



# Berlin Tech Snapshot 2017

A report on the current attitudes, technology stacks, job figures and facts based on surveys from Berlin's CTOs and technology executives

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# Forward

By Travis Todd, CEO of Silicon Allee

Our beginnings can be traced back to February 2011, when we first offered monthly meetups and provided Berlin with an English-language blog. As we have expanded and evolved, so has the Berlin tech scene. Since 2011, Berlin has become one of the top cities in the world for ambitious tech entrepreneurs, displaying success in markets such as e-Commerce, gaming, and marketplaces. In 2014, Berlin even surpassed London as the leading European city for venture capital investments.

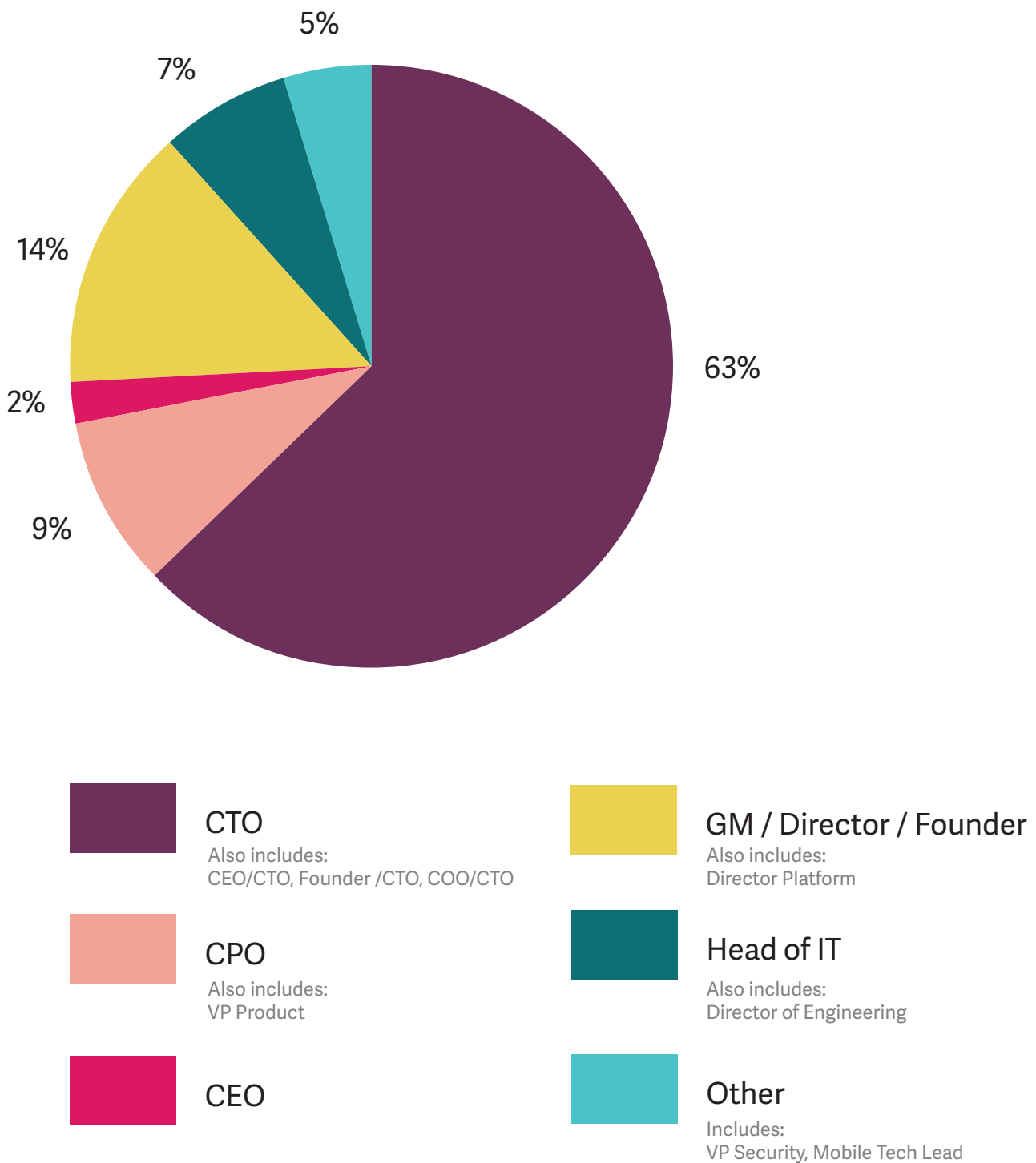
At Silicon Allee, we have always been interested in furthering our understanding of the evolving tech industry of Berlin. One of the most important roles in tech is that of the CTO. This role has many names, including often Co-founder, so for the purposes of this report we have called them generally Tech Executives. They are the people actually leading the development of the software revolutionizing the industry. We set out to produce an in-depth, comprehensive report that covers issues related to the day-to-day activities and decisions facing these Tech Executives. The report is compiled from the responses of 50 leading Tech Executives from big and small companies in Berlin.

While most reports on the Berlin tech scene remain focused on the financing side of the startup community, our goal is to provide an up-to-date snapshot of the current software attitudes, technology stacks, job figures, and development-related facts on the Berlin tech scene. While we do touch on all areas of the tech startup industry, from financing levels to salary levels, the views and opinions are from that of the development team leader. Our survey also displays their current sentiments on the impact of various political topics.

We are proud to present you with our report, and we hope this document will be useful for Tech Executives in making decisions on how to run their company as well as service providers like recruiters and outsourcing agencies to better target their offerings to Tech Executives.

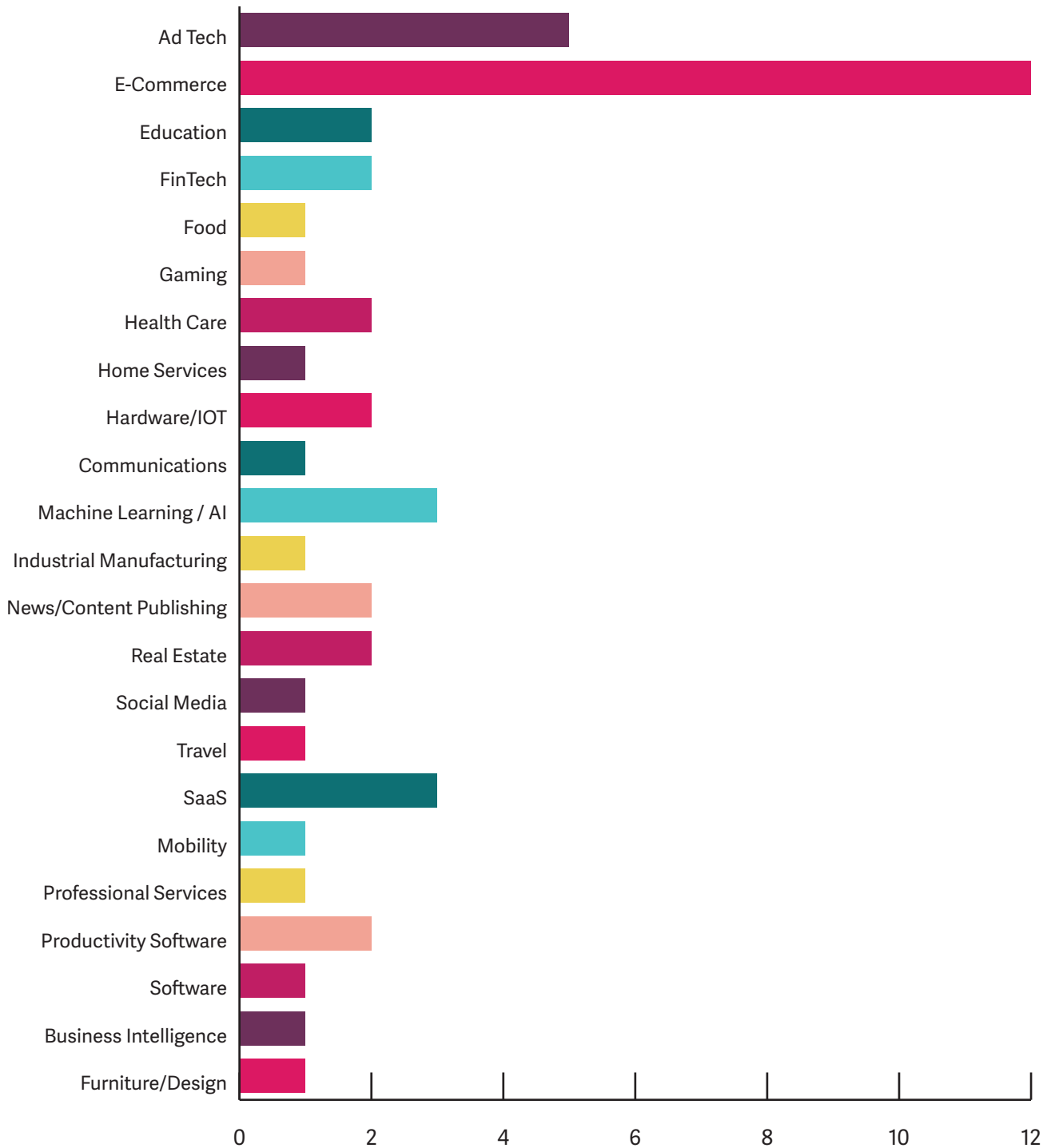
# > What is your role within your company?

**Chief technology officer (CTO) accounted for nearly two-thirds of all tech executives surveyed.** GM/Director/Founder accounted for the second most number of respondents at 14%. CPO, CEO, Head of IT, VP security, and mobile tech lead each accounted for less than 10% of those surveyed. 50 tech executives were surveyed in total.



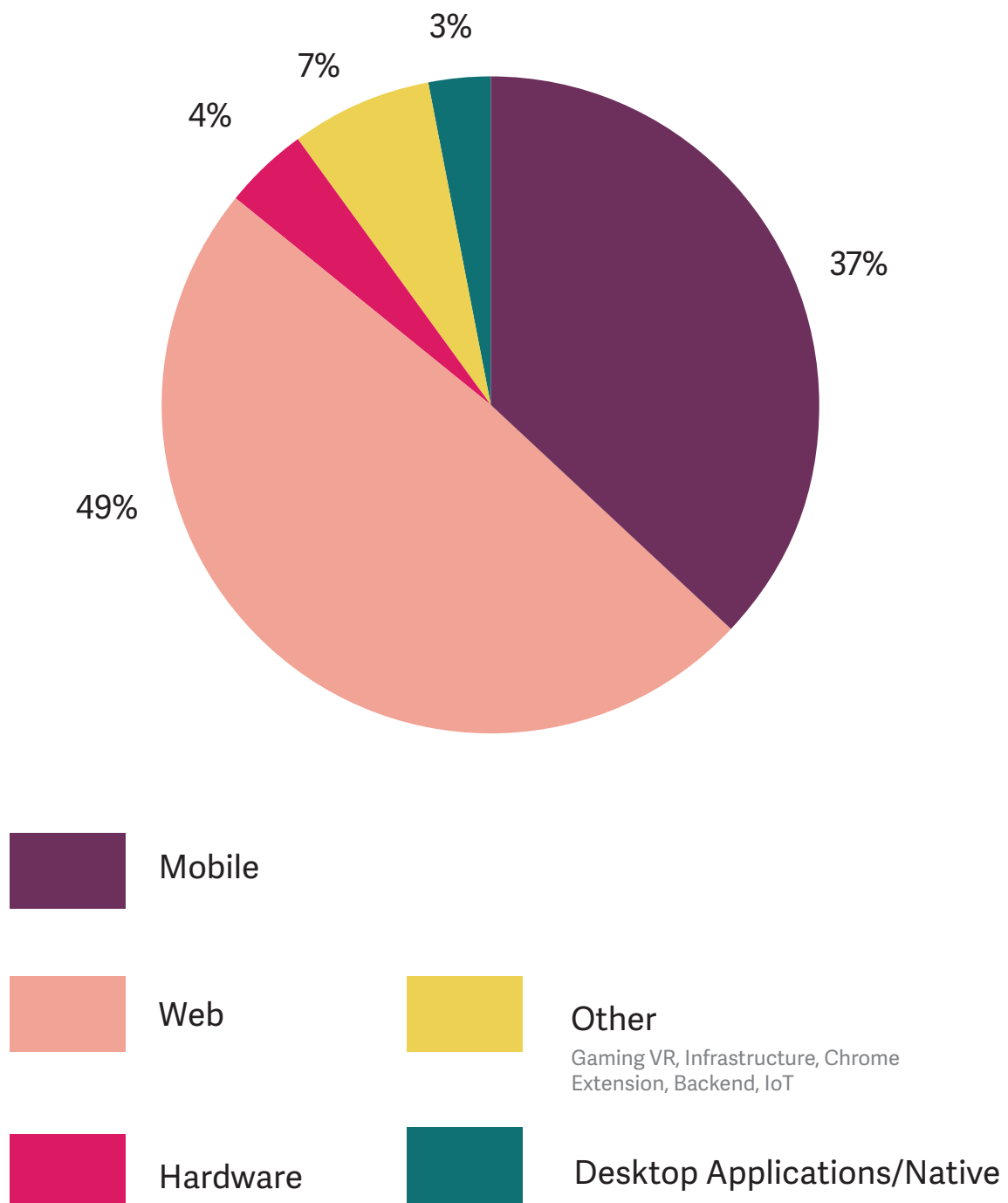
# > What sector is your company?

**E-commerce displays a vital role in the Berlin tech scene, accounting for almost one-fourth of tech companies analyzed in the study.** Ad Tech, machine learning, and Software as a Service (SaaS) also play an important role. As a whole, the Berlin tech scene remains diverse with 23 sectors represented in the study.



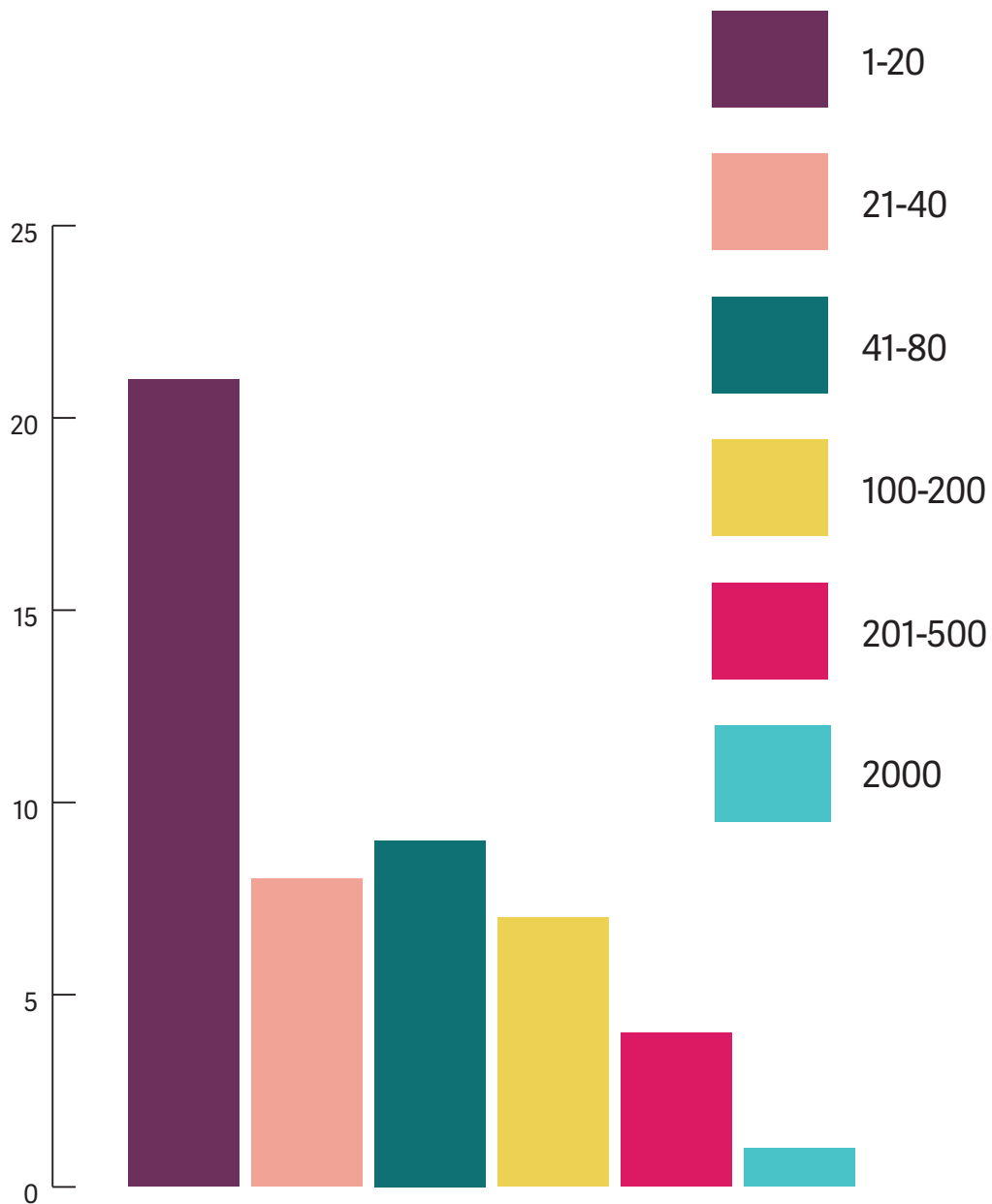
## > What are the platforms you are most focused on developing?

Web (49%) and mobile (37%) serve as the predominant platforms for Berlin's tech startups. **86% of tech companies surveyed focus developing for either a web or mobile platform.** Outside of web and mobile, 14% of those surveyed are developing for hardware, desktop applications, gaming virtual reality, and other platforms.



