date across all externally hired executives at this stage (e.g., Heads of Marketing, Heads of Finance).

Key Operational Traits for Externally Hired Heads of Engineering (p. 13-23)

- Among $50M+ ARR companies, **46% of leaders have previously led an entire engineering organization, with two-thirds having done so at companies of similar size or larger**. While fewer than half of the leaders possess prior Head of Engineering experience, **all leaders in this study have some degree of engineering experience at public companies, with 77% having senior-level positions (CTO, SVP/VP Engineering)**.
- **We believe CEOs should aim to prioritize a leader with both prior Head of Engineering experience at private SaaS companies and senior-level engineering experience (CTO, SVP/VP Engineering) in public companies** – this combination resulted in relatively long tenures (4.5+ years). **Alternatively, the data suggests that hires should at least have SVP/VP Engineering experience at 'Big Tech' companies[2] (e.g., Microsoft, Google, Salesforce)**, as this yields comparable tenure outcomes (4 years).
- Although all externally hired leaders in this study have prior public company experience, **89% of Heads of Engineering who were present at IPO at the companies in this study were not involved in an IPO process before** – suggesting that this is not a necessary qualification.
- Despite a preference for hiring within the same sector, the data suggests that **CEOs should opt for strong leadership and technical skills over sector-specific expertise** as having sector affinity does not show a strong correlation to tenure outcomes.

Internally Promoted Heads of Engineering (p. 28-31)

- **After $50M ARR, the data suggests that it is 2.5x more common to have an internally promoted Head of Engineering than at a <$50M ARR SaaS company.** Internally promoted hires have longer tenures compared to externally hired Heads of Engineering (5.5 years vs. 4.0 years).
- **Infrastructure companies are 1.5x times more likely to internally promote someone to the Head of Engineering role** compared to Application companies. Regardless of sector, companies typically promote individuals from within their engineering organization who have been with the company for at least 2.5 years and have reached the SVP/VP level.

1) We acknowledge individuals depart from their roles for various reasons, though we generally believe longevity and ability to scale across multiple growth stages are key indicators of a successful leader.
2) For this study, we defined 'Big Tech' as public companies with a market capitalization of >$100B at the time they were at this company.

Despite tech inflection points like the dot-com era, mobile revolution, cloud computing, and now AI/ML, the core responsibilities of a Head of Engineering remain largely consistent. However, during these times, understanding the business impact and underlying tech is critical.

Engineering Leadership in an Evolving Technology Landscape

Matt Eccleston
ICONIQ Growth
Technical Advisory Board

Formerly VP Growth at Dropbox, Chief Architect at VMware

The **CTO is expected to have a profound understanding of the business impact of technological changes**, more so than other executives. During the shift to the cloud, there was a general understanding of the technology but leaders were unsure of the speed and necessity of the transition – **such burdens increase during periods of transition**. This is all part of their job normally, but **it will demand significantly more of their attention during these inflection points**.

Mike Curtis
ICONIQ Growth
Technical Advisory Board

Formerly VP Engineering at Airbnb, Director Engineering at Facebook

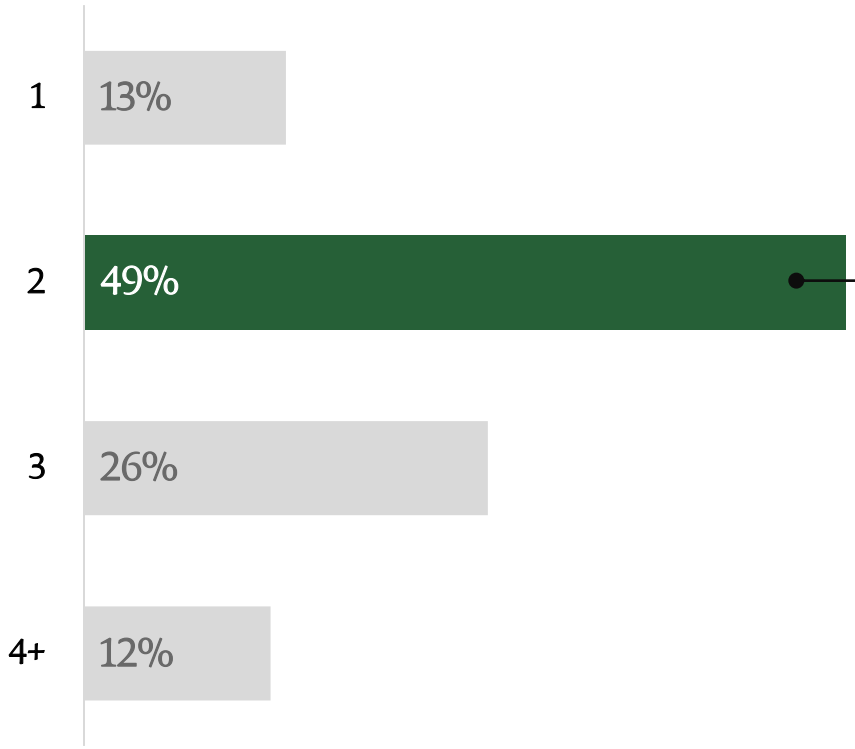
I tend to think that a **new technology trend likely doesn't radically change the CTO profile** and it is more dependent on the individual to keep up with the trends and lead in that environment. That said, **they should have some degree of literacy with data, how data systems are built, how data pipelines are managed, how machine learning infrastructure works** – this is going to be really important for the foreseeable future.

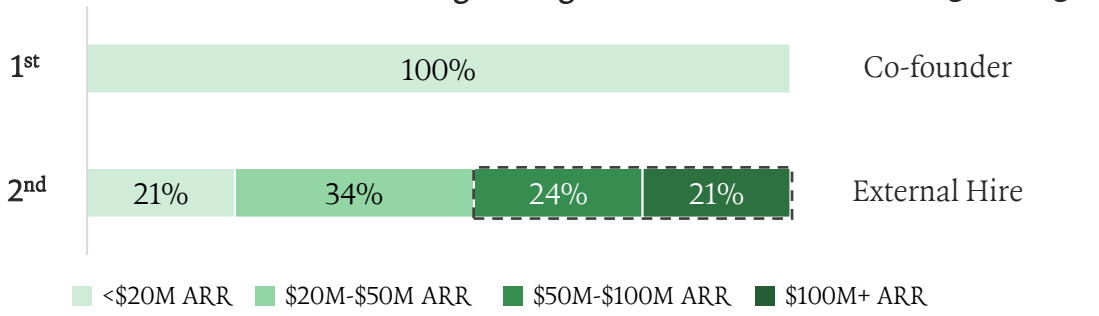
Trademarks are the property of their respective owners. None of the companies illustrated have endorsed or recommended the services of ICONIQ.

Companies typically have 2-3 Heads of Engineering from founding to IPO, with co-founders often leading the engineering organization initially. Nearly half of the companies with 2 leaders transition to their 2nd Head of Engineering after $50M ARR[1].

Number of Heads of Engineering[2,3] from Founding to IPO

n = 68 companies





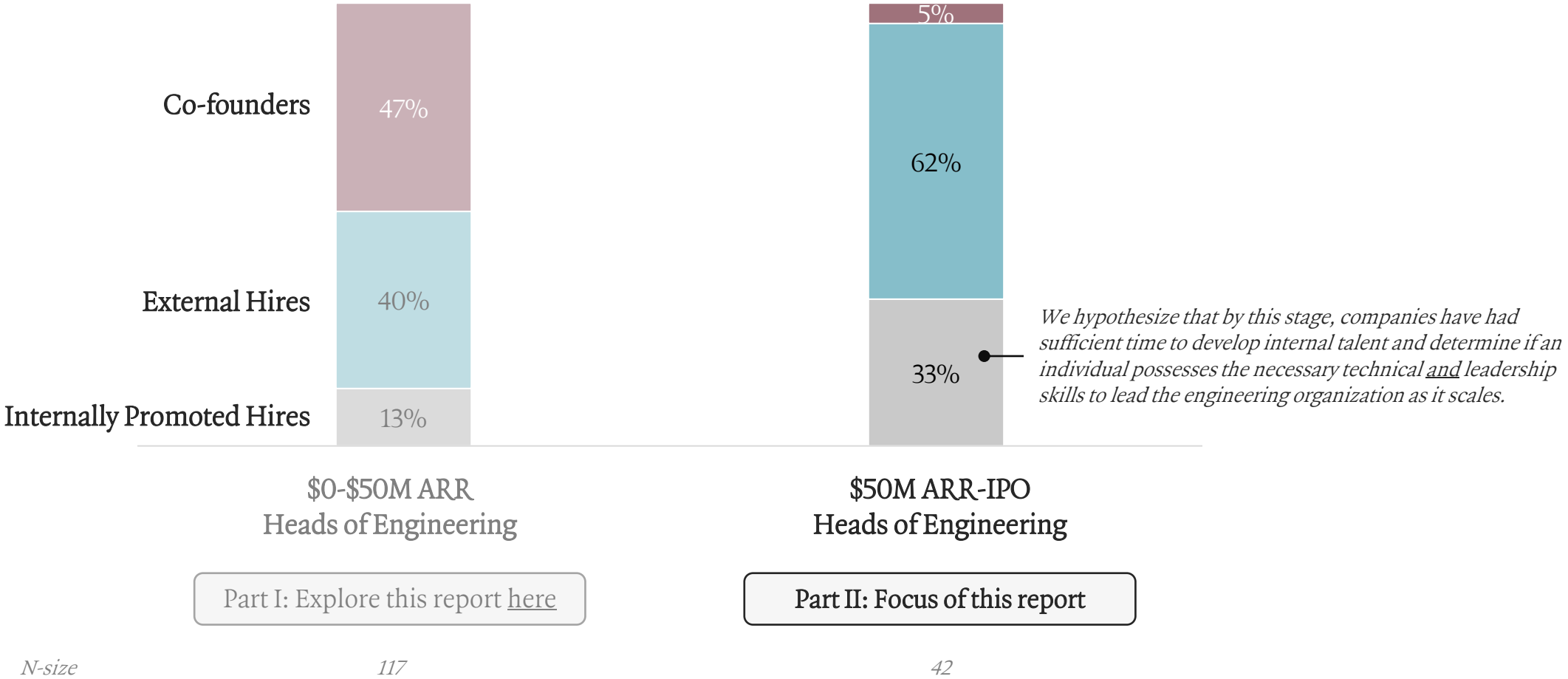
> "As a company matures, **more formal management systems should be in place, necessitating a different skill set from the Head of Engineering**. Co-founders without experience running larger organizations may want to consider transitioning to someone with leadership experience at this scale."

