POSTMAN

2024 State of the API Report

2024 marks the 6th year of the State of the API - the most comprehensive survey on APIs with over 5,600 developers and API professionals sharing their thoughts this year.

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Key trends in API development

The rising shift from code-first, to API-first

74%

74% of respondents are API first in 2024, up from 66% in 2023.

APIs front and center

APIs are no longer an afterthought but the foundation of development, with between 26 and 50 APIs powering the average application. The API-first paradigm prioritizes API design, streamlining integration and boosting efficiency across teams.

To deliver top-tier APIs, engineering organizations are realizing they need more than just an API gateway. Proper tooling, enablement, and processes are essential to building and scaling high-quality APIs.
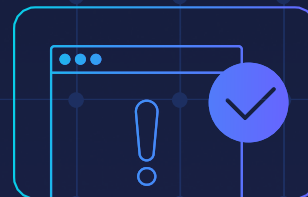
API-first yields tangible benefits

When APIs are the core of development, the advantages are clear:

63%

Faster API production

Last year, 47% of developers could produce an API within a week. This year, that number jumped to 63%.

Rapid failure recovery

API-first organizations recover from API failures faster, often within an hour.

Rising API production speed

67%

Faster, faster!

67% of teams using Postman team workspaces can produce an API in less than a week, compared to 58% of those who don't use workspaces. This improvement highlights the power of collaboration within dedicated API workspaces.

Collaboration challenges: The hidden bottleneck

Despite faster production, developers still face hurdles when collaborating on APIs.

Documentation issues, complex requests, and unclear variables can delay public and private API integration. Inconsistent onboarding processes can extend the time it takes to get started on even the simplest API use cases.

58% use internal docs

58% of developers rely on internal documentation, but 39% say inconsistent docs are the biggest roadblock.

Pro tip

Postbot now generates comprehensive API documentation with a single click, saving developers hours of manual work and keeping docs up-to-date.

44%

44% of developers dig through source code to understand APIs, **but over half** collaborate with product managers, QA, and designers who can't always interpret the code.

Pro tip

Postman Workspaces enable smooth collaboration by centralizing API-related information, saving time across the board.

43%

43% of developers rely on colleagues to explain APIs. What if that colleague is in a different time zone or on vacation? This can cause frustrating delays.

Pro tip

Postman Workspaces store critical API information where the work happens, enabling asynchronous collaboration.

Scattered conversations: The collaboration breakdown

API changes—whether additions, edits, or deprecations—are a routine part of development.

However, without proper tools to manage these transitions, teams face challenges that lead to inconsistencies, breaking changes, and potential security risks.

44%

44% of developers rely on chat tools or email for API development, but critical updates can easily get lost in the mix.

Pro tip

The Workspace Updates Feed ensures everyone stays informed. Post updates and notify everyone watching the workspace. Future integrations will pipe those workspace updates automatically into Slack and Microsoft Teams for new change alerts that are always stored in your workspace, ensuring no important changes slip through the cracks.

Gateways are multiplying: A new era of API management

1/3 use multiple gateways

The traditional single-gateway model is becoming obsolete. Now, the market demands support for all types of APIs—whether private, partner, or public—regardless of the gateway in use.

Nearly a third of API publishers use multiple gateways, reflecting the complexity of managing APIs in diverse environments. However, multiple gateways can cloud API discovery and observability, making it harder to monitor APIs effectively.

Pro tip

Integrated API management platforms offer a consolidated view of APIs, regardless of their gateway.

These tools streamline API discovery, observability, and security, reducing fragmentation.

APIs as revenue drivers: Monetization on the rise

APIs are no longer just technical enablers—they are revenue-generating products.

62% of respondents report working with APIs that generate income. This signals the rise of the **API-as-a-product** model, where APIs are designed, developed, and marketed as strategic assets.

Why it matters

APIs are opening new streams of revenue for organizations through public-facing services and partner integrations. As part of broader product strategies, they enhance internal efficiency while also driving business growth.

Pro tip

Launch, distribute, and grow your APIs with the Postman API Network, where consumers can onboard in minutes and deliver real-time feedback.

AI landscape diversifies

AI tooling is on the rise, and OpenAI will remain at the top. Developers will also be looking to diversify AI tooling, models, and deployments with AI tools from Meta, Google, and Perplexity.

Pro tip

The age of AI is powered by APIs. The rapid adoption of chatbots like ChatGPT has proven that AI bots are going to advance the state of human-computer interaction. AI alone won't boost productivity—you need quality APIs to stay ahead in modern software.

Until now, we have primarily been designing APIs for humans, but designing APIs for machines will become an increasingly important area…. and AI alone won't boost productivity—you need quality APIs to stay ahead in modern software.

Key insight

Biggest AI integration pain point: Security and compliance.

API observability & security:
Addressing the new attack frontier

APIs are now a top target for malicious actors, making security and observability critical.

As companies continue to embrace an API-first approach, maintaining high standards for internal and external APIs is crucial to preventing exploitation and maintaining performance.

27% don't use vault tools

API key vault security tools

Shockingly: **27%** do not use API Key Vault security tools, while those who do favor **AWS Key Management** (28%) and **Azure Key Vault** (24%).
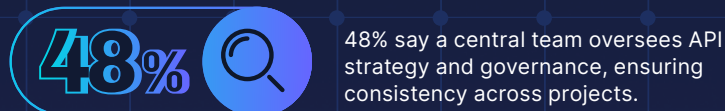
The challenge

Without proper observability and governance, APIs can become vulnerable entry points for cyberattacks.

It's essential for organizations to monitor their APIs to prevent security breaches and maintain operational integrity.

💡 **Pro tip** — **Postman Vault now integrates with external vaults** like AWS Key Management, Azure Key Vault, and HashiCorp Vault. You can link secrets directly from these external systems into your Postman environment, streamlining security processes and removing the need for manual secret management.

API ownership: Who's in charge?

API creation and management vary depending on the organization's structure.
Here's how teams approach API development:

48% — 48% of respondents say API creation is owned by the development team, driven by demand.

48% — 48% say a central team oversees API strategy and governance, ensuring consistency across projects.

40% — Furthermore, 40% of all respondents report a business-oriented directive guiding API development, with a focus on revenue generation and external partnerships.

⭐ **Key insight** — Some companies are still leveraging an Architect to drive API design through governance and control, but this alienates the person who actually designs the API - developers. The de-centralization of API design is on the rise and **Postman Collections** have become the tool of choice as they enable the generation of API workspaces - then enable design time governance.

Conclusion:
The API-first future

The shift to an API-first approach continues to revolutionize how development teams work. From faster production times and better collaboration to enhanced security and API monetization, organizations that embrace this model are setting themselves up for long-term success.

By prioritizing API design, governance, and security, teams can unlock new opportunities, deliver APIs faster, and ensure their APIs are protected and optimized for the future.