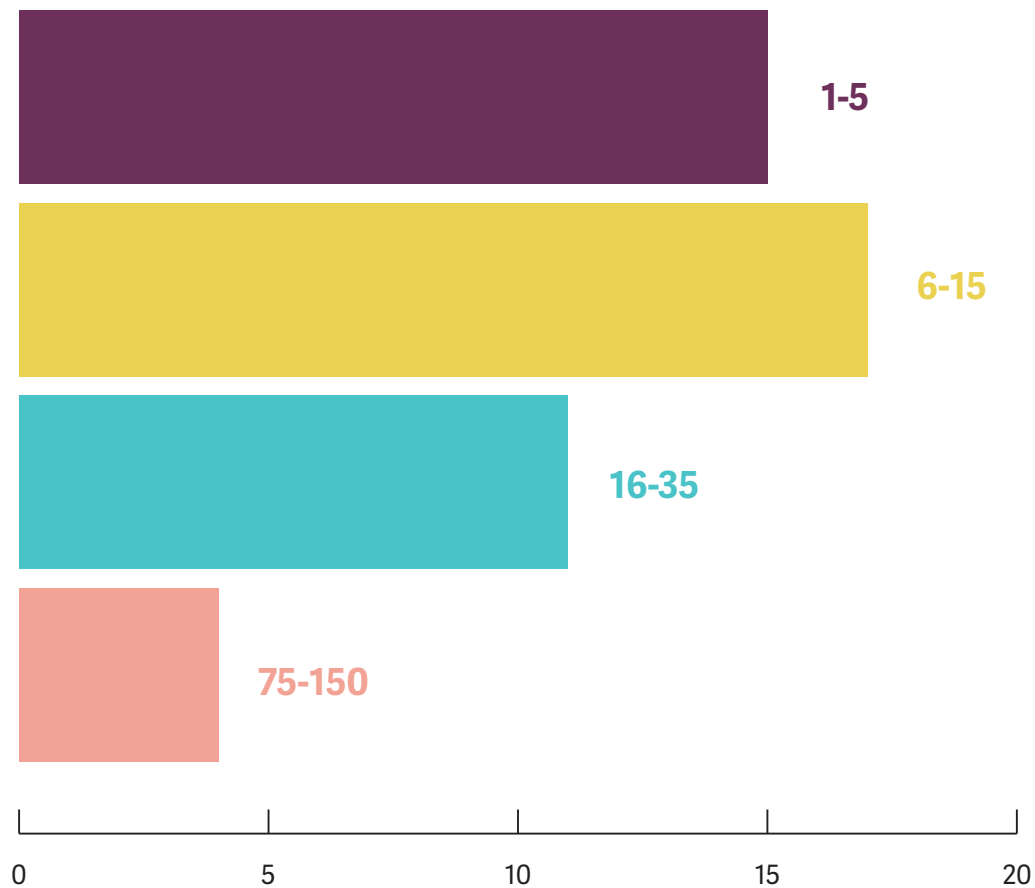
## > What is the size of your company?

The graph below analyzes the size of various Berlin tech startups' workforce. **42% of firms surveyed have a workforce comprised of 1-20 employees, which shows that most Berlin tech startups are on the smaller side.** 24% of tech startups surveyed have more than 100 employees in their firm.



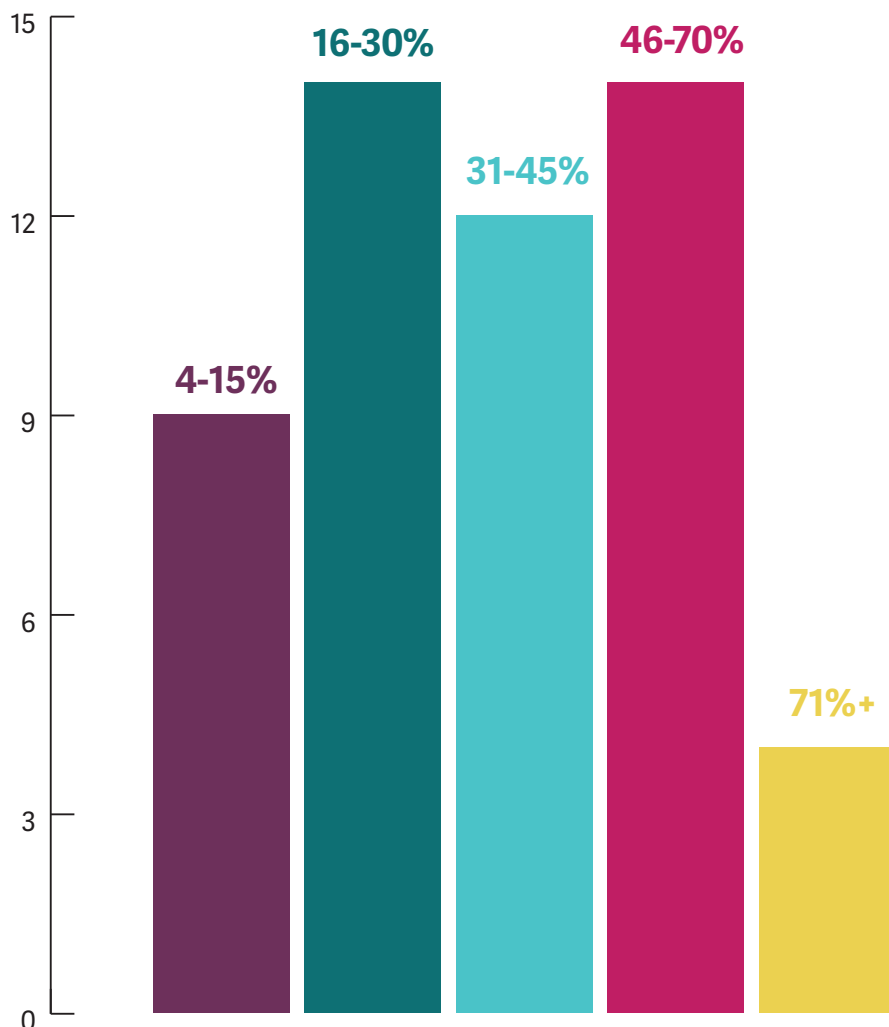
## > How many people in your company are on the development team?

The majority of programming/development teams are comprised of less than 15 workers. 36,2% of firms have a programming/development team of 6-15 people, 31,9% have a programming/developing team of 1-5 people, and 23,4% have a programming/development team of 16-35 people.



## > What percentage of your company is in the development team?

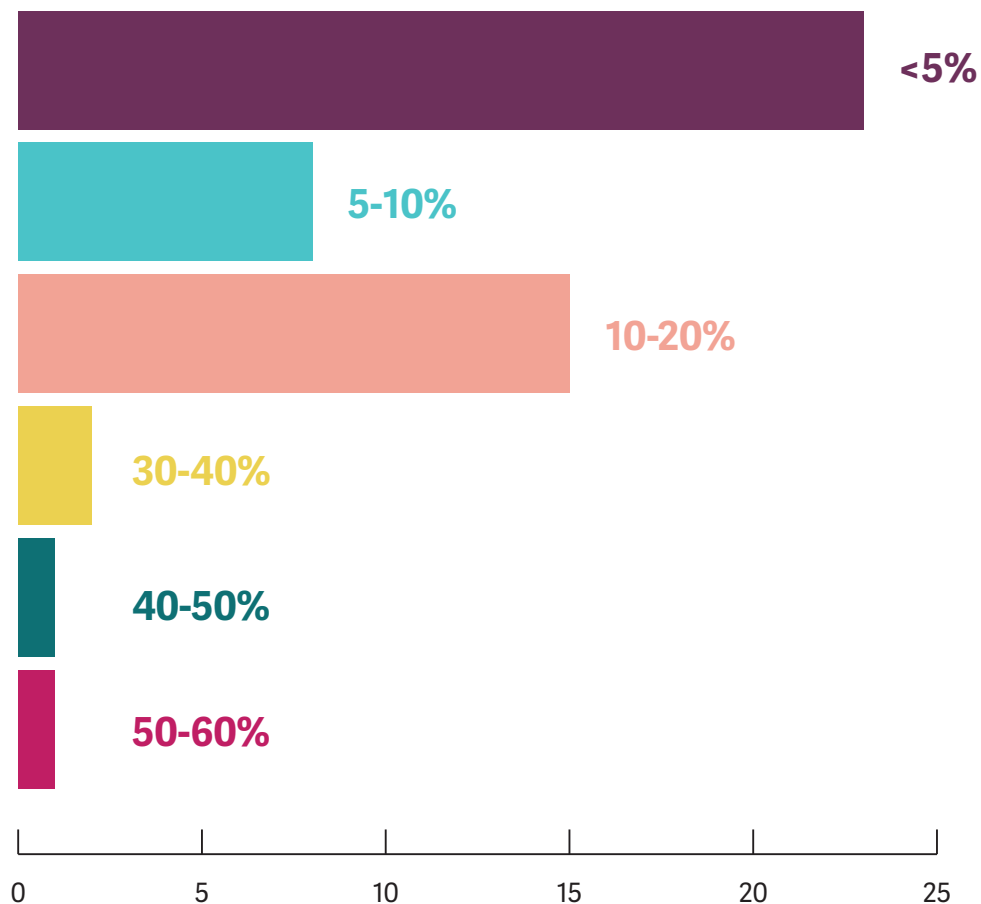
The graph below displays the size of each firm's development team with respect to its overall firm. **The percent of the team focused on development varies significantly in our study.** 26% of firms surveyed have a development team that comprises of 46%-70% of its overall workforce and 26% of firms have a development team that comprises 16%-30%.





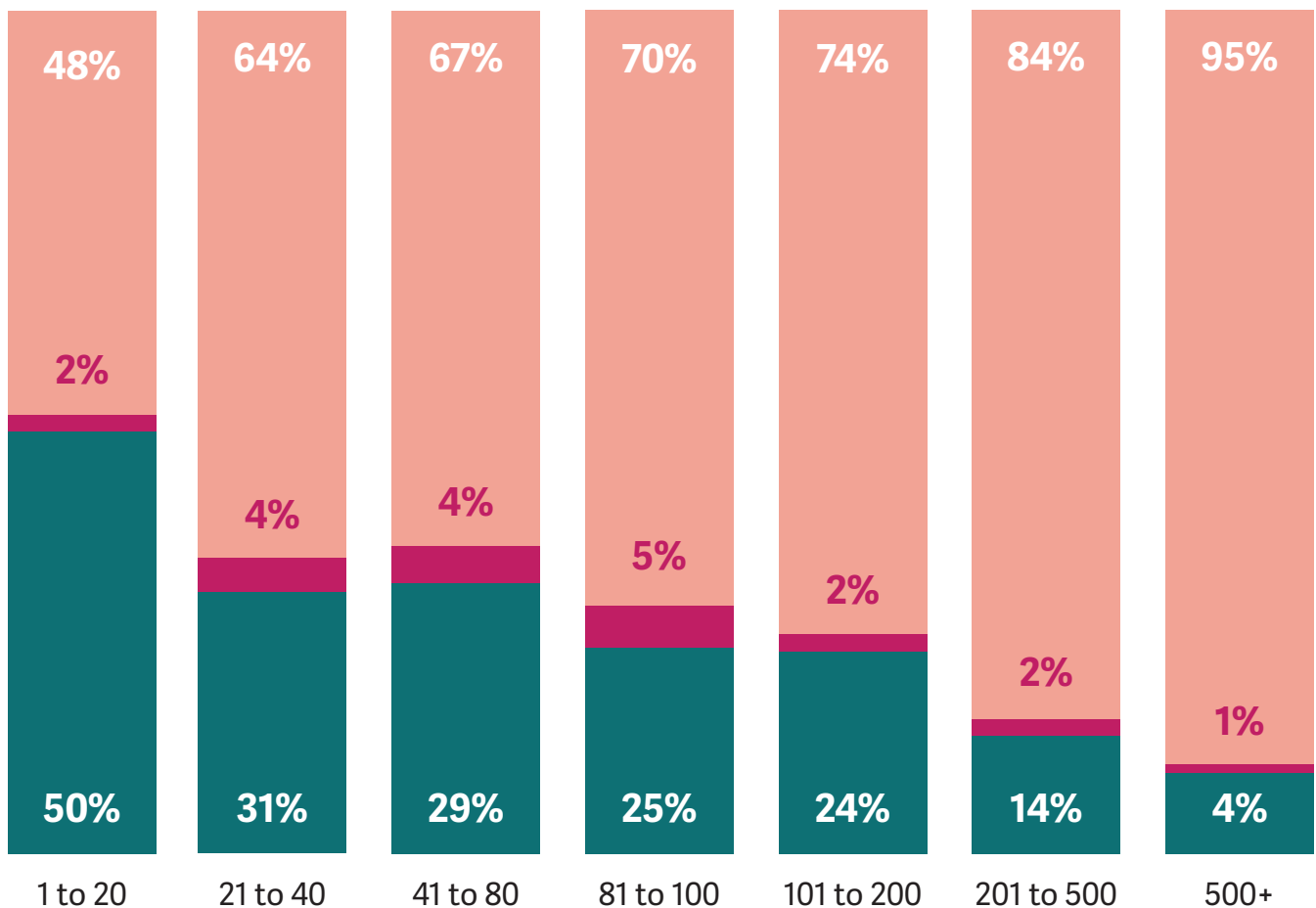
## > What is the gender ratio within your development team?

The graph below displays the gender ratio of Berlin tech startups' development team. **46% of tech startups surveyed had less than 5% women in their development team.** 30% of tech startups had 10%-20% women, and 16% of startups had 5%-10% women in their development team. Only 8% of tech startups surveyed had more than 30% women in their development team.



## > What is the overall makeup of your company's workforce in relation to the development team?

This question was not asked in our survey but rather this graph was put together by consolidating the previous data into one overall picture of the companies workforces. **The underrepresentation of women in tech startups' development teams is clearly displayed in our results. Also, smaller tech startups tend to focus more on their development team in relation to their overall business.** For smaller companies with no more than 20 employees, the development team accounts for 52% of its workforce.



% Male Developers



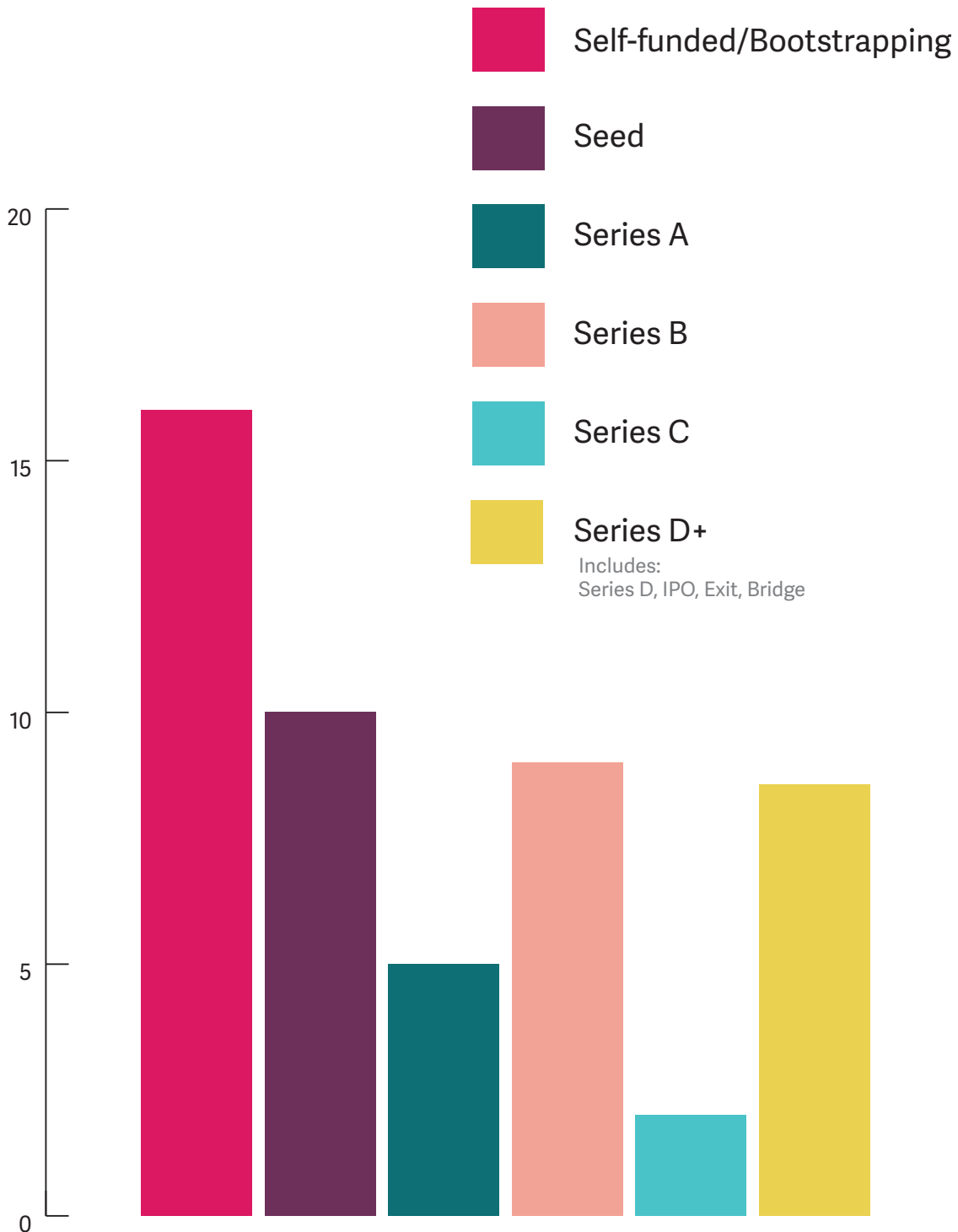
% Female Developers



% Non-Development Employees

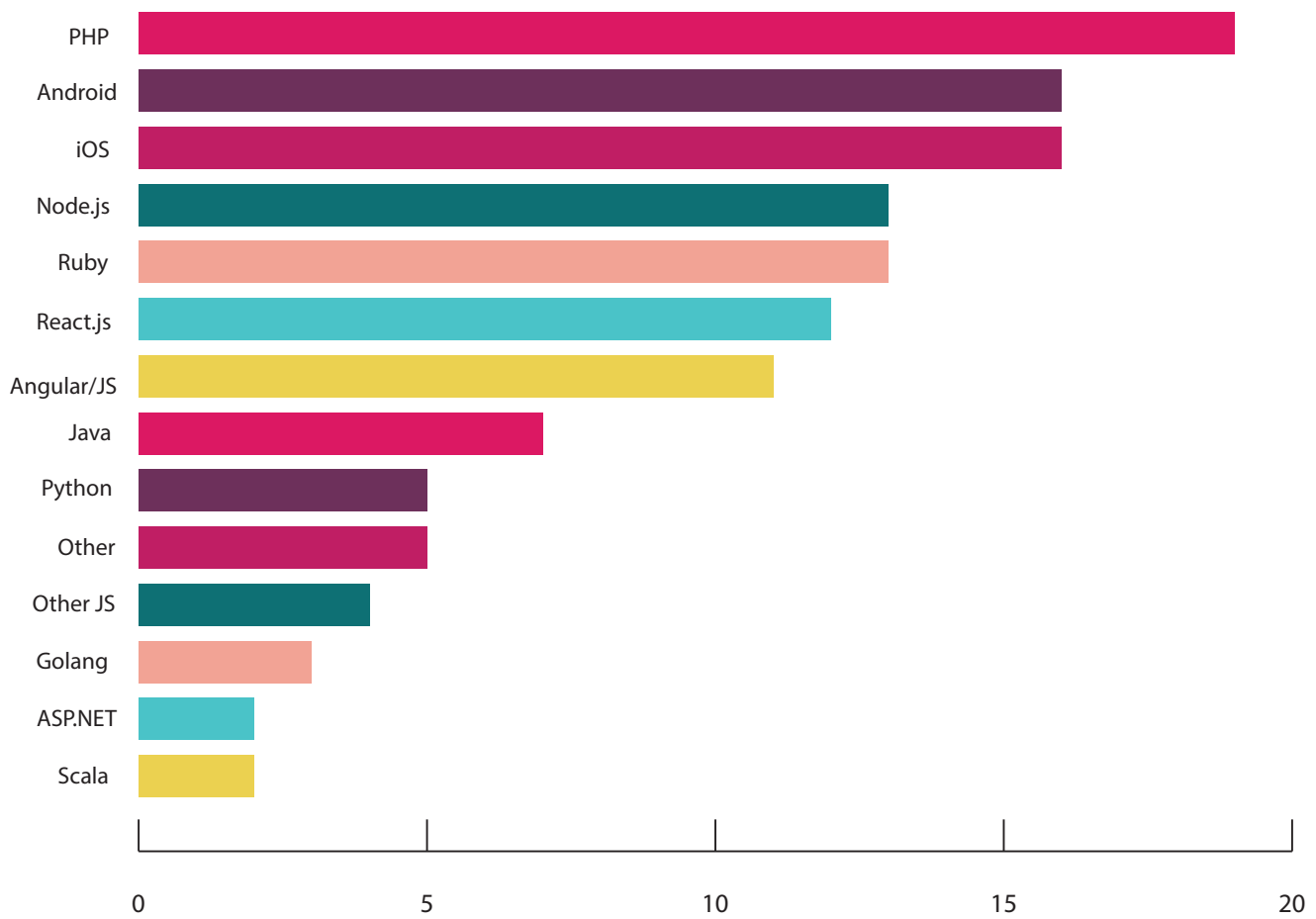
## > What was your last funding round?