Matt Eccleston
ICONIQ Growth Technical Advisory Board

1) Source for ARR data is from internal and external data sources. If ARR was unavailable, it was estimated using proxy metrics (e.g., headcount, primary invested capital).
2) This chart reflects various types of Heads of Engineering, including founders, internal promotions, and external hires.
3) The "Number of Heads of Engineering" signifies the sole individual overseeing the engineering organization within a specific timeframe. If a company had more than one Head of Engineering, they assumed the role in succession.

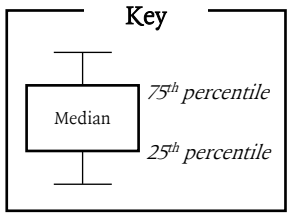
After reaching $50M ARR, companies often hire a Head of Engineering from outside their organization. However, it also becomes 2.5x more common to promote someone internally relative to <$50M ARR companies.

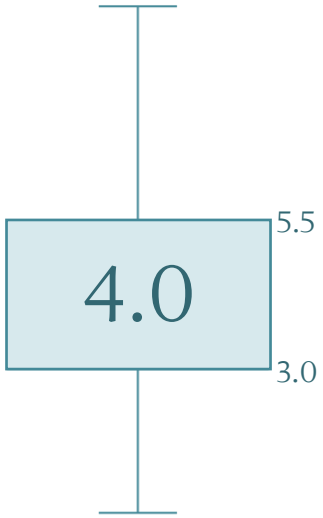
Types of Heads of Engineering Hired by ARR Stage

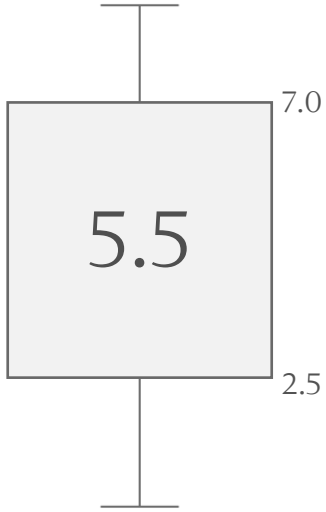


Externally hired Heads of Engineering hired between $50M ARR and IPO have a median tenure of 4 years. Despite showing greater variability, internally promoted individuals tend to have longer tenures.

>$50M ARR Heads of Engineering[1,2] by Tenure Outcomes (years)[3]





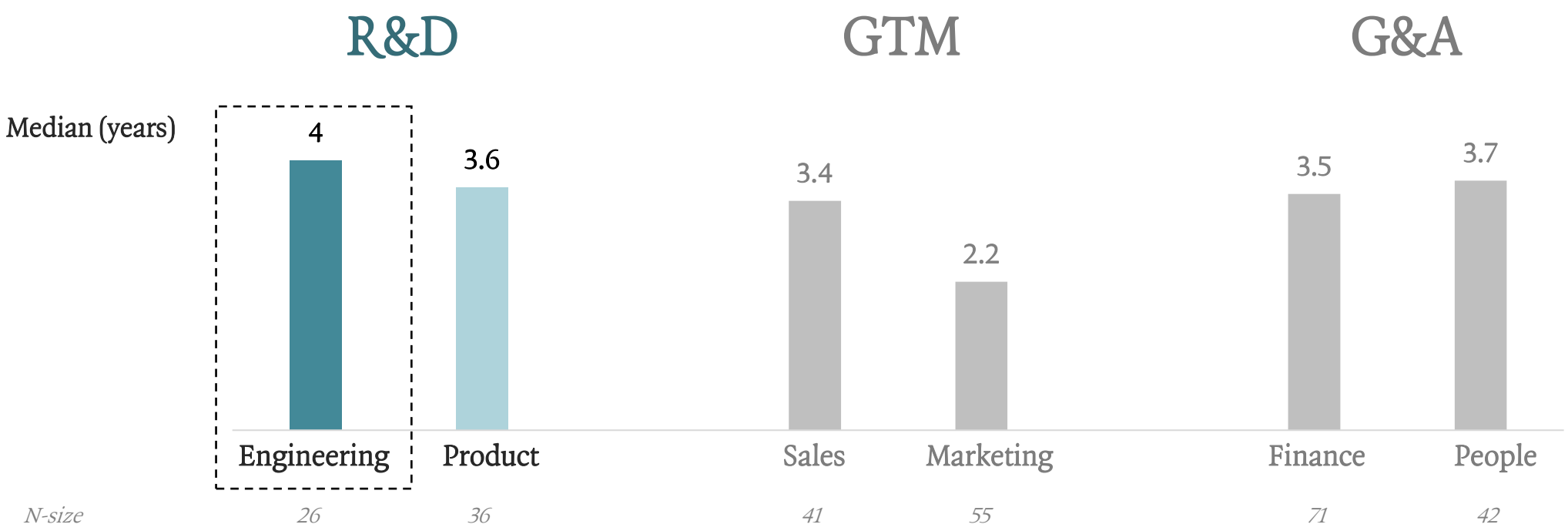


	Focus of Externally Hired Heads of Engineering section P. 13-27	Focus of Internally Promoted Heads of Engineering section P. 28-31
N-size	*26*	*14*

1) <25% of external hires are still in their roles, meaning their tenure with the company continues to increase.
2) Co-founders have been excluded on this page due to low n-size.
3) Reflects the cumulative years of a hire's tenure as Head of Engineering, including post-IPO. "Tenure Outcomes" are defined as the duration in which an individual serves as the Head of Engineering at the companies in this dataset. This definition also applies to pages 14-21, 23-26, 29.

On average, >$50M ARR R&D leaders have slightly longer tenures compared to other functions, with Heads of Engineering having the longest.

>$50M ARR External Executive Hires by Tenure Outcomes (years)



The next section focuses on **Externally Hired Heads of Engineering** and examines key profile characteristics to understand how these impact an engineering leader's longevity.

Note: For details on each specific data source, please refer to the respective reports available on our website here for R&D (Product), here for GTM (Sales, Marketing) and here for G&A (Finance, People). Additionally, for leaders who were still in their roles at the time of publication of these reports, tenure data has been updated as of June 2024 to reflect any changes since then.

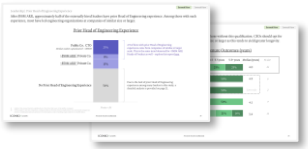
Engineering Leadership Trends

Hiring For Success

Why do some Heads of Engineering leave within a year, while others stay for 9+ years? We analyzed a selection of major traits in engineering executive backgrounds at these companies to understand how these impacted a leader's longevity.

