



2020 State of the API Report



POSTMAN

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Key Findings

Introduction

The annual State of the API survey is the largest and most comprehensive survey of the API industry. Every year, Postman surveys industry members to get a picture of the API industry—to understand who is working with APIs, how they are getting their work done, and where they see the industry going. More than 13,500 developers, testers, executives, and others took our 2020 survey and provided insights on everything from how they spend their time to what they see as the biggest issues and opportunities for APIs.

Three Key Findings



API investments stay strong:

Close to half of respondents stated that investment of time and resources into APIs will increase over the next 12 months, while another third stated that investments into APIs will stay the same, despite a tough economic environment.



The pandemic has changed the world, but it didn't stop APIs:

Nearly 90% of industry members surveyed stated that their organizations offered remote work options as a result of COVID-19. Furthermore, nearly a third (30.6%) said that APIs played a role in their organization's ability to respond to COVID-19—many utilized APIs for customer communications, powering remote work options, and quickly responding to regulatory changes and government initiatives.



APIs are the nucleus of digital transformation:

For those working on digital transformation initiatives, 84.5% state that APIs are playing a significant role in those initiatives.

Additional insights

- Over 60% of respondents rated themselves as 5 or better (out of 10) in terms of embracing an “API-first” philosophy, which indicates a groundswell toward API-first.
- The API industry continues to touch just about every job role, from developers to management to sales, and even to the C-suite. In fact, 1 in 10 of those working with APIs today are in management roles—from the C-suite through to directors and managers.

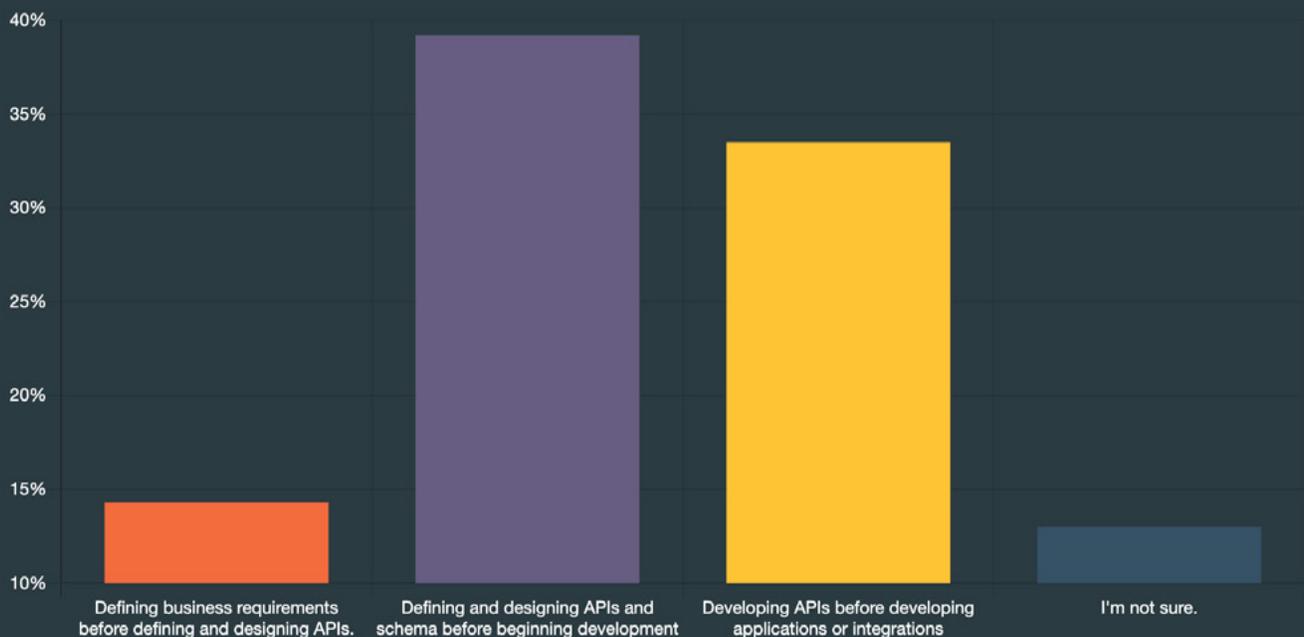
- Whether internal, external, or partner, APIs are perceived as reliable—more than half of respondents stated that APIs do not break, stop working, or materially change specification often enough to matter. Respondents choosing the “not often enough to matter” option here came in at 55.8% for internal APIs, 60.4% for external APIs, and 61.2% for partner APIs.
- When it comes to producing APIs, the number one obstacle by a wide margin is lack of time, cited by more than half of respondents. Compare that to the number one obstacle to consuming APIs: lack of documentation (which also led other factors by a wide margin). In fact, less than 5% of individuals give the APIs they work with a 9 out of 10 or higher when rating how well documented these APIs are.
- The four most important factors individuals consider before integration with an API are reliability (71.6%), security (71.0%), performance (70.9%), and documentation (70.3%).
- Expectations for how individuals allocate their time is generally in line with how their time is actually spent, but there are some notable discrepancies. On average, individuals feel like they should spend nearly 15% of their time on automated testing, compared to 11% in real life; similarly, they expect to spend nearly 11% on designing APIs, while in actuality it’s less than 8.7%. Where will this time come from? Well, individuals spend 17% of their time debugging APIs, compared to 10% in their ideal state.
- REST is the dominant architectural style, used by 93.4% of respondents. In distant second, third, and fourth places are webhooks (34.4%), SOAP (33.4%), and GraphQL (22.5%). Likewise, JSON Schema is the dominant API specification, used by 75.6% of respondents; it was followed by Swagger 2.0 (43.9%), OpenAPI 3.0 (27.8%), and GraphQL (22.5 %).
- Looking to future technologies, respondents are most excited about microservices (48.7%), Kubernetes (43.6%), and containers (42.2%).

The Rise of API-First

Defining API-first

Before we dig too deep into the survey results, we want to set the stage for this report by addressing one particular, high-level phenomenon: There's been a notable groundswell of developers, industry members, and analysts using the term "API-first" in the past year or two, but yet there's no known, industry-wide, universally accepted definition of this term. So we wanted to ask the question, "What does 'API-first' mean to you?"

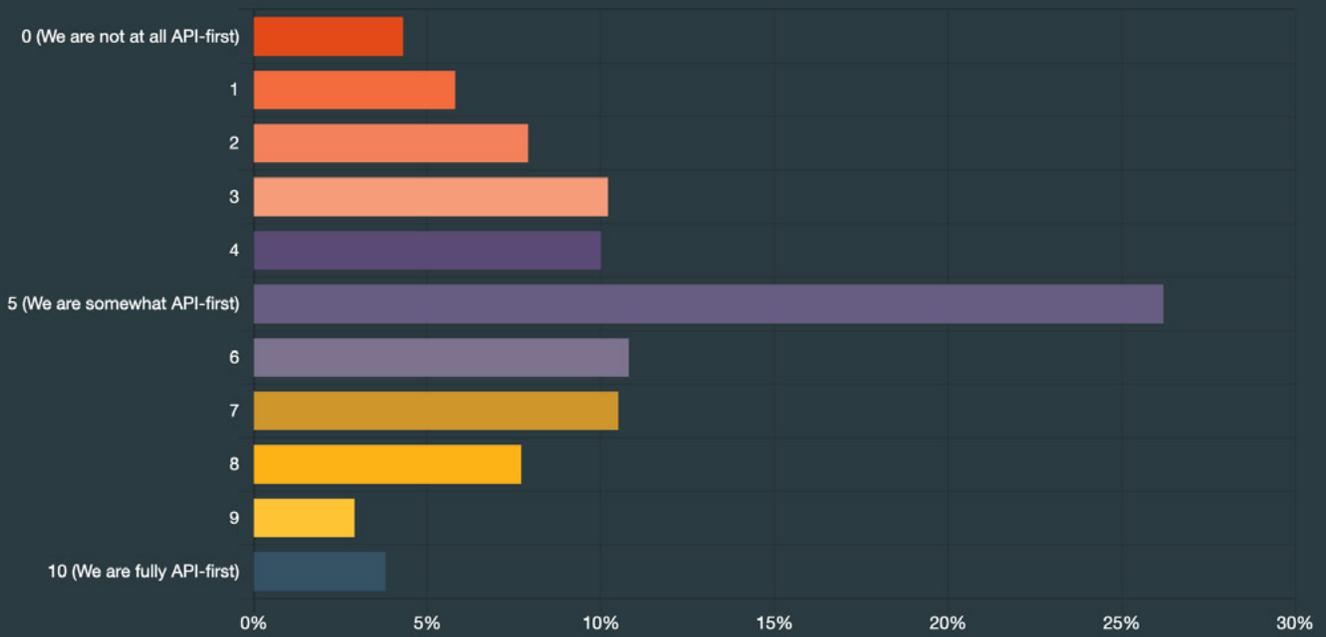
When it comes to defining API-first, we found a variety of responses, with no overwhelming favorite. However, with only 13% of respondents saying they were unsure what API-first means, that leaves 87% who are familiar with the term, which is certainly a measure of its impressive and expanding reach.



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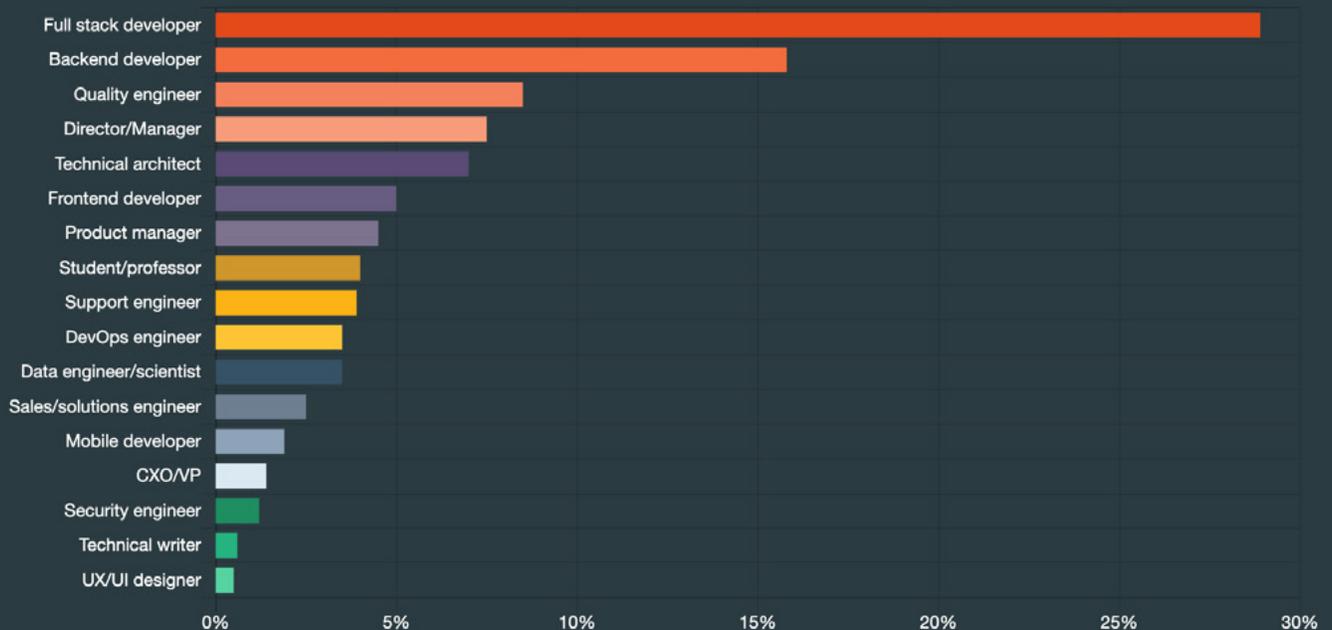
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Who Works with APIs

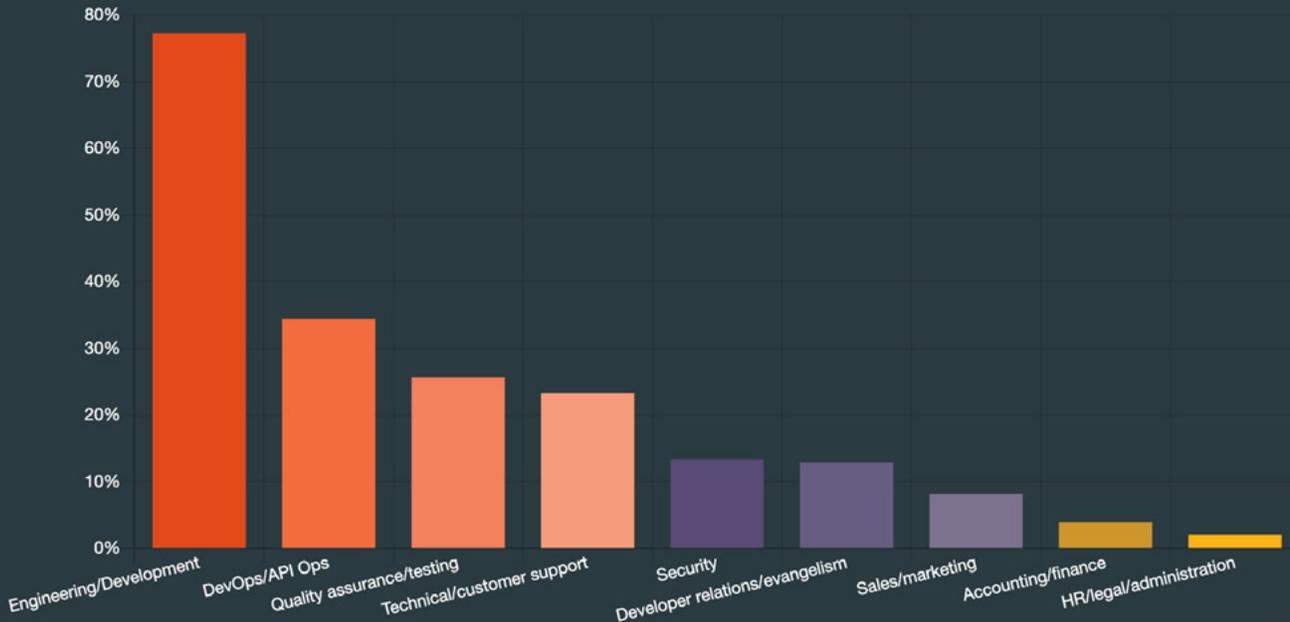
Primary job function

We asked survey-takers about their primary roles, and it’s approximately an even split: about half of respondents considered themselves developers (full stack, backend, frontend, or mobile), and about half have another role within the organization. The most popular role to work with APIs? Full stack developers, accounting for nearly 29% of survey responses.



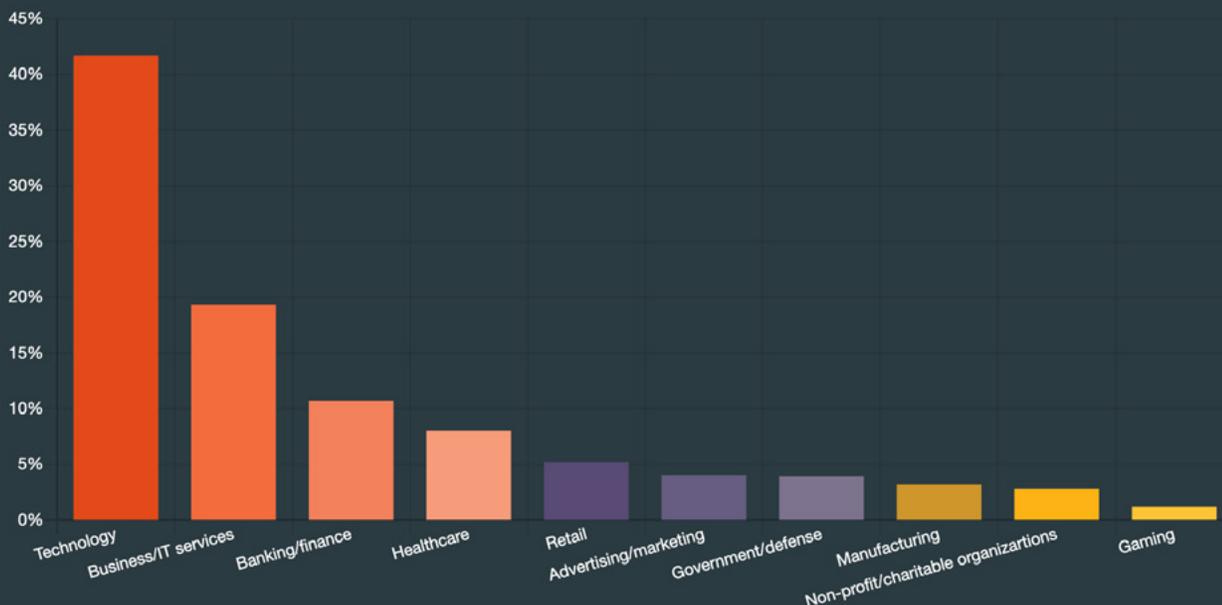
Functional area

While there is a wide diversity in the roles that work with APIs, there is one particularly clear concentration: over 77% of respondents listed their functional area as engineering/development. DevOps (26% in 2019)/API Ops (21% in 2019) were listed together in 2020 and combined for 34% in this survey. The developer relations/evangelism functional area nearly doubled in respondents from last year (7.5% in 2019), accounting for 13%. Education, product and project management, and customer relations are among a smaller group of other notable specific areas of work making use of APIs.