Global growth of APIs
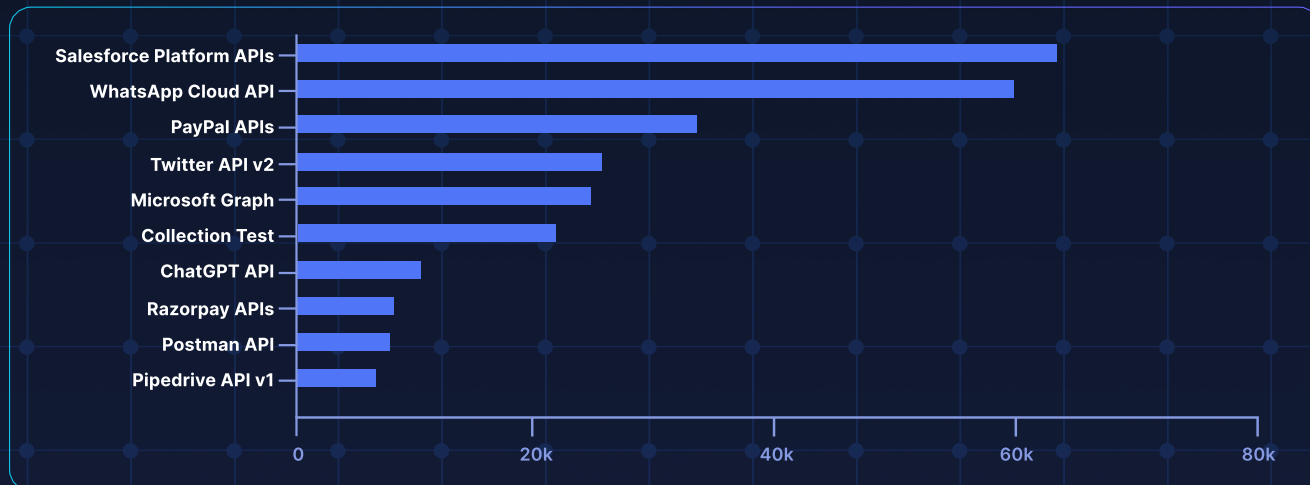
The top API collections that were forked most over the past year across the Postman Public API Network, the world's largest public API hub.

> Postman is an essential part of the developer community and API ecosystem making it critical to our API-first journey. It allows developers to accelerate integration and expedite onboarding.
>
> **Brian Beck**, Director of Engineering, Developer Ecosystem, PayPal

APIs are global

The global growth of the API ecosystem has been strong, from the number of practitioners and countries participating to the number of requests created. Here's where things stand in 2024.

Postman users grew to over 35 million, up from 25 million in 2023.

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2023   25m

2024   35m
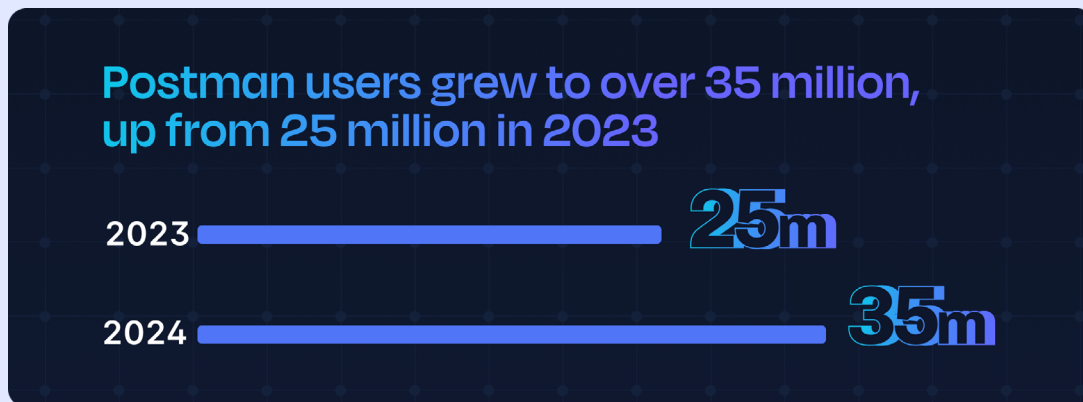
APIs are global

Postman collections are being created in 266 countries — even Antarctica saw 10 collections built in the past year!
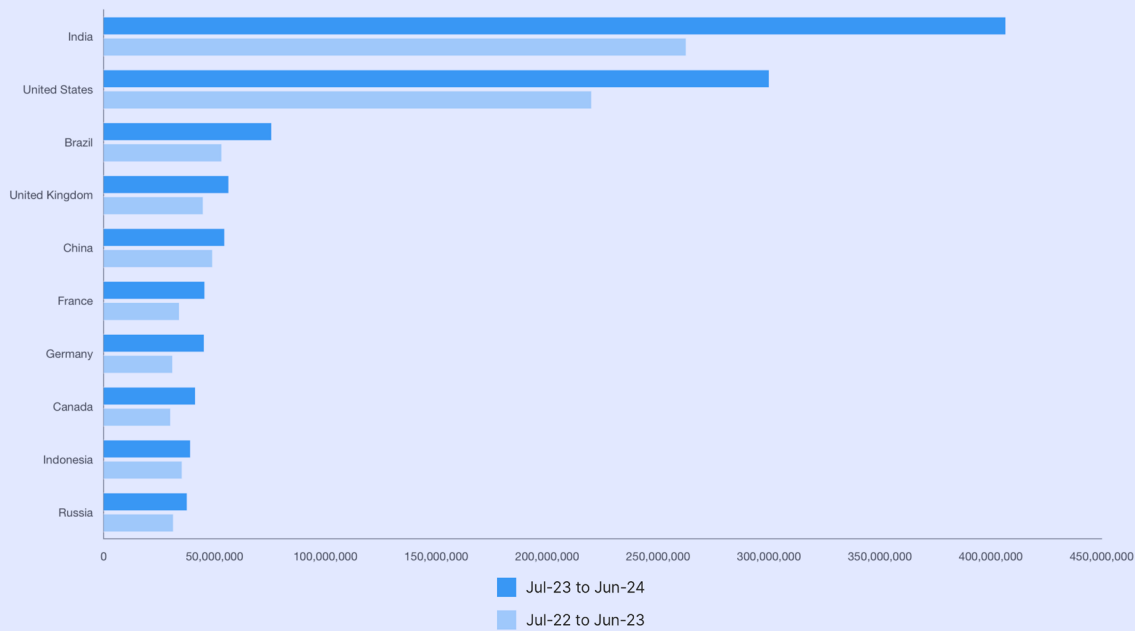

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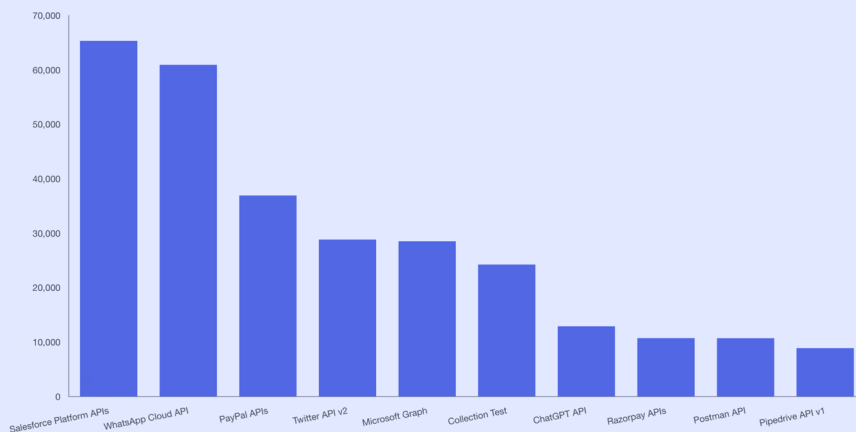
Top 10 countries by collections created