Companies included in this section[1]

Amplitude, Apptio, Atlassian, Avalara, BigCommerce, Bill.com, box, Cloudera, Confluent, DigitalOcean, Dropbox, Marqeta, Medallia, Pluralsight, SendGrid, slack, snowflake, Square, talend, UiPath, User Testing, zuora

Head of Engineering Operational Traits	Tenure Impact[2] (Less → More)		
Prior Head of Engineering Experience *Prior Head of Engineering experience by company ARR scale*	● ● ●		P. 15-16
Prior Years of Engineering Experience *Number of years in software engineering roles at any level*	● ● ○		P. 17
Public Technology Company Experience *Prior experience as junior and/or senior-level engineers in public technology companies*	● ● ●		P. 18-21
IPO Experience *Has gone through an IPO process before as the Head of Engineering or direct report of the Head of Engineering*	○ ○ ○		P. 22
Sector and Sub-Sector Affinity *Degree of prior exposure within a sector and sub-sector*	● ○ ○		P. 23-25

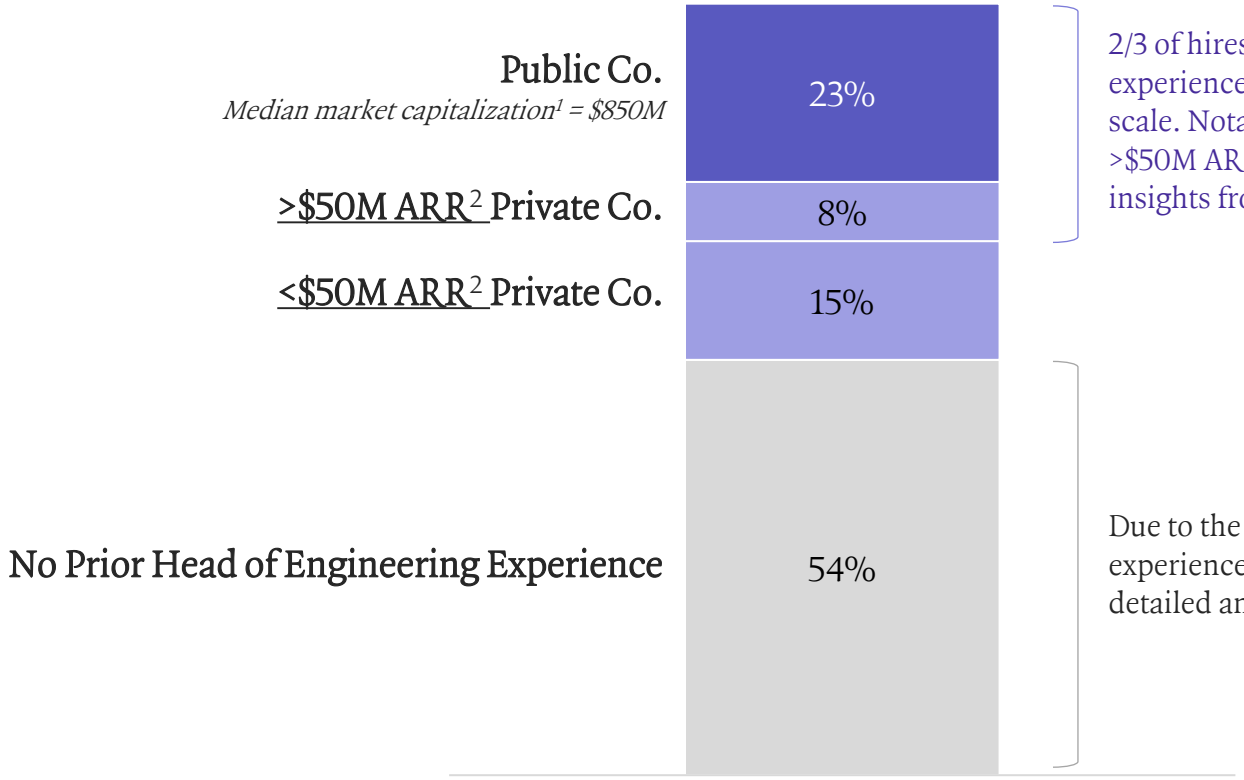
1) Pages 15-21, 23-27, reflect data and insights from external hires. N-sizes may include more than one hire from a company.
2) "Tenure Impact" indicates the extent to which a variable influenced an individual's tenure as the Head of Engineering. While efforts have been made to control confounding variables and ensure robustness, unaccounted contextual factors may also affect the impact on tenure.

Trademarks are the property of their respective owners. None of the companies illustrated have endorsed or recommended the services of ICONIQ. Not all companies on this page are ICONIQ Growth portfolio companies. For a complete list of ICONIQ Growth portfolio companies, please see page 34 in this report. Insights are from some but not all ICONIQ Growth portfolio companies as well as companies not part of ICONIQ Growth's portfolio.

Prior Head of Engineering Experience

After $50M ARR, approximately half of the externally hired leaders have prior Head of Engineering experience. Among those with such experience, most have led engineering organizations at companies of similar size or larger.

Prior Head of Engineering Experience



2/3 of hires with prior Head of Engineering experience came from companies of similar or larger scale. Notably, this is the same trend observed for >$50M ARR Heads of Product as well – explore insights from our companion report here.

Due to the lack of prior Head of Engineering experience among many leaders in this study, a detailed analysis is provided on page 21.

N-size = 26

1) Reflects the annual market capitalization at the time they were at the public company.
2) With respect to private companies, company ARR at the time of prior employment was estimated using proxy metrics including headcount, primary invested capital, and/or funding stage (subject to available data).

Prior Head of Engineering Experience by Tenure Outcomes

Leaders with prior Head of Engineering experience tend to stay 1.3x longer than those without this qualification. CEOs should consider opting for leaders who have prior Head of Engineering experience at companies of similar size or larger as this tends to yield greater longevity.

Prior Head of Engineering Experience by Tenure Outcomes (years)

	≤ 3 years	3 - 4 years	4.5 - 5.5 years	5.5+ years	Median (years)	N-size
All >$50M ARR Heads of Engineering	27%	27%	23%	23%	4.0	26
Public Co. (23%)	33%	17%	50%		4.5	6
>$50M ARR Private Co. (8%)	50%		50%		Low n-size	2
<$50M ARR Private Co. (15%)	50%		50%		4.1	4
No Prior Head of Engineering Experience (54%)	36%	29%	21%	14%	3.4	14

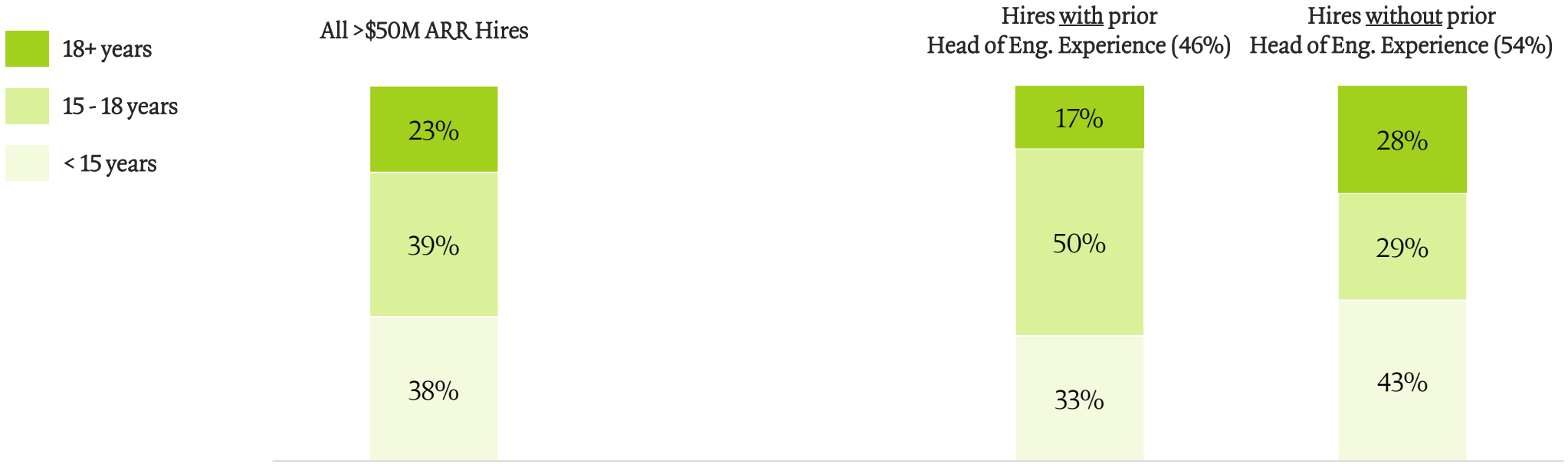
From page 15

Prior Years of Engineering Experience

Regardless of prior leadership experience, those hired after $50M ARR typically have 15+ years of engineering experience. At this stage, the quality of their experience appears to be more determinative of a successful hire than merely the number of years accumulated.