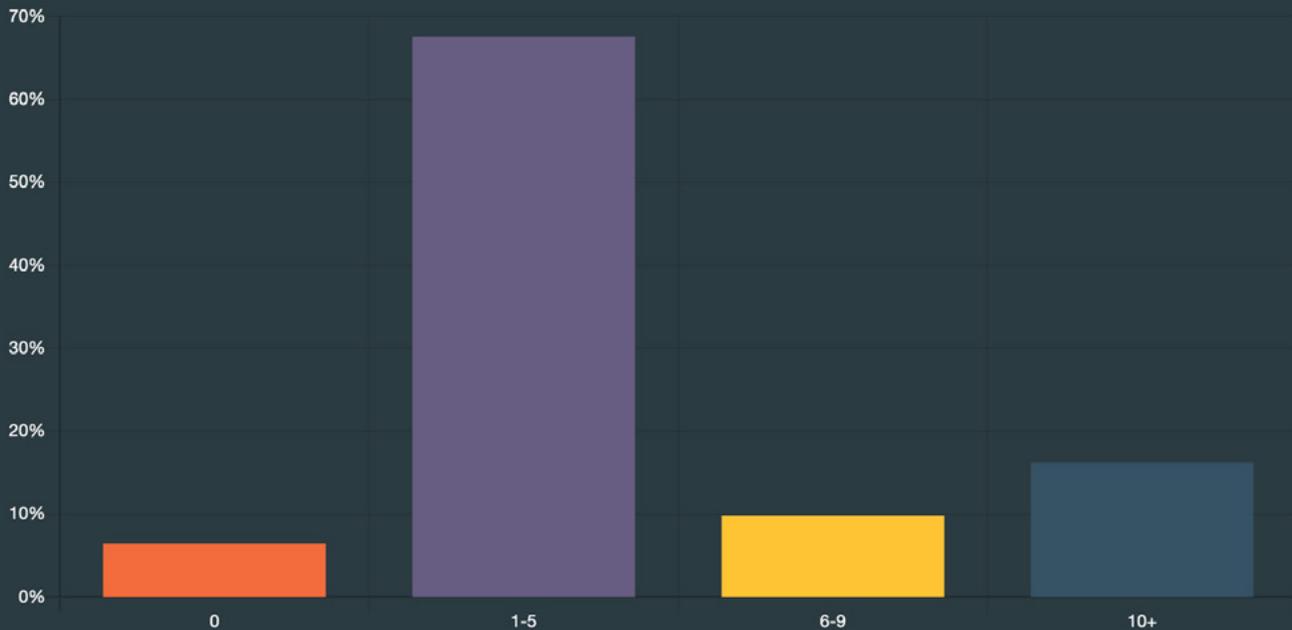
Industry

We asked individuals about their industry, and the order of the results mirrored the 2019 survey results. Technology led the way at 41.7% (versus 52.3% last year), followed by business/IT Services, banking/finance, healthcare, and retail. Gaming made its debut in this year's survey, at 1.2%.



Years of experience

It's a young industry—74% of respondents reported between 0 and 5 years of experience with API development. However, a quarter of respondents have 6 or more years of experience. And those respondents with 6+ years of API development experience were significantly more likely to be API-first leaders than those with 0–5 years of experience.

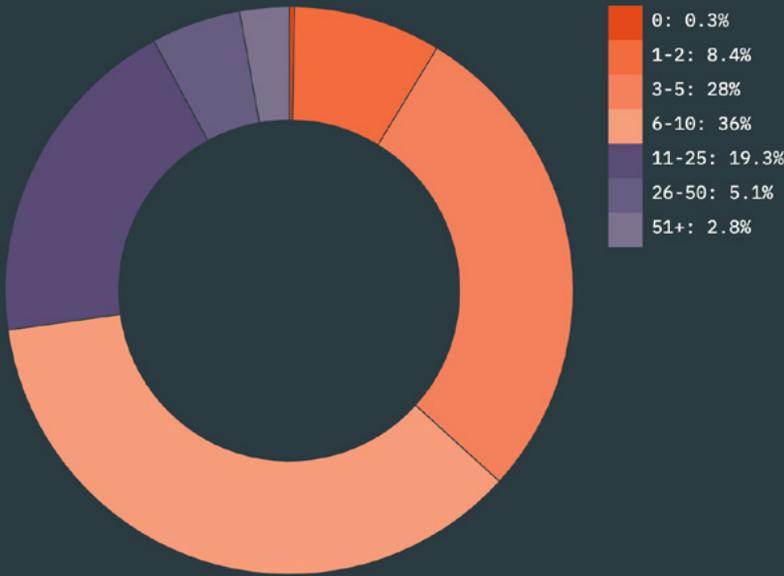


Note: The previous four sections (primary job function, functional area, industry, and years of experience) will be frequently referenced throughout this report, as each one provides uniquely insightful ways to view survey responses.

Team size

We asked individuals about the number of people working on their team, and the majority have 10 or fewer on their team. The average team size registered at 13; however, the median was 7, due in part to the impact of some larger organizations.

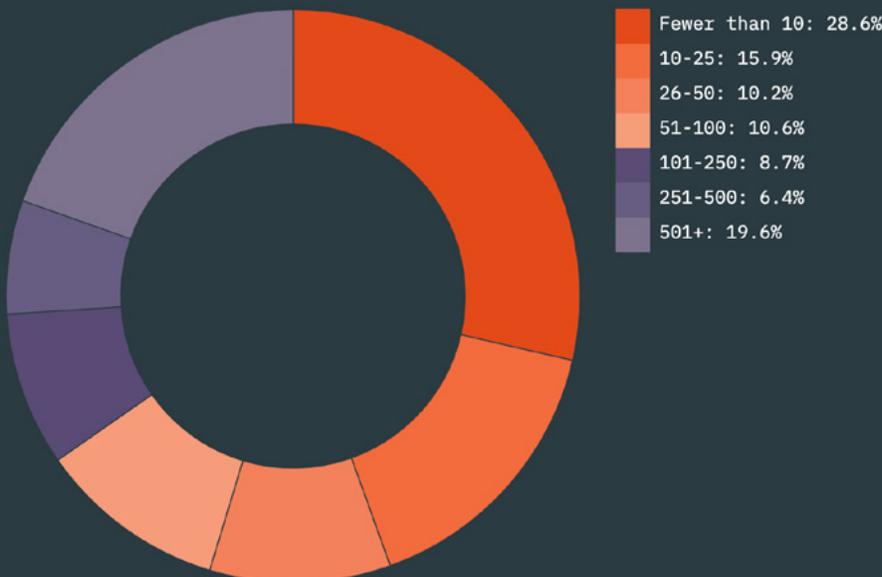
Within primary job functions, CXO/VP had the highest average number of people on their teams, but technical architects had the highest median, suggesting CXO/VP had more extra-large teams. Within industries, gaming had the highest average number of people on their teams. Within functional areas, developer relations/evangelism had the highest average number of people on their teams. API-first leaders had more people on their team on average than others. Respondents with 6+ years of API development experience had more people on their team on average than those with 0–5 years of experience.



Number of developers in the organization

We found an interesting dichotomy in the number of developers at organizations. Respondents from organizations with 10 or fewer developers were most common, at 28.6%; however, the next largest category—those with 501+ developers—accounted for 19.6% of respondents.

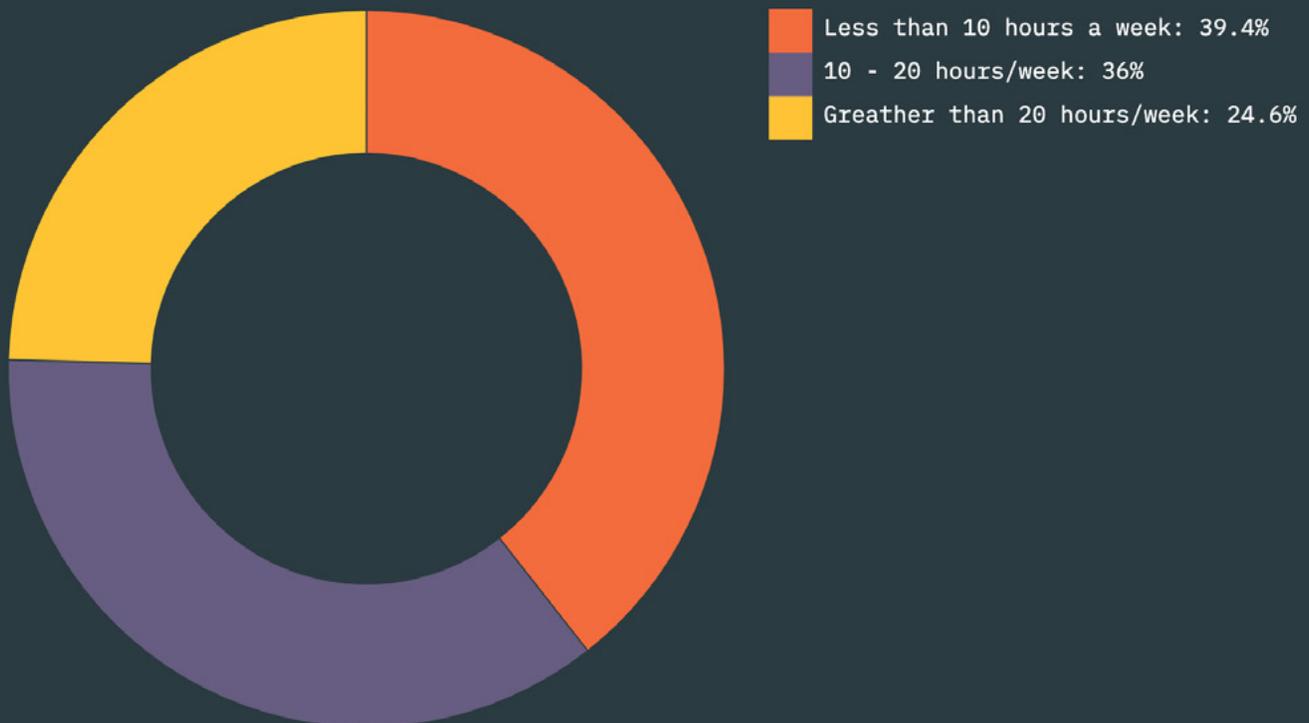
Within primary job functions, DevOps engineer, technical architect, data engineer/scientist, and backend developer were most likely to be part of an organization with more than 500 developers. Within industries, the banking/finance organizations were most likely to employ 501+ developers. Within functional areas, those who identified themselves as engineering development were most likely to be part of an organization with more than 500 developers. API-first leaders were more likely to have 501+ developers in their organization than those rating it a 6 or less.



A Day, Week, or Year in the Life

Time spent with APIs

Similar to 2019, the highest number of developers in this year's survey spent fewer than 10 hours a week working with APIs, at 39.4%. Within primary job functions, backend developers were most likely to spend greater than 20 hours/week working with APIs. Within industries, those in banking/finance were most likely to spend greater than 20 hours/week. Within functional areas, DevOps/API Ops and developer relations/evangelism were most likely to spend greater than 20 hours/week working with APIs. API-first leaders were more likely to spend greater than 20 hours/week working on APIs than others. Respondents with 6+ years of API development experience were also more likely to spend greater than 20 hours/week working on APIs than those with 0–5 years of experience.

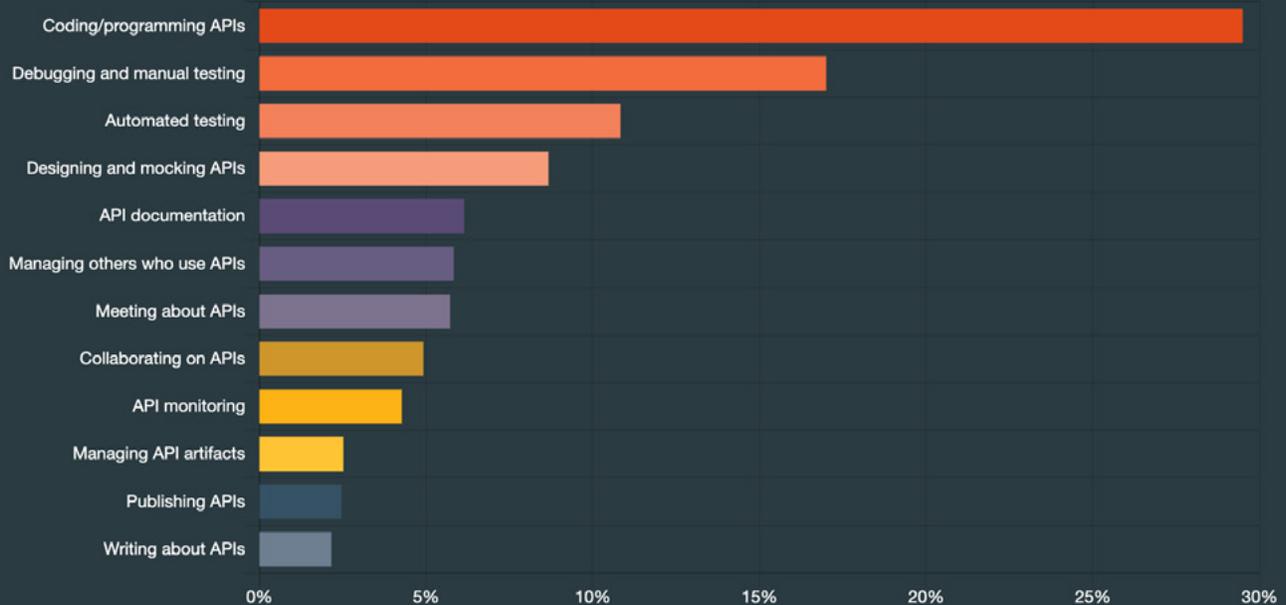


API time allocation

When asked how individuals allocate the time they spend with APIs, more time was allocated to coding/programming APIs than any other task, with a mean of 29.49% and median of 25%. Debugging required the second-highest amount of time from respondents, at 17% mean, 10% median.

Automated testing was the only other task accounting for 10% or more of allotted time, at 10.83%.

Within primary job functions, backend developers allocated the most time to coding/programming APIs, and within industries, gaming allocated the most time to coding/programming APIs. Within functional areas, engineering/development allocated the most time to coding/programming APIs.



Respondents were asked to allocate 100 points across all items

API time allocation: ideal state

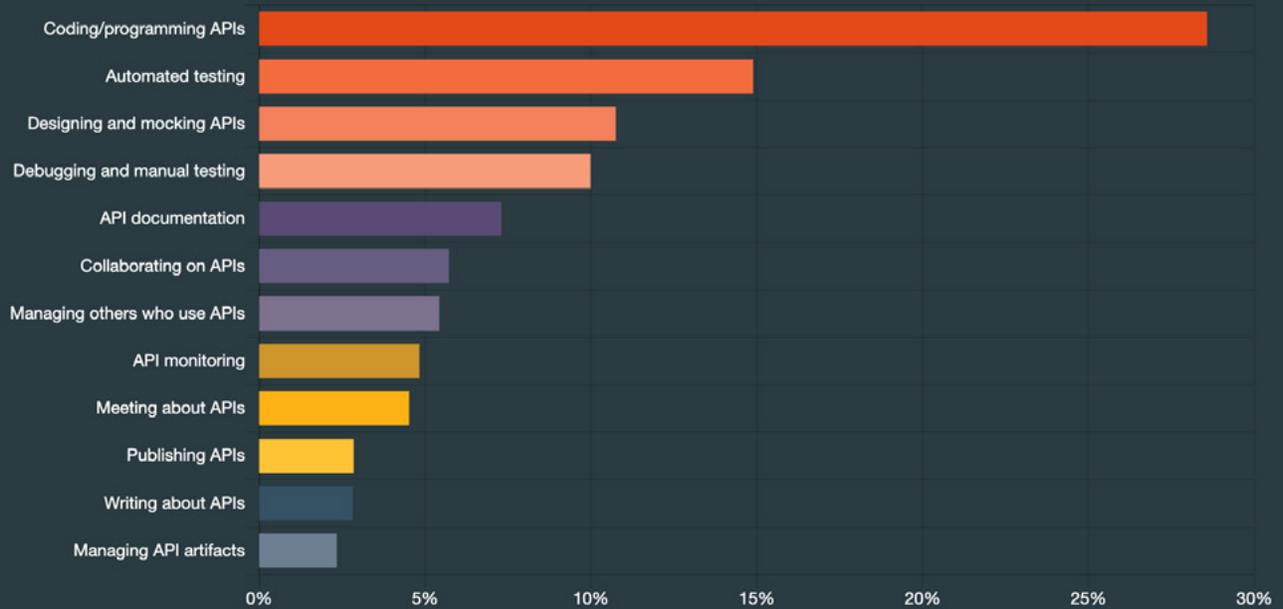
Respondents' expectations for their allocation of time was primarily in line with actual allocation of time, with the same top five leading the way, but there are some notable discrepancies.