Jul-23 to Jun-24
Jul-22 to Jun-23
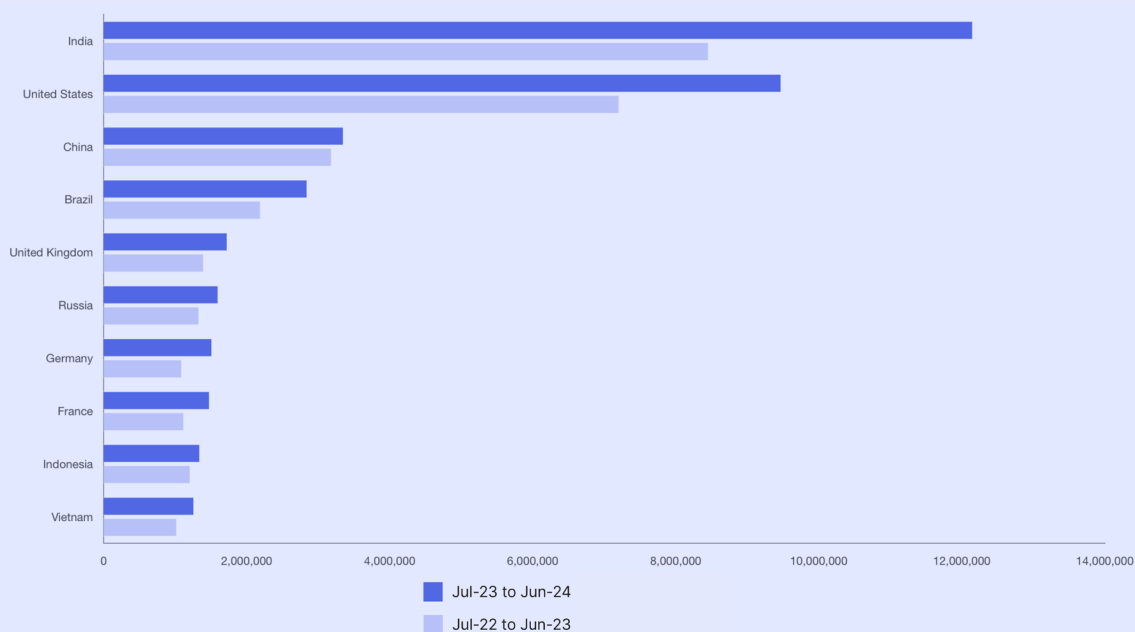
Top 10 countries by requests

Jul-23 to Jun-24
Jul-22 to Jun-23

API landscape

We looked across the Postman Public API Network, the world's largest public API hub, to see which API collections were forked most over the past year. Here's what we found.
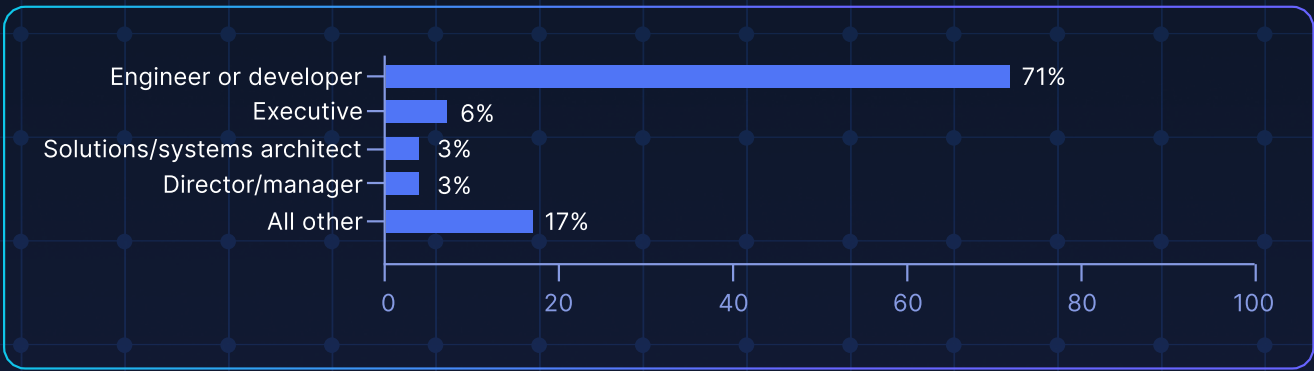
Most popular APIs

💡 Pro tip

Today, when a developer wants to get an open-source project, they go to GitHub. When a developer wants to get a public API, they go to the largest network of public APIs on the planet - the Postman API Network. We have over 100k APIs from more than 18k companies, giving publishers a chance to reach over 35 million Postman developers to grow their communities.
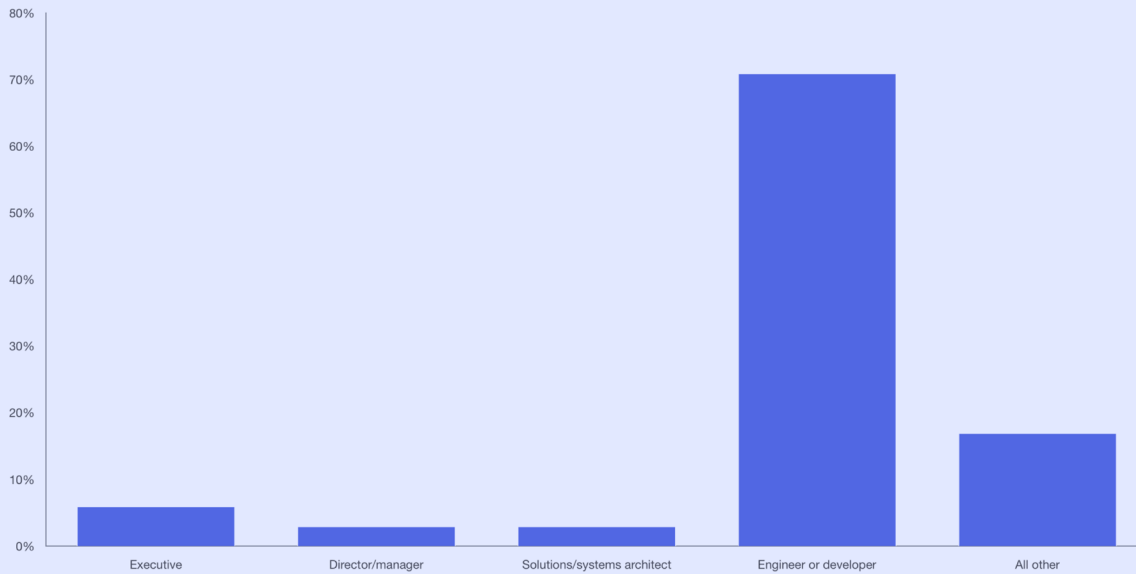
Who works with APIs

Engineer or developer — 71%
Executive — 6%
Solutions/systems architect — 3%
Director/manager — 3%
All other — 17%

0   20   40   60   80   100

While developers dominate API work, this reflects the collaborative nature of modern API development across different organizational levels.

Roles

The majority of respondents (71%) are engineers or developers, while executives, architects, and more round out the rest.