**The majority of Berlin's tech startups remain in early stages of financing.** Nearly one-third of tech startups surveyed have relied only on self-funding/bootstrapping as a means of finance. The remaining tech startups have utilized external financing as their most recent funding round, which includes Series A, B, C, and D funding, bridge financing, or initial public offering (IPO).



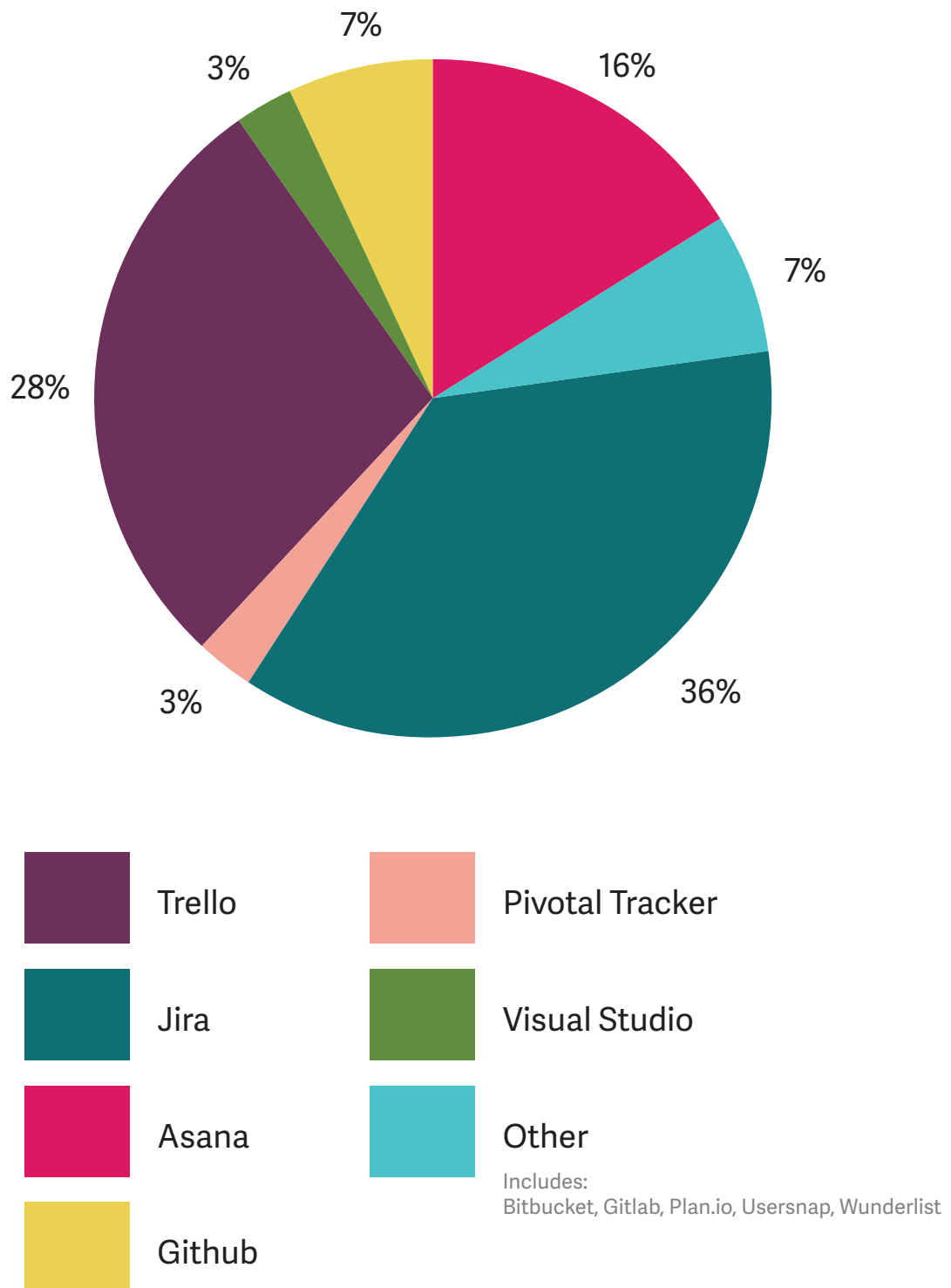
## > Which frameworks/technology does your startup use most frequently?

Berlin tech startups used a wide array of technology frameworks. **The most frequently used framework/technology is the scripting language PHP, followed by Android and iOS.** Other frequently used frameworks include Node.js, Ruby, React.js, and Angular/JS.



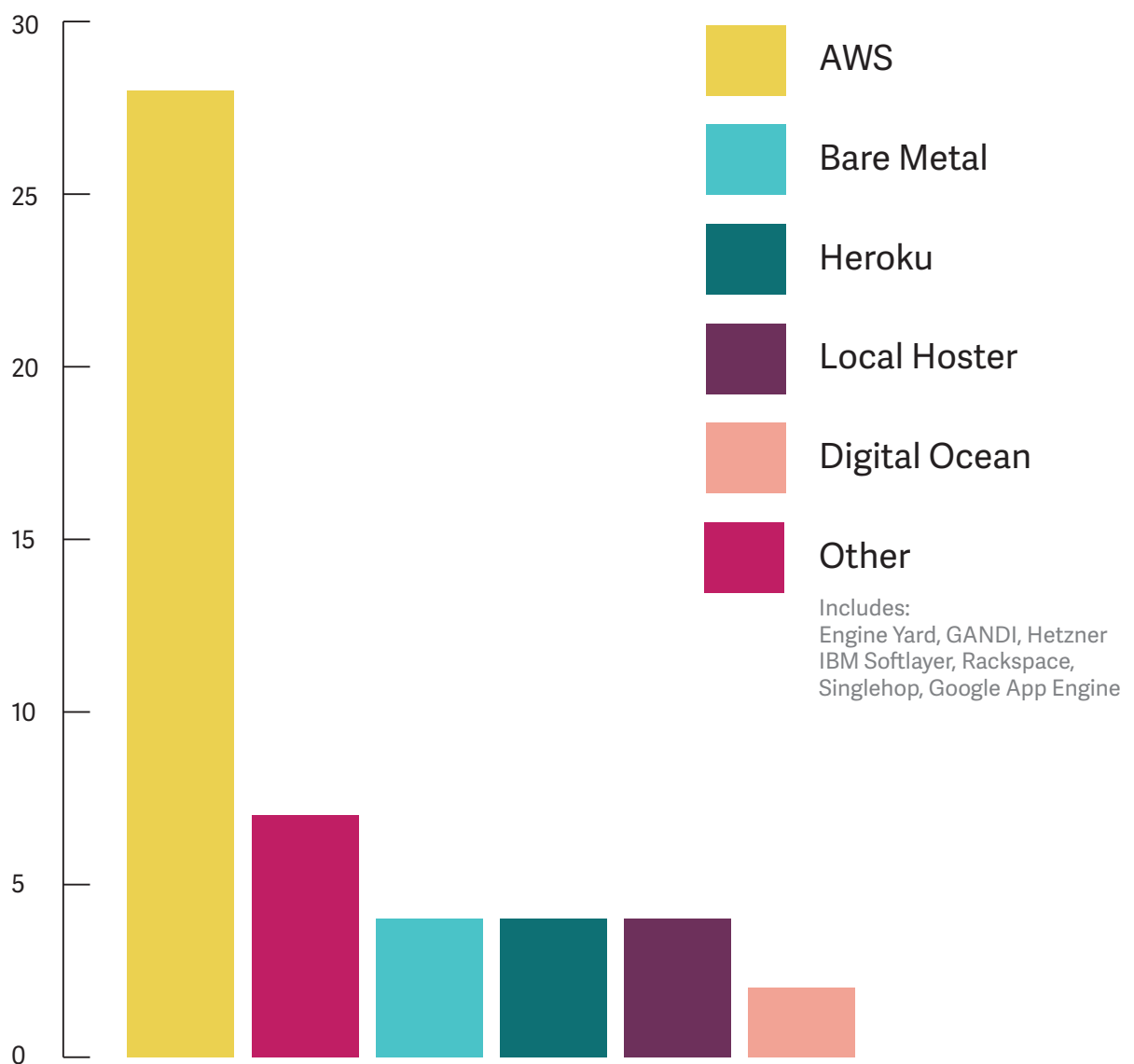
## > Which project management tool do you currently use?

**Trello and Jira are the most prominently used project management tools for Berlin tech startups.** Together, 68% of tech startups used either Trello or Jira. Asana accounted for 16% of startups, followed by Github and other project management tools at 7% each.



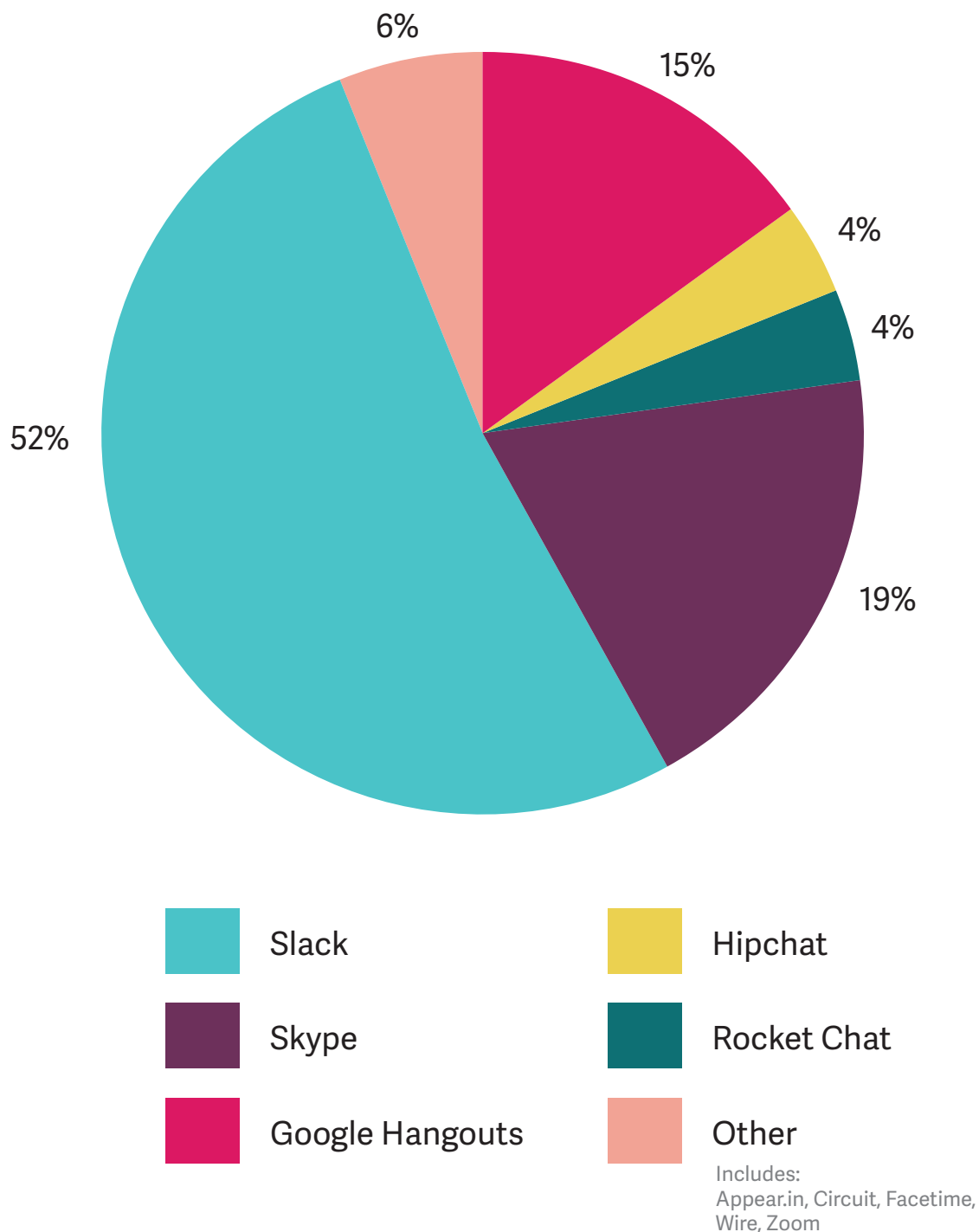
## > Which platform or service do you use for hosting and managing your product?

The most commonly used platform or service for hosting and managing products is Amazon Web Service, accounting for more than half of all startups surveyed. No other platform or service used by Berlin startups accounted for more than 10% of startups surveyed. Other platforms or services used by startups include Bare Metal, Heroku, Local Hoster, and Digital Ocean.



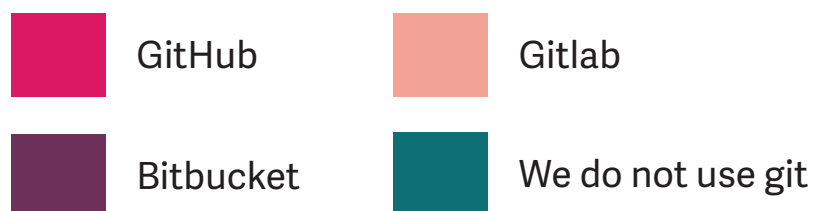
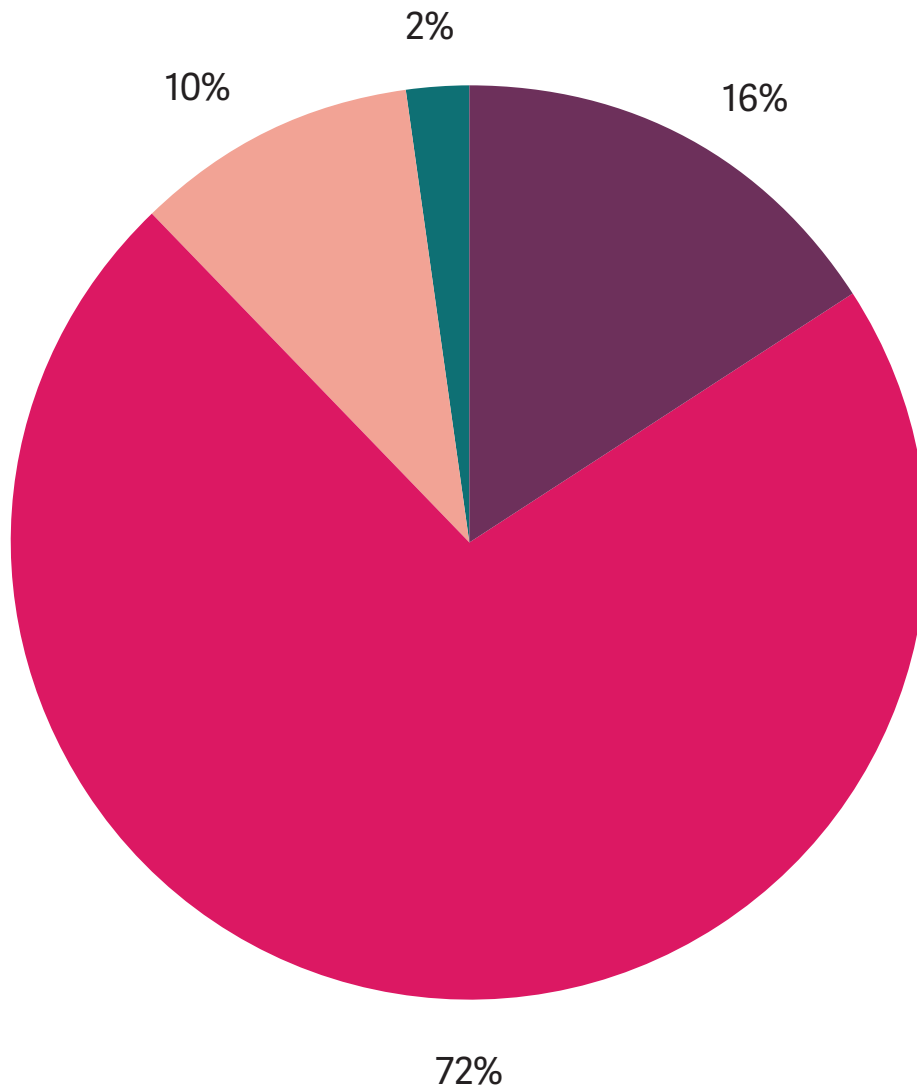
## > Which software do you use to communicate inside your team?

The majority of Berlin startups surveyed use team communication app Slack as its software for internal communication. Other commonly used software for tech startups include Skype (19%) and Google Hangouts (15%). Less frequently used software for internal communication include Hipchat, Rocket Chat, Appear.in, Circuit, Facetime, Wire, and Zoom.