Respondents believe more time should be allocated to designing and mocking APIs (10.75%) than they are currently able to (8.67%), and they should spend more time automating testing (14.89%) than they do (10.83%).

Meanwhile, respondents feel like they should spend less time debugging (10.75%) than they actually do (17%), and they should spend a little less time in meetings (4.52% ideal versus 5.72% actual).

Within primary job functions, full stack developer and backend developer think that coding/programming APIs should be allocated the most time. Within industries, gaming thinks that coding/programming APIs should be allocated the most time. Within functional areas, engineering development thinks that coding/programming APIs should be allocated the most time.

Looking at the items with the most points allocated, respondents with 6+ years of API development experience also think they should allocate more time to coding/programming APIs on average than those with 0–5 years of experience.



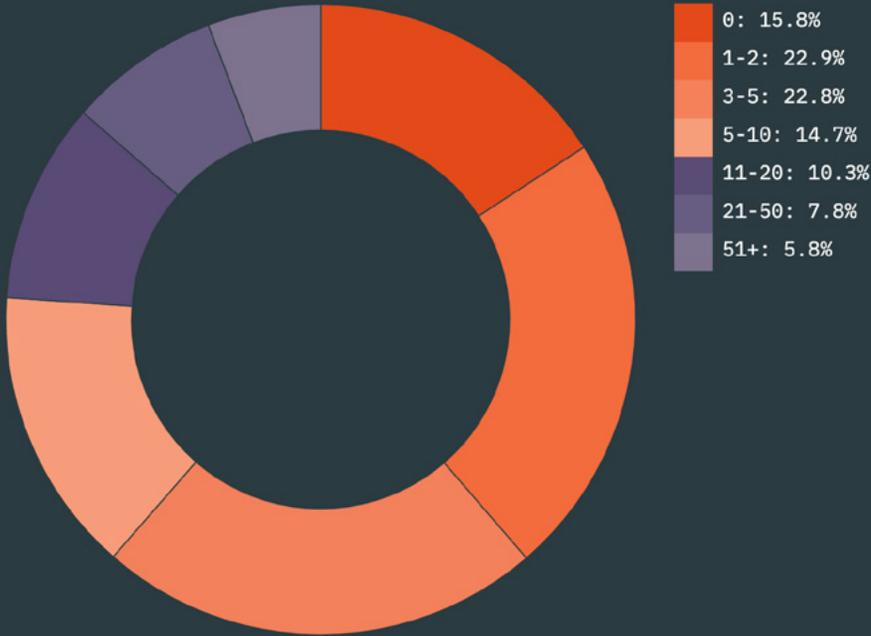
Respondents were asked to allocate 100 points across all items

Number of APIs produced in the last 12 months: individual

Most respondents produced or helped to produce five or fewer APIs, with 1–2 and 3–5 coming in highest, at an almost identical 22.9% and 22.8%, respectively. Almost 16% reported producing 0, while 5.8% produced 50+.

Within primary job functions, technical architects and CXO/VP were most likely to have produced (or helped to produce) 51+ internal and external APIs in the past 12 months. Within industries, retail was most likely to have produced (or helped to produce) 51+ internal and external APIs in the past 12 months. Within functional areas, developer relations/evangelism were most likely to have produced (or helped to produce) 51+ internal and external APIs in the past 12 months.

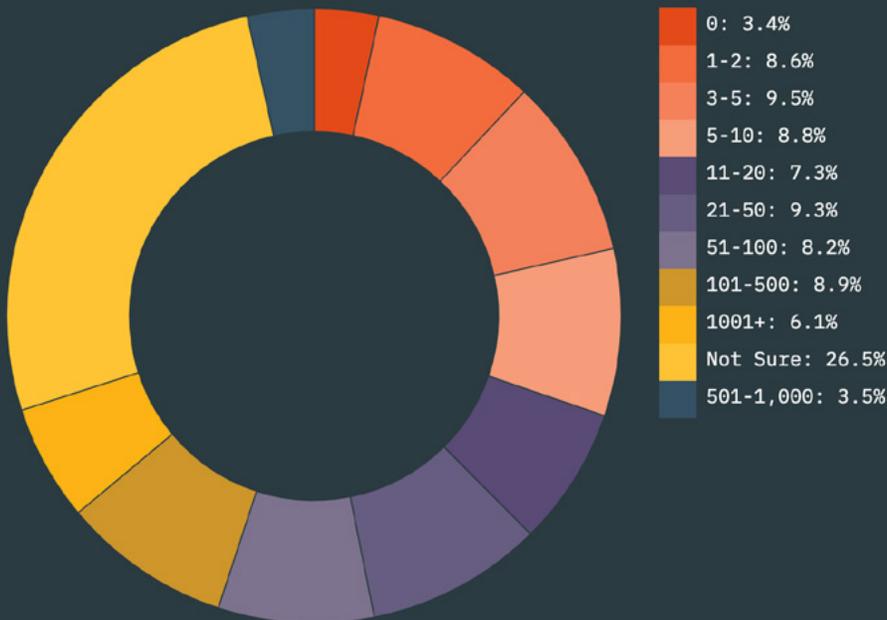
API-first leaders were more likely to have produced (or helped to produce) 51+ internal and external APIs than those rating it a 6 or less. Respondents with 6+ years of API development experience were more likely to have produced (or helped to produce) 51+ internal and external APIs than those with 0–5 years of experience.



Number of APIs produced in the last 12 months: organization

Over a quarter of respondents were not sure about how many APIs their organization produced, which indicates challenges with API visibility in many organizations. The number of APIs produced was spread out fairly evenly among every range listed between 1-500, but ranges underneath 50 APIs accounted for a cumulative 46.9%.

API-first leaders were more likely to work for an organization that produces more than a thousand internal and external APIs per year than others. Respondents with 6+ years of API development experience were more likely to work for an organization that produces 1,001+ internal and external APIs than those with 0–5 years of experience.

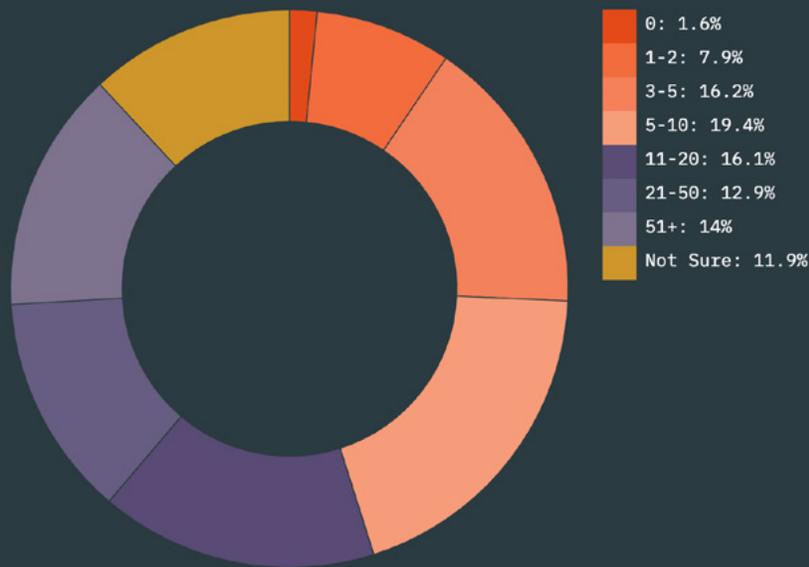


Number of APIs produced in the last 12 months: individual

We asked survey-takers how many APIs they consumed in the last year, and the results created a bell curve representing API consumption, peaking with respondents consuming 5-10 APIs, at 19.4%, followed closely by 3-5 at 16.2, and 11-20 at 16.1%.

Within primary job functions, technical architects were most likely to have consumed 51+ internal and external APIs. Within industries, technology was most likely to have consumed 51+ internal and external APIs. Within functional areas, developer relations/evangelism was most likely to have consumed 51+ internal and external APIs.

API-first leaders were more likely to have consumed 51+ internal and external APIs in the past 12 months than those rating it a 6 or less. Respondents with 6+ years of API development experience were more likely to have consumed 51+ internal and external APIs in the past 12 months than those with 0–5 years of experience.

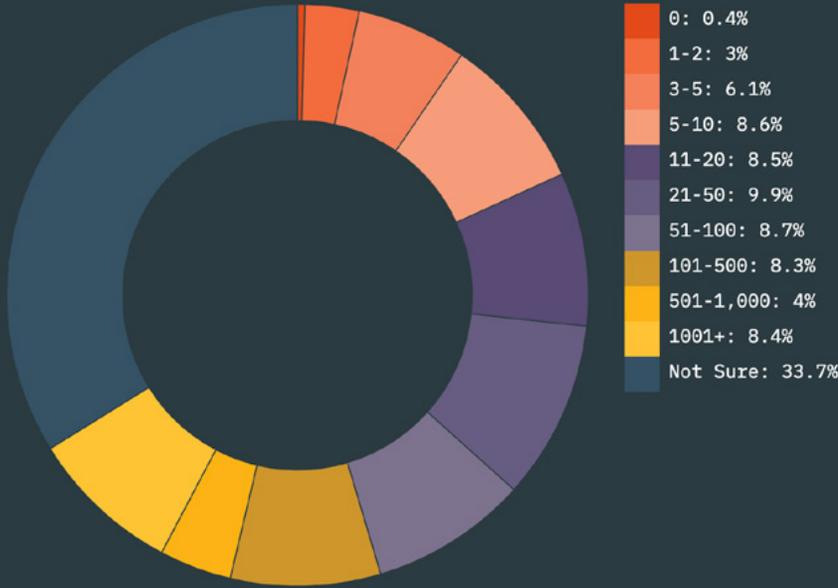


Number of APIs consumed in the last 12 months: organization

We found a lack of visibility in API consumption across the organization: When asked how many APIs their organizations consumed, about one-third of respondents, 33.7%, were unsure.

Within primary job functions, sales/solutions engineers were most likely to consume 1000+ internal and external APIs. Within industries, banking/finance were most likely to consumer 1000+ internal and external APIs. Within functional areas, sales/marketing were most likely to consume 1000+ internal and external APIs.

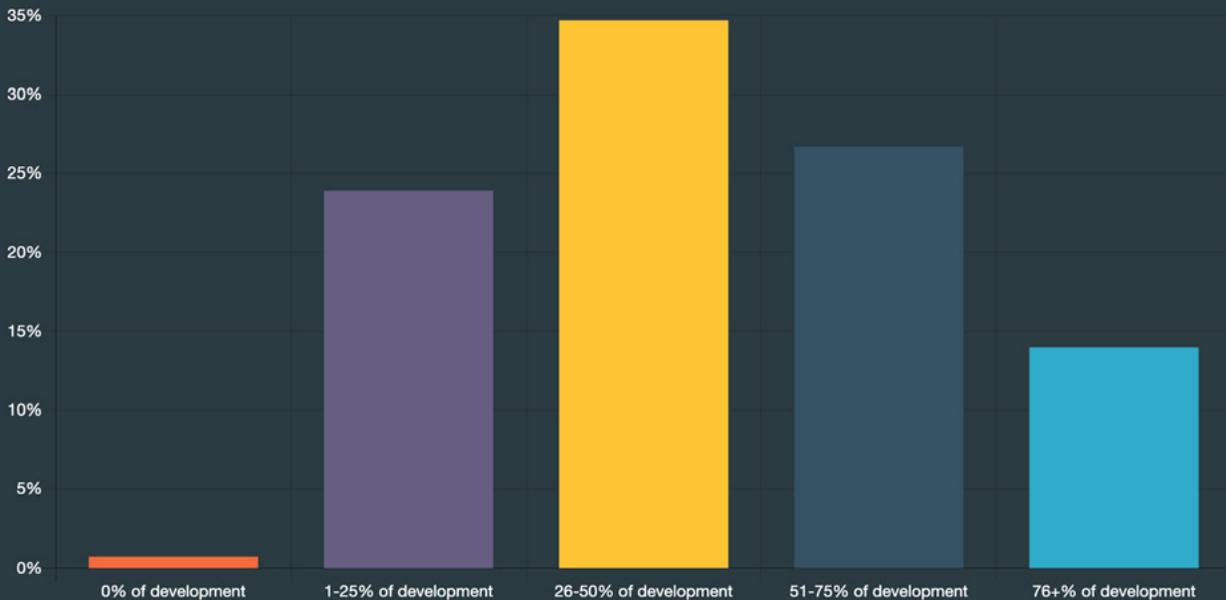
API-first leaders were more likely to work for an organization that consumed 1,000+ internal and external APIs than others. Respondents with 6+ years of API development experience were more likely to have worked for an organization that consumed 1,000+ internal and external APIs than those with 0–5 years of experience.



API development effort

When asked to rate the percentage of their organization’s development effort spent working APIs, 40.7% said that more than half of the organization’s development effort is spent on APIs.

API-first leaders work for organizations whose percentage of effort working with APIs is higher on average than others. Respondents with 6+ years of API development experience work for organizations whose percentage of effort working with APIs is higher on average than those with 0–5 years of experience.



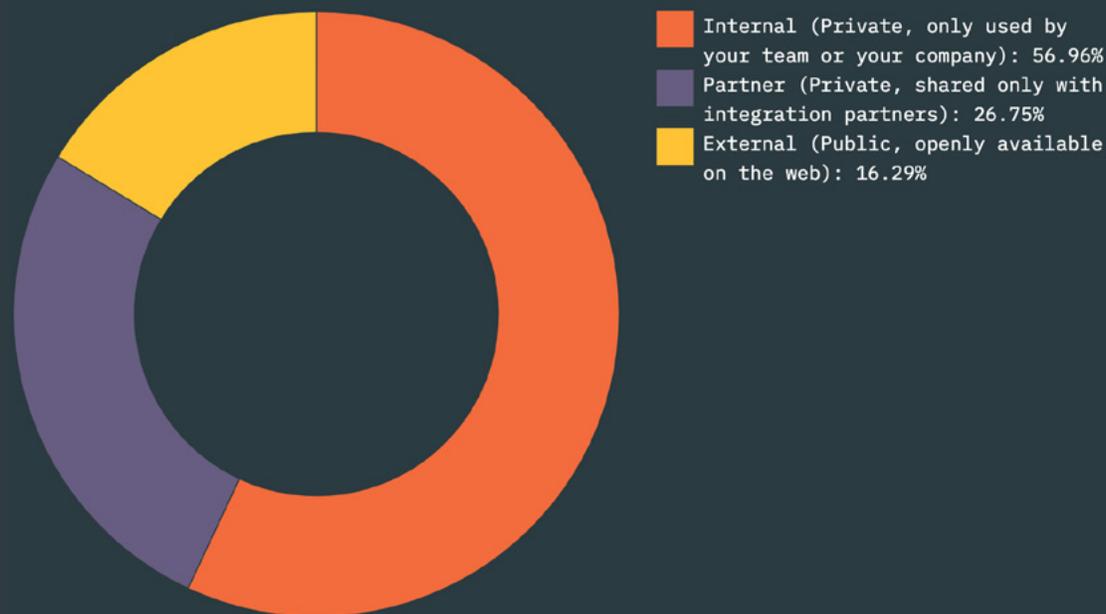
Mean: 47.47, Median: 50

API Strategies

Internal vs partner vs external

The percentage of internal APIs (56.96%) increased compared to last year (52.8%), and it's clear that internal APIs are becoming more of a force across the industry. Within primary job functions, full stack developer and mobile developer were most likely to say the largest percentage of their APIs are internal. Within industries, retail, manufacturing, and gaming were most likely to say the largest percentage of their APIs are internal. Within functional areas, DevOps/API Ops and engineering development were most likely to say the largest percentage of their APIs are internal.

API-first leaders were more likely to allocate points to public APIs and less likely to allocate points to internal APIs than those who do not. Respondents with 6+ years of API development experience were less likely to allocate points to public APIs and more likely to allocate points to internal APIs than those with 0–5 years of experience.