80%
70%
60%
50%
40%
30%
20%
10%
0%

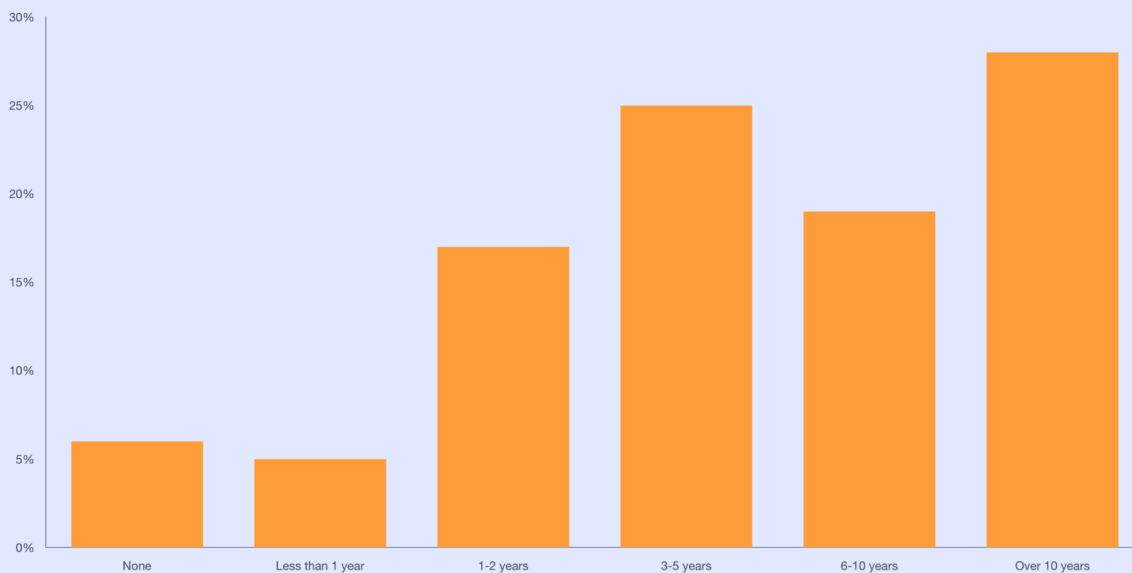Executive   Director/manager   Solutions/systems architect   Engineer or developer   All other

Industry

We asked about individuals' industries, and the results were clear: Technology remains the most represented sector, followed by business/IT services, financial services, and education.
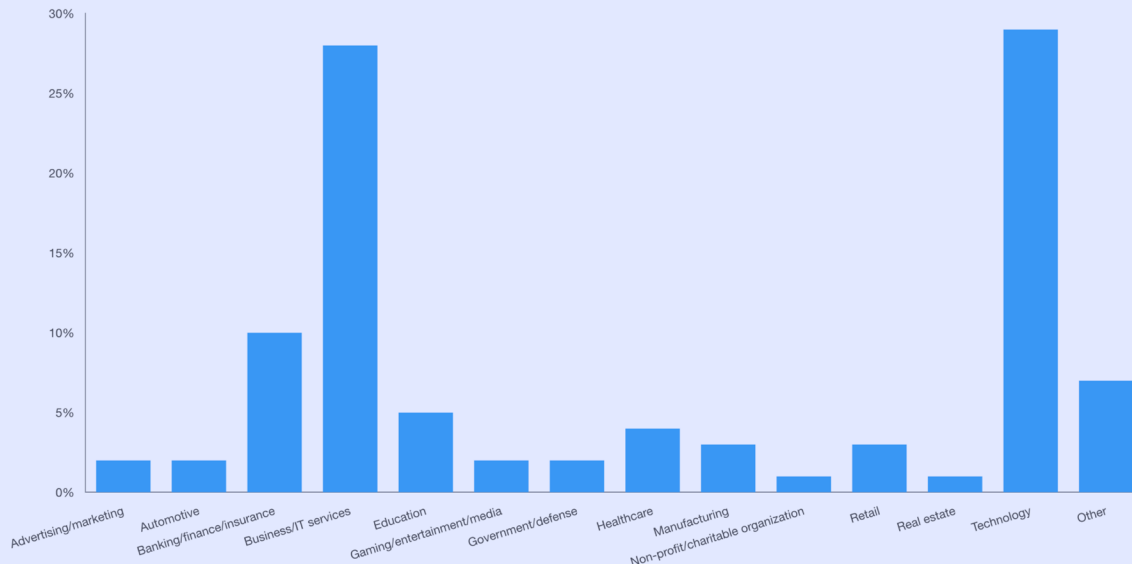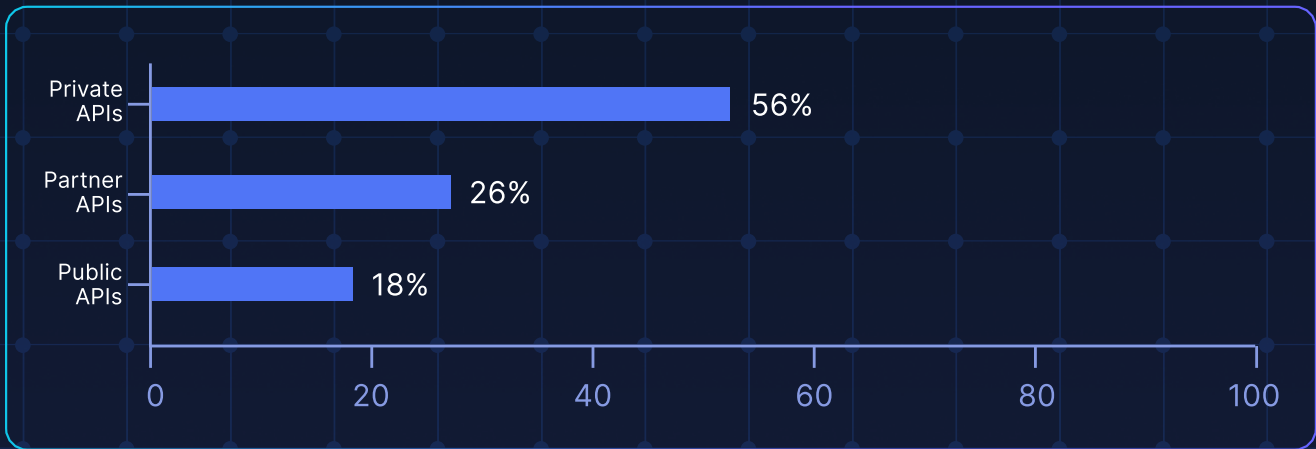

Years of experience

API use & discovery

API development doesn't happen within your company's walls, it is just as important to prioritize partner and public APIs.

> Partner Workspaces are invaluable to Canopy. It's been an exciting time for us, as we are continually delighted by Postman, especially since moving to the Enterprise plan.

Anurag Angara, Head of Product, Canopy Servicing

Public, private, and partner APIs

The rise of AI and SaaS = an incredible amount of API sprawl, and not just within your own company. There is an increasing need to have 1 hub to store all API assets.