Prior Years of Engineering Experience

Data reflects years of engineering experience at any role level/title

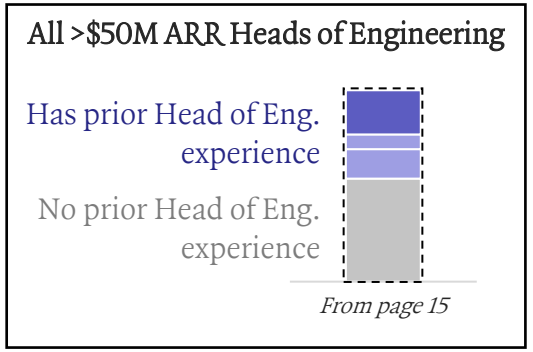


	All >$50M ARR Hires	Hires with prior Head of Eng. Experience (46%)	Hires without prior Head of Eng. Experience (54%)
Median Prior Years of Eng. Exp.	15.5	16	15.5
Median Tenure Outcomes (years)	4.0	4.7[1]	3.4
N-size	*26*	*12*	*14*

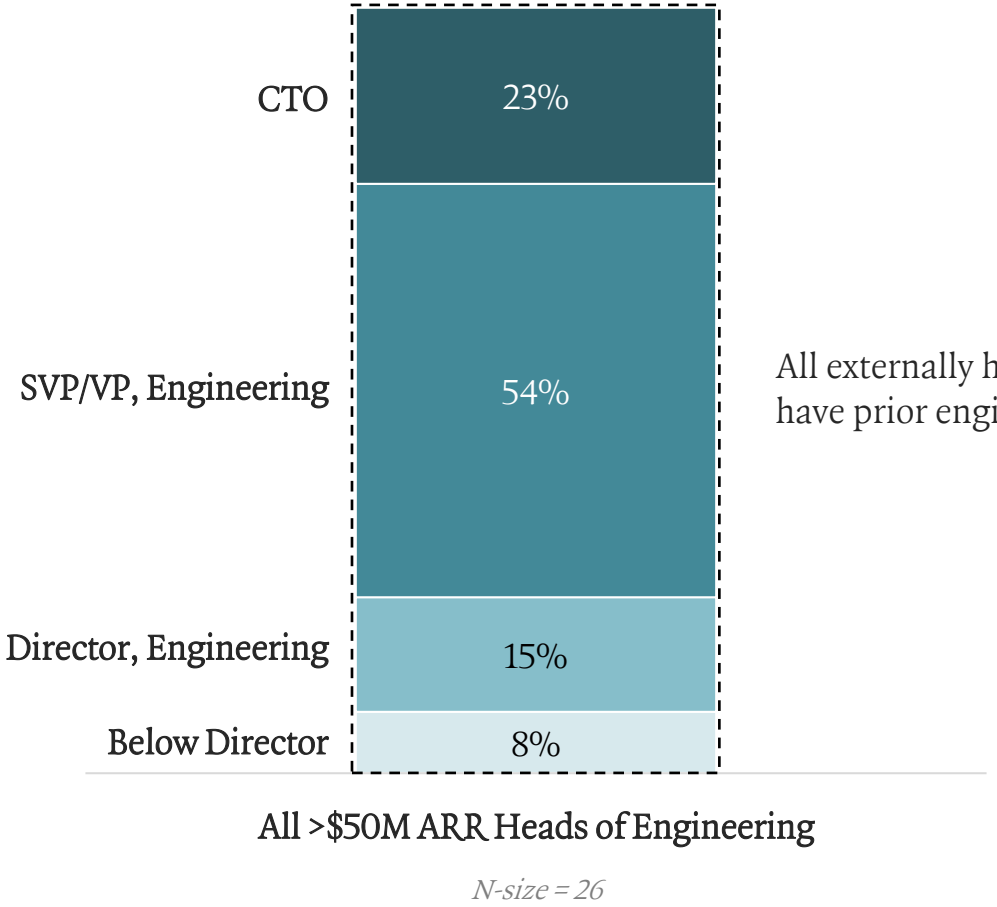
1) The median tenure includes the two individuals in the ">$50M ARR Private Co." category from the prior page. Their tenures are ≥ 5 years, which is driving up the median tenure on this page.

Public Company Experience

While fewer than half of the leaders have prior Head of Engineering experience, notably all have some degree of experience within large engineering organizations at public companies, with 77% having senior-level experience (CTO and SVP/VP Engineering).



Prior Public Technology Company Experience

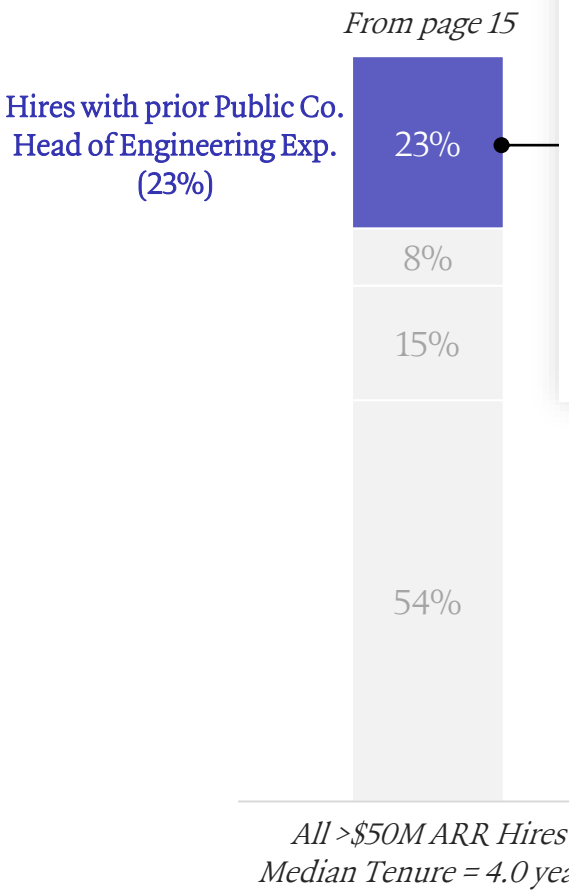


All externally hired Heads of Engineering in this study have prior engineering experience in public companies.

Hires with Public Co. Head of Engineering Experience

CEOs should consider leaders with prior Head of Engineering experience at public companies as this can result in longevity. Among these leaders, two sub-profiles emerge: those who exclusively had public co. experience and those who also operated in private SaaS companies.

Further Details on Hires with prior Public Co. Head of Engineering Experience



	Other Eng. Experience	Median Tenure Outcomes (years)
	23%	
Only public co. experience	11.5%	4.5
Has private co. experience	11.5%	

Additional Insights

Leaders with only public co. experience typically started at a 'Big Tech' company[1] (e.g., Microsoft, SAP, Oracle) and then became CTOs at smaller public companies.

Leaders with private company experience were involved pre- and post-IPO. Additionally, most of them were multiple-time CTOs.

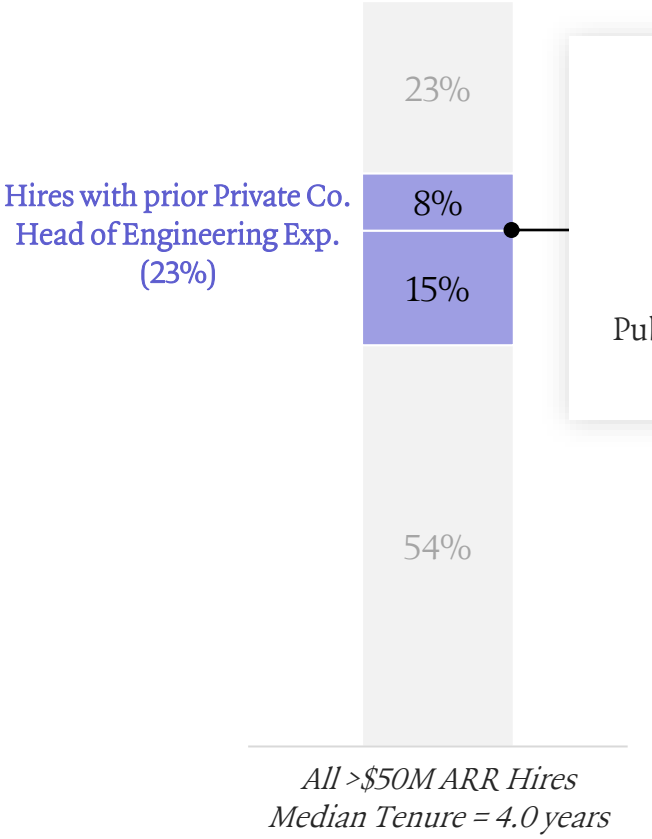
1) For this study, we defined 'Big Tech' as public companies with a market capitalization of >$100B at the time they were at this company.

Hires with Private Co. Head of Engineering Experience

CEOs can also opt for leaders who have served as both a private company Head of Engineering and public company SVP/VP/Director Engineering as this combination tends to lead to relatively long tenures (4.5 years).