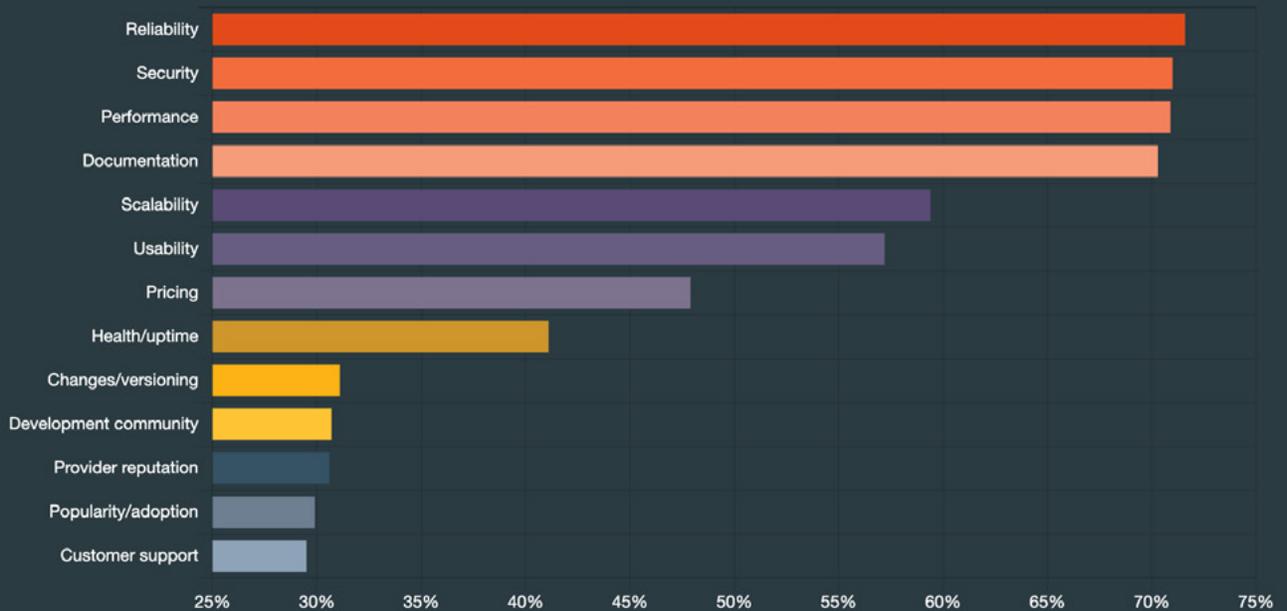
Factors considered: API integration

When asked what factors are considered before integrating with an API, reliability was the most important factor, at 71.6%, followed closely by security, performance, and documentation, which all came in slightly less (but all above 70%).

Usability and scalability often go hand in hand, and registered similarly at 59.4% and 57.2%, respectively. Pricing registered with fewer than half of respondents, at 47.9%.

Within primary job functions, CXO/VP was most likely to choose reliability as the factor they consider before they integrate with an API. Security engineers were most likely to choose security, while mobile developers and quality engineers were most likely to choose performance. Within industries, healthcare was most likely to choose reliability as the factor they consider before they integrate with an API. Within functional areas, quality assurance/testing and DevOps/API Ops were most likely to choose reliability as the factor they consider before they integrate with an API.

API-first leaders were more likely to choose security, documentation, and performance as factors they consider before integrating with an API than others. Respondents with 6+ years of API development experience were more likely to choose reliability, security, documentation, and performance as factors they consider before integrating with an API than those with 0–5 years of experience.



Multiple responses allowed

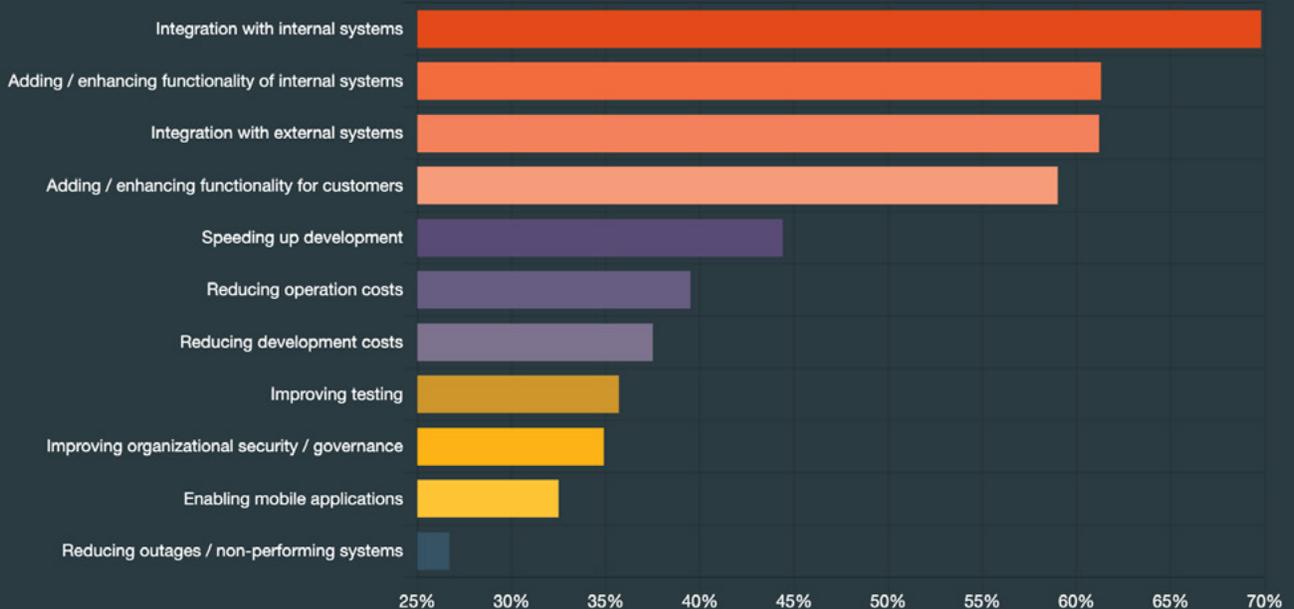
Factors considered: producing APIs

When asked what factors individuals consider when deciding to produce an API, a leading factor mentioned by almost 70% of respondents was integration between internal applications, programs, or systems. Integration with or enhancement of current internal or external applications, programs, or systems registered similarly around 61%. Enhancing customer-oriented products or offerings came up with 59% of respondents.

Within primary job functions, full stack/developer, technical architect, and backend developer were most likely to choose that integration between internal applications, programs, or systems contributed to their organization deciding to produce an API. Within industries, banking/finance were most likely to choose that integration be-

tween internal applications, programs or systems contributed to their organization deciding to produce an API. Within functional areas, the most noteworthy is that sales marketing were less likely to choose that integration between internal applications, programs or systems contributed to their organization deciding to produce an API.

Respondents with 6+ years of API development experience were more likely to choose that integration between internal applications, programs, or systems contributed to their organization deciding to produce an API than those with 0–5 years of experience.



Multiple responses allowed

Factors considered: consuming APIs

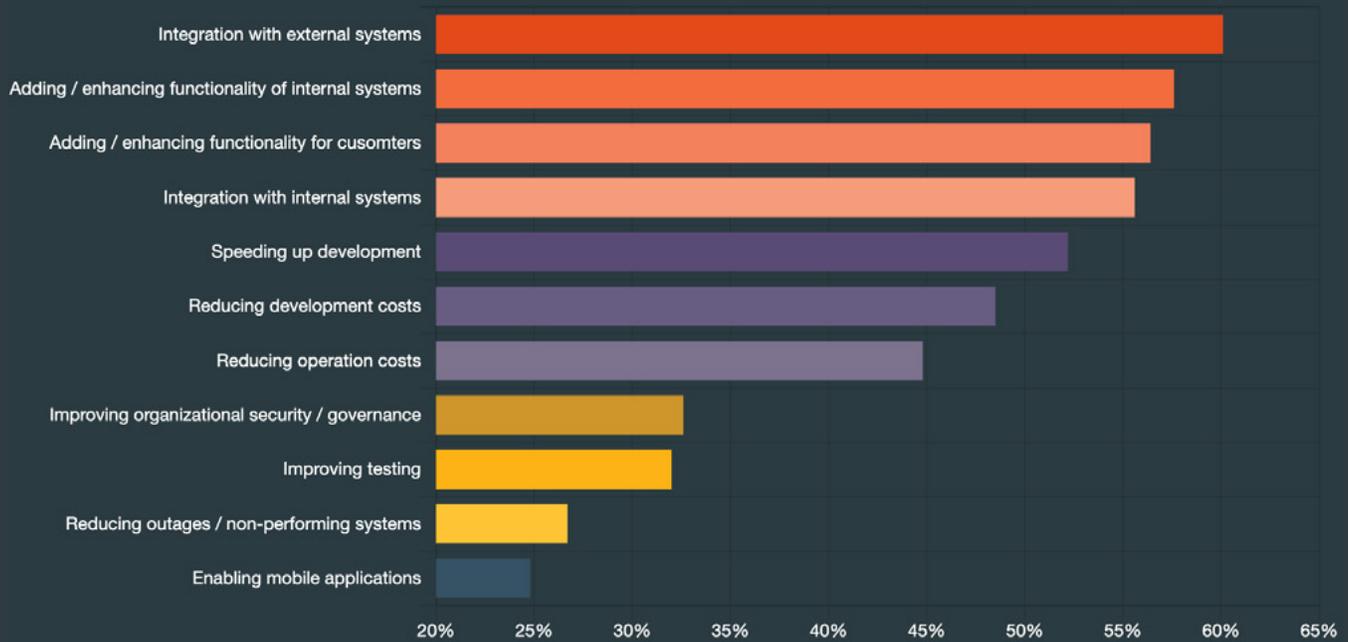
When asked what factors individuals consider when deciding to consume an API, integration with external applications, programs or systems was the leading factor at 60.1%. Adding or enhancing the functionality of internal applications, programs or systems was the second-leading factor (57.6%), followed closely by its customer-facing counterpart, adding or enhancing the functionality of products and services offered to customers (56.4%).

Again, pricing and costs did not appear as factors more than 50% of the time: reducing development costs registered at 48.5%, and reducing operating costs at 44.8%.

Within primary job functions, sales solution/engineer was most likely to choose that integration between internal applications, programs, or systems contributed to their organization deciding to consume an API. Within industries, business IT services was most likely to choose that integration between internal applications,

programs or systems contributed to their organization deciding to consume an API.

Respondents with 6+ years of API development experience were also more likely to choose that integration between internal applications, programs or systems contributed to their organization deciding to consume an API than those with 0–5 years of experience.



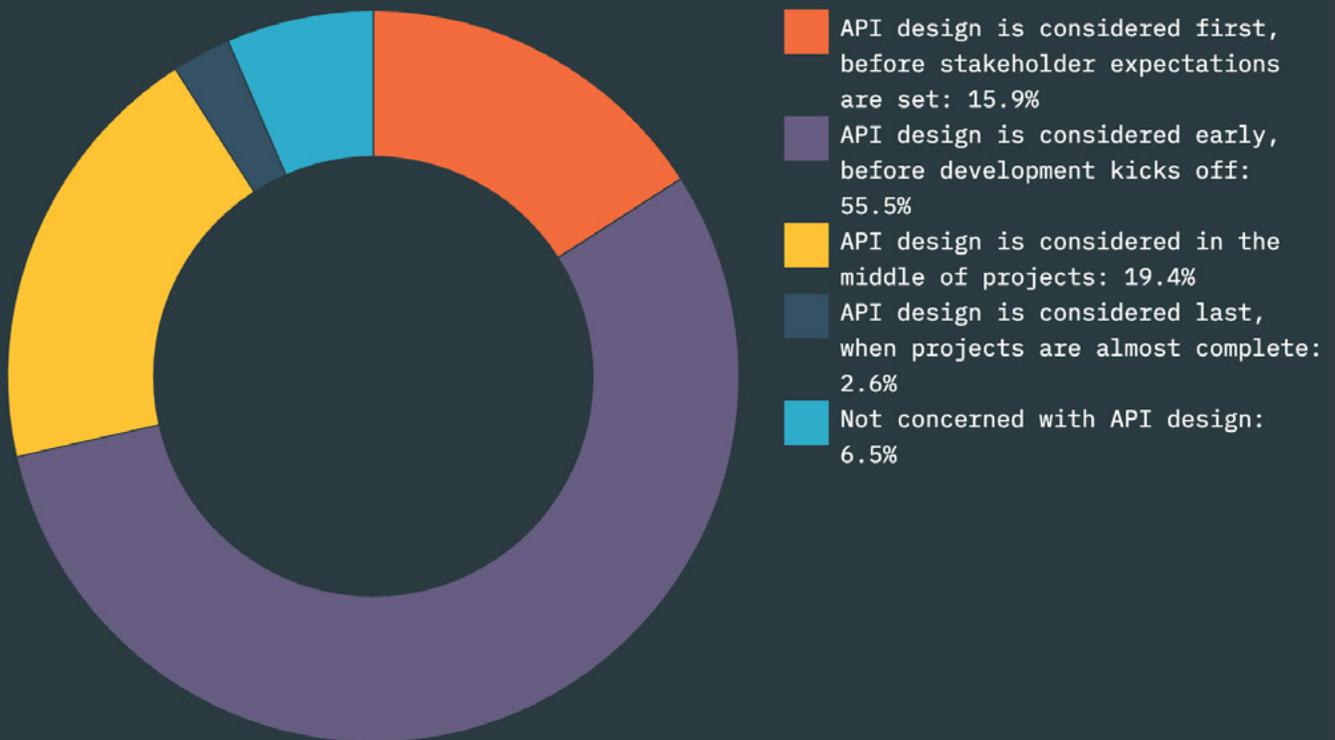
Multiple responses allowed

API design

API design is considered early by many respondents: 55.5% shared that API design is considered after stakeholder expectations are set but before development kicks off, and 15.9% even before that point. It is rare for an organization to consider API design last, when the project is almost complete, as only 2.6% reported their organization taking that approach.

Within primary job function, quality engineer was most likely to report that API design is considered early after stakeholder expectations are set. Within industries, banking/finance was most likely to report that API design is considered early. Within functional areas, quality assurance/testing was most likely to report that API design is considered early.

API-first leaders were more likely to consider API design early, and respondents with 6+ years of API development experience were also more likely to consider API design early than those with 0–5 years of experience.



Executing on APIs

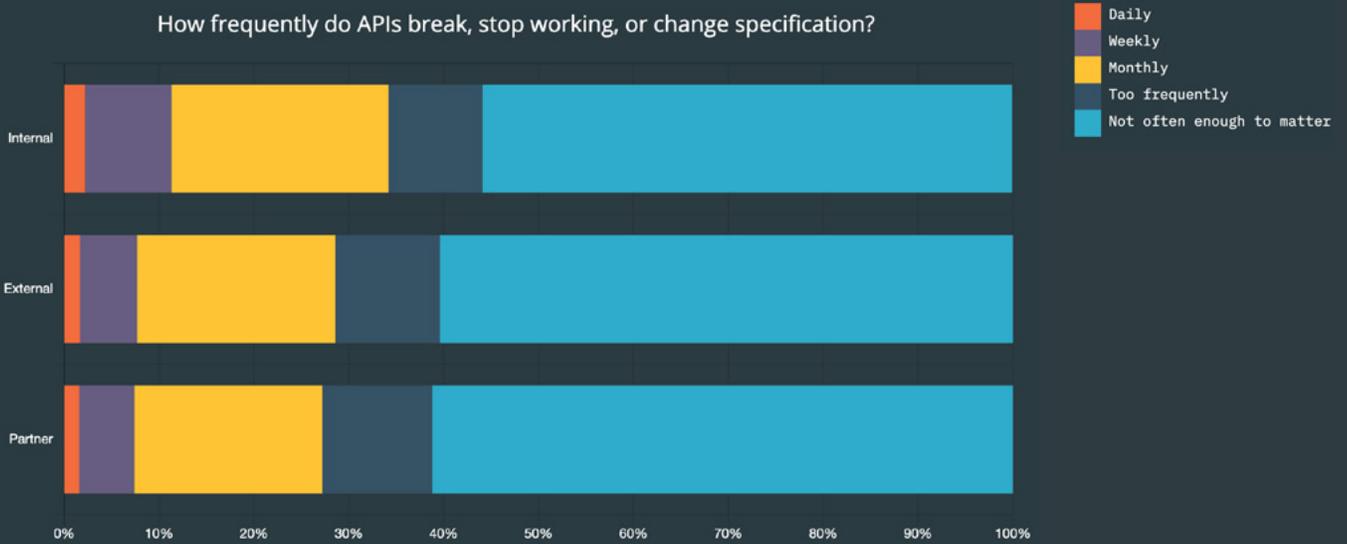
API performance and change

While APIs appear to be perceived as stable and reliable, angst may be rising for when APIs break or change. A significantly higher number of respondents than last year said APIs don't break, stop working, or materially change specification often enough to matter, which was the top response; however, the percentage of respondents who feel APIs still break too frequently also rose significantly versus last year.