Private: 56%

Partner: 26%

Public: 18%
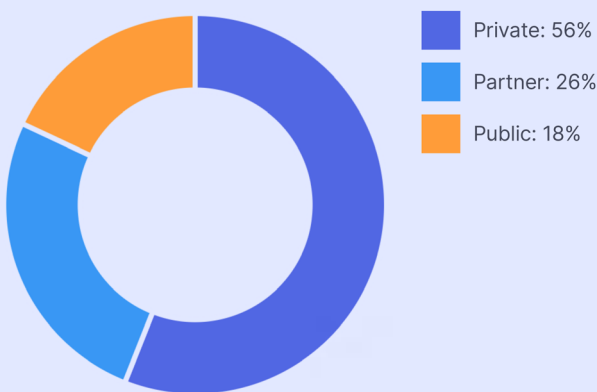
Pro tip

Consolidate tooling across the API lifecycle with one **API platform** to expedite building high-quality APIs, together.
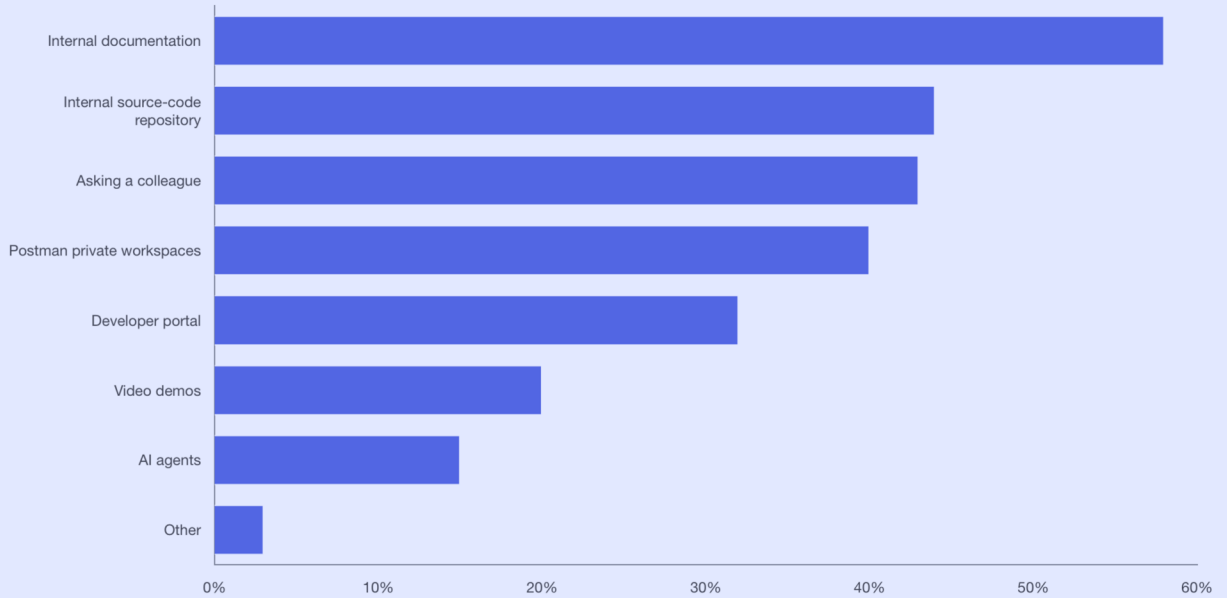
How people learn to use internal APIs

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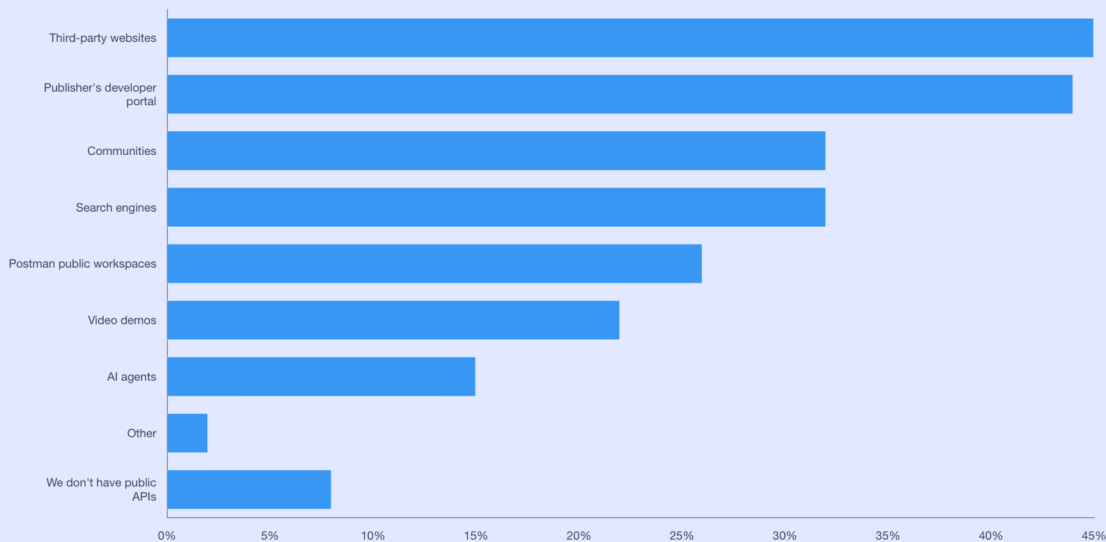
58% of developers rely on internal documentation to learn APIs, but

39% say inconsistent docs are the biggest roadblock.

Pro tip

Postbot now generates comprehensive API documentation with a single click, saving developers hours of manual work and keeping docs up-to-date.

(Bar chart: "How people learn to use internal APIs")
- Internal documentation — ~58%
- Internal source-code repository — ~43%
- Asking a colleague — ~43%
- Postman private workspaces — ~40%
- Developer portal — ~32%
- Video demos — ~20%
- AI agents — ~15%
- Other — ~3%

How people learn to use public APIs

(Bar chart: "How people learn to use public APIs")
- Third-party websites — ~44%
- Publisher's developer portal — ~43%
- Communities — ~32%
- Search engines — ~32%
- Postman public workspaces — ~26%
- Video demos — ~22%
- AI agents — ~15%
- Other — ~2%
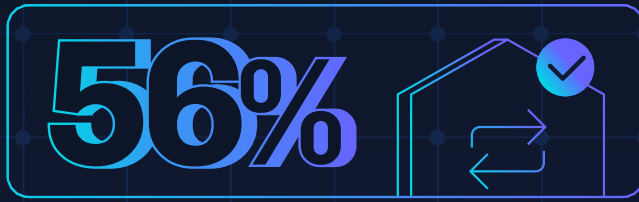- We don't have public APIs — ~8%

⭐ Key insight

When it comes to choosing a public API, good API documentation outranked performance or security.

API production

56%

While 56% of API changes succeed with minimal issues, a concerning 5% experience failure rates above 25%, highlighting a persistent struggle to maintain stability in production.
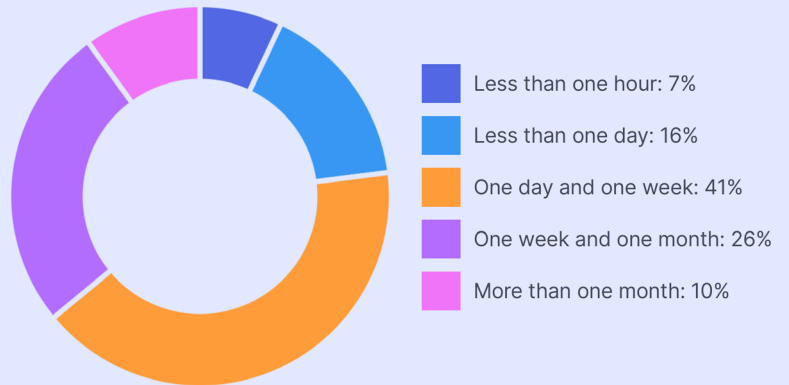
44%

44% of developers rely on chat tools or email for API development, but critical updates can easily get lost in the mix.