Further Details on Hires with prior Private Co. Head of Engineering Experience

From page 15



Other Eng. Experience		Median Tenure Outcomes (years)	Additional Insights
23%			
Public Co. SVP/VP	8%	4.5	Most of these hires were **acqui-hired into senior-level roles, primarily within 'Big Tech' companies**[1] (e.g., Google, Oracle, Microsoft). They typically spent 4-5 years there.
Public Co. Director	11%		
Public Co. Below Director	4%	*Low n-size*[2]	

> **My ideal candidate would have experience at the same stage of SaaS company they would be joining as well as experience in a larger, more mature organization.** At a bare minimum they need to have leadership experience at a company with stage affinity, but it would also be nice for this candidate to have a vision of where the tech org needs to get to in the next 4-5 years.

Matt Eccleston

Former VP Growth at Dropbox

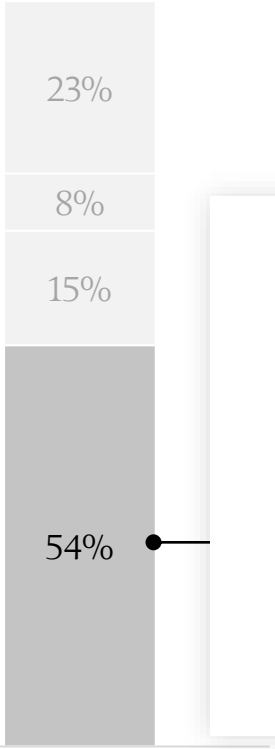
1) For this study, we defined 'Big Tech' as public companies with a market capitalization of >$100B at the time they were at this company
2) N-size = 1.

Hires without Head of Engineering Experience

While prior Head of Engineering experience is preferred, leaders without it should at least have SVP/VP Engineering experience at a 'Big Tech' company[1]. A third of the leaders have such experience and exhibit similar tenures (4 years) to those with prior Head of Engineering experience.

Further Details on Hires without prior Head of Engineering Experience

From page 15



Hires without prior Head of Engineering Experience (54%)

All >$50M ARR Hires
Median Tenure = 4.0 years

Other Eng. Experience		Median Tenure Outcomes (years)
	54%	
'Big Tech' Public Co. SVP/VP	31%	4.0
Smaller Public Co. SVP/VP	15%	3.0
Public Co. Director or below	8%	*Low n-size[2]*

Additional Insights

Leaders often had a **10+ year stint at a 'Big Tech' company (e.g., Microsoft, Google, Salesforce)**, suggesting they spent some of their junior level years there before reaching the SVP/VP level.

Hires from smaller public companies often bring experience from companies that have recently entered the public markets. Some were present at the IPO, though in more junior roles at that time.

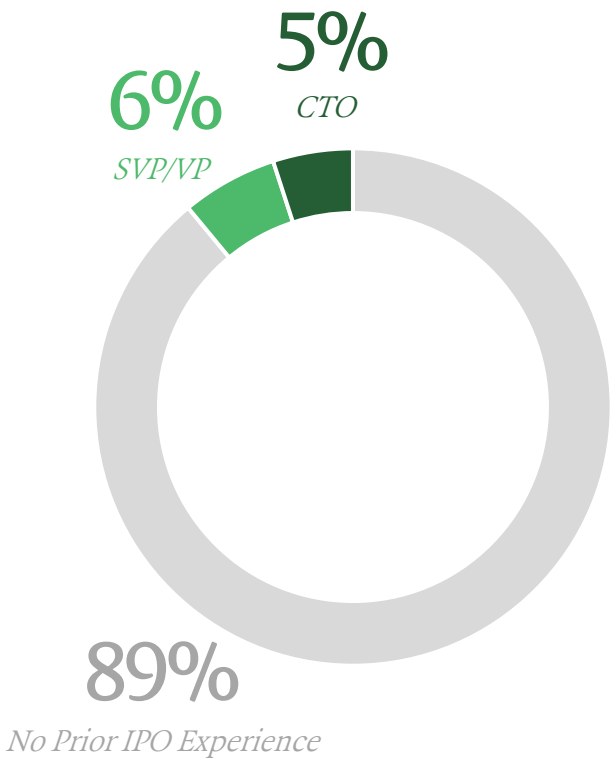
1) For this study, we defined 'Big Tech' as public companies with a market capitalization of >$100B at the time they were at this company.
2) N-size = 2.

Prior IPO Experience

Even though all leaders have some degree of engineering experience in public companies, 89% of Heads of Engineering who were present at IPO were not involved in an IPO process before – suggesting that this is not a necessary qualification.

Heads of Engineering at IPO with Prior IPO Experience[1]

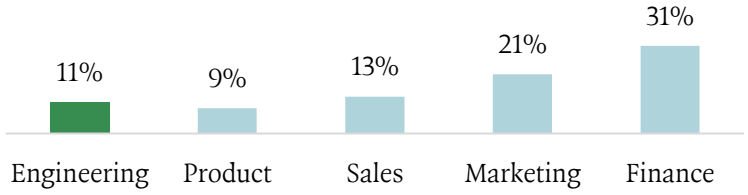
N-size = 66[2]



ICONIQ Growth Cross-Functional Insight

Among the following functions, it was uncommon for functional leaders to possess experience in leading a company through an IPO, with R&D leaders being the least likely to have such experience.

% of Executive Hires with Prior IPO Experience by Function



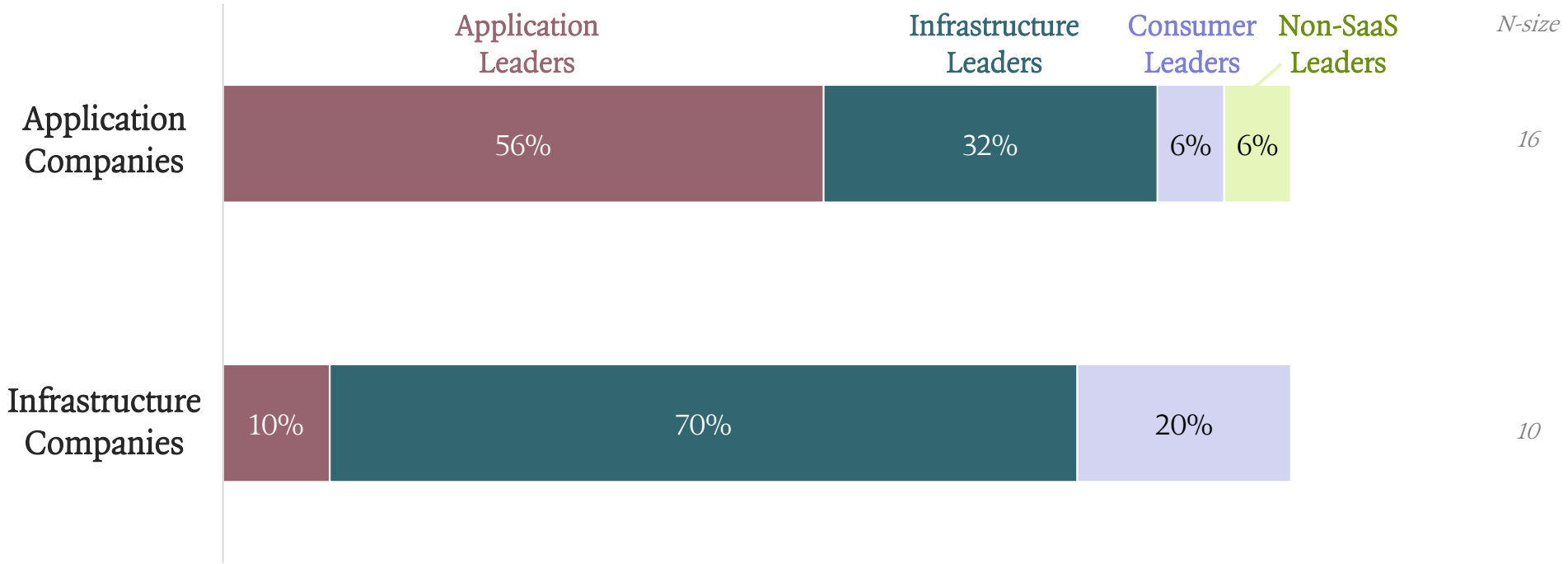
Check out our Executive Leadership Series and other research here

1) In this study we define IPO experience as being the Head of Engineering at IPO or direct report of a Head of Engineering at the time of initial public offering.
2) Includes all Heads of Engineering present at IPO. 2 companies did not have a Head of Engineering at IPO, resulting in an n-size of 66.