Within primary job functions, support engineer was most likely to report that APIs break not enough to matter. Within industries, non-profits and manufacturing were most likely to report that APIs break not enough to matter. Within functional areas, technical customer support and security were most likely to report that APIs break not enough to matter.

API-first leaders were less likely to report that APIs break too frequently, while respondents with 6+ years of API development experience were more likely to report they break too frequently than those with 0–5 years of experience.

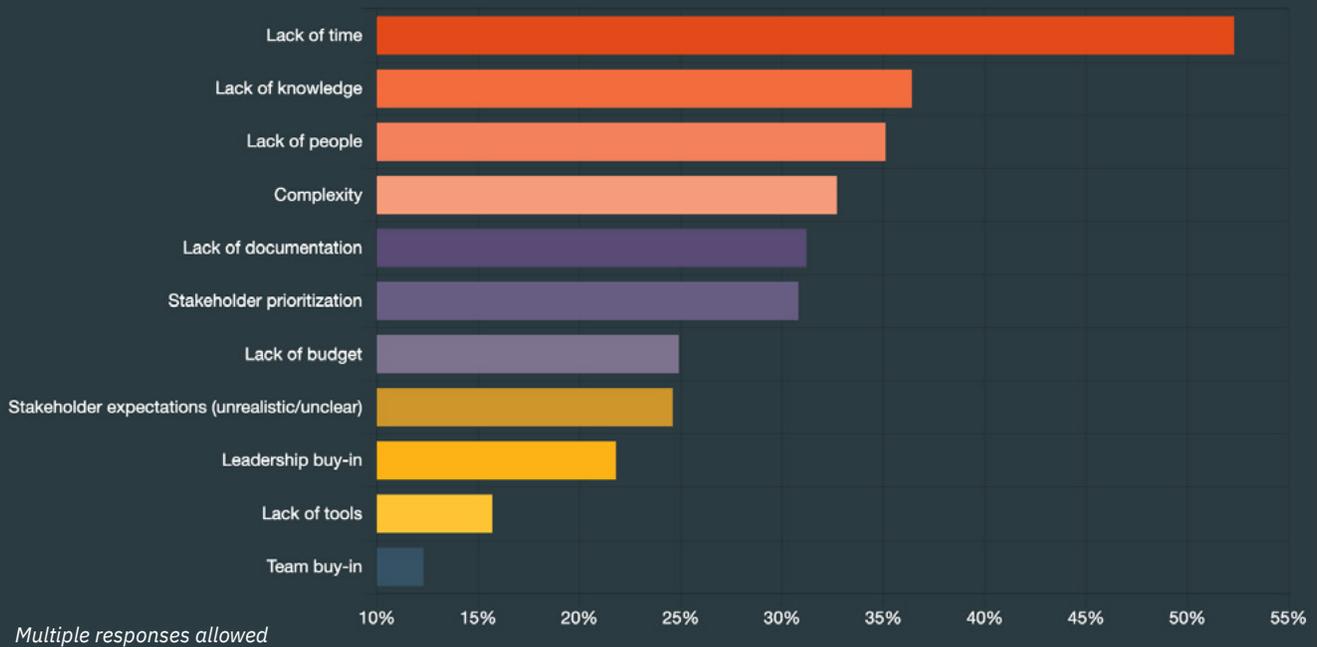
How frequently do APIs break, stop working, or change specification?



Obstacles to producing APIs

When asked about the obstacles to producing APIs, lack of time is by far the leading obstacle, with 52.3% of respondents listing it. Lack of knowledge (36.4%) and people (35.1%) were the next highest.

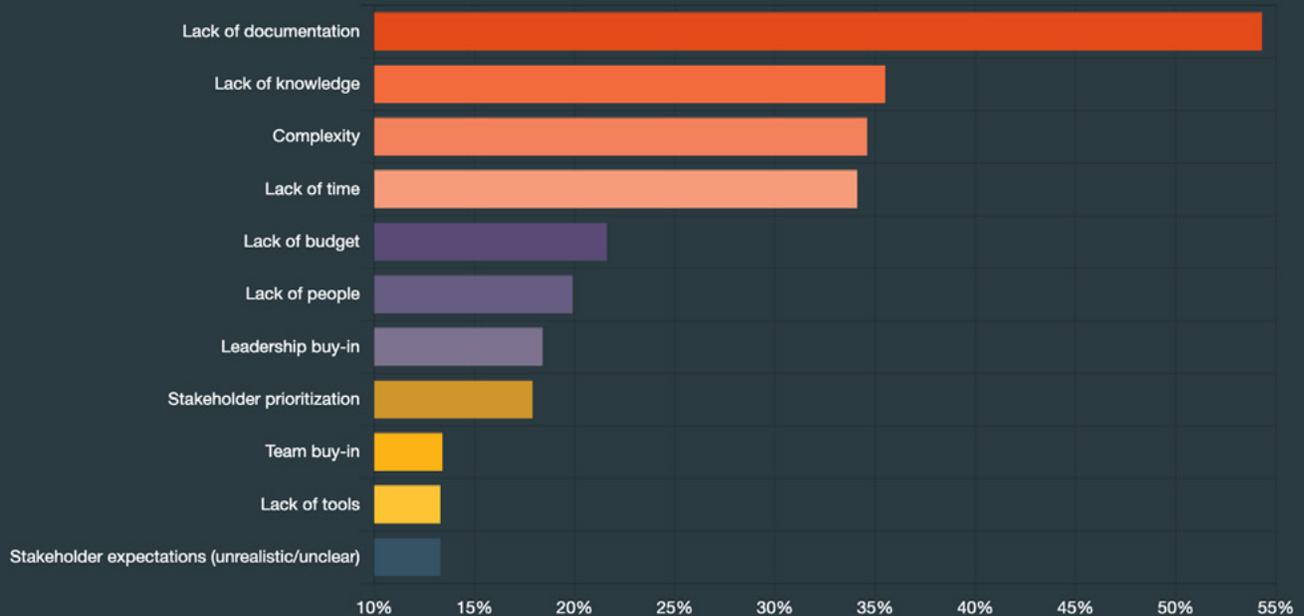
Looking at the top three mentions, API-first leaders were more likely to mention lack of time, lack of knowledge, and lack of people than others. Respondents with 6+ years of API development experience were less likely to mention lack of time, lack of knowledge, and lack of people than those with 0–5 years of experience.



Obstacles to consuming APIs

When asked about the biggest obstacle to consuming APIs, lack of documentation clocked in the highest obstacle to consuming APIs (54.3%), by an extremely wide margin. Other top obstacles to consuming APIs are lack of knowledge, complexity, and lack of time, all cited by a little over one-third of respondents.

Respondents with 6+ years of API development experience were more likely to mention lack of documentation than those with 0–5 years of experience.

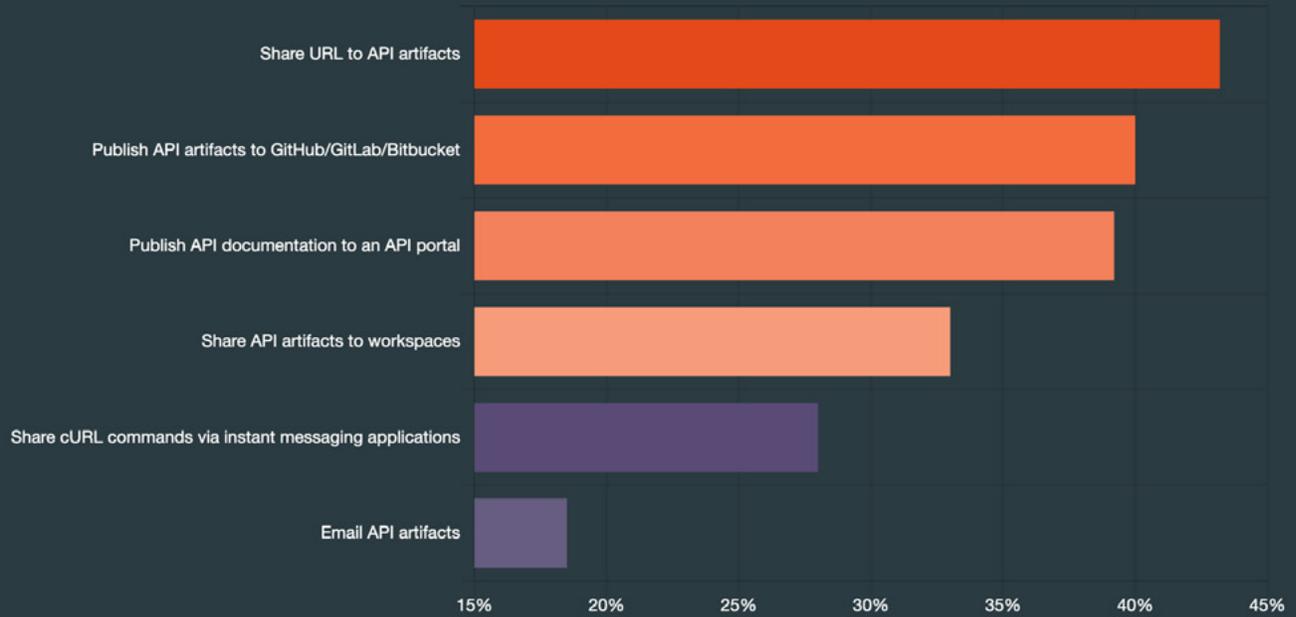


Multiple responses allowed

Collaborating on APIs

When asked how they collaborate, respondents leaned toward sharing URLs to API artifacts (Swagger, OpenAPI, etc.) which received the highest percentage of mentions at 43.2%. This was followed by publishing those artifacts to GitLab, GitHub, Bitbucket, etc. at 40%. Publishing API documentation to an API portal logged in third-highest at 39.2%.

Instant messaging applications may be ideal for quick communication, but only ranked as the fifth-highest collaboration tool at 28%.

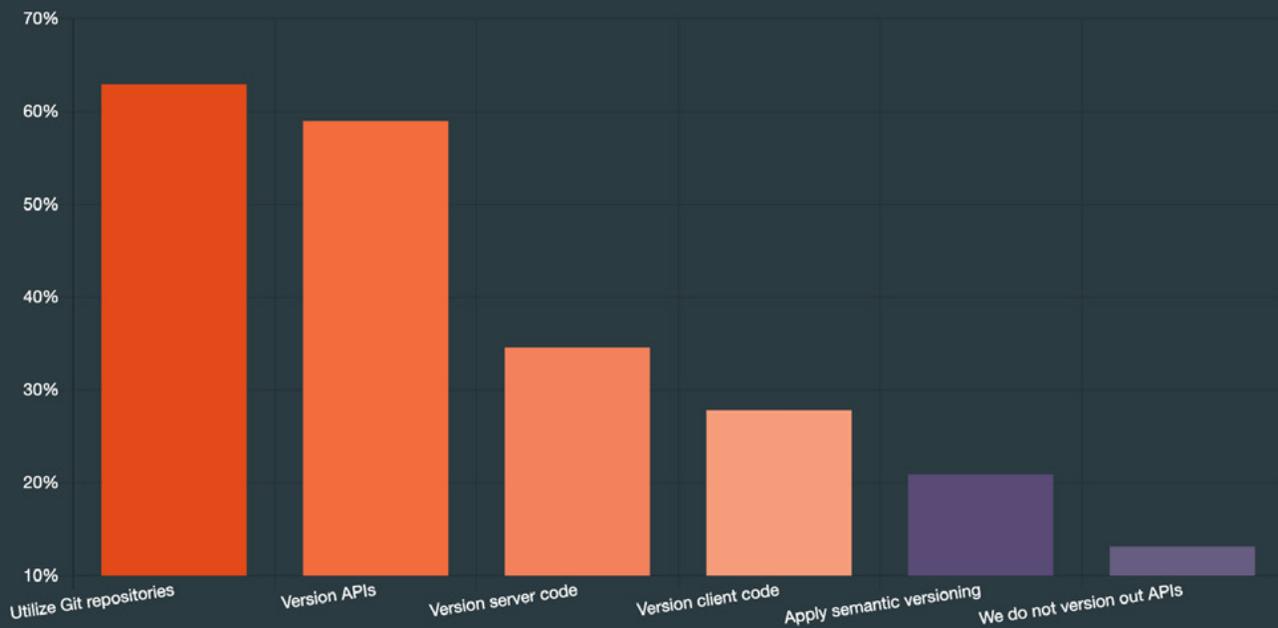


Multiple responses allowed

Change management

When it comes to preferred change-management practices, the utilization of Git repositories scored the most mentions, at 62.9%. Logging in succession behind that top response we find versioning APIs (59%), versioning server code (34.6%), and versioning client code (27.8%). Applying semantic versioning lagged behind at 20.9%. We do not version out APIs at 12.8%.

API-first leaders and respondents with 6+ years of API development experience were more likely to mention each of the top two mentions (i.e., Git repositories and versioning APIs).



Multiple responses allowed

API testing

When it comes to API testing, a wide variety of practices are applied, although functional testing (70.4%) and integration testing (67.1%) towered over the rest. Performance testing (48.4%) and acceptance testing (42.8%) trailed behind, followed by security testing at 35.8%.

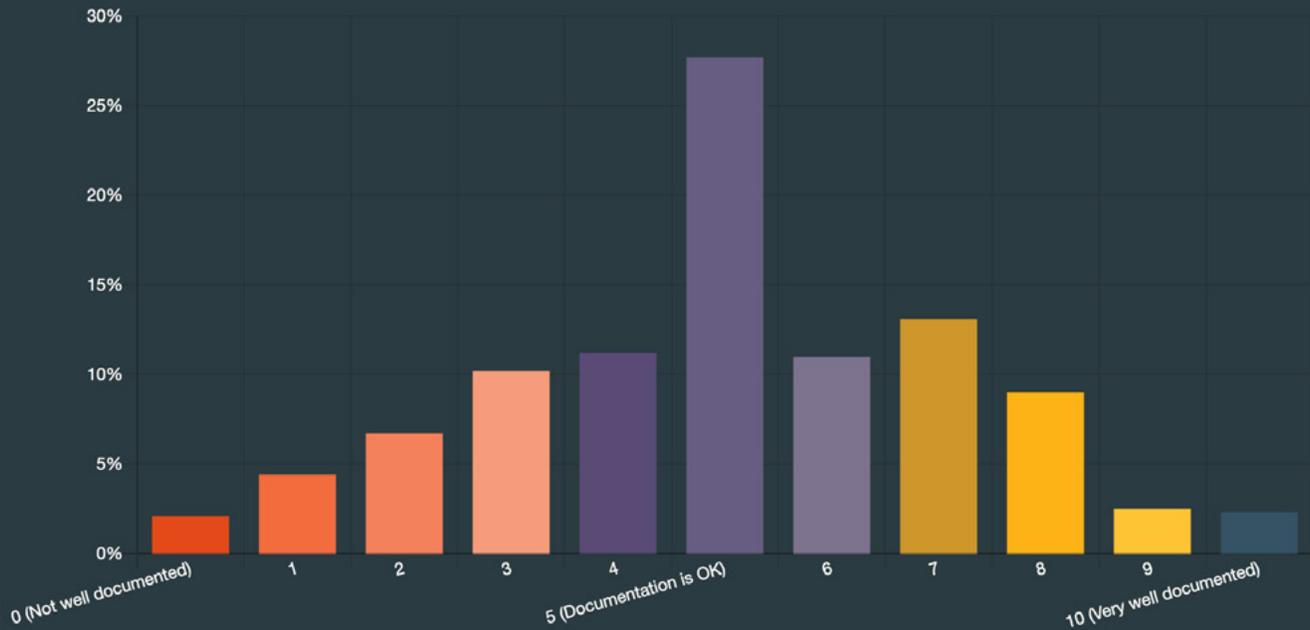


Multiple responses allowed

API documentation

We asked how well APIs are documented, and the results resembled a bell curve, with the highest percentage of respondents (27.7%) indicating that documentation scored a 5 out of 10 (or “OK”). The average score on the 10-point scale was just over 5 (5.06). Only 2.3% of respondents rated APIs they work with “very well documented.”