How long it takes to produce an API

Over 63% of teams ship APIs in less than a week, while 10% are stuck in a development cycle lasting over 1 month.
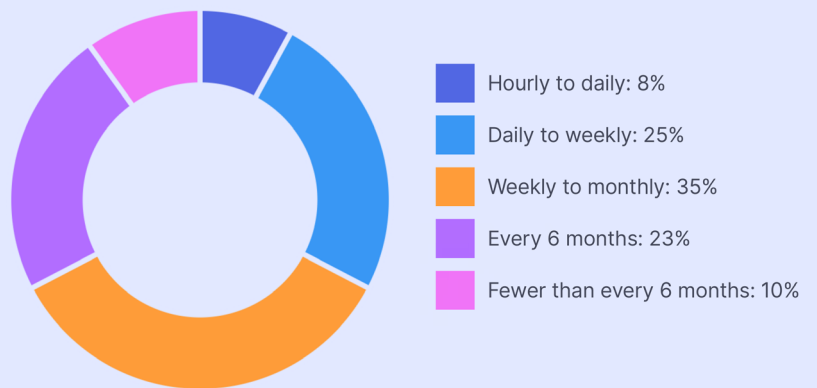
⭐ Key insight

When APIs are the core of development, the faster API production advantages are clear. Last year, 47% of developers could produce an API within a week. This year, that number jumped to 63%.

- Less than one hour: 7%
- Less than one day: 16%
- One day and one week: 41%
- One week and one month: 26%
- More than one month: 10%

How frequently APIs are deployed

API deployment is speeding up—daily deployments jumped to 8% in 2024, while long release cycles of 6+ months are steadily shrinking. Rapid iteration is becoming the norm.

- Hourly to daily: 8%
- Daily to weekly: 25%
- Weekly to monthly: 35%
- Every 6 months: 23%
- Fewer than every 6 months: 10%

Most common API testing practices

With 1% admitting they don't test APIs, the real shocker is how security testing lags behind—only 37% prioritize it, leaving APIs vulnerable while integration and functionality lead the way.
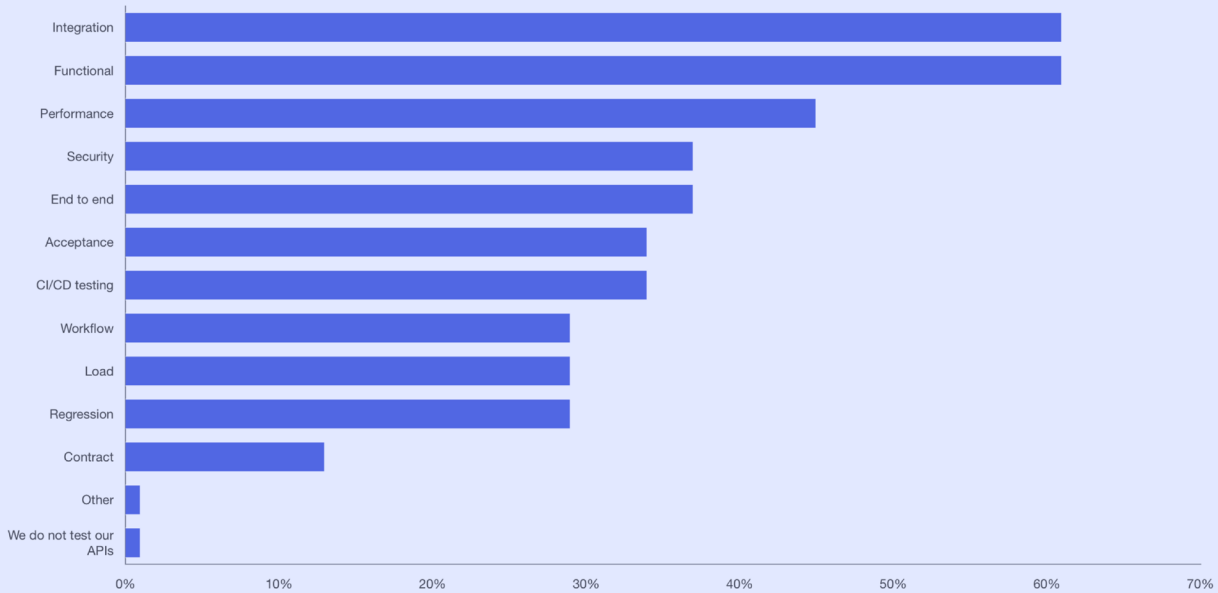
Pro tip

Only 45% employ performance testing, down from 50%+ in each of the past 4 years.
Get testing with easy to use API testing templates.

Percentage of API changes that fail

API changes—whether additions, edits, or deprecations—are a routine part of development. However, without proper tools to manage these transitions, teams face challenges that lead to inconsistencies, breaking changes, and potential security risks.

Key insights

✦ While 56% of API changes succeed with minimal issues, a concerning 5% experience failure rates above 25%, highlighting a persistent struggle to maintain stability in production.

✦ API-first leaders were 83% likelier to say they could restore a failed API in under an hour
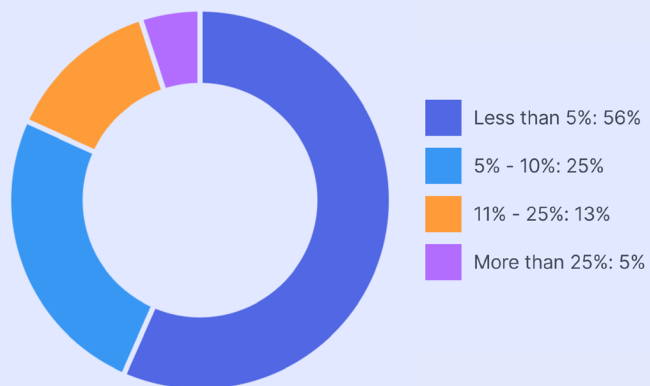

- Less than 5%: 56%
- 5% - 10%: 25%
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- More than 25%: 5%

Pro tip

The Workspace Updates Feed ensures everyone stays informed. Post updates and notify everyone watching the workspace, and integrations will pipe those workspace updates automatically into Slack and Microsoft Teams for new change alerts that are always stored in your workspace, ensuring no important changes slip through the cracks.

API priorities & outlook
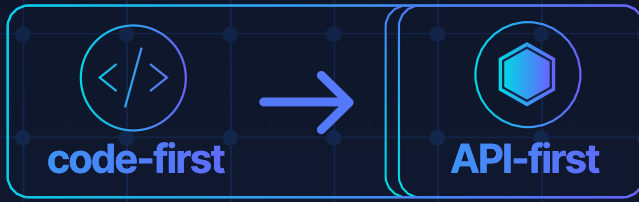
code-first → **API-first**

Software development is experiencing a major shift, with more organizations moving from a code-first approach to an API-first approach.

API-first

2024	74%
2023	66%
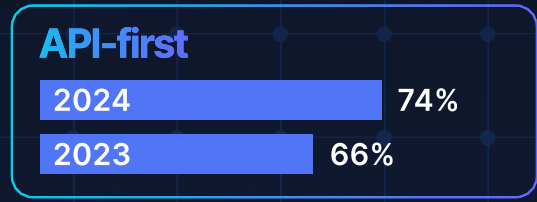
74% of respondents are API-first in 2024, up from 66% in 2023.

> Postman is a playground—with governance—that allows developers to discover, test and execute PayPal APIs quickly. The easy-to-use UI provides backend visibility and makes cross-collaboration easy.
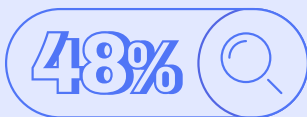
Christina Monti, Senior Technical Product Manager, Developer Relations, PayPal

API ownership: Who's in charge?