## > Which git repository hosting service do you currently use?

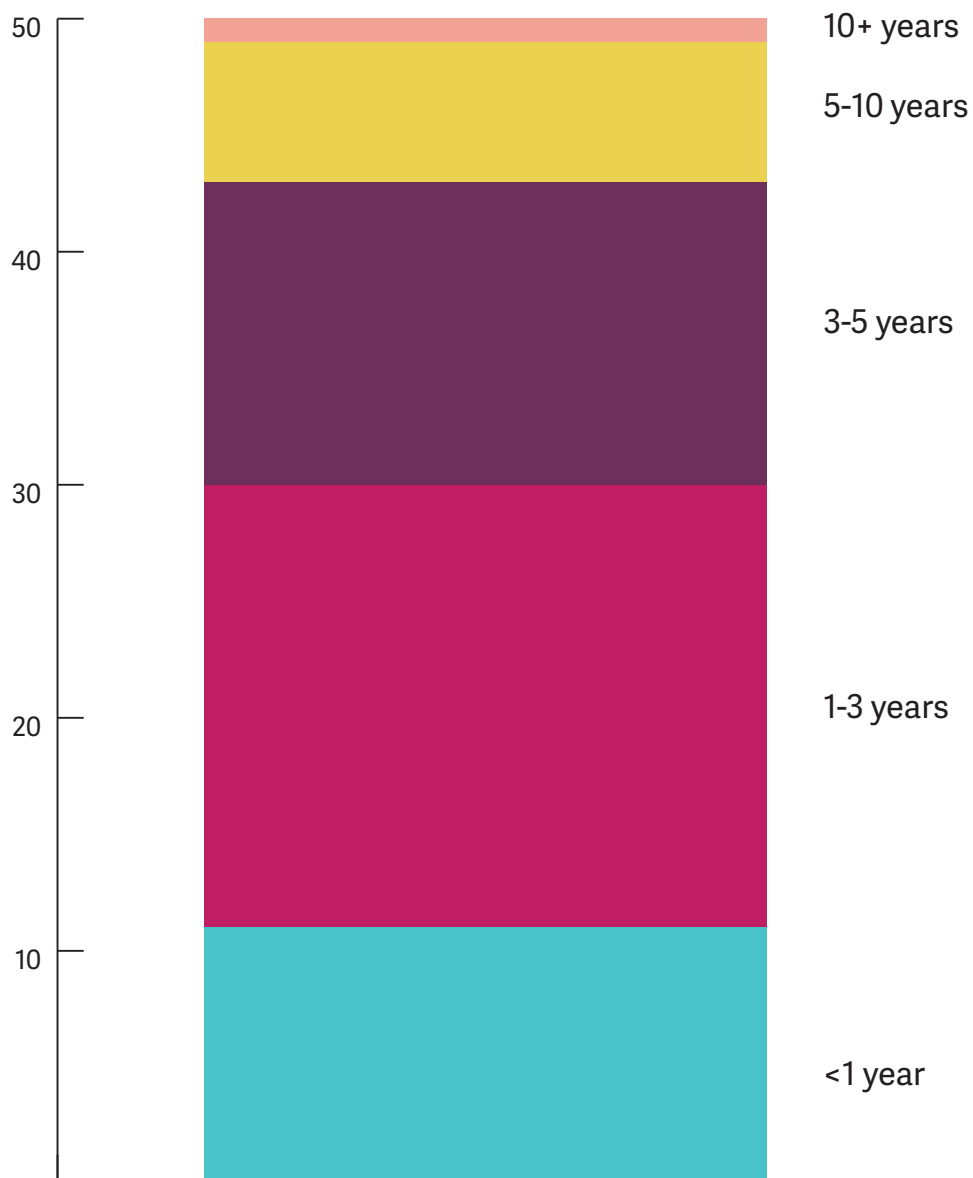
Nearly three-fourths of all tech startups surveyed use GitHub as their Git repository hosting service. Other Git repositories used by Berlin startups include Bitbucket (16%) and Gitlab (10%). Only 2% of Berlin startups surveyed do not use Git.





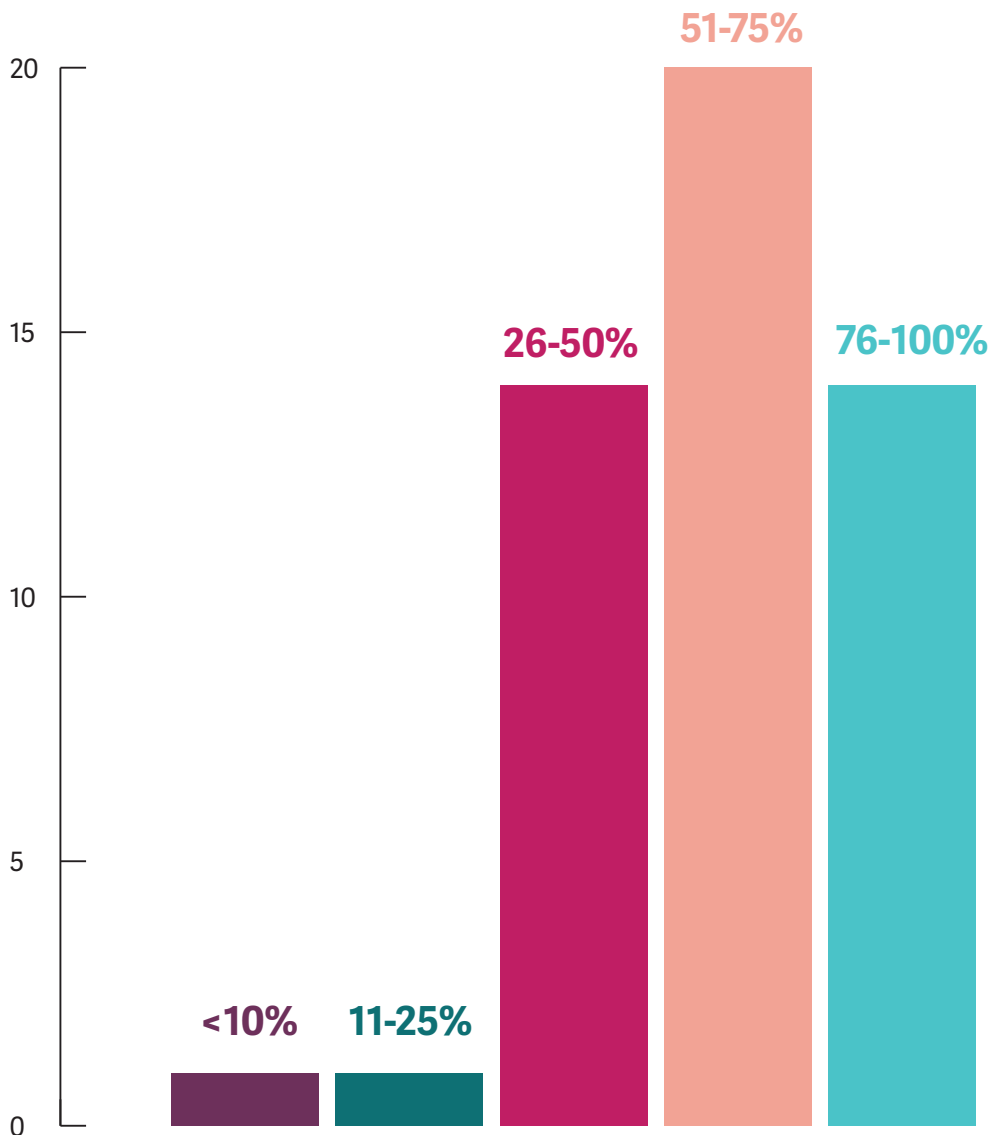
## > How long has your main application been under development?

The majority of Berlin tech startups remain in early stages of development. **More than half of Berlin startups surveyed have stated their main project has been under development for at most three years.** Furthermore, the average length of a startup's main application is between one and three years. Only 40% of startups' main application has been under development for more than three years. Less than 20% of startups surveyed have been under development for more than 5 years.



## > What % of time does your team spend on new features vs. support of existing code base?

More than two-thirds of Berlin tech startups surveyed spend the majority of their time developing new features versus supporting existing code base. Almost all tech startups devote at least 25% of their time to developing new features. **As a whole, the development of new features plays more of a role for Berlin startups than supporting existing code does.**



## > Did you ever have to rewrite your codebase from scratch?

The graphic below compares Berlin tech startups that have rewritten codebase from scratch and those that have not. **In our survey, 62% of Berlin tech startups have rewritten their codebase from scratch.** This confirms a common theme among developers that it is often necessary to start over from the beginning



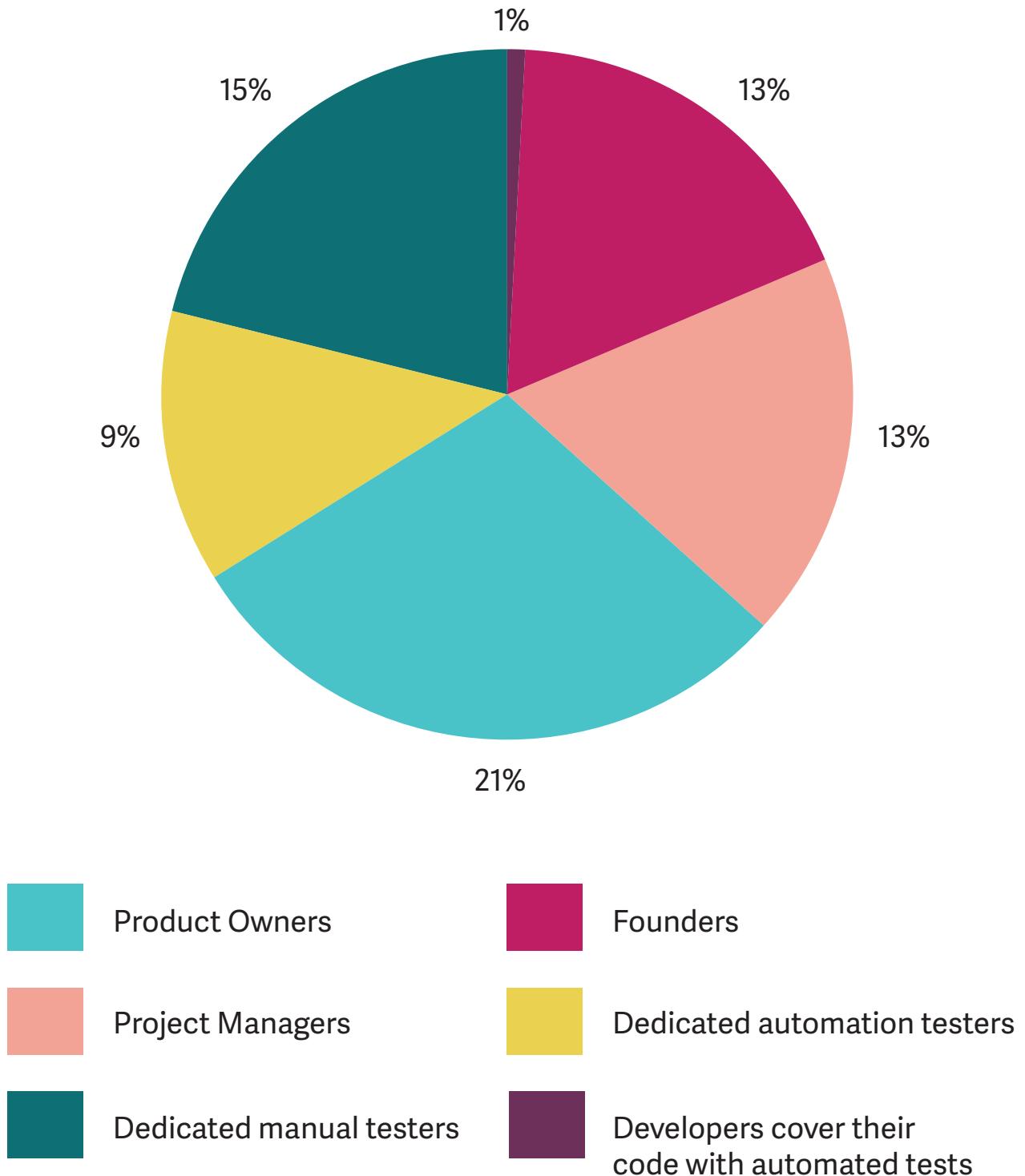
**have.**



**have not.**

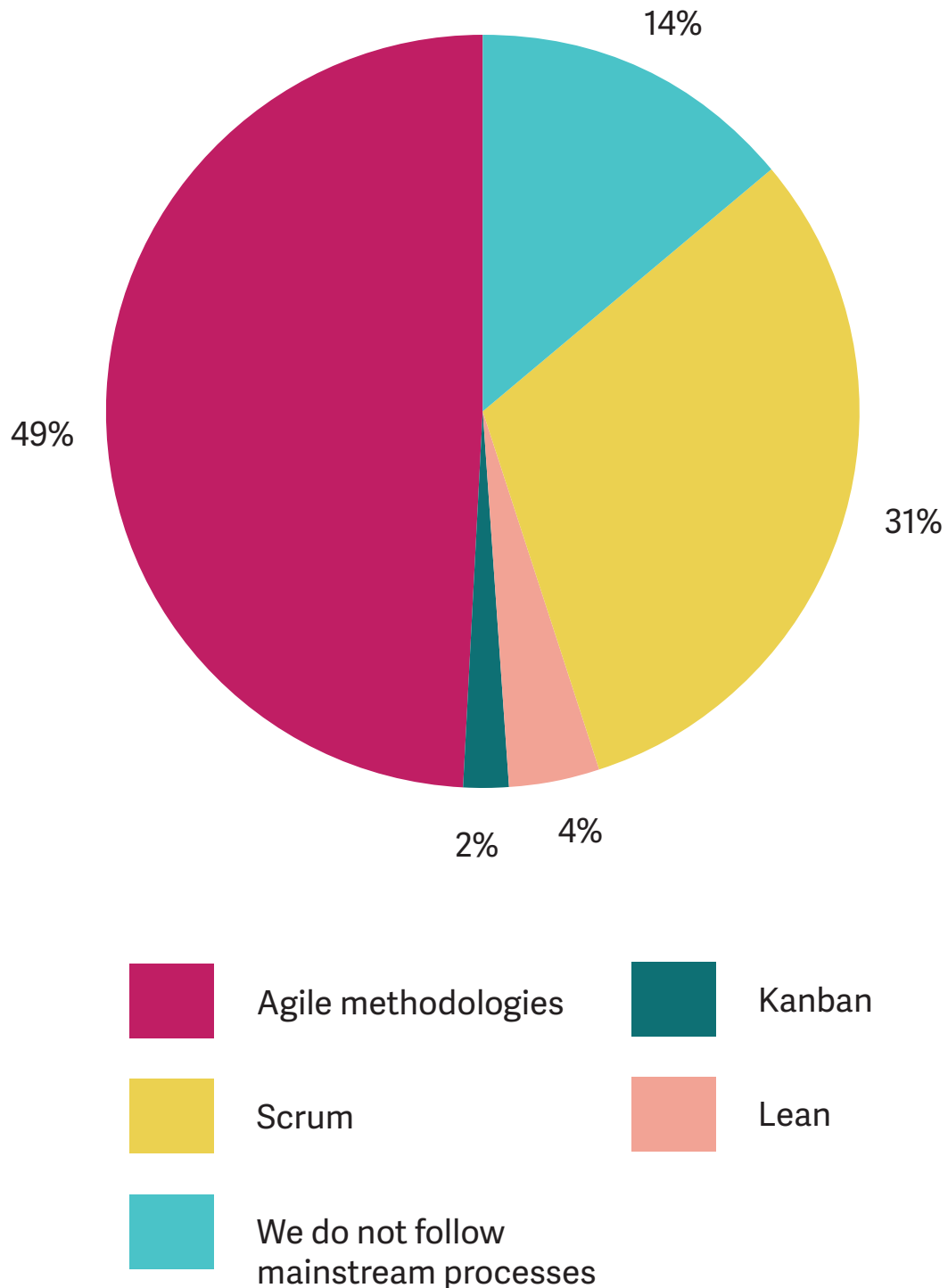
## > Who is responsible for testing new features?

The responsibility for testing new features appears to be distributed almost evenly. Product owners (21%) are most commonly used for testing new features, followed by dedicated manual testers (15%), founders (13%), and project managers (13%). Only 1% of tech startups cover their code with automated tests.



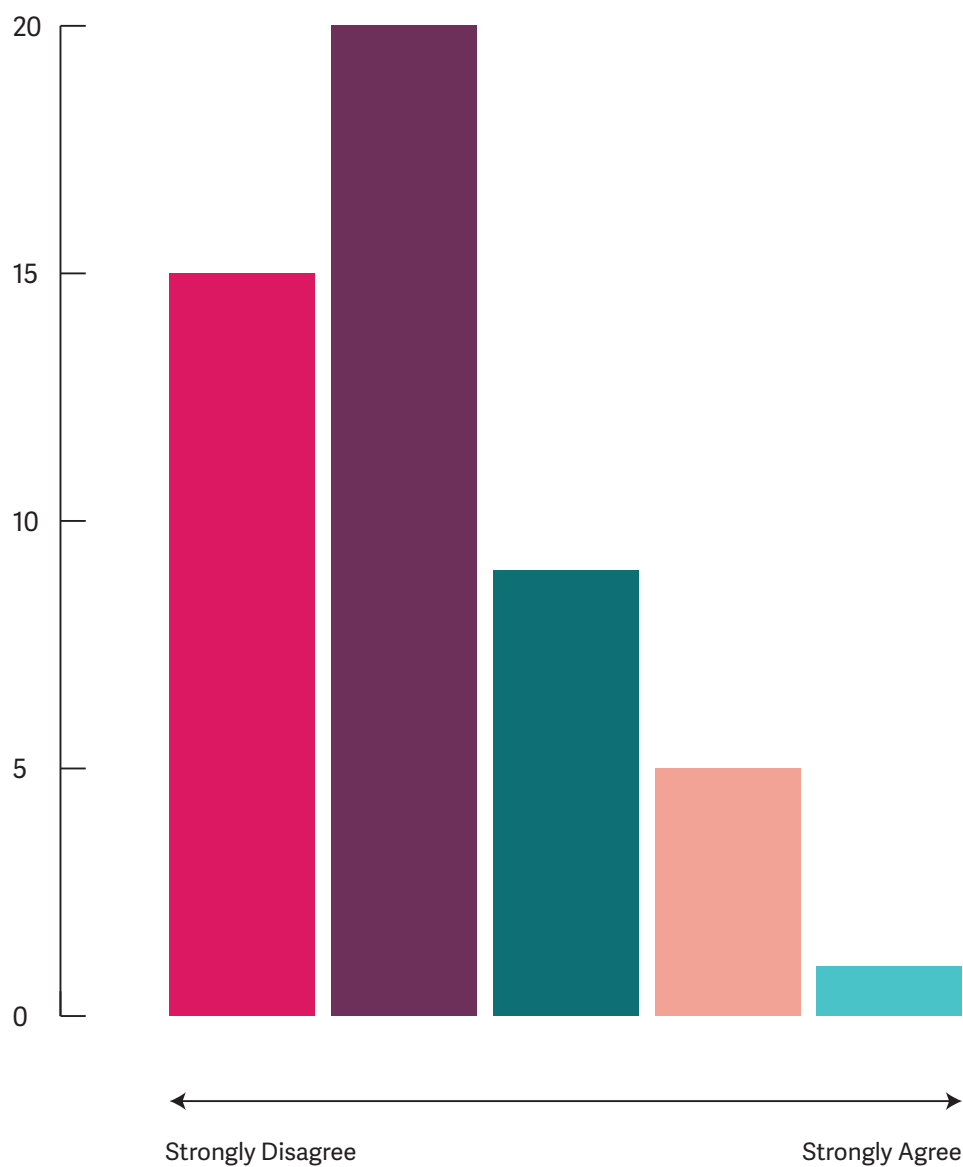
## > Which development methodology does your company follow?

The pie chart below displays the different software development methodologies followed by Berlin tech startups. **Nearly half of startups surveyed use Agile as their software development methodology.** The next most common method followed is Scrum (31%). 14% do not follow mainstream processes.



# > Can outsourcing development help you better achieve your objectives?

**Most Berlin tech startups surveyed oppose outsourcing software development in order to grow their business.** 70% of Berlin tech startups either disagree or strongly disagree with the notion that outsourcing software development can help better achieve the company's objectives.