Sector

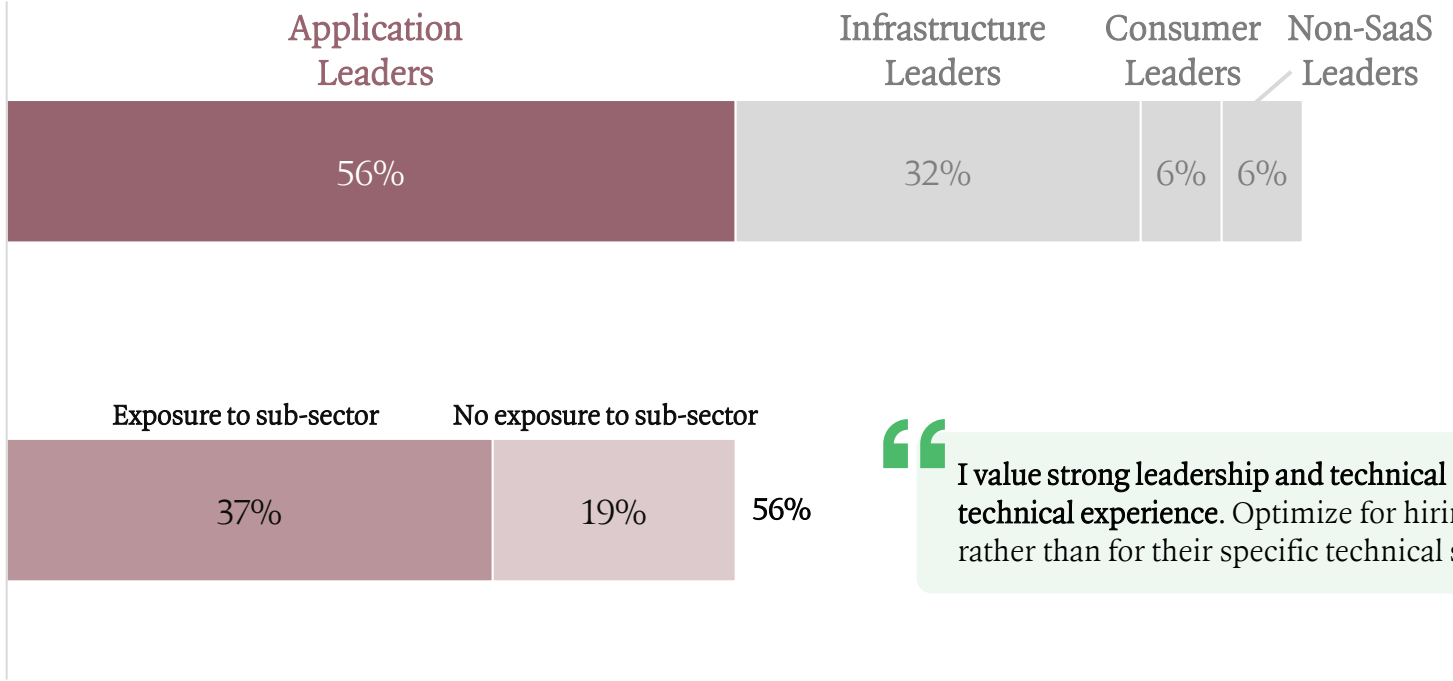
>$50M ARR Application companies generally show more openness to hire from outside of their broad sector, while Infrastructure companies tend to skew towards infrastructure-oriented leaders.

Engineering Leader's Sector Background vs. Company's Sector



While Application companies tend to hire application-oriented leaders, their tenure outcomes are similar to those with infrastructure or consumer backgrounds. Of the hires with an application background, two thirds are coming from the same sub-sector.

Application Companies: Prior Sub-Sector Exposure



Median Tenure Outcomes (years)

4.5 years | 5.0 years

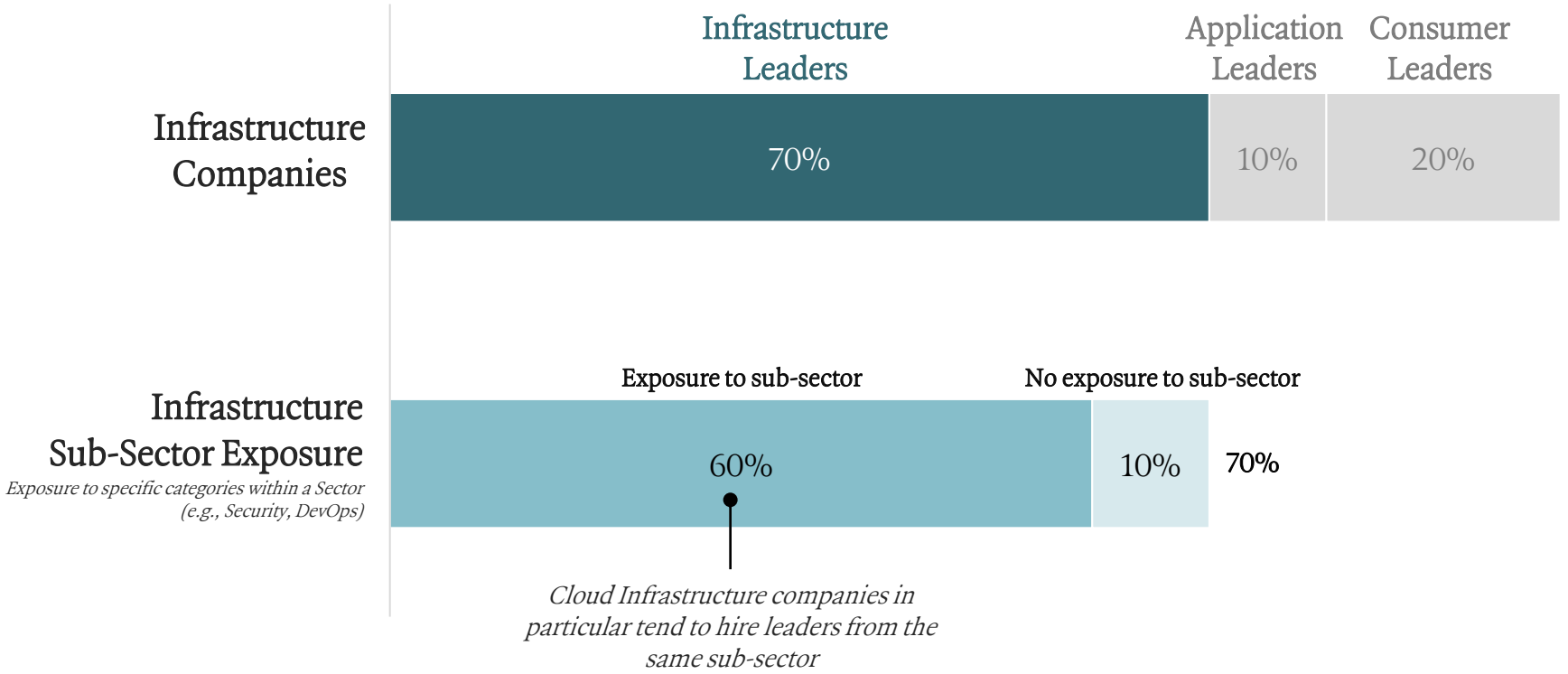
> **I value strong leadership and technical skills over specific technical experience.** Optimize for hiring the best leader rather than for their specific technical skillset.

Mike Curtis

Former VP Engineering at Airbnb

>$50M ARR Infrastructure companies tend to prefer leaders who not only have an infrastructure-oriented background but also possess some degree of familiarity within the same sub-sector. This may be due to a higher degree of technical complexity in infrastructure products.

Infrastructure Companies: Prior Sub-Sector Exposure



Median Tenure Outcomes (years)

3.5 years	3.0 years

Private & Strictly Confidential

Hiring For Success

Head of Engineering Operational Traits

Tenure Impact[1]

Less → *More*

Prior Head of Engineering Experience
Prior Head of Engineering experience by company ARR scale

Prior Years of Engineering Experience
Number of years in software engineering roles at any level

Public Technology Company Experience
Prior experience as junior and/or senior-level engineers in public technology companies

IPO Experience
Has gone through an IPO process before as the Head of Engineering or direct report of the Head of Engineering

Sector and Sub-Sector Affinity
Degree of prior exposure within a sector and sub-sector

Summary

- The data suggests that **CEOs should prioritize a leader with both prior Head of Engineering experience at private SaaS companies and senior-level engineering experience (CTO, SVP/VP) in public companies.** Alternatively, we believe **hires should at least have SVP/VP Engineering experience at 'Big Tech' companies** (e.g., Microsoft, Google, Salesforce).
- Regardless of the type of prior experience, **those hired after $50M ARR typically have 15+ years of engineering experience**.
- Although all externally hired leaders in this study have prior public company experience, **89% of Heads of Engineering who were present at IPO were not involved in an IPO process before.**
- While companies generally have a preference to hire from their same sector, the data indicates that **CEOs should opt for strong leadership and technical skills rather than sector-specific expertise.**