API creation and management vary depending on the organization's structure. Here's how teams approach API development:

48% — 48% of respondents say API creation is owned by the development team, driven by demand.

48% — 48% say a central team oversees API strategy and governance, ensuring consistency across projects.

40% directed by business

Furthermore, 40% of all respondents report a business-oriented directive guiding API development, with a focus on revenue generation and external partnerships.

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Some companies are still leveraging an Architect to drive API design through governance and control, but this alienates the person who actually designs the API - developers.
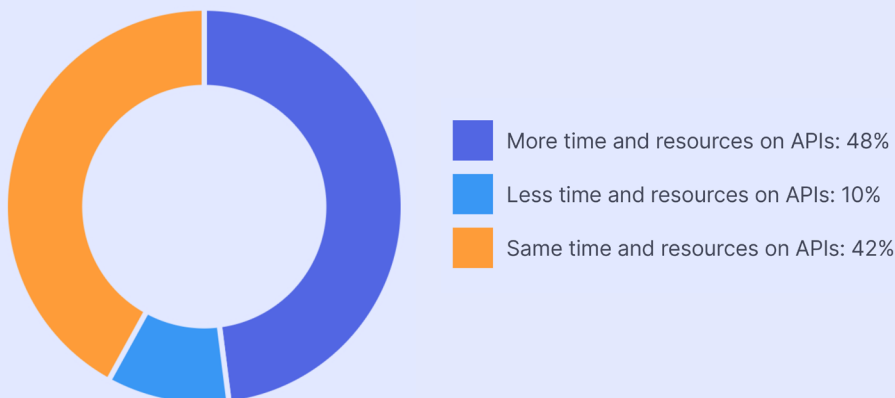
The de-centralization of API design is on the rise and Postman Collections have become the tool of choice as they enable the generation of Open API from collections - then enable design time governance.

API investment surge

With 48% planning to ramp up API investments, the message is clear: APIs are the future. Meanwhile, the 10% cutting back risk falling behind in the innovation race.

- More time and resources on APIs: 48%
- Less time and resources on APIs: 10%
- Same time and resources on APIs: 42%

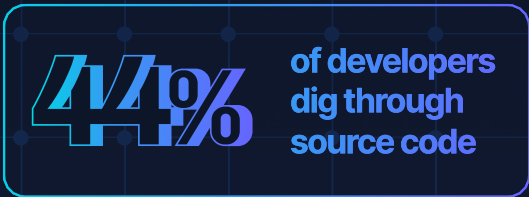# The rising shift from code-first, to API-first

Software development is experiencing a major shift, with more organizations moving from a code-first approach to an API-first approach.

⭐ **Key insight**

74% of respondents are API-first in 2024, up from 66% in 2023.

API collaboration

44% of developers dig through source code

44% of developers dig through source code to understand APIs, but over half collaborate with product managers, QA, and designers who can't always interpret the code.

> For me, one of the most exciting things about Postman is that it is extremely accessible and welcoming for product managers. It's a well-thought-out platform. With Postman, we are able to more easily make APIs available to the world.

Marco Wirasinghe,
Head of Product and Developer Experience,
WhatsApp Business Platform

Collaboration challenges: The hidden bottleneck

Despite faster production, developers still face hurdles when collaborating on APIs. Documentation issues, complex requests, and unclear variables can delay public and private API integration. Inconsistent onboarding processes can extend the time it takes to get started on even the simplest API use cases.
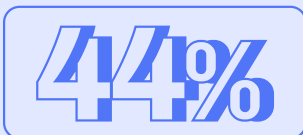
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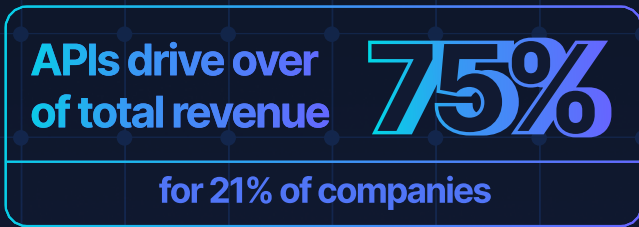
Pro tip

Postman Workspaces store critical API information where the work happens, enabling asynchronous collaboration.

API monetization

APIs drive over
of total revenue
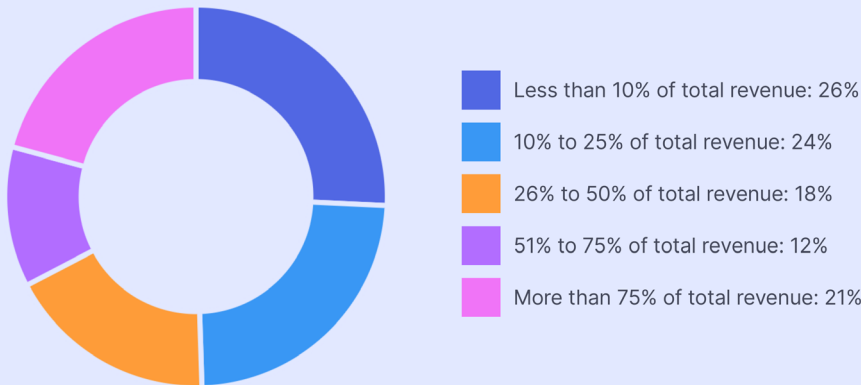## 75%
for 21% of companies

APIs are cash machines

For 21% of companies, APIs drive over 75% of their total revenue, making them a core business lifeline, highlighting for the need for a distribution portal for public APIs.

APIs as revenue drivers: Monetization on the rise

APIs are no longer just technical enablers—they are **revenue-generating products**. 62% of respondents report working with APIs that generate income. This signals the rise of the **API-as-a-product model**, where APIs are designed, developed, and marketed as strategic assets.

- Less than 10% of total revenue: 26%
- 10% to 25% of total revenue: 24%
- 26% to 50% of total revenue: 18%
- 51% to 75% of total revenue: 12%
- More than 75% of total revenue: 21%

★ Key insight

APIs are cash machines: For 21% of companies, APIs drive over 75% of their total revenue, making them a core business lifeline. Launch, distribute, and grow your APIs with the Postman API Network, where consumers can deliver real-time feedback for improvement.

Artificial intelligence

Designing APIs for machines is becoming increasingly important

Until now, we have primarily been designing APIs for humans, but designing APIs for machines will become an increasingly important area for API development.

73% AI traffic increase in 2024

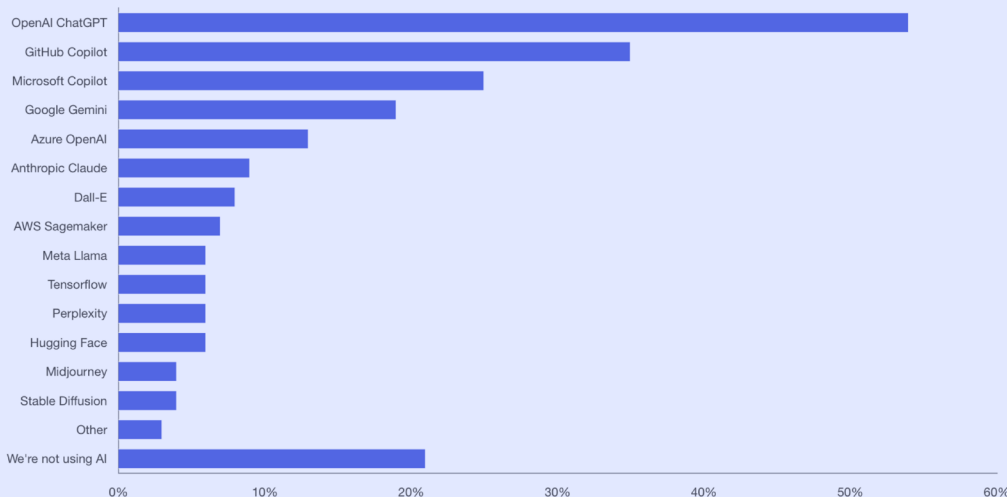AI-related traffic across the Postman platform has increased by nearly 73% in 2024.