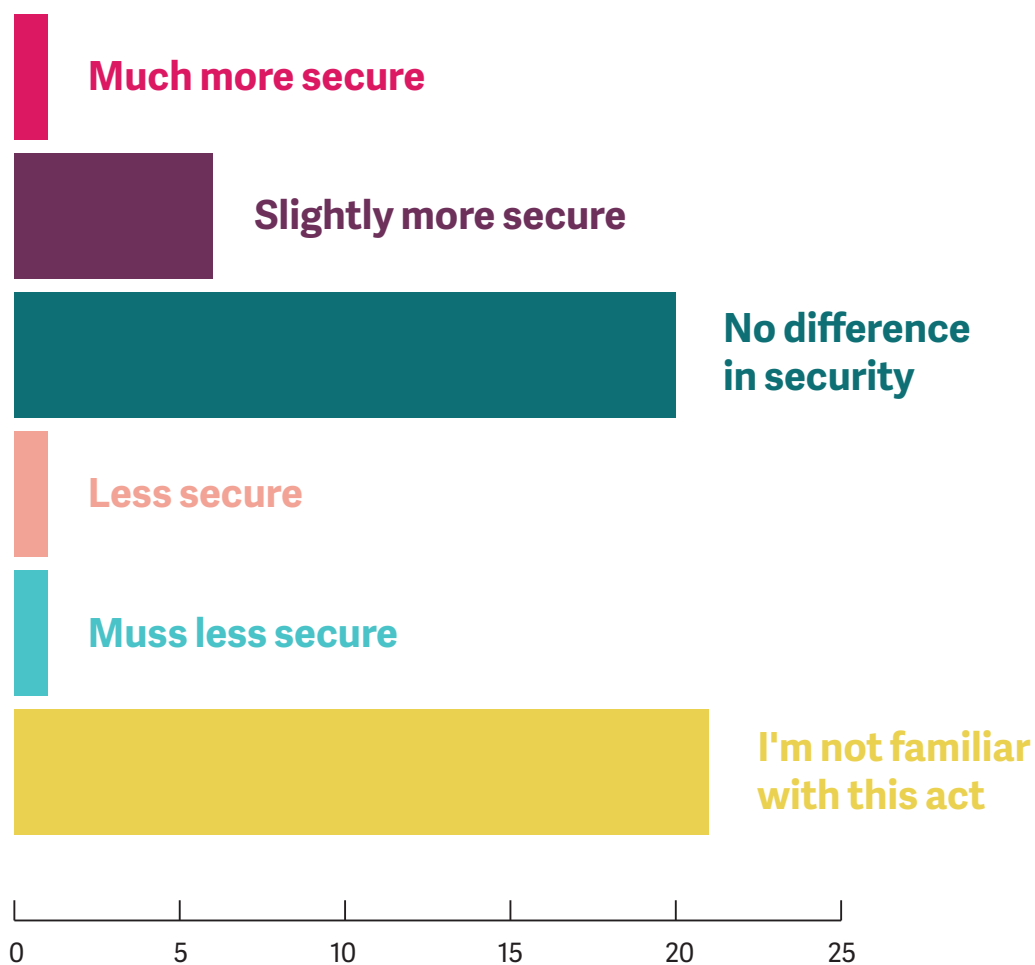
# > What would most likely cause you to outsource development?

Berlin tech executives were questioned as to what their motives would be if they were to outsource software development. Our results show that savings on development cost, avoiding cost of hiring, and transparent structure of IT expenses do not provide tech executives with clear incentives to outsource software development. **More than half of tech executives either agreed or strongly agreed that fast extension of existing team with new developers would be an important reason for outsourcing software development.**



## > Do you think the GDPR will improve data security within your company?

Tech executives were questioned on how effective they believe the General Data Protection Regulation (GDPR) will be for improving data security after it is implemented in May of 2018. Out of the tech executives familiar with GDPR, most believe the regulation will result in no difference in data security. The second most common response from executives familiar with GDPR is that the GDPR will result in slightly more secure data security. **A worrying indication is that most tech executives were not aware at all of the legislation.**

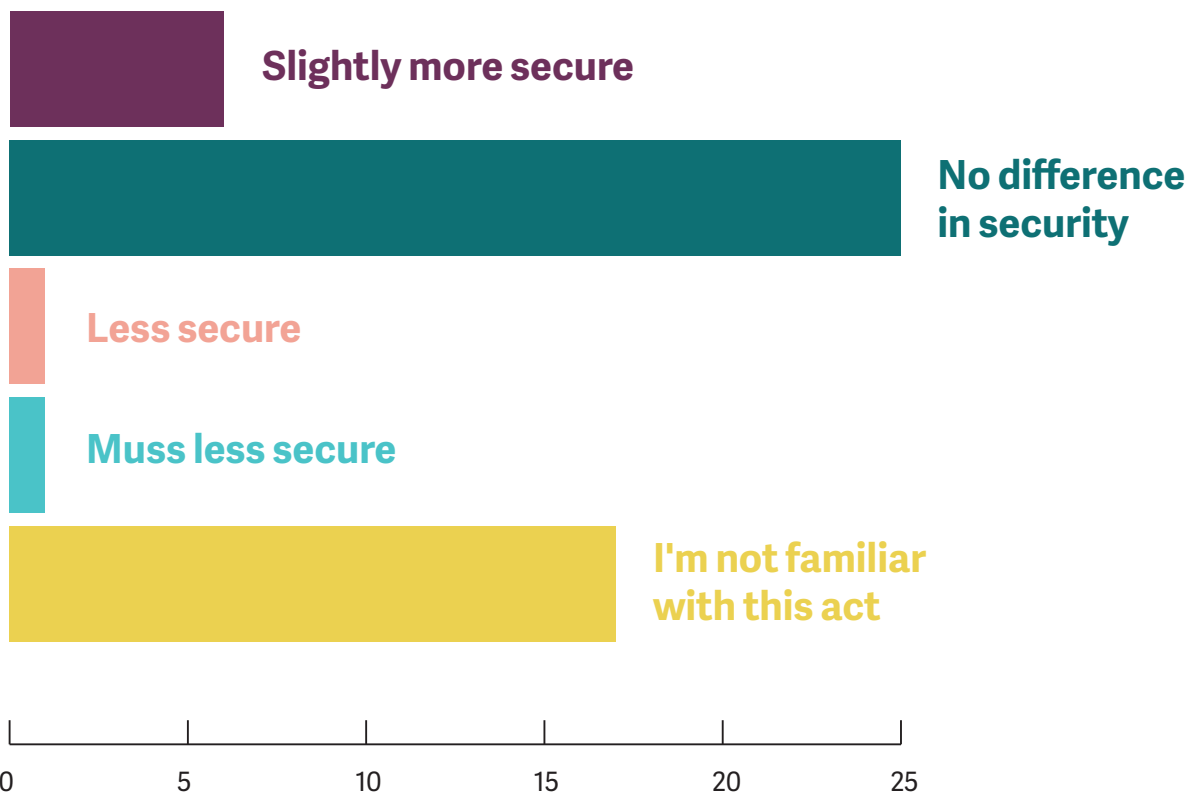




## > Do you think the EU-US Privacy Shield Framework will improve data security?

Our survey indicates that tech executives view EU-US Privacy Shield Framework similar to the GDPR. Of those aware of the EU-U.S. Privacy Shield Framework, 76% believe the agreement will result in no difference in security and 18% believe it will result in slightly more secure data security. **Again is worrying that many tech executives are not aware of the legislation.**

### Much more secure



## > How do you think the Brexit will affect the Berlin startup scene?

Berlin tech executives demonstrate differing opinions on the impact of Brexit on the Berlin startup scene. More than two-thirds of executives surveyed believe Brexit will have an affect on the Berlin startup scene. **Most tech executives believe more firms will start in Berlin rather than in London.** About a third of tech executive believe some firms will relocate to Berlin, and about a quarter believe Brexit will have little effect.



**It will have little effect**



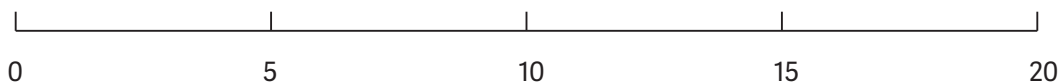
**Some firms will relocate to Berlin**



**More firms will start in Berlin rather than in London**

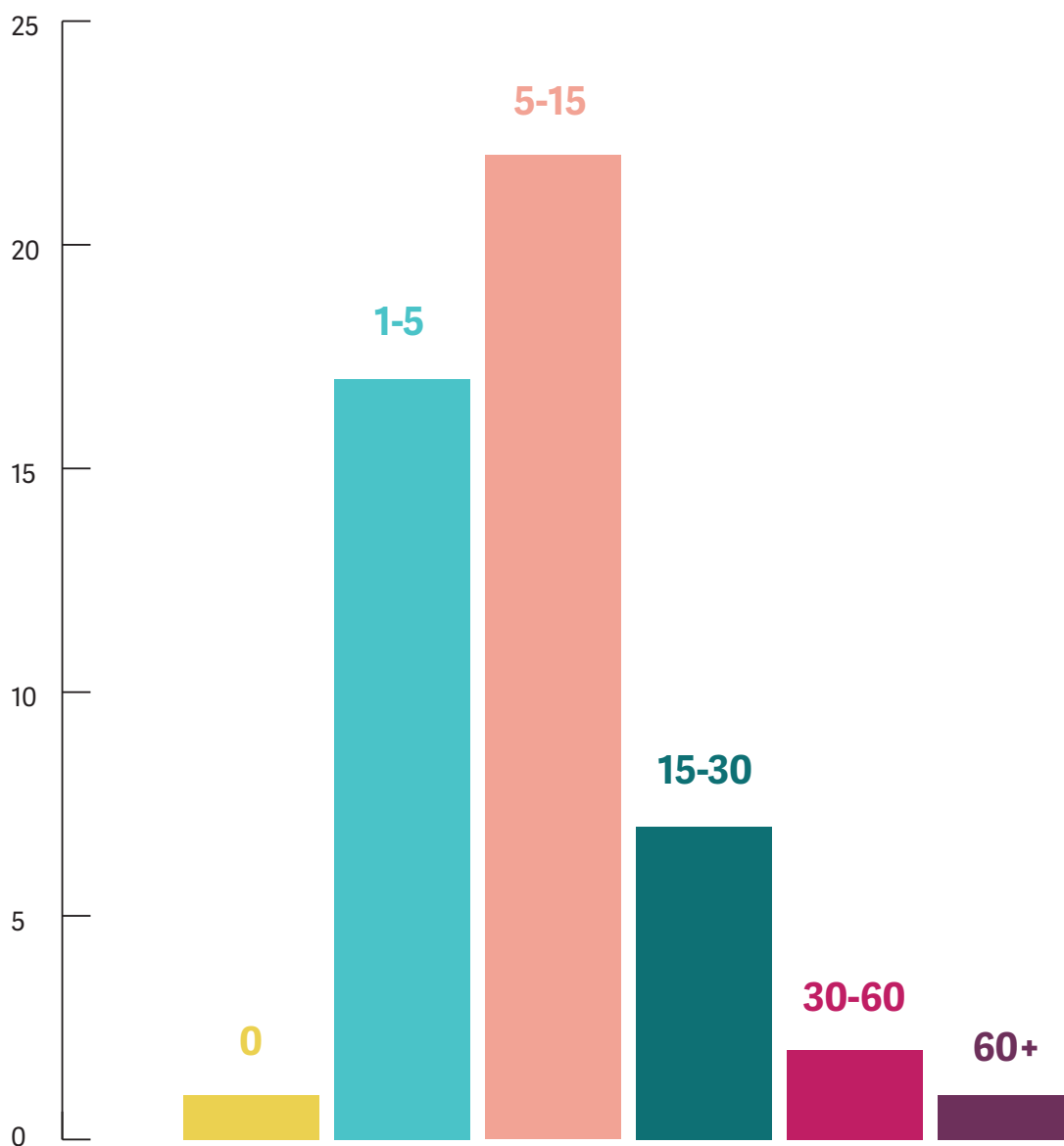


**Not familiar**



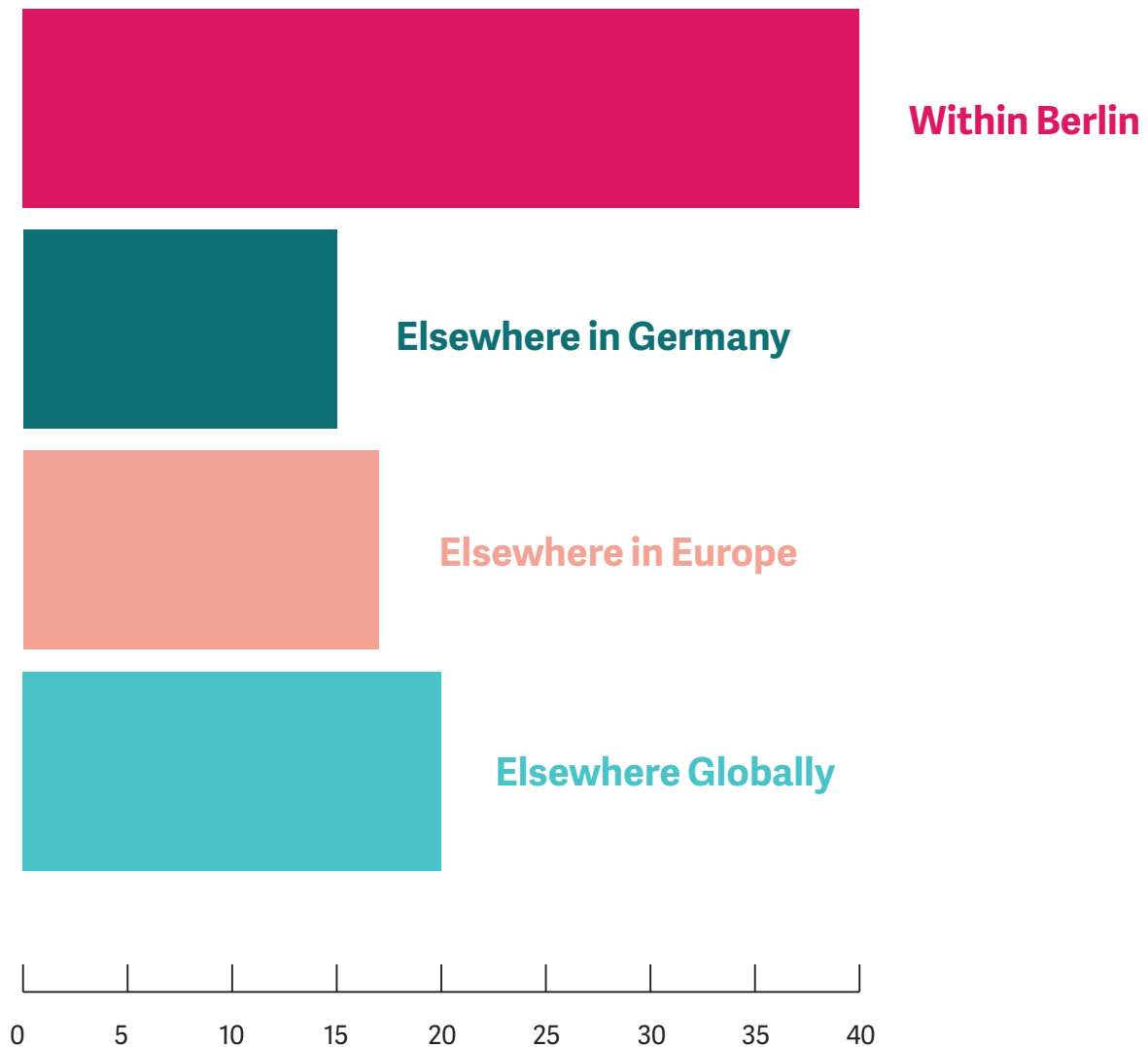
## > How many people do you plan to hire in the next 12 months?

Our results highlight the hiring outlook of Berlin tech startups over a year's time. **Most tech startups expect to hire between 5 to 15 employees within a year**, followed by 1 to 5 employees, and 15 to 30 employees.



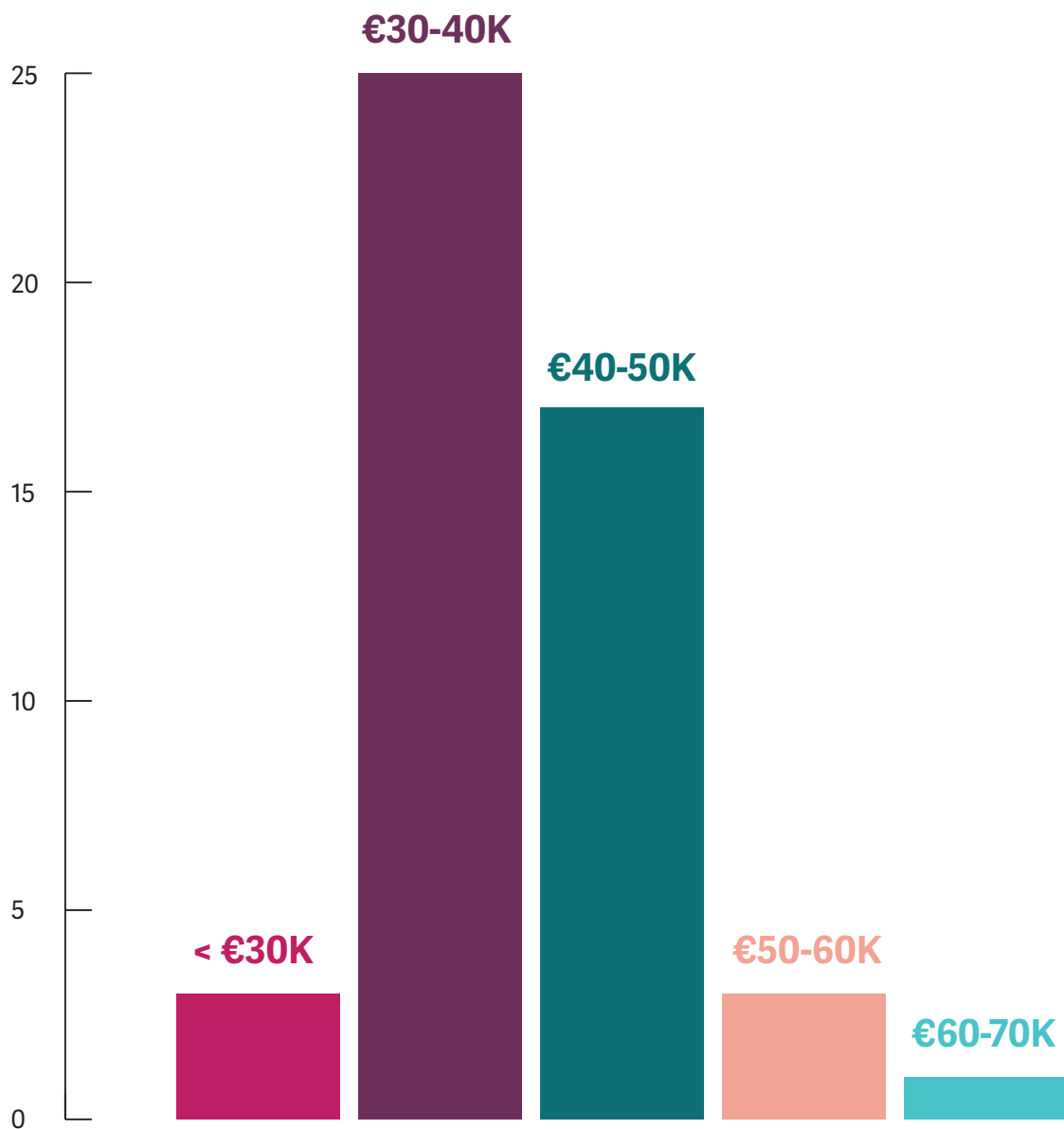
## > Where do you plan to hire within the next 12 months?