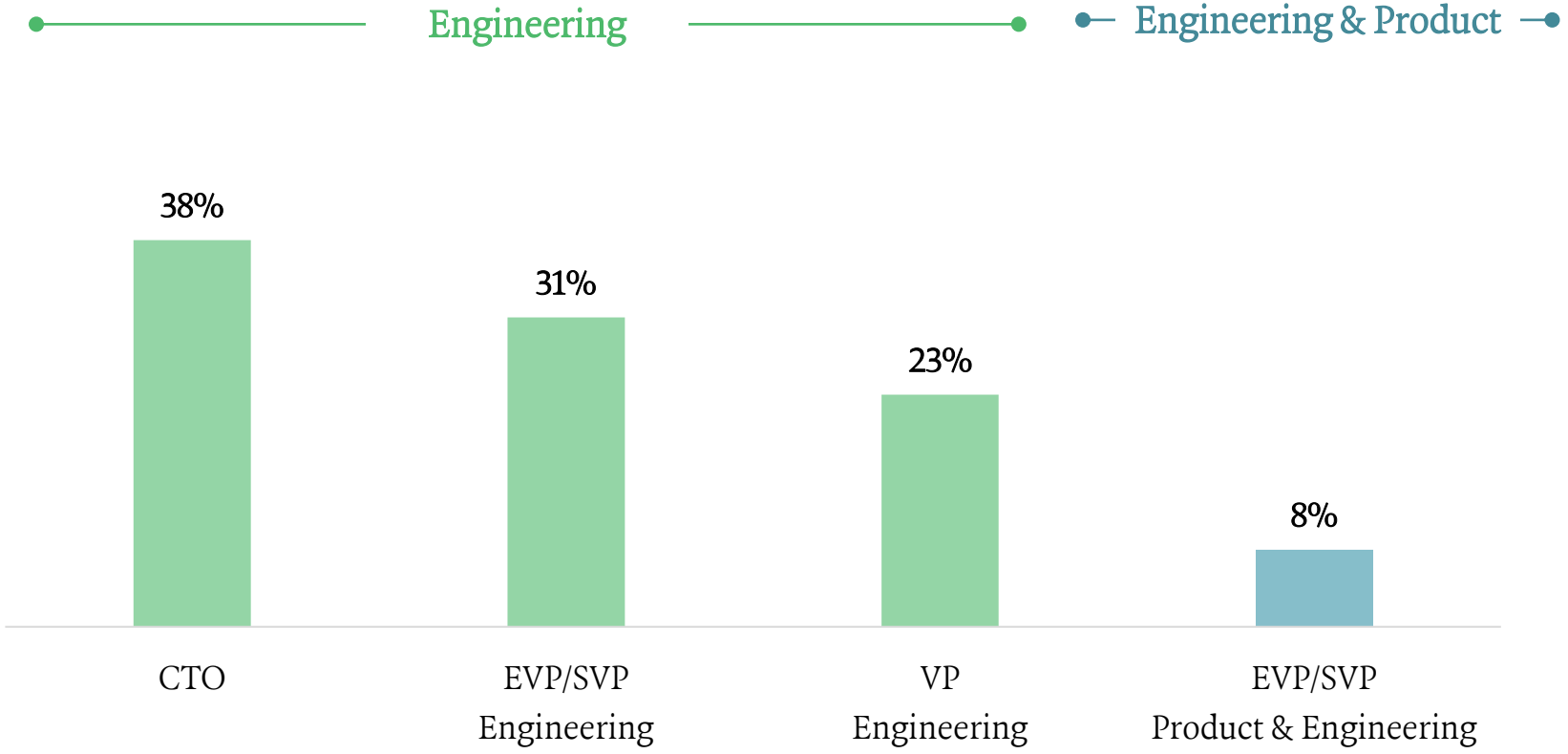
1) "Tenure Impact" indicates the extent to which a variable influenced an individual's tenure as the Head of Engineering. While efforts have been made to control confounding variables and ensure robustness, unaccounted contextual factors may also affect the impact on tenure.

Titling

$50M+ ARR companies tend to use the "CTO" and "EVP/SVP Engineering" title. Although uncommon, some hires assume a dual title of engineering and product, indicating that they are overseeing both functions.

Titles[1] at >$50M ARR Companies

External hires only



ICONIQ Technical Advisory Board Perspective on the Chief Product & Technology Officer (CPTO) role

The decision to combine the executive roles of engineering and product **depends significantly on the CEO's background**. For a sales-oriented CEO, this approach could be beneficial, as they may focus on the GTM side of the business more so than on R&D.

The **benefits of a CPTO role typically include increased organizational productivity** and the ability to move quickly.

However, this can be a challenging path to take, given leaders with deep knowledge and strong capabilities in both engineering and product are rare and **highly sought after**, and **entrusting one person with both crucial functions in a startup can be risky**.

All in all, **the CPTO role is generally not recommended as a standard blueprint**.

1) Titles reflect the most senior engineering leader managing the day-to-day engineering organization.

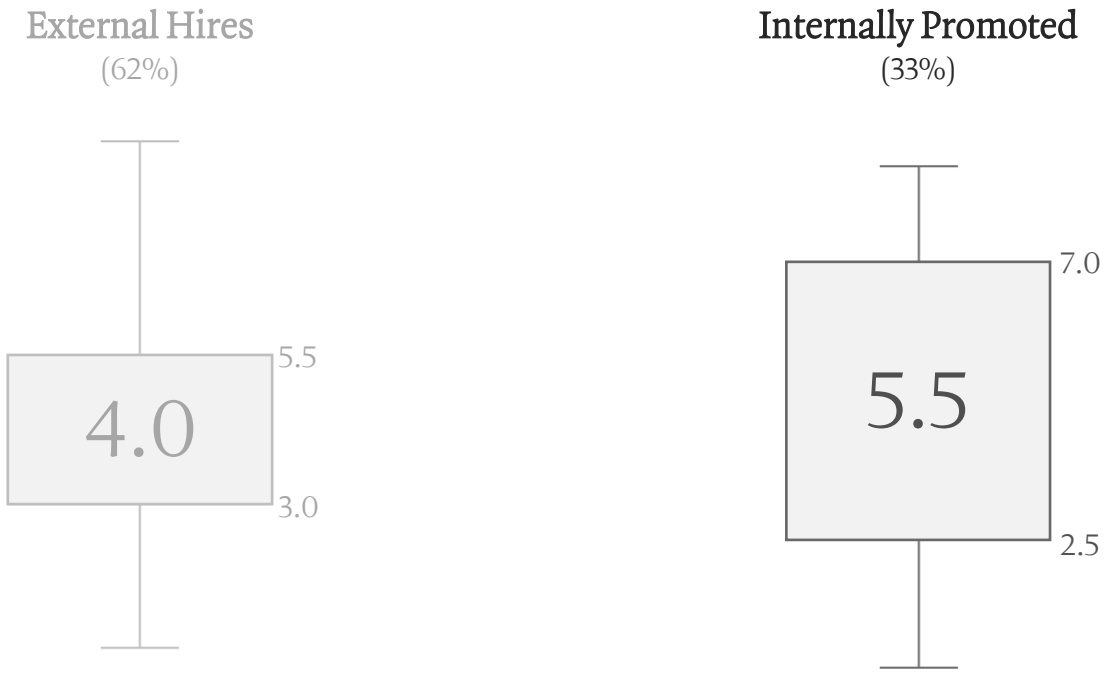
Internally Promoted Heads of Engineering

Companies can also opt to hire Heads of Engineering internally to leverage their existing institutional knowledge and potentially enable a seamless transition into the role. However, this approach typically relies on the presence of an exceptional internal candidate who not only excels in their current role, but also shows potential for higher-level leadership and scale.

Internal vs. External Heads of Engineering

While 62% of Heads of Engineering are hired externally, internal candidates are also a viable option since they tend to have longer tenures relative to external hires.

>$50M ARR Heads of Engineering[1,2] by Tenure Outcomes (years)[3]