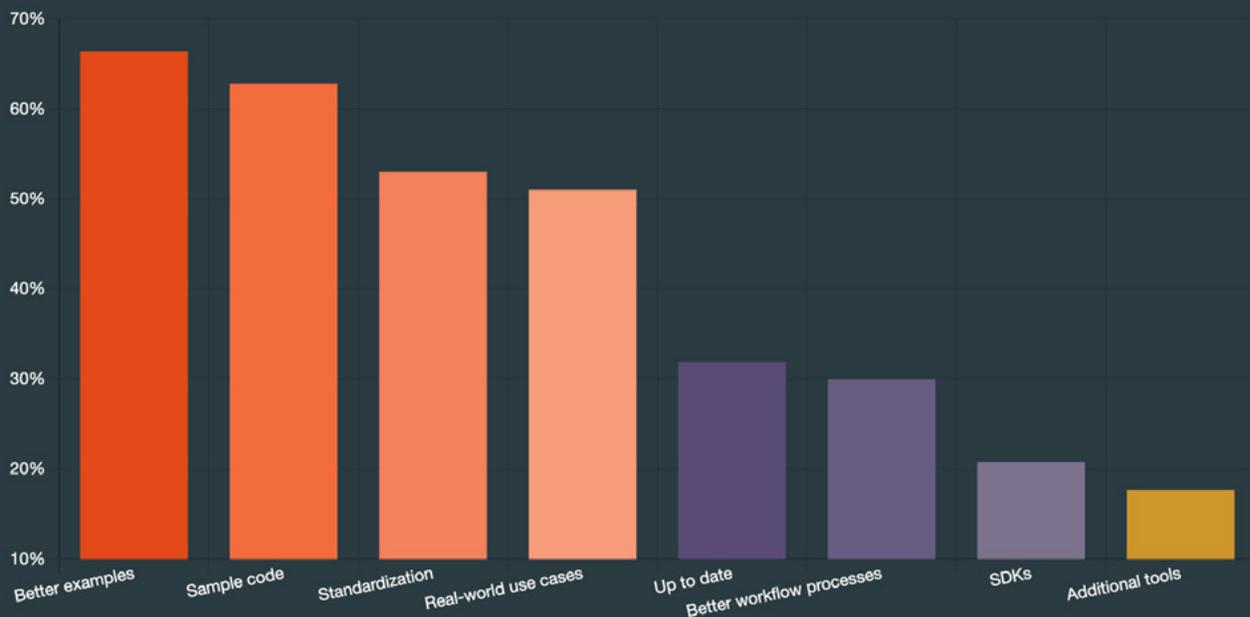
API-first leaders rated documentation of APIs higher on average than others.



Mean: 5.06

Improving API documentation

What does it take to improve documentation? Our respondents had insights. The most helpful enhancement API producers can make is to provide better examples in the documentation (66.4%), followed by sample code (62.8%), and standardization (53.0%). API consumers also find real-world use cases, better workflows, additional tools, and SDKs to be helpful, although to a lesser extent.



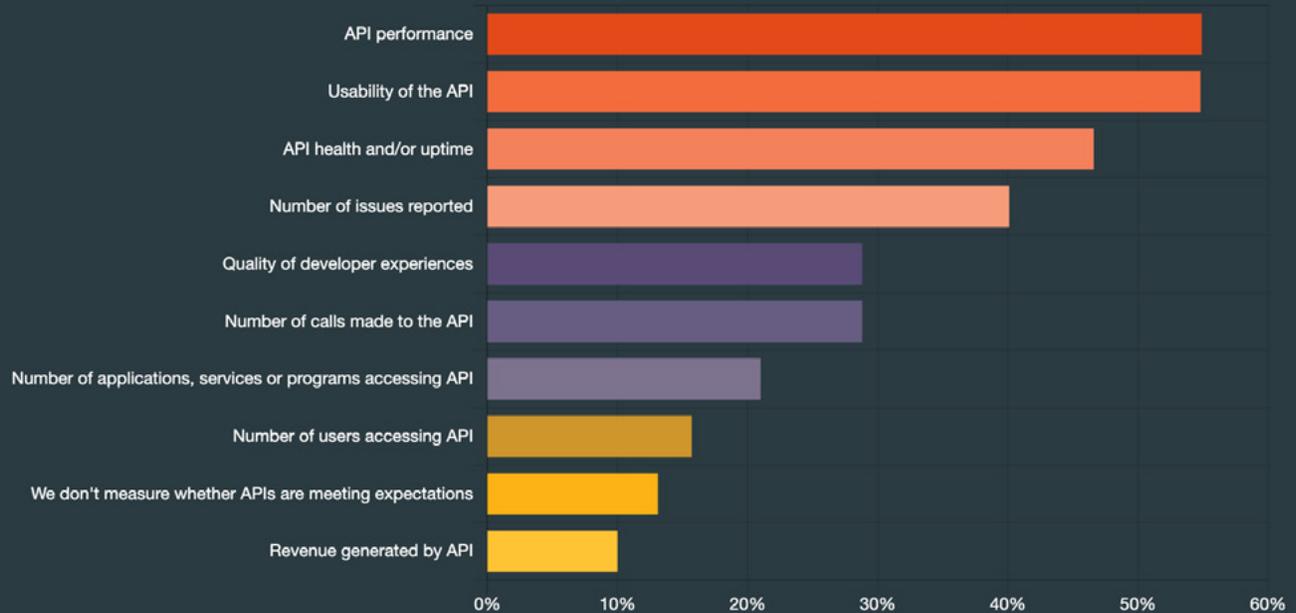
Multiple responses allowed

Meeting expectations—or not

When determining whether an API is—or is not—meeting expectations, API performance (54.9%) and usability of the API (54.8%) were almost inseparable as the top two responses.

API health and/or uptime was not too far behind in third (46.6%). The number of issues reported received mentions from 40.1% of respondents. Somewhat surprisingly, other quantitative measures like the number of applications, services, or programs accessing the API (21%), the number of users accessing the API (15.7%), and revenue generated by the API (10%) all clocked in lower than quality of developer experience (28.8%).

Respondents with 6+ years of API development experience were more likely to mention API performance (the top mention) than those with 0–5 years of experience.



Multiple responses allowed

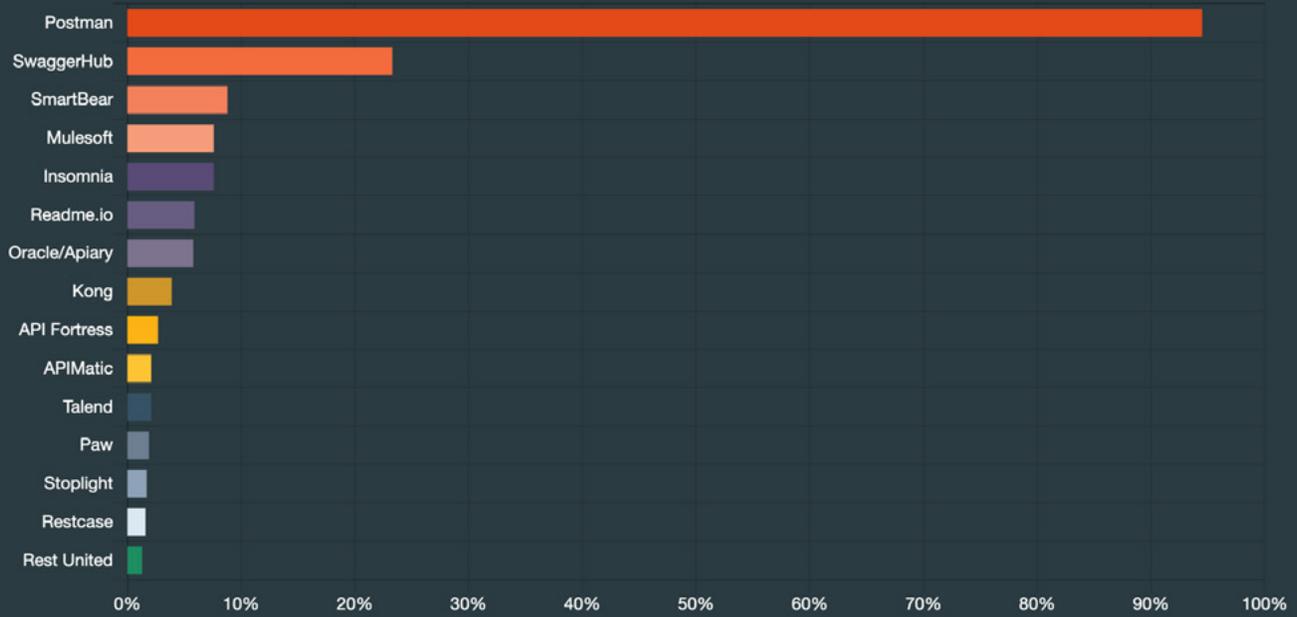
Tooling for APIs and Development

API tools

When respondents were asked which API tools they use, Postman came out on top, garnering mentions from 94.5% of responses. SwaggerHub was the only other tool earning above single digits, with 23.3%. SmartBear (8.8%), Mulesoft (7.6%), and Insomnia (7.6%) rounding out the top five.

API-first leaders were more likely to mention Postman and SwaggerHub than others. Respondents with 6+ years

of API development experience were more likely to mention Postman, SwaggerHub, and SmartBear than those with 0–5 years of experience.

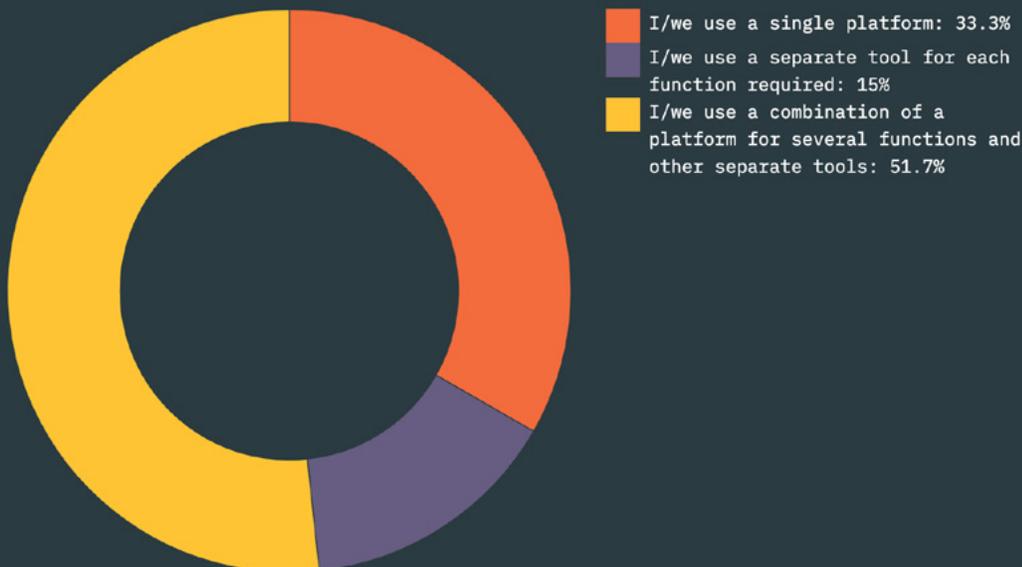


Multiple responses allowed

Platform vs separate tools

We asked respondents whether they prefer a single platform or a mix of tools to design, document, test, and deliver APIs. A combination of both was the most popular answer, garnering more than 50% of the responses.

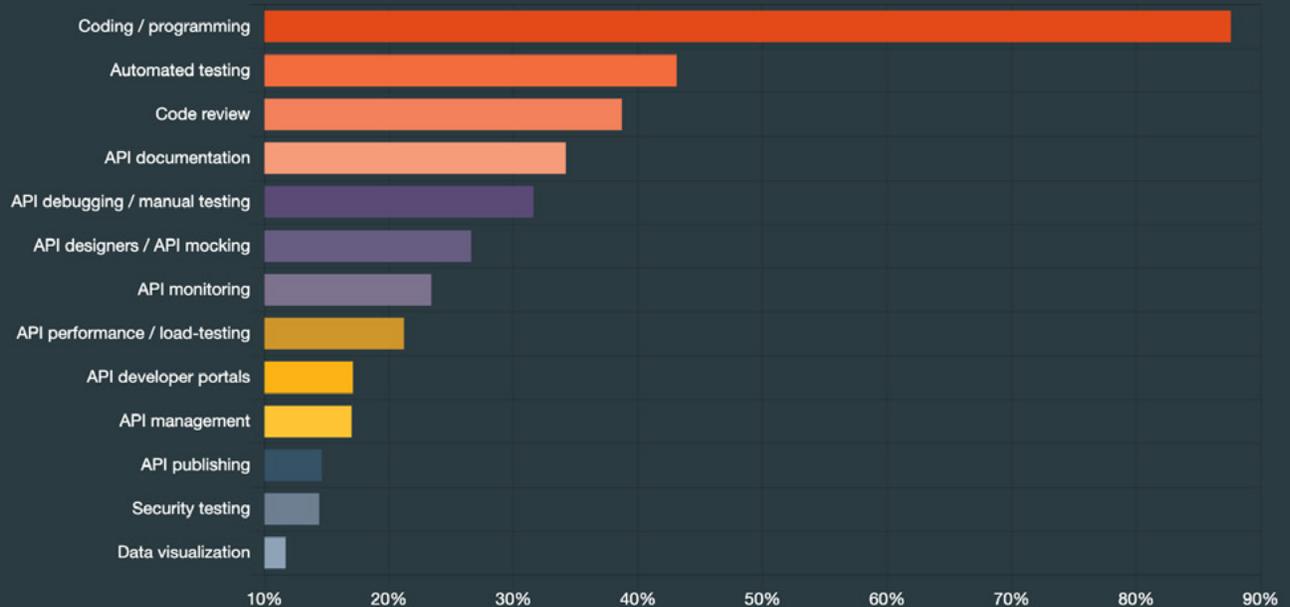
Respondents with 6+ years of API development experience were more likely to report using a combination than those with 0–5 years of experience.



Types of tooling for producing APIs

We asked survey-takers about the types of tools they use to produce APIs. Coding/programming tools (87.6%) received twice as many mentions as the next most popular, automated testing (43.1%). Code review tools were the third most popular at 38.7%.

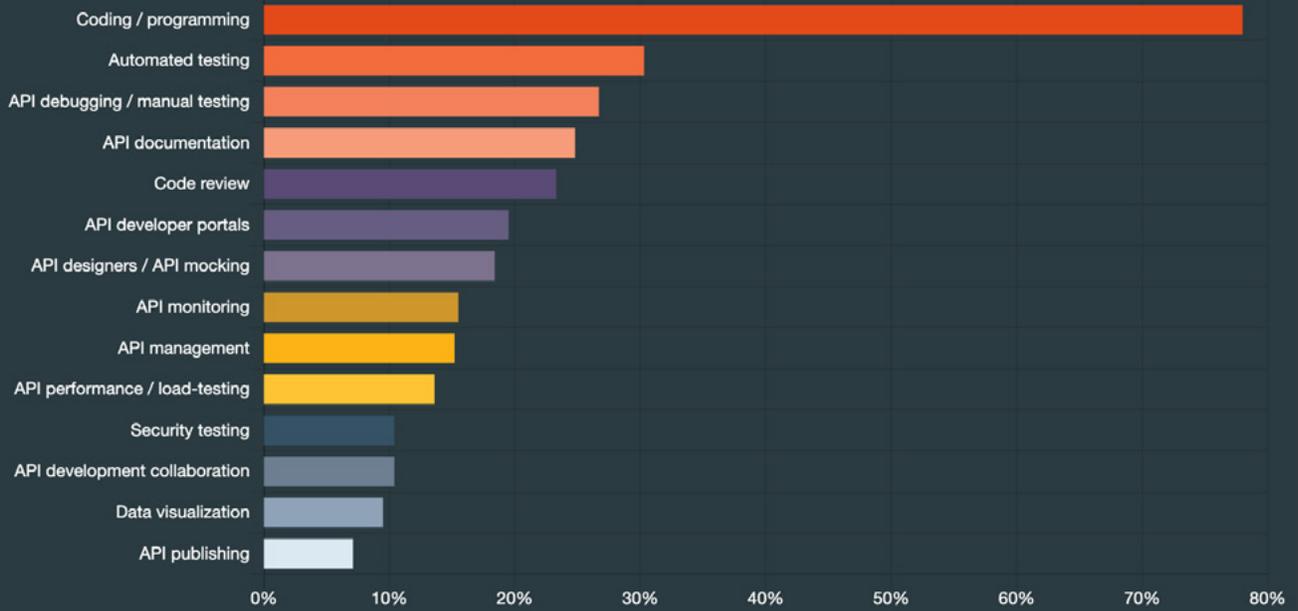
The remainder of the tools mentioned were primarily API-specific tools. Interestingly, respondents with 6+ years of API development experience were more likely to report using coding/programming tools to produce APIs than those with 0–5 years of experience.