**The hiring outlook within the Berlin tech startup displays its international dynamic.** While planning to hire in Berlin is the most common, Berlin tech startups are also looking to hire elsewhere in Germany, Europe, and internationally.



## > What is the average salary of a low-level engineer on your team?

The graph below displays the average pre-tax salary of a low-level engineer. Most low-level engineers earn between



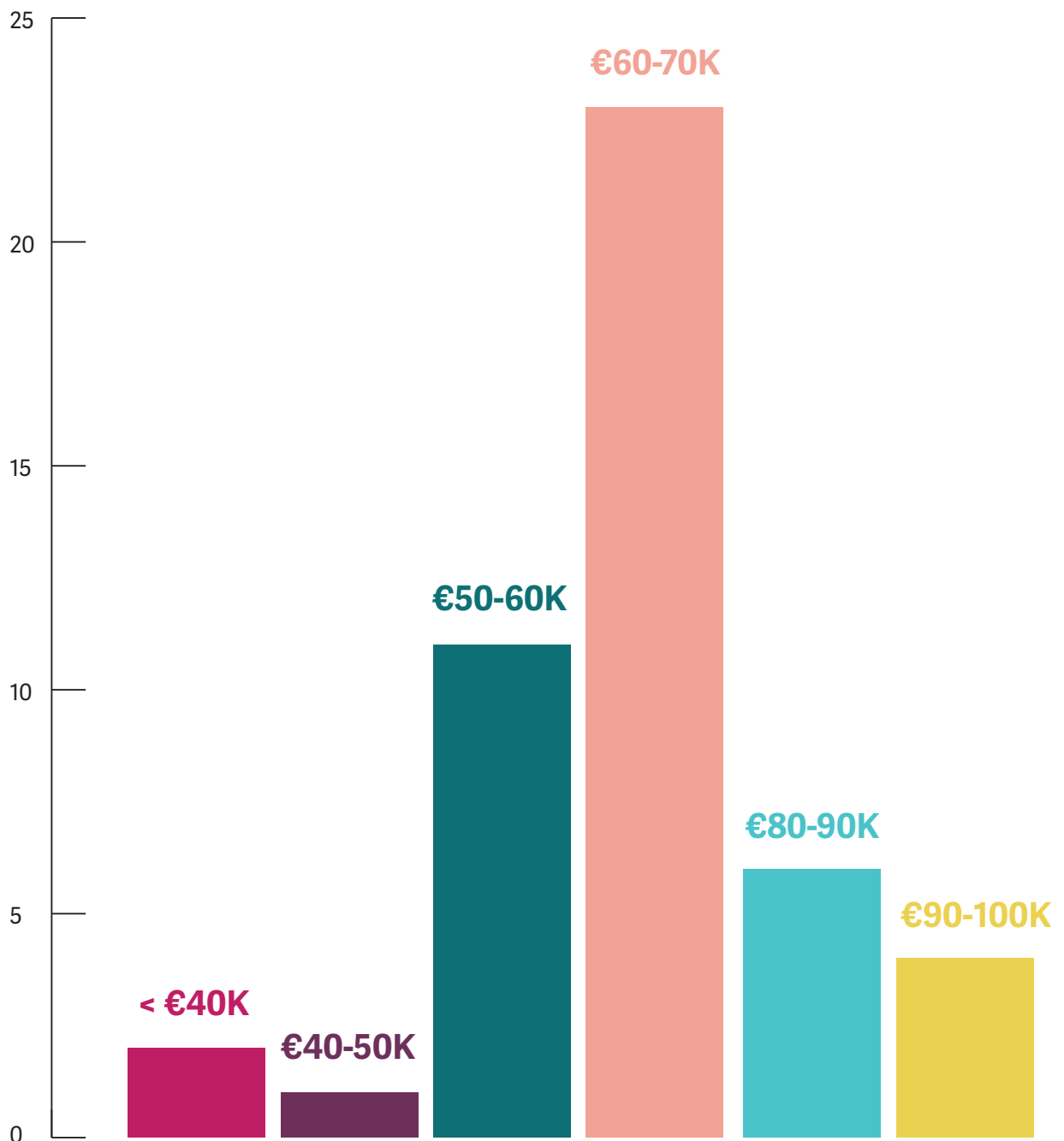
## > What is the average salary of a mid-level engineer on your team?

The graph below displays the average pre-tax salary of a mid-level engineer. **The salary is close to normally distributed around its most common bound of €50-60K.** The second most common range of salary is €40-50K, followed by €60-70K.



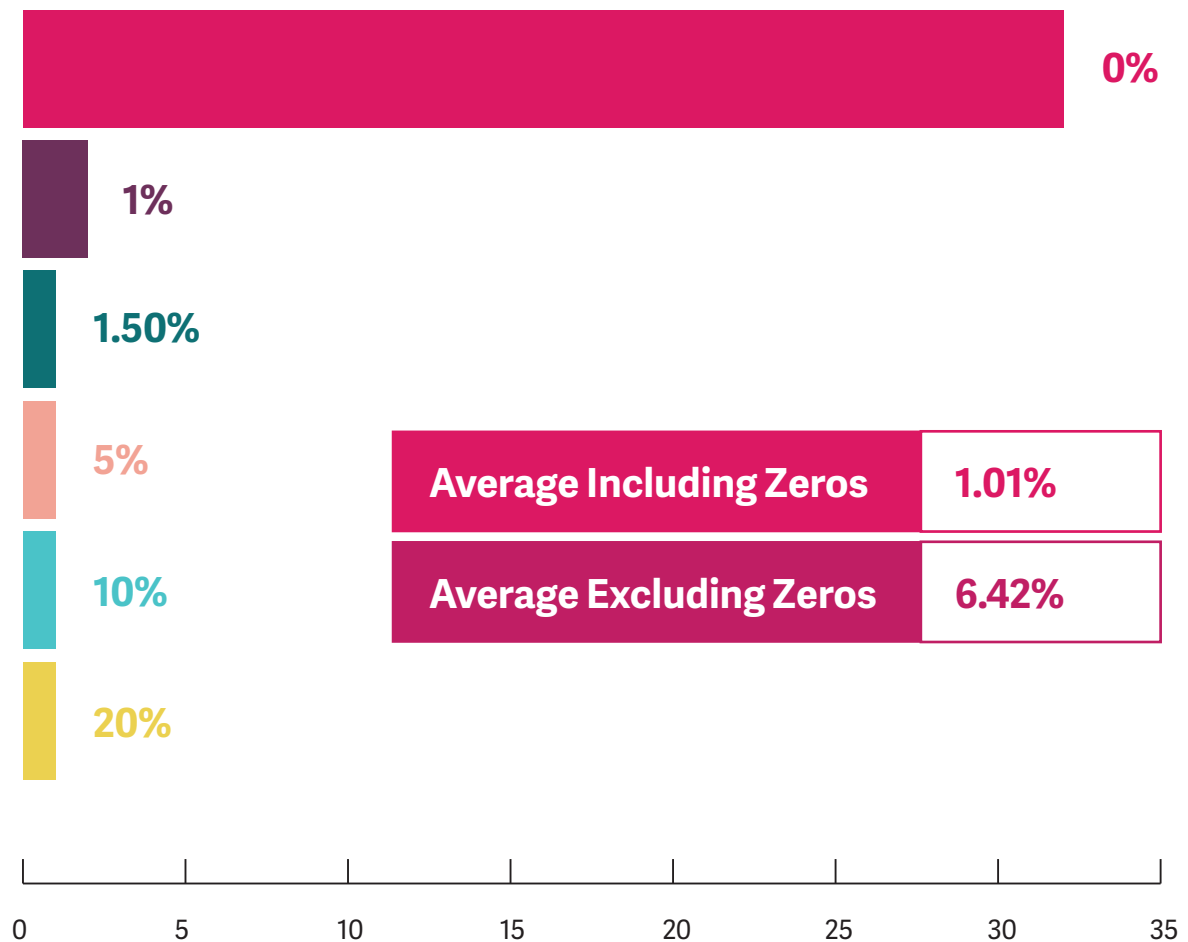
## > What is the average salary of a high-level engineer on your team?

The graph below displays the average pre-tax salary of a high-level engineer. **The average salary falls between €60-70K** while salaries still range from less than €40K to up to €100K.



## > What is the average equity given to a low-level engineer?

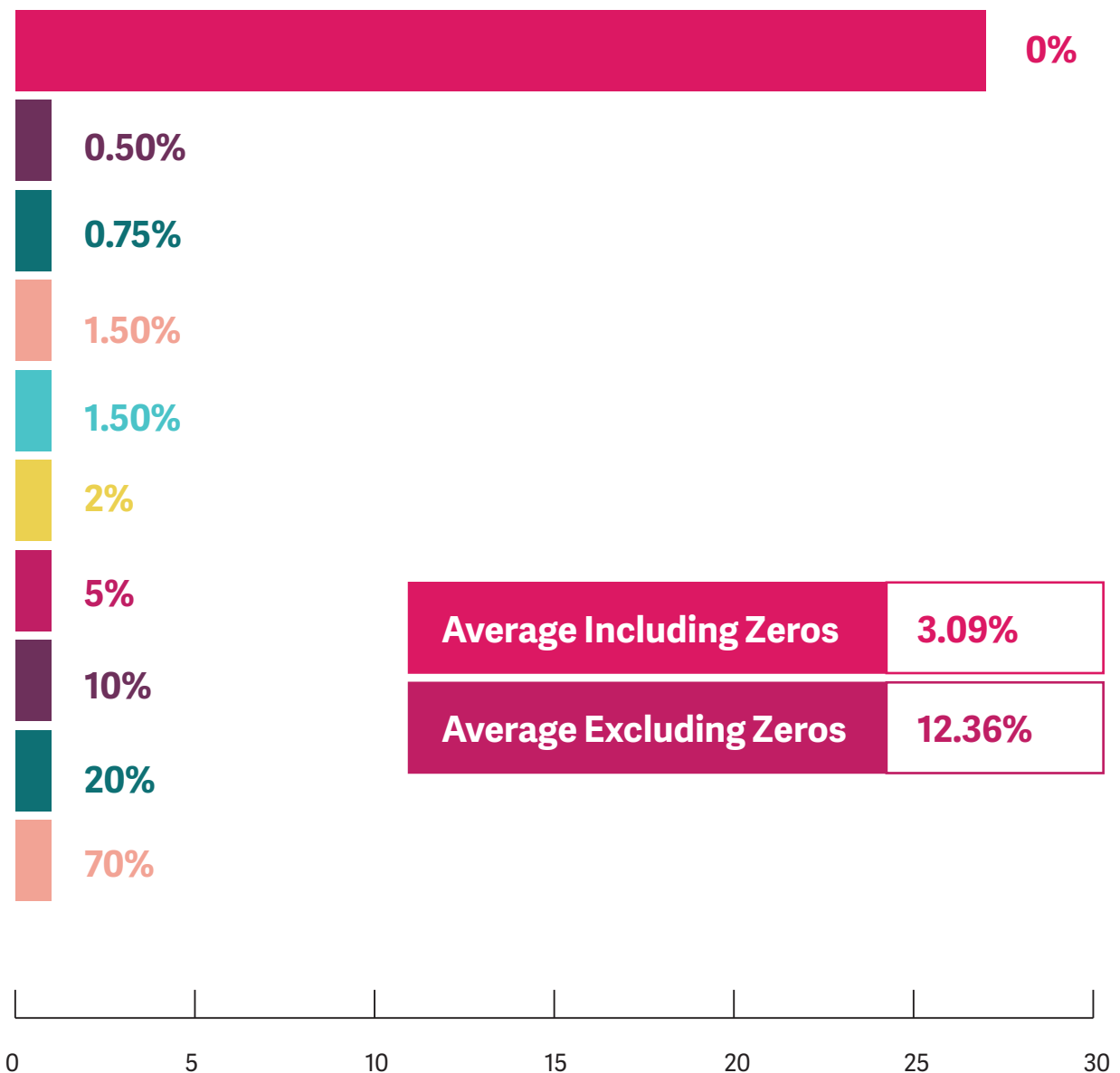
32 out of 38 of tech startups that responded to this question employ low-level engineers with zero equity in their company. **The average percentage of equity for low-level engineers is 1,01%**. Excluding the low-level engineers with zero equity, the average percentage of equity increases to 6,42%





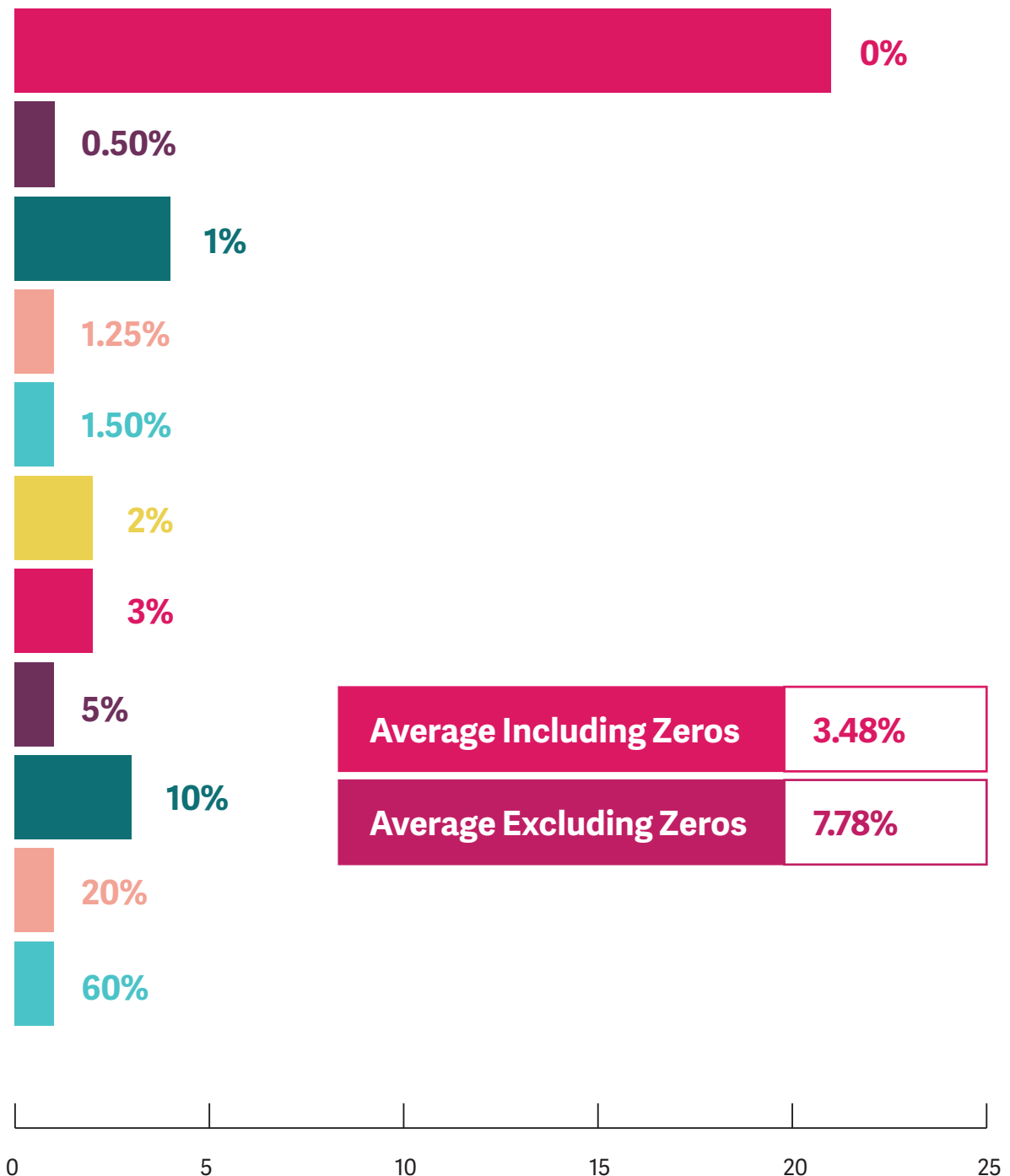
## > What is the average equity given to a mid-level engineer?

75% of tech startups surveyed employ mid-level engineers with zero equity in their company. Only 9 out of 36 tech startups employ mid-level engineers with equity in their company. **The average equity for a mid-level engineer is 3.09% when including engineers with zero equity.** The average equity for mid-level engineers increases to 12.36% when excluding mid-level engineers with zero equity. The median equity for mid-level engineers with equity in the company is 2.00%. However, it should be noted that the outlier of 70% equity heavily skews the data for the average percentage of equity for a mid-level engineer.



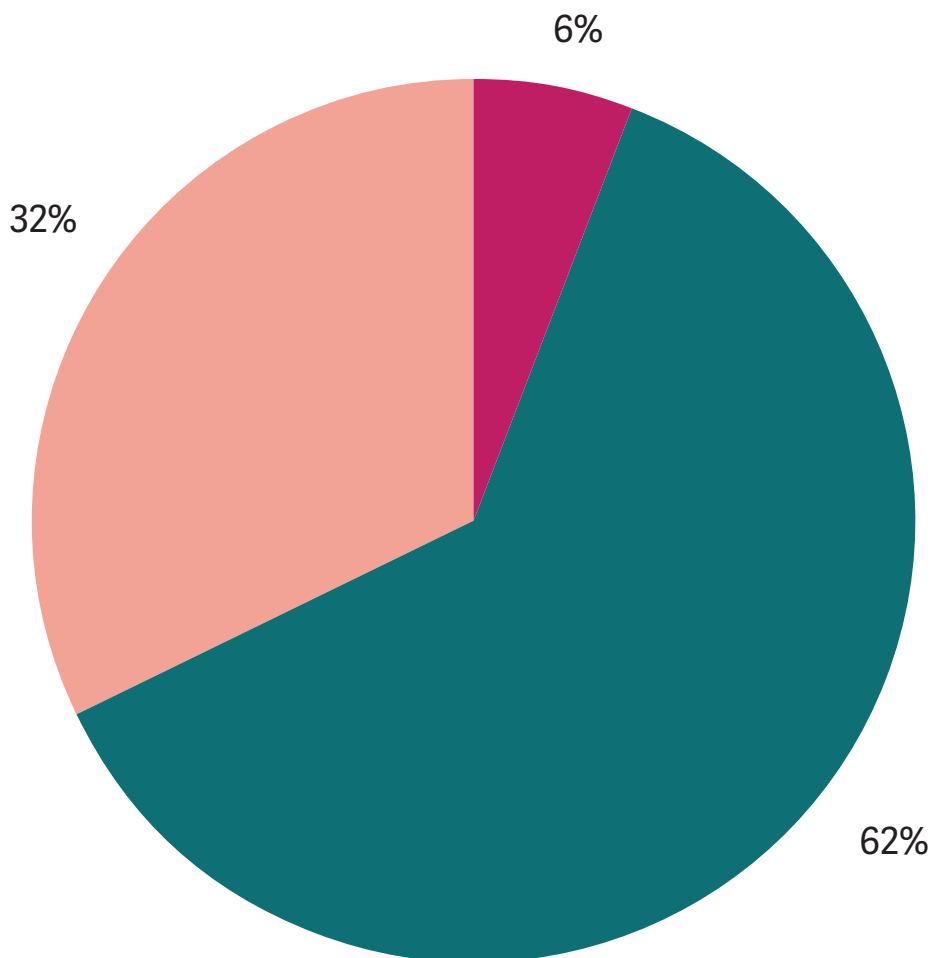
## > What is the average equity given to a high-level engineer?