Focus of Externally Hired Heads of Engineering section
P. 13-27

Focus of Internally Promoted Heads of Engineering section
P. 28-31

N-size — *26* — *14*

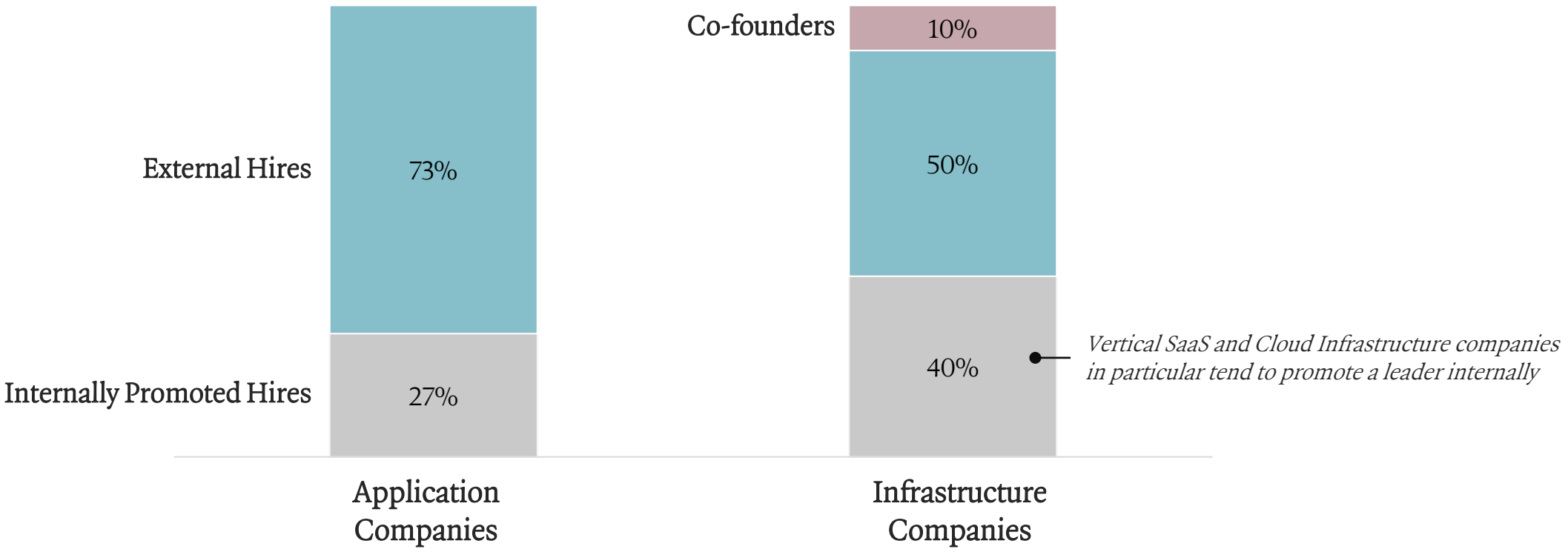
> **Having existing in-depth knowledge of the technical stack can be a significant advantage when stepping into a leadership role.** Already having the technical context within the company allows for better risk management and predictability of their performance. **However, a CEO should not rule out considering more experienced [external] leaders for the role.**
>
> **Mike Curtis**
>
> *Former VP Engineering at Airbnb*

1) <25% of external hires are still in their roles, meaning their tenure with the company continues to increase.
2) Co-founders have been excluded on this page due to low n-size.
3) Reflects the cumulative years of a hire's tenure as Head of Engineering, including post-IPO. "Tenure Outcomes" are defined as the duration in which an individual serves as the Head of Engineering at the companies in this dataset.

Types of Heads of Engineering by Sector

Infrastructure companies are 1.5x times more likely to internally promote someone to the Head of Engineering role compared to Application companies. This is likely due to the specialized knowledge infrastructure products require.

Types of >$50M ARR Heads of Engineering by Sector



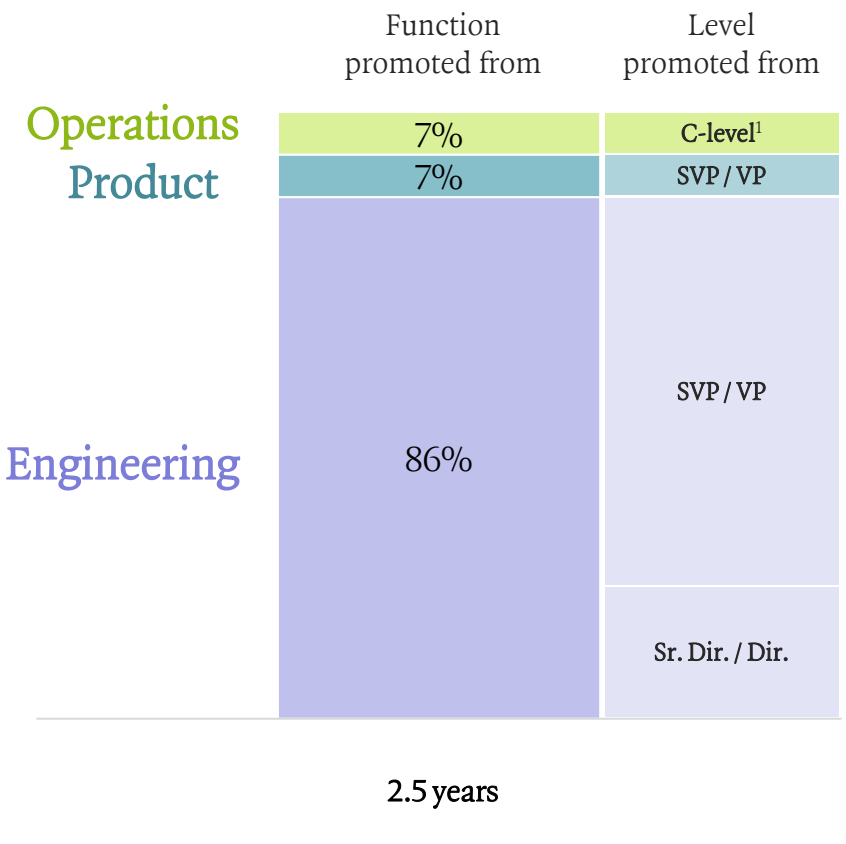
N-size	22	20

Internal Hires | Function and Level Promoted From

Regardless of sector, companies tend to promote individuals from within their engineering organization who have been with the company for at least 2.5 years and have reached the SVP/VP level.

Internal Hires by Function and Level Promoted From

N-size = 14



1) "C-level" refers to individuals who transitioned directly from their C-Suite position to assume the Head of Engineering role (e.g., Chief Operations Officer).

ICONIQ | Growth

San Francisco | Palo Alto | New York | London

Join our community

Other Research from
ICONIQ Growth

Leadership Analytics

Chief Marketing Officer Study: Part 1 & Part 2	• Quantitative analysis of the most prevalent – and most successful – operational backgrounds and qualifications for Heads of Marketing at private SaaS companies, segmented by Growth Stage	
Chief Revenue Officer Study: Part 1 & Part 2	• Quantitative analysis of the most prevalent – and most successful – operational backgrounds and qualifications for Heads of Sales/CROs at private SaaS companies, segmented by Growth Stage	
Chief Product Officer Study: Part 1 & Part 2	• Quantitative analysis of the most prevalent – and most successful – operational backgrounds and qualifications for Heads of Product at private SaaS companies, segmented by Growth Stage	
Chief Financial Officer Study	• Quantitative analysis of the most prevalent – and most successful – operational backgrounds and qualifications for Heads of Finance at private SaaS companies, segmented by Growth Stage	
*President & Chief Operating Officer Study	• Examination of the advantages and challenges of having a COO and/or President role	
Chief People Officer Study	• Quantitative analysis of the most prevalent – and most successful – operational backgrounds and qualifications for Heads of People at private SaaS companies, segmented by Growth Stage	

Select research shown. We invite you to explore additional resources on our ICONIQ Growth Insights page.
**Please reach out to iconiqgrowthinsights@iconiqcapital.com to request access.*

A global portfolio of category-defining businesses

1Password, acuity MD, adyen, Age of Learning, airbnb, Airtable, ajaib, Alibaba.com, alteryx, Altruist
APPRENTICE, APTTUS, articulate, aurora, AUTOMATTIC, AXONIUS, bamboohr, Benchling, BetterUp, bill
BLACKLINE, braze, Calendly, Campaign Monitor, Canva, CaptivateIQ, causaly, chime, CLARA, Collibra
conexiom, coupa, CROWDSTRIKE, cyber GRX, DATADOG, dataiku, dbt Labs, DeepL, DevotedHealth, dexcare
dialpad, DocuSign, DRATA, enfusion, EPIC GAMES, EvolutionIQ, ezcater, fastly, fetch REWARDS, Figma
Fireblocks, Fivetran, Flipkart, FloQast, FREEWILL, FTX, Gem, GitLab, glean, gofundme
GoodRx, GreenSky A Goldman Sachs Company, Groww, Guild, HashiCorp, headspin, HEPTAGON, highradius, HIGHSPOT, hightouch
hippo, HONEST, houzz, iex, INTERCOM, invision, komodo HEALTH, loom, Lucid, MARQETA
miro, MONTE CARLO, motorway, Moveworks, Nayya, netskope, ninjaOne, notable, Notion, orca security
panther, people.ai, Pepper, Pigment, Pinecone, PLURALSIGHT, Pontera, Primer, PROCORE, QGenda
ramp, recharge, RED VENTURES, Reify HEALTH, Relativity, Reprise, Restaurant365, Robinhood, SANITY, sendbird
ServiceTitan, shopmonkey, side, skuid, SMARTLING, snowflake, SPOTNANA, sprinklr, SQUIRE, TENCENT MUSIC ENTERTAINMENT
TRUCKSTOP, turbonomic, twin, Twistlock, Uber, Unit21, UNITE US, VIC.AI, virtru, WARBY PARKER
wayfair, Wealthsimple, Wolt, WRITER, zinier, zoom

These companies represent the full list of companies that ICONIQ Growth has invested in since inception through ICONIQ Strategic Partners funds as of the date these materials were published (except those subject to confidentiality obligations). Trademarks are the property of their respective owners. None of the companies illustrated have endorsed or recommended the services of ICONIQ.