AI takes off: Postman sees 73% surge in AI-driven API traffic

Increase in AI-related traffic on Postman from June 30, 2023 to June 30, 2024.

79% overall traffic — OpenAI

41x annual growth — Gemini

88x annual growth — MISTRAL AI_

79x annual growth — perplexity

cohere   ANTHROP\C   RunPod

stability.ai   replicate   Hugging Face

Top AI tools today

ChatGPT reigns, with Gemini and Anthropic on the rise, AI tool preferences are rapidly diversifying—yet 18% still plan to skip AI entirely next year.

| Tool	
OpenAI ChatGPT	
GitHub Copilot	
Microsoft Copilot	
Google Gemini	
Azure OpenAI	
Anthropic Claude	
Dall-E	
AWS Sagemaker	
Meta Llama	
Tensorflow	
Perplexity	
Hugging Face	
Midjourney	
Stable Diffusion	
Other	
We're not using AI	

0%   10%   20%   30%   40%   50%   60%

How does AI tooling landscape change next year?

The most interesting takeaway from this data is that devs may start looking to diversify AI tooling, models, and deployments. **OpenAI** still holds the top position with **54%** using ChatGPT in 2024 and **43%** of respondents planning to use it next year.

This delta suggests a potential shift in AI tool adoption, whereas other tools like **GitHub Copilot** and **Google Gemini** maintain consistent interest from 2024 to 2025. Additionally, despite the current AI hype, **21%** of respondents are not using AI today, and **18%** have no plans to use AI in the next year, indicating a notable segment of the market remains hesitant or unconvinced about AI adoption.
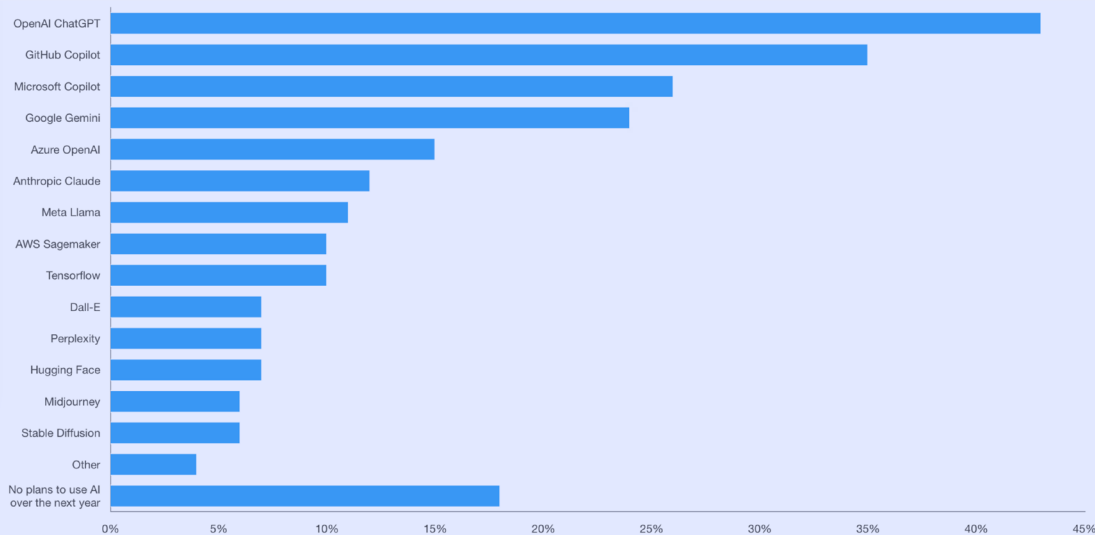

💡 Pro tip

The age of AI is powered by APIs. The rapid adoption of chatbots like ChatGPT has proven that AI bots are going to advance the state of human-computer interaction. Until now, we have primarily been designing APIs for humans, but designing APIs for machines will become an increasingly important area... and AI alone won't boost productivity—you need quality APIs to stay ahead in modern software.

Biggest pain points when integrating AI tools

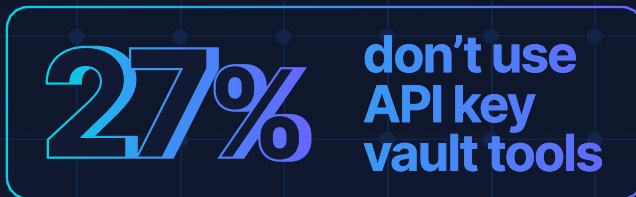Security and compliance top the list of AI integration headaches.
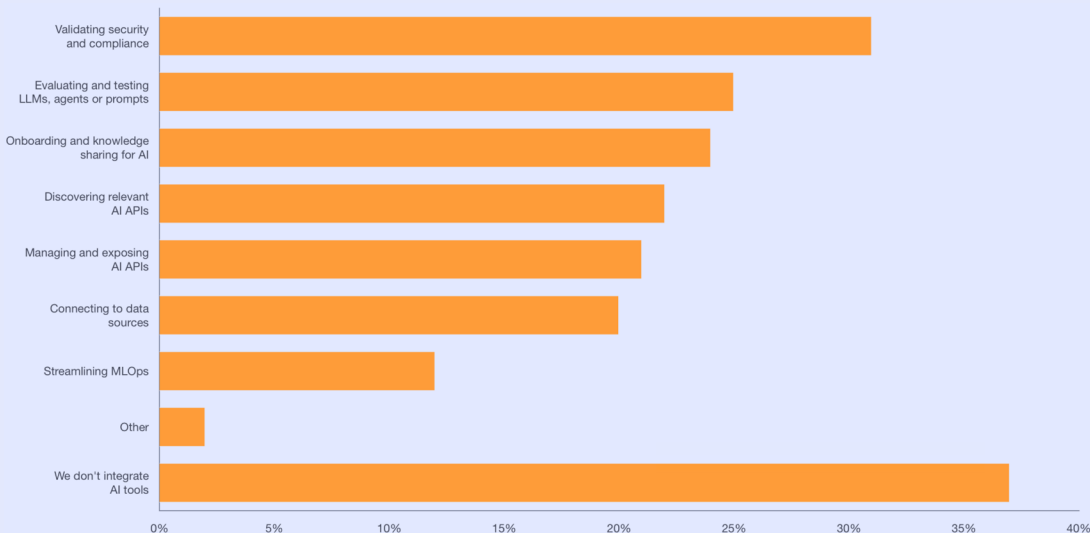
API technologies

41% GitHub Actions

GitHub Actions reigns supreme in the competitive CI/CD landscape.

27% don't use API key vault tools

Shockingly: 27% do not use API Key Vault security tools, while those who do favor AWS Key Management (28%) and Azure Key Vault (24%).

Top API security vault tools: Addressing the New Attack Frontier

APIs are now a top target for malicious actors, making security and observability critical. As companies continue to embrace an API-first approach, maintaining high standards for internal and external APIs is crucial to preventing exploitation and maintaining performance.