17 out of 38 Berlin tech startups who responded to this question employ high-level engineers with equity in their company. **Our study reveals that high-level engineers are nearly twice as likely to have equity in their company than a mid-level engineer. The average equity given to a high-level engineer is 3,48%.** When excluding high-level engineers with zero equity, the average equity increases to 7,78%.



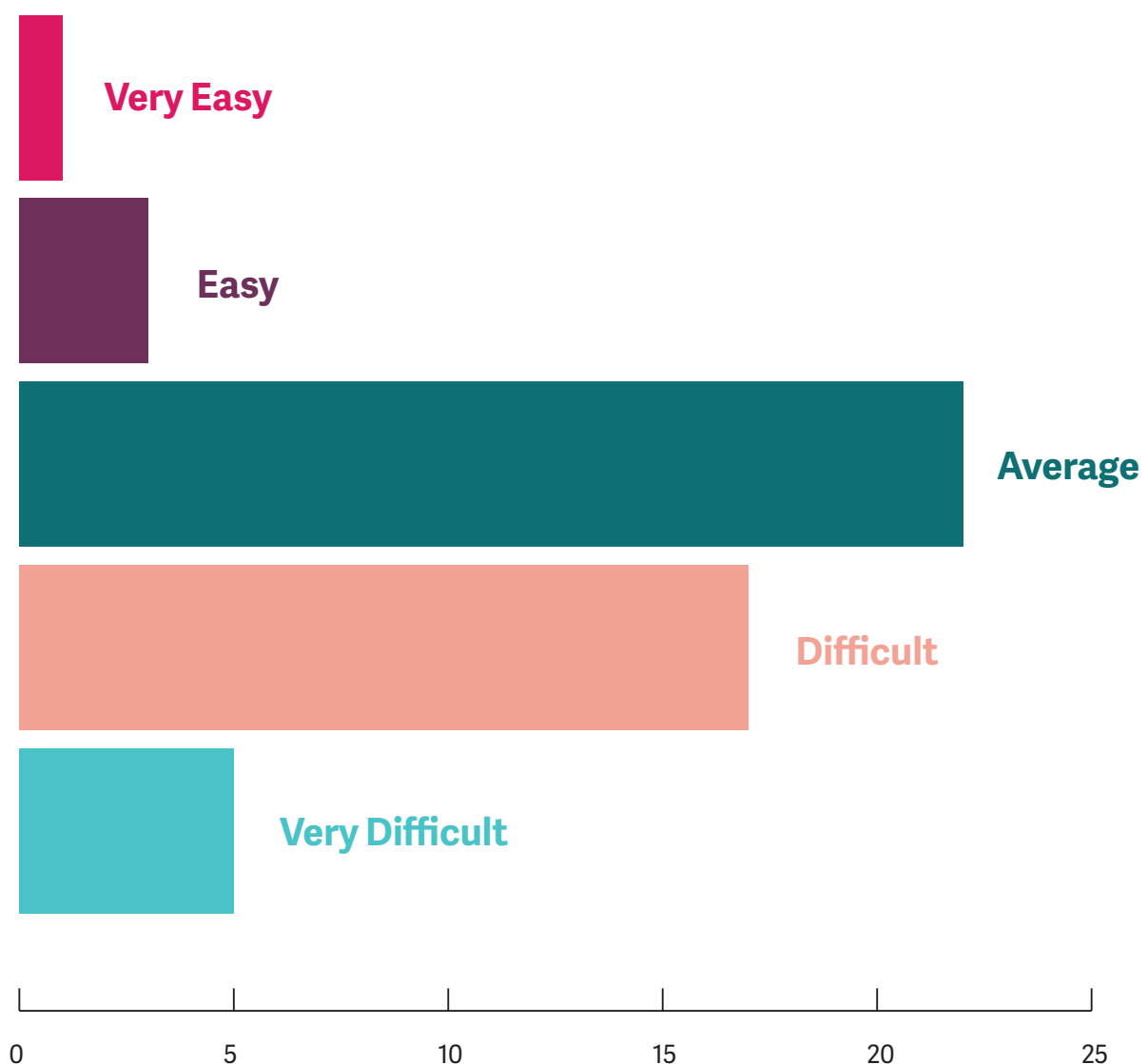
## > Are you ahead of, on track, or behind your hiring plan?

The figure below displays Berlin tech startups' accordance with hiring plan. **62% of tech startups view themselves as being on track**, 32% view themselves as behind, and only 6% believe their hiring plan is ahead of schedule.



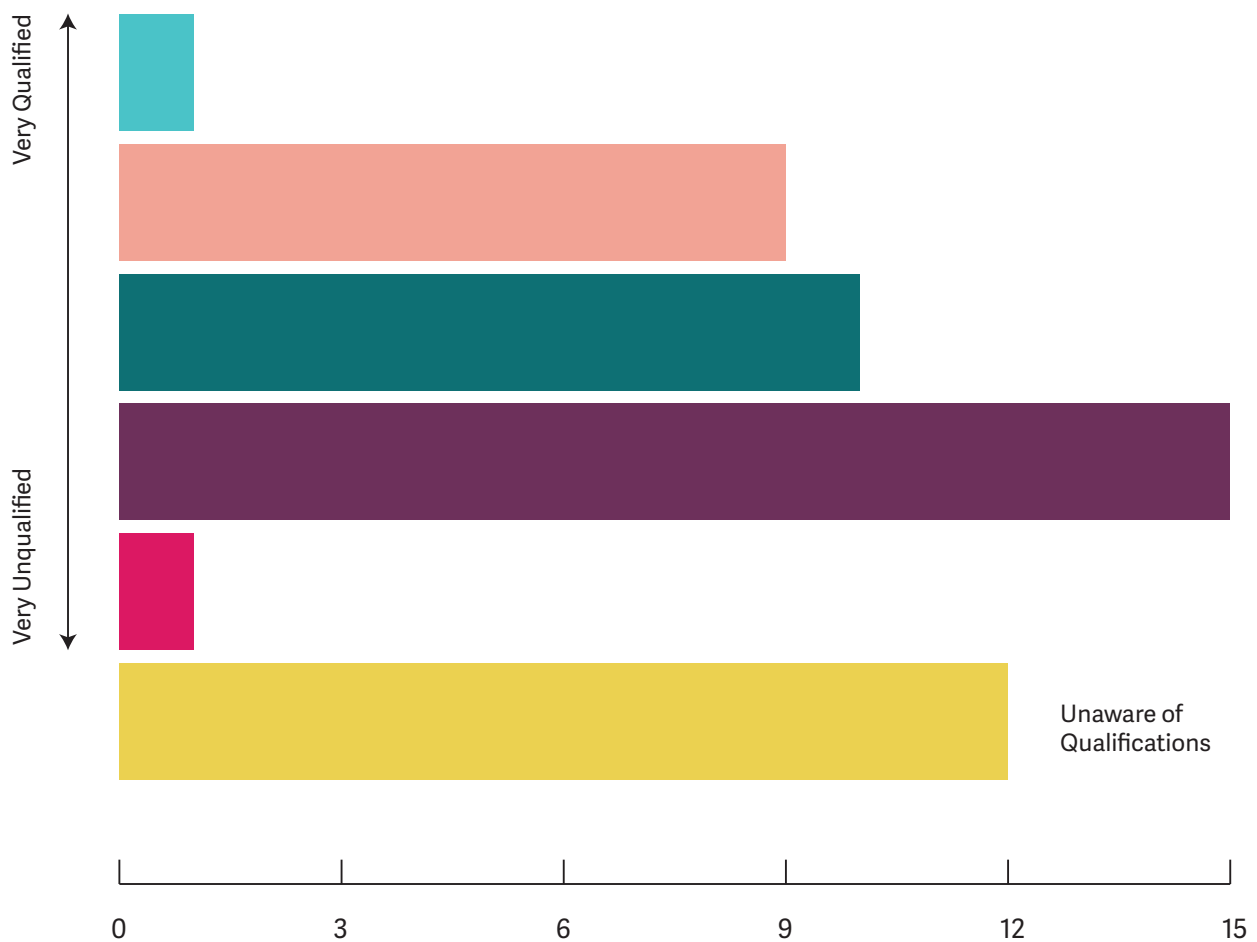
## > How difficult have you found it to hire for your development team?

The graph below displays the current attitudes of Berlin tech startups towards the hiring process for their development team. 22 out of 48 tech startups who responded to this question believe **the ease or difficulty of hiring is about average for their development team**. About 35% of startups believe the hiring process is difficult, and 10% believe the process is very difficult. Only 8,3% view the hiring process as easy or very easy.



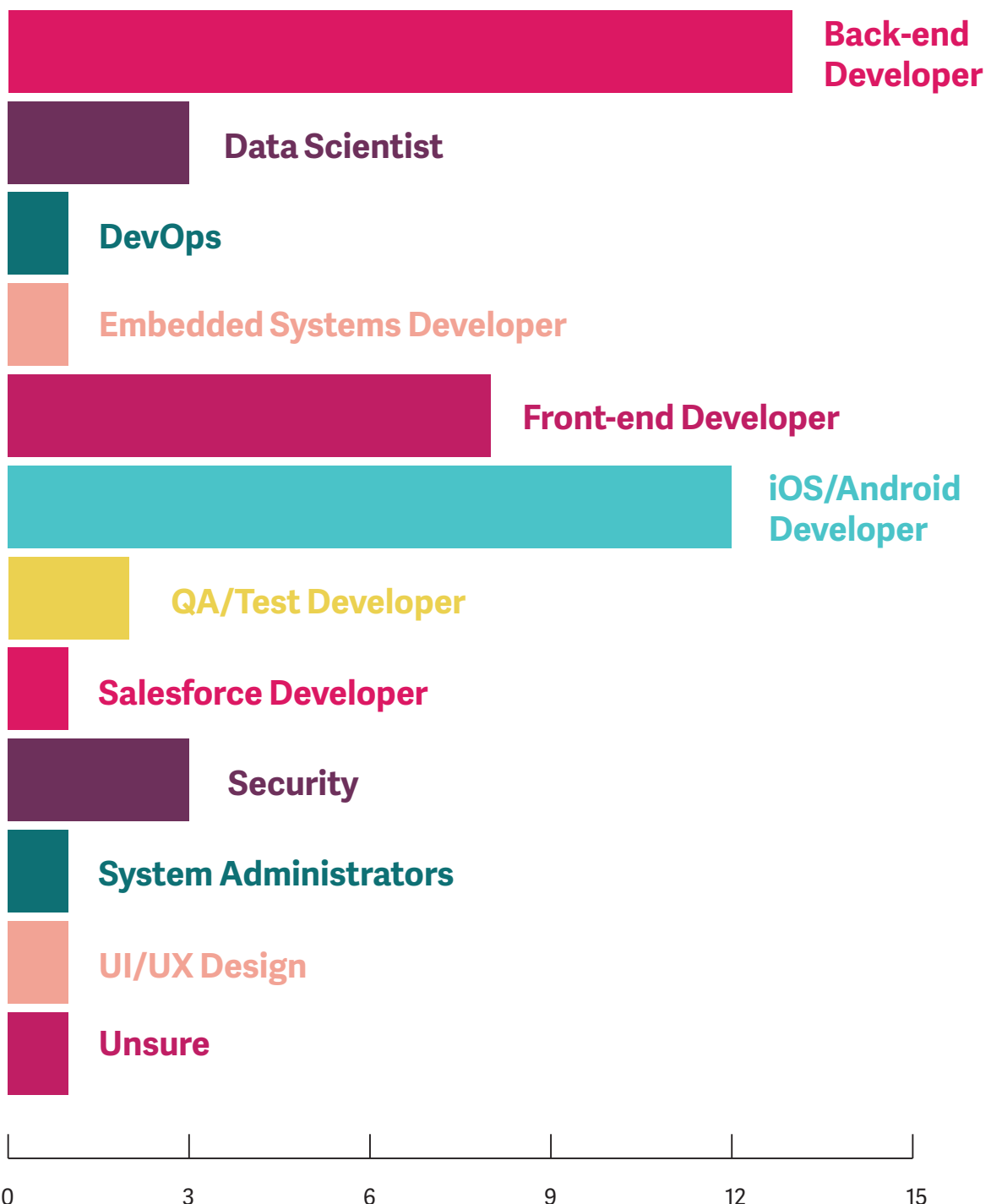
## > How qualified are German students for your development positions?

The graph below displays the current views of tech executives on the qualifications of German students for development and programming jobs. Out of the 36 tech executives with understanding of the qualifications of German students, **42% believe German students are unqualified for their development team**. 28% of tech executives believe German students' qualifications are about average. 25% believe German students are qualified for their development team. The large amount of respondents who said they were unaware of the qualifications of students suggests there could be a disconnect in getting recent graduates into jobs in the local startup sector.



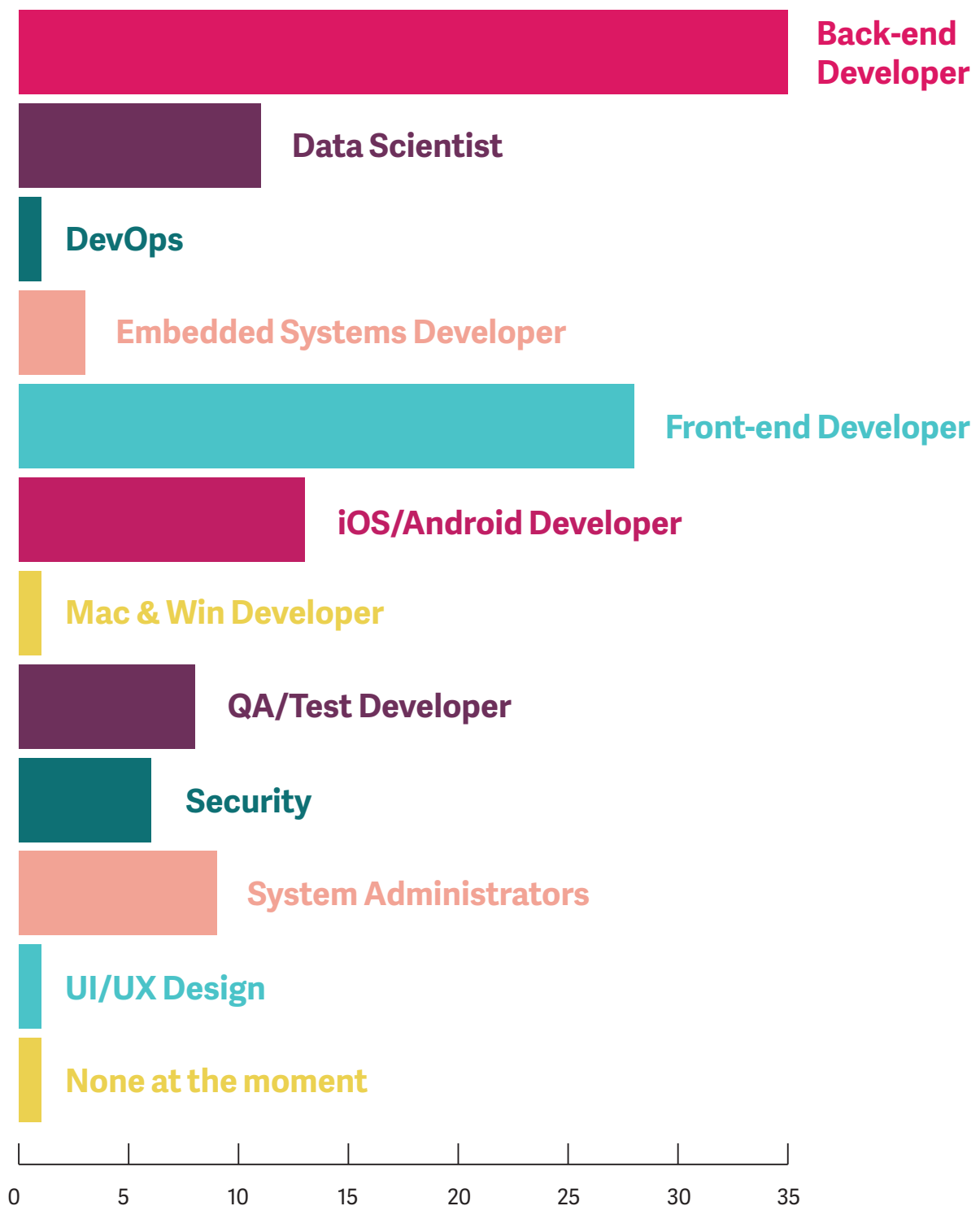
## > Which position is the most difficult hire on the development team?

Tech executives were asked to name the most difficult position to hire for their programming team. **The most difficult position to fill for their programming team was back-end developer (27.7%)**, followed by iOS/Android developer (25.5%), and then front-end developer (17.0%). No other position registered more than 10% in our survey.