Multiple responses allowed

Types of tooling for consuming APIs

We also asked survey-takers about the types of tools they use to consume APIs. Mentions of coding/programming tools dwarfed all other API consumption tools, with 78%, compared to 30.3% for automated testing, the second-highest. Respondents with 6+ years of API development experience were also more likely to report using coding/programming tools to consume APIs than those with 0–5 years of experience.

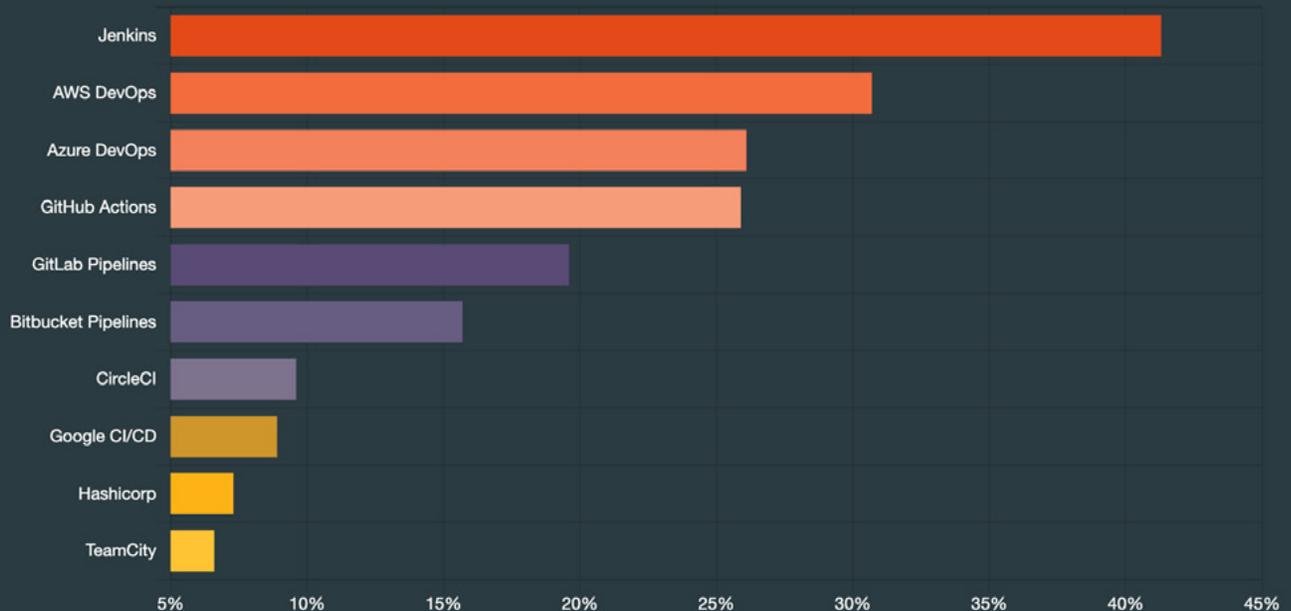


Multiple responses allowed

DevOps tooling

DevOps practitioners rely on a number of tools, with Jenkins standing out and leading the way at 41.3%. AWS DevOps (30.7%) and Azure DevOps (26.1%) registered second and third, respectively. GitHub Actions, GitLab Pipelines, and Bitbucket Pipelines round out the remaining tools that received responses totaling 15% or higher.

API-first leaders and respondents with 6+ years of API development experience were also more likely to mention Jenkins.

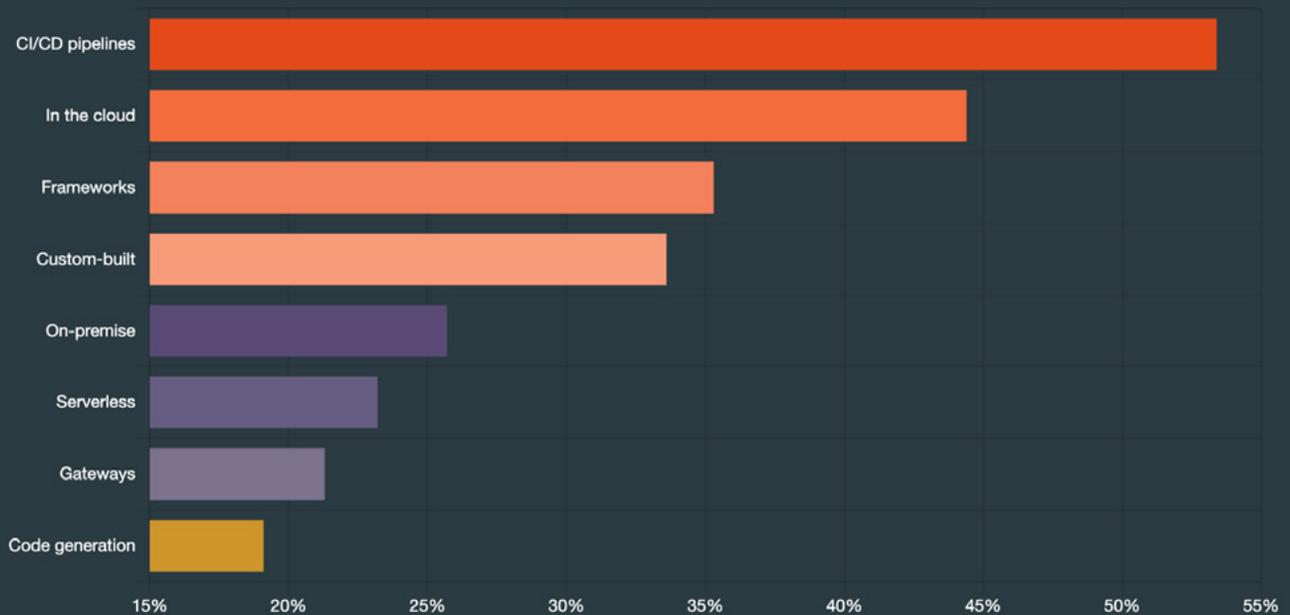


Multiple responses allowed

Deploying APIs

Respondents deploying APIs reported using a number of different approaches. CI/CD pipelines were the most popular, at 53.4%, followed by deploying APIs in the cloud.

API-first leaders were more likely to use all of the approaches offered when deploying APIs than others; similarly, respondents with 6+ years of API development experience were more likely to use all of the approaches offered when deploying APIs than those with 0–5 years of experience.



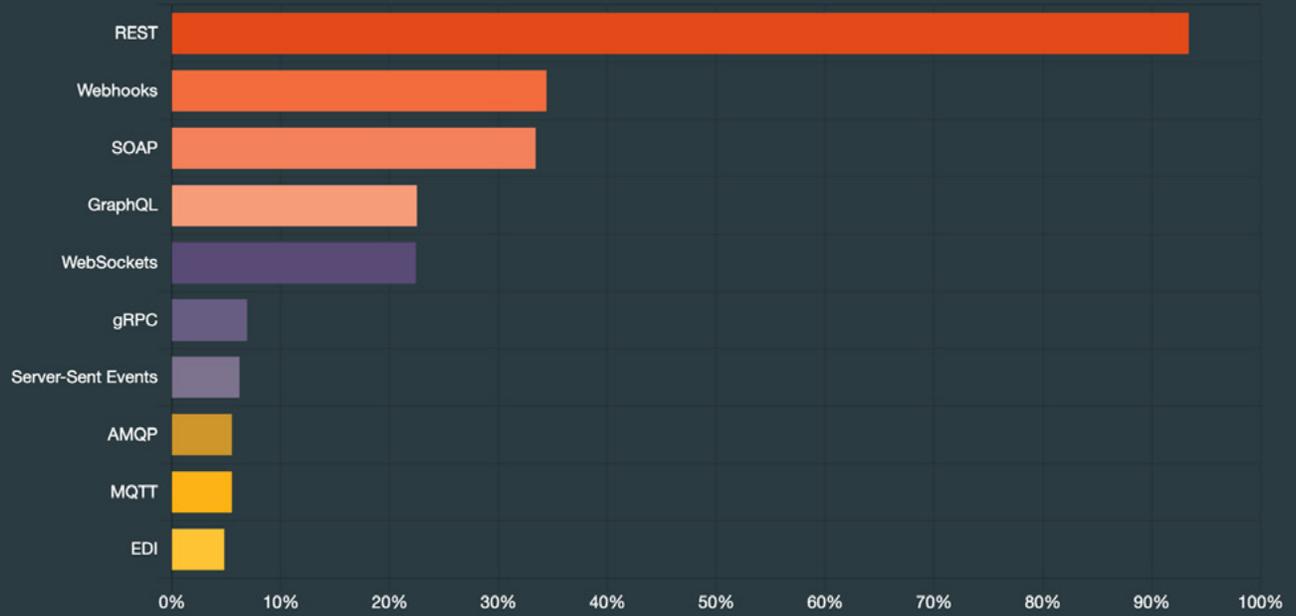
Multiple responses allowed

API Technologies

Architectural style

As far as architectural styles for APIs are concerned, a sweeping majority of respondents (93.4%) were most familiar with REST. More than one-third mentioned webhooks and almost one-quarter mentioned WebSockets, which may point toward an event-driven future. Rounding out the top five are SOAP at 33.4% and GraphQL at 22.5%.

Respondents with 6+ years of API development experience were more likely to use REST than those with 0–5 years of experience.

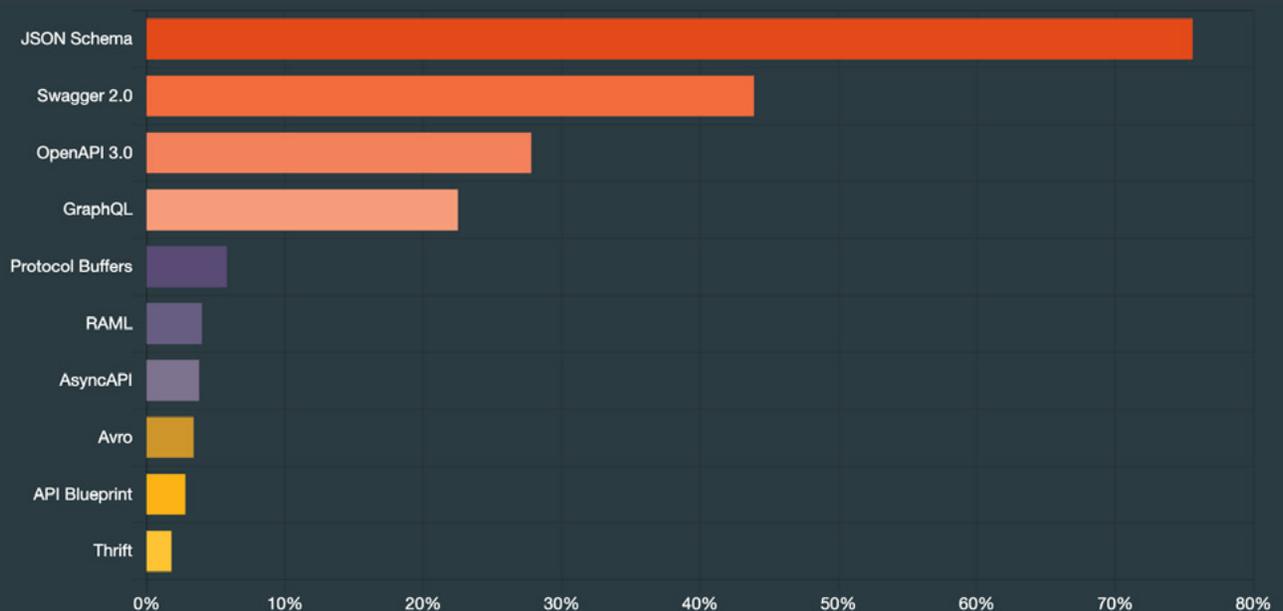


Multiple responses allowed

Specifications

We also asked folks which API specifications they use. JSON Schema was by far the top specification in use in 2020, at 75.6%. Swagger 2.0 was next, followed by the OpenAPI 3.0. GraphQL also had some significant reported usage at 22.5% and the rest fell in line significantly behind at 5.8% and less.

Respondents with 6+ years of API development experience were more likely to use JSON Schema than those with 0–5 years of experience.



Multiple responses allowed

The Future of APIs

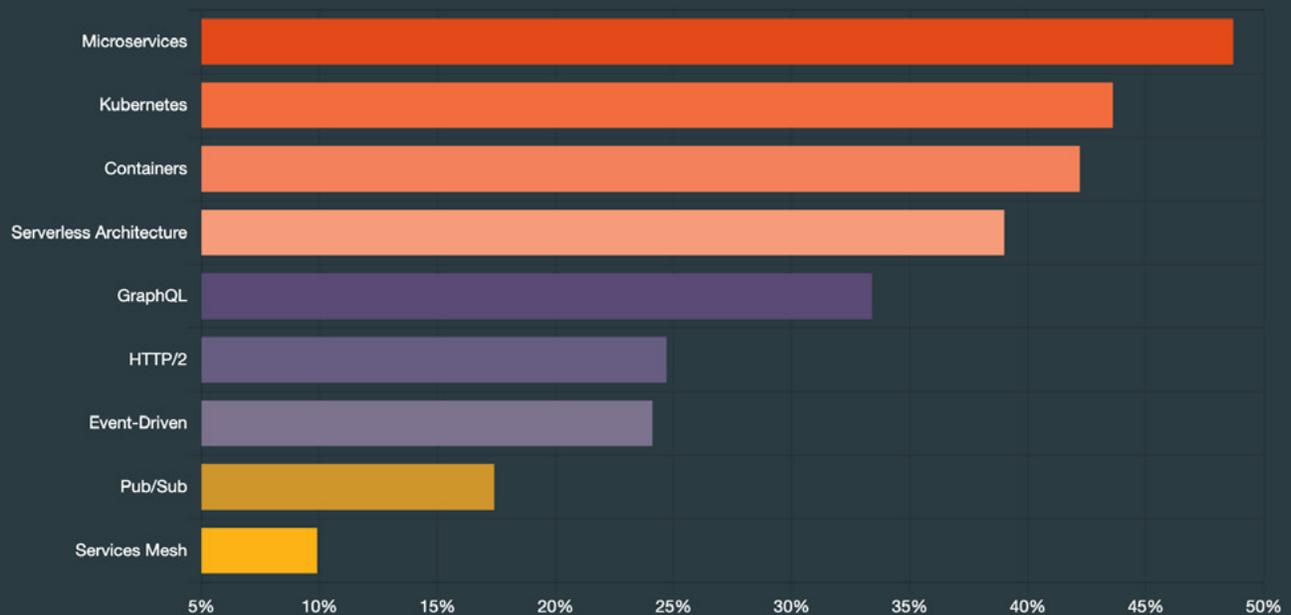
Future technologies

We posed the question, “What technologies are you most excited about using over the next year?”

Microservices and containers led in 2019 as the top two most exciting technologies by a substantial margin.

This year, Kubernetes climbed into second place, falling just short of microservices. Overall, respondents’ enthusiasm was relatively evenly spread among the top five technologies, ranging between 33.4% and 48.7%.

API-first leaders and respondents with 6+ years of API development experience were more likely to choose the top mention—microservices.

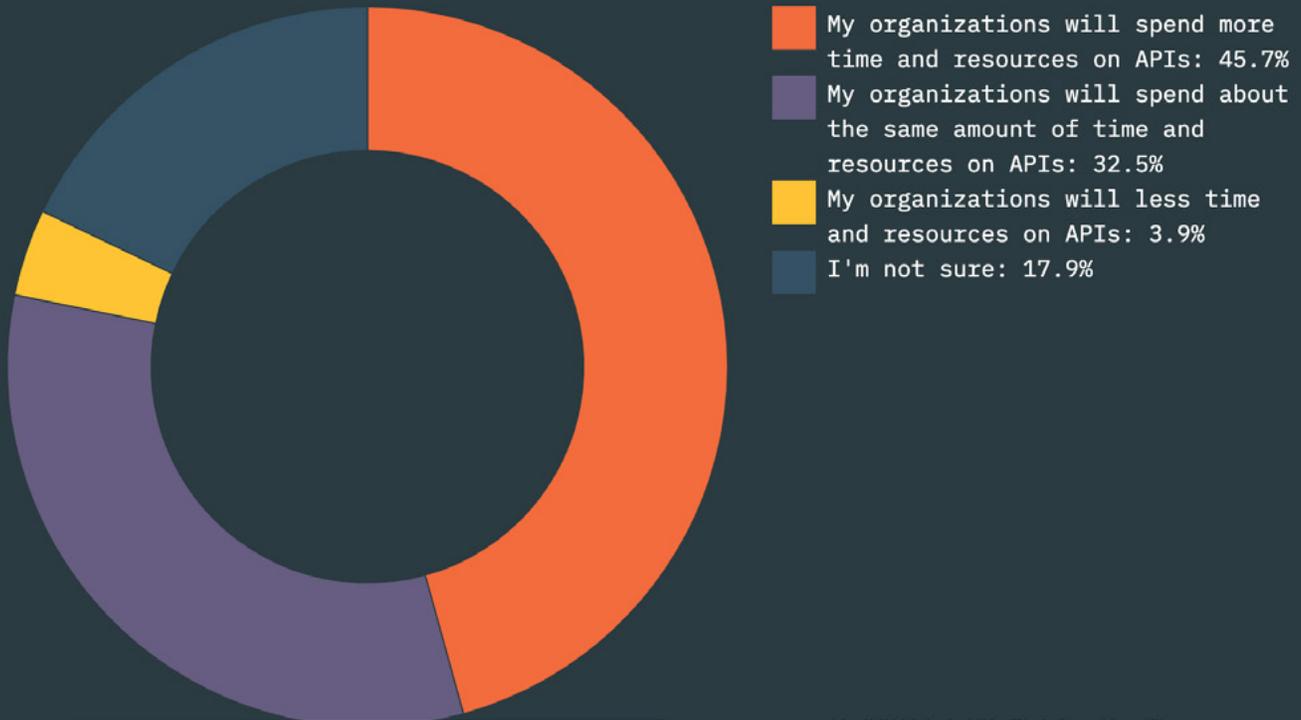


Multiple responses allowed

Investing in the future

More than three-quarters of respondents stated that investment of time and resources into APIs will increase or stay the same for the next 12 months. Meanwhile, only 17.9% reported they weren’t sure of their organization’s plans for APIs, and less than 4% said that their organization will spend less time and resources on APIs.