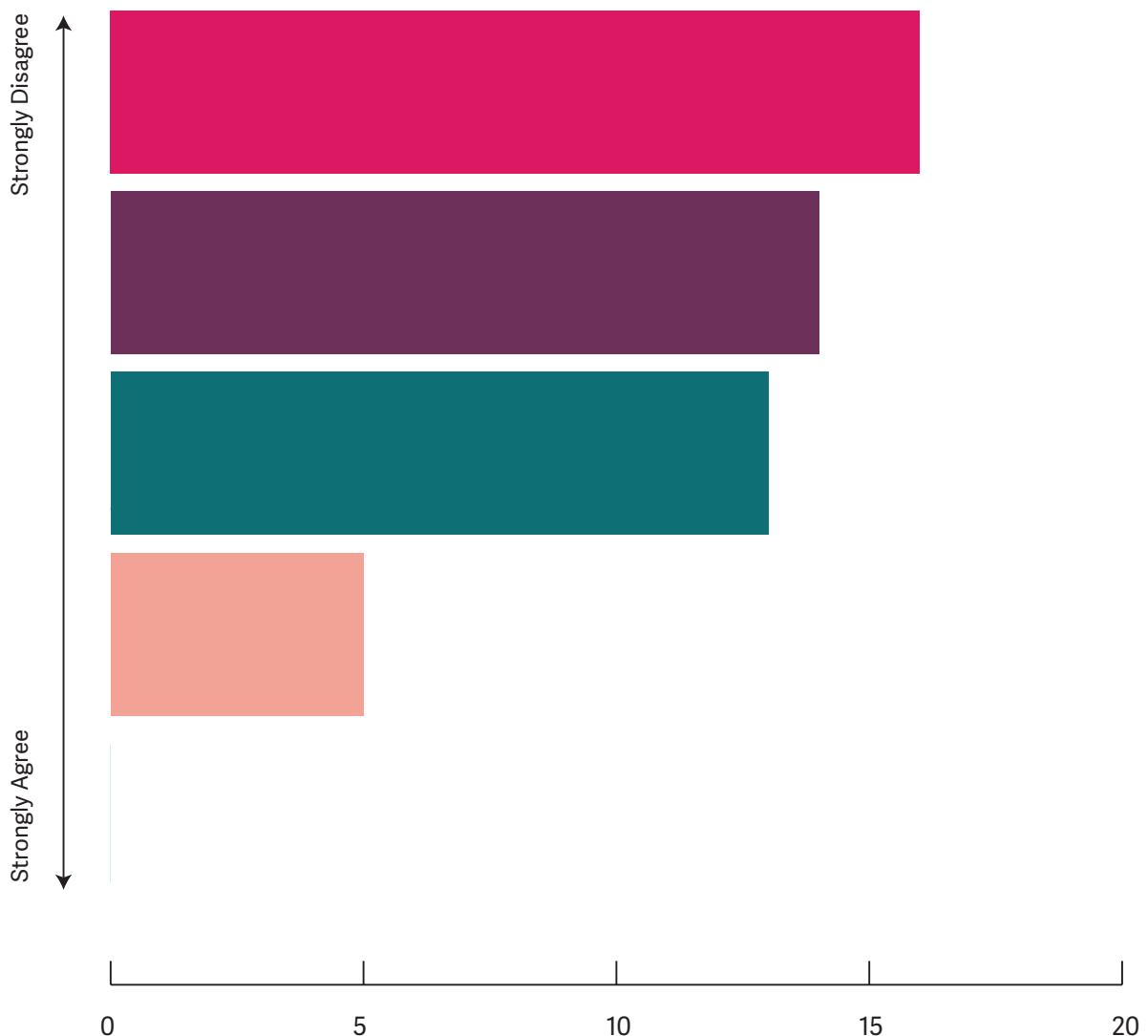
## > Which of these positions are you currently looking to hire?

The most difficult position to hire for Berlin tech executives are also the most sought after positions. **The most sought after positions by tech executives include back-end developer (29,9%), front-end developer (23,9%), iOS/Android developer (9,4%), and data scientist (9,4%).**



## > Legal and visa issues make it hard to hire international talent in Berlin. Do you agree?

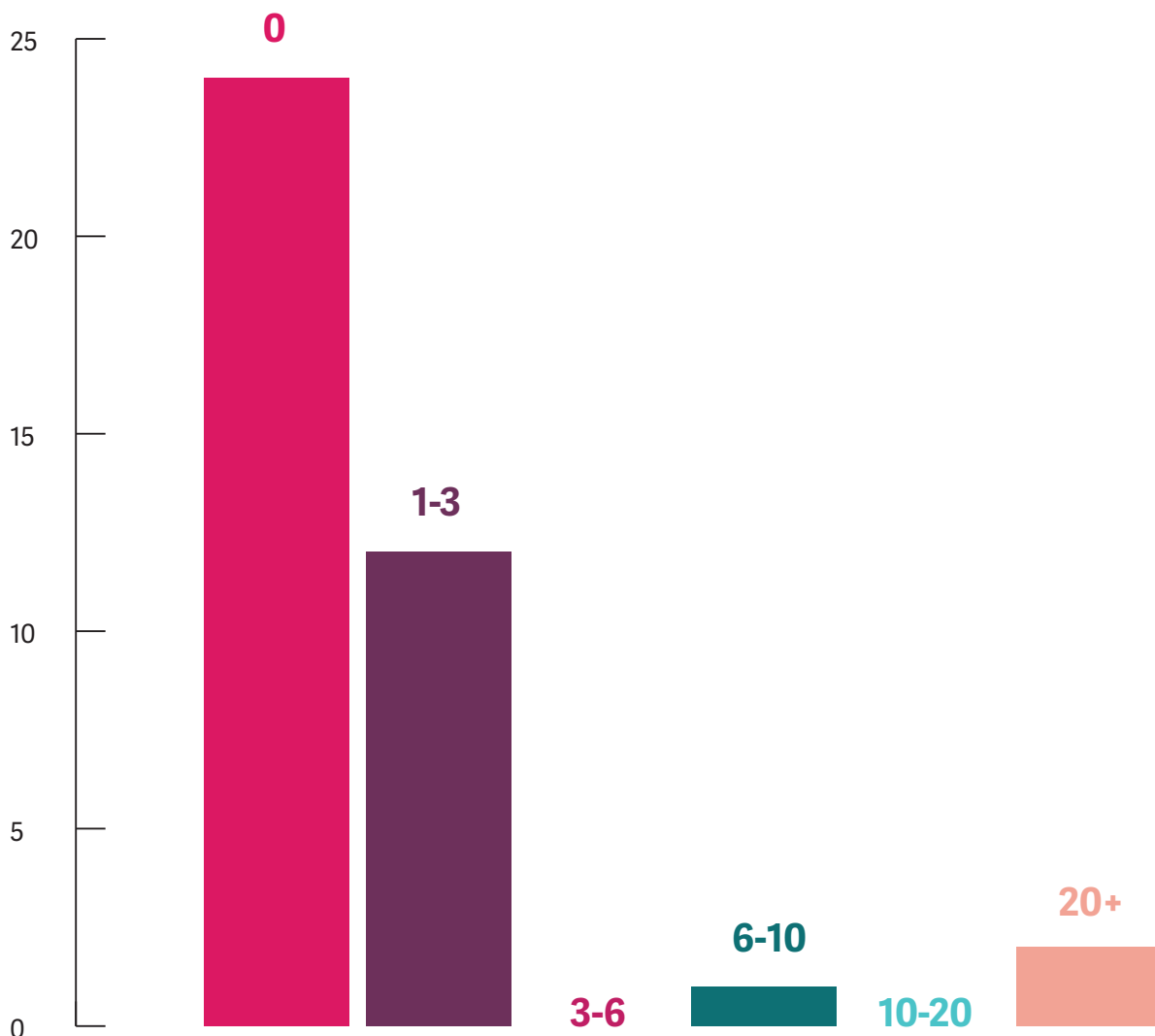
Berlin tech executives were questioned as to whether or not legal and visa issues would impede from hiring internationally. **One-third of tech executives surveyed strongly disagreed that legal and visa issues were too great of a barrier to hire.** In total, 62,5% of tech executives either disagreed or strongly disagreed. Only 10% agreed that legal and visa issues cause great difficulty in hiring internationally.





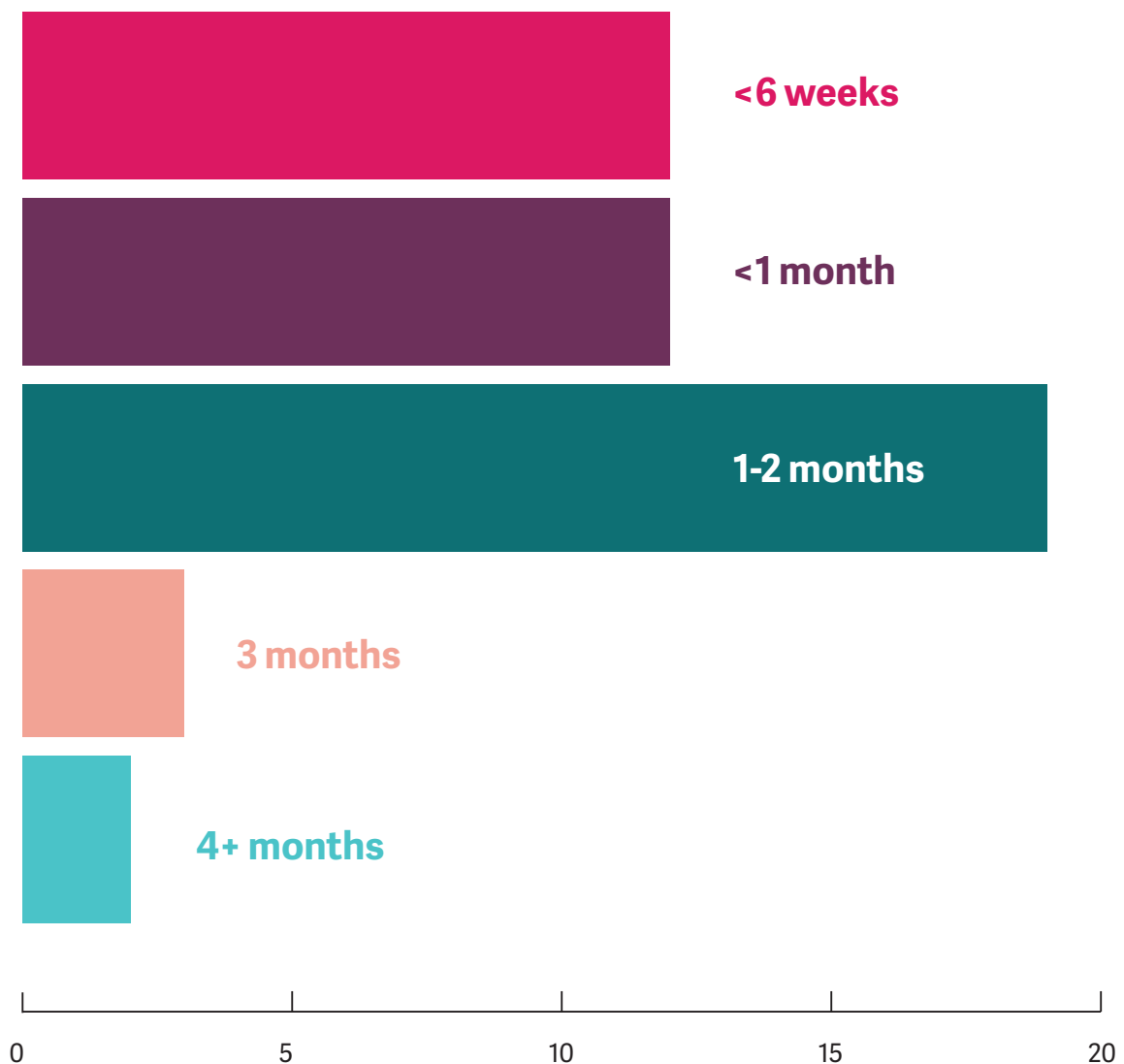
## > How many remote developers or programmers do you have?

The graph below analyzes the role of remote developers or programmers in the Berlin tech scene. **The majority of Berlin techs startups surveyed currently do not employ remote developers or programmers.** About one-third tech startups currently employ 1-3 remote developers or programmers. Less than 10% employ 6 or more remote developers or programmers



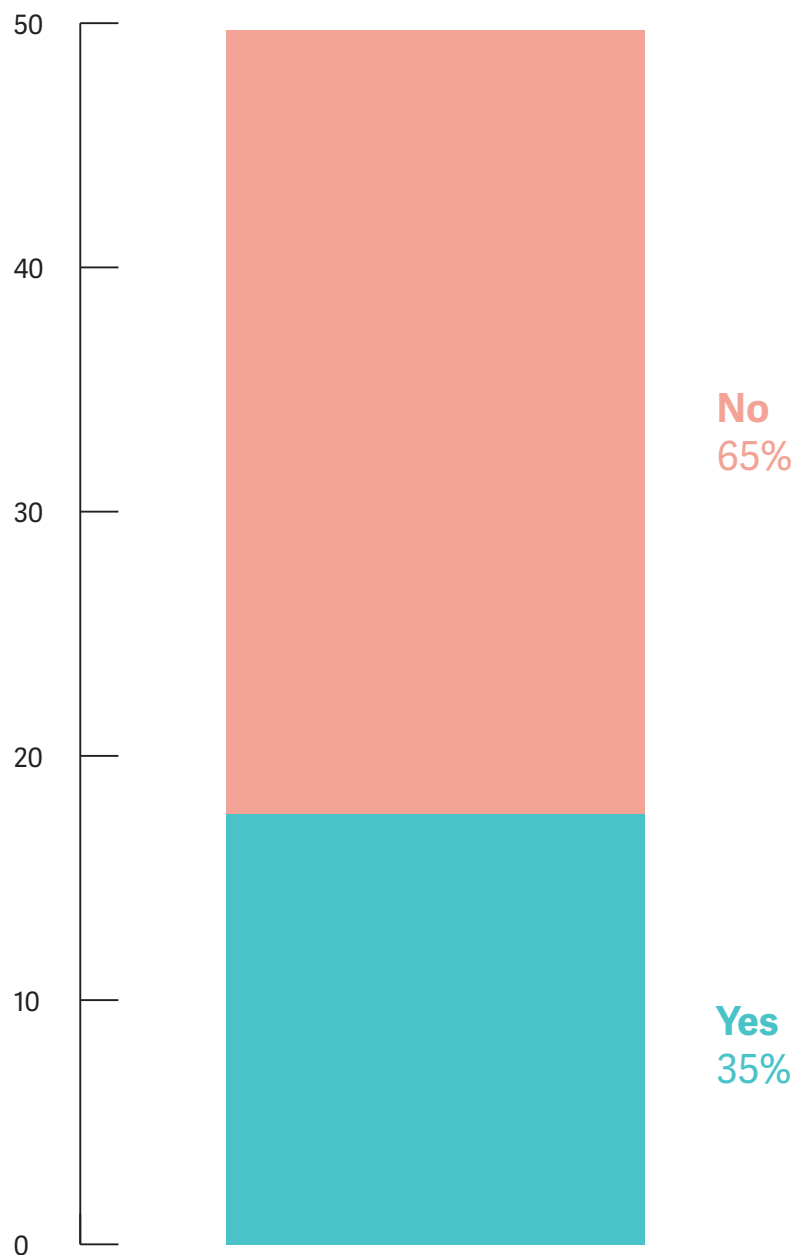
## > How long until new developers reach full productivity?

The graph below analyzes the average length for a new programming or developing employee to reach their full working productivity. The most common length for new developers or programmers to reach full productivity is 1-2 months (39,6%) but our data indicates that **the vast majority of developers are up-to-speed in less than two months.**



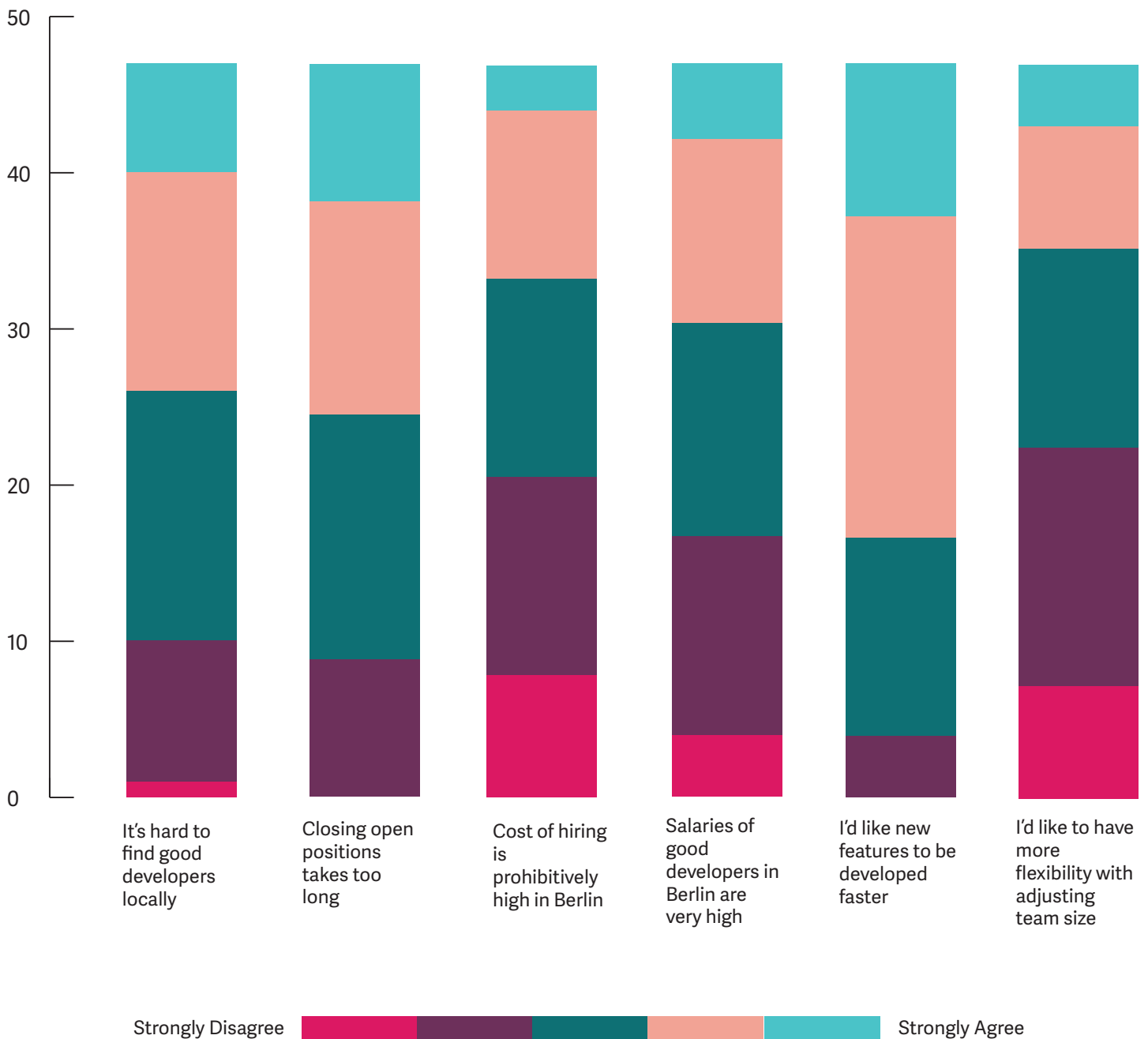
## > Do you currently use recruiting firms?

**Berlin tech startups that use recruiting firms are currently in the minority.** Our survey indicates that only 35% of tech startups utilize recruiting firms, while the remaining 65% use different methods of hiring.



## > Do you agree or disagree with the following statements?

The graph below describes the varying sentiments of tech executives on different developer statements. **Most tech executives agree that they would like new features to be faster developed.** On the contrary, nearly half of tech executives disagree with the statement that they would, “like to have more flexibility with adjusting team size.”





# Thanks

## Vertalab

This report was produced with the help of Vertalab.

Vertalab connects German startups with remote Ruby on Rails developers in Ukraine.

For more information please visit <https://vertalab.de>