API-first leaders and respondents with 6+ years of API development experience were more likely to report their organization will spend more time and resources on APIs in the next 12 months.



APIs and Business Initiatives

Coronavirus, working from home, and APIs

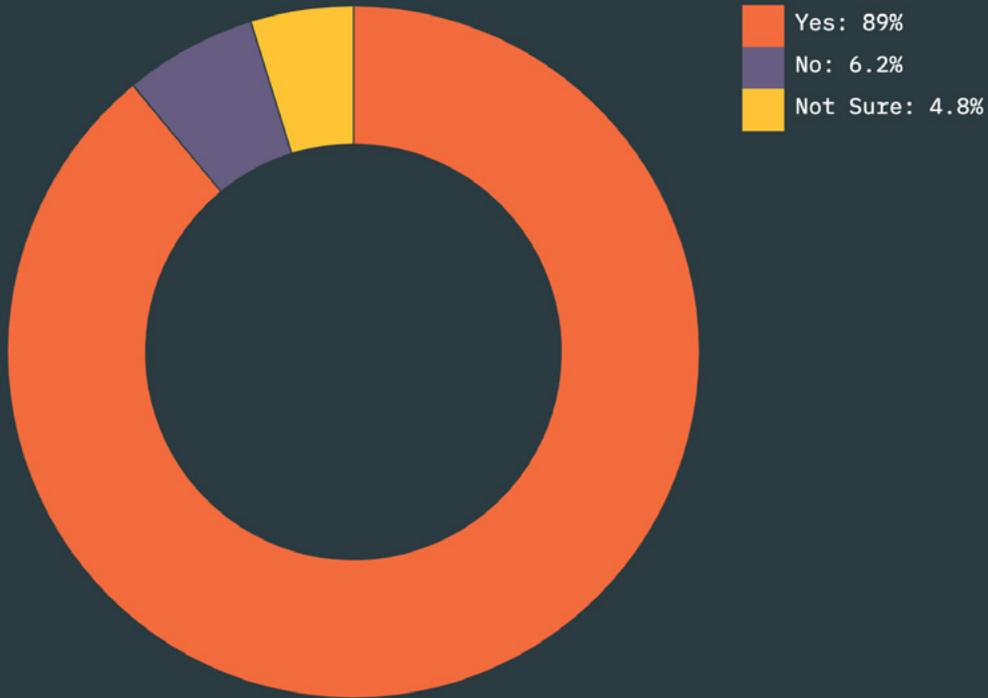
The global pandemic caused by COVID-19 has had far-reaching effects, and the API industry has certainly seen some startling examples of this. Nearly 1/3 (30.6%) said that APIs played a role in their organization's ability to respond to COVID-19.

API developers' work environments changed, too. A large majority of organizations offered the option of remote work, with only 6.2% of them not allowing it, but only one-third of that majority used APIs to facilitate working remotely.

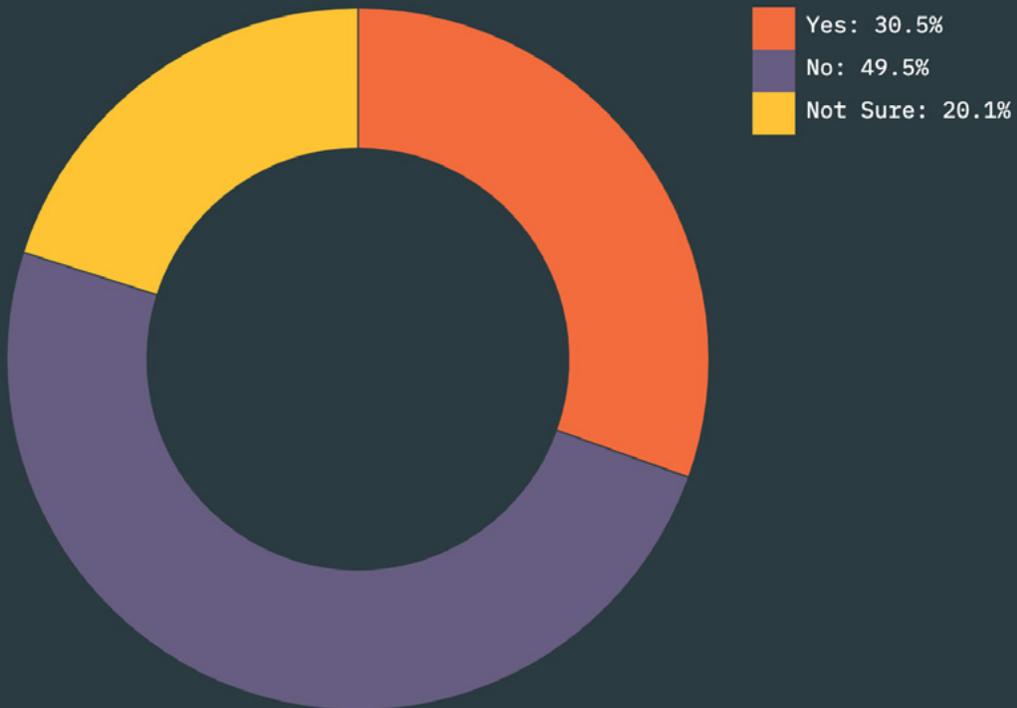
APIs have played a range of roles among the organizations that have used them to boost productivity during changes brought on by COVID-19, with many utilizing APIs specifically for customer communications, powering remote work options, and quickly responding to regulatory changes and government initiatives.

API-first leaders were more likely to work for an organization where APIs played a role in their ability to respond to COVID-19. Respondents with 6+ years of API development experience were more likely to work for an organization that offered remote work as a result of COVID-19. For organizations that did offer remote work, API-first leaders were more likely to work for an organization where APIs played a role in ability to work remotely.

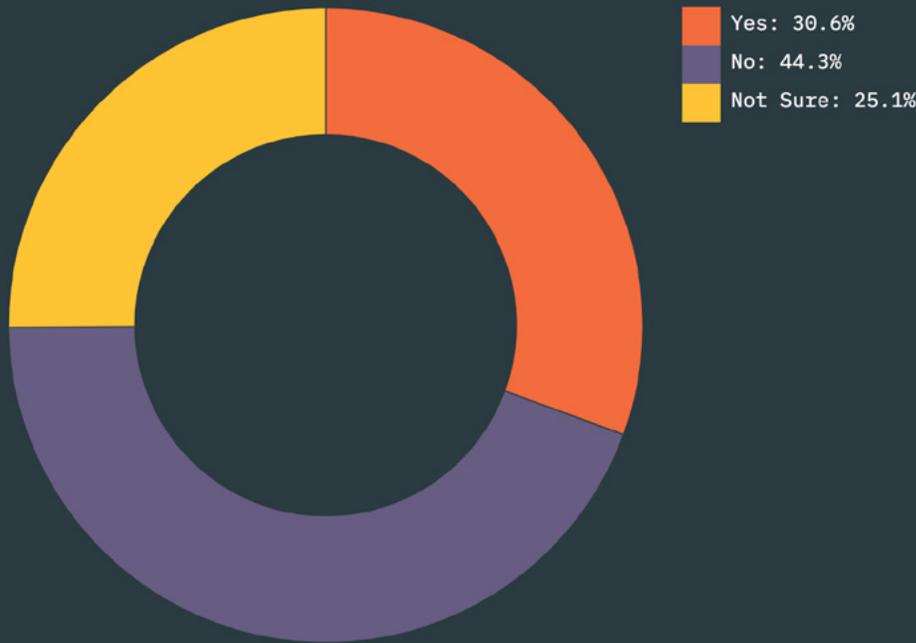
Did your organization offer remote work options as a result of COVID-19?



Did APIs play a role in your organization's ability to offer remote work during COVID-19?



Did APIs play a role in your organization's ability to respond to COVID-19?

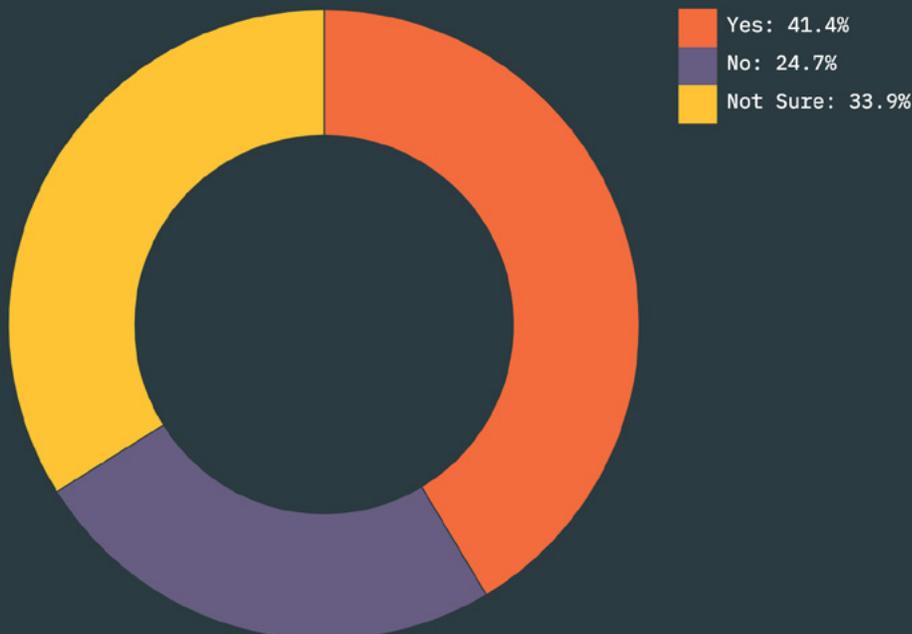


Digital transformation

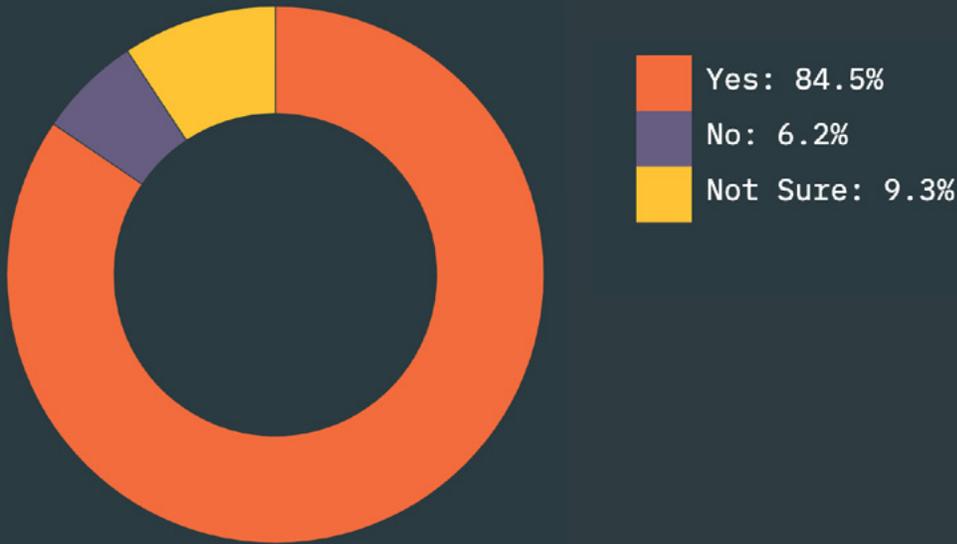
We also asked respondents about their organization's investment in digital transformation initiatives. Only a slight majority of companies reported that they are working on a digital transformation, but among them, 84.5% reported that APIs were helping them do that.

API-first leaders were more likely to work for an organization working on a digital transformation initiative. For respondents whose organizations are working on digital transformation, both API-first leaders and respondents with 6+ years of API development experience were more likely to report that APIs play a significant role.

Is your organization working on a digital transformation initiative?



Do APIs play a significant role in your organizations digital transformation initiative?

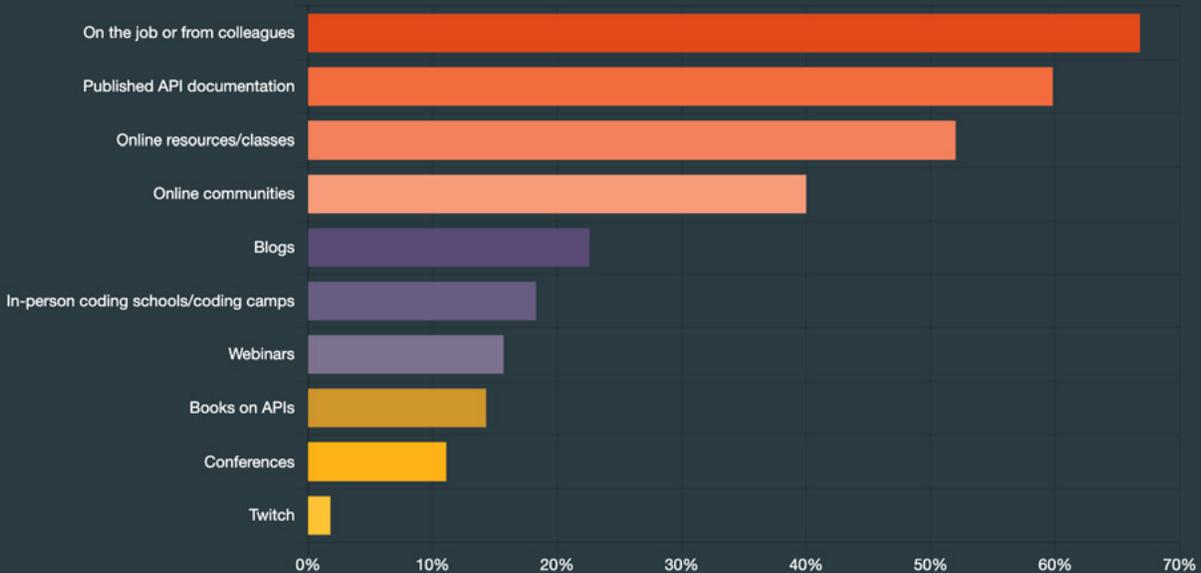


Learning about APIs

Gaining API Knowledge

We asked survey-takers where they gained most of their knowledge about APIs. Most respondents (66.8%) using APIs at their current organization learned them in their current position and/or from coworkers. Published documentation, online resources, and blogs proved a bit more useful over in-person learning like coding schools, webinars, and conferences.

API-first leaders and respondents with 6+ years of API development experience were more likely to choose the top two mentions about where they gained most of their knowledge about APIs—on the job or from colleagues, and published API documentation.



Report Methodology

This report is based on a survey of 13,586 API industry members from around the world. The survey was fielded over a course of three weeks in June and July 2020. The median amount of time spent on the survey was 13 minutes and 6 seconds. The answers to most non-numerical questions were randomized in order to prevent order bias in answering.

Respondents were recruited primarily through channels owned by Postman, including social media, email, community forum, in-product messages, and website. Since respondents were recruited in this way, highly engaged users of Postman were more likely to notice the survey and complete it.

As an incentive, respondents who finished the survey could opt to receive a copy of this report. Also, individuals from the United States were offered a chance to win one of two Nintendo Switches, five \$100 Amazon gift cards, or ten \$50 gift certificates to the Postman swag store.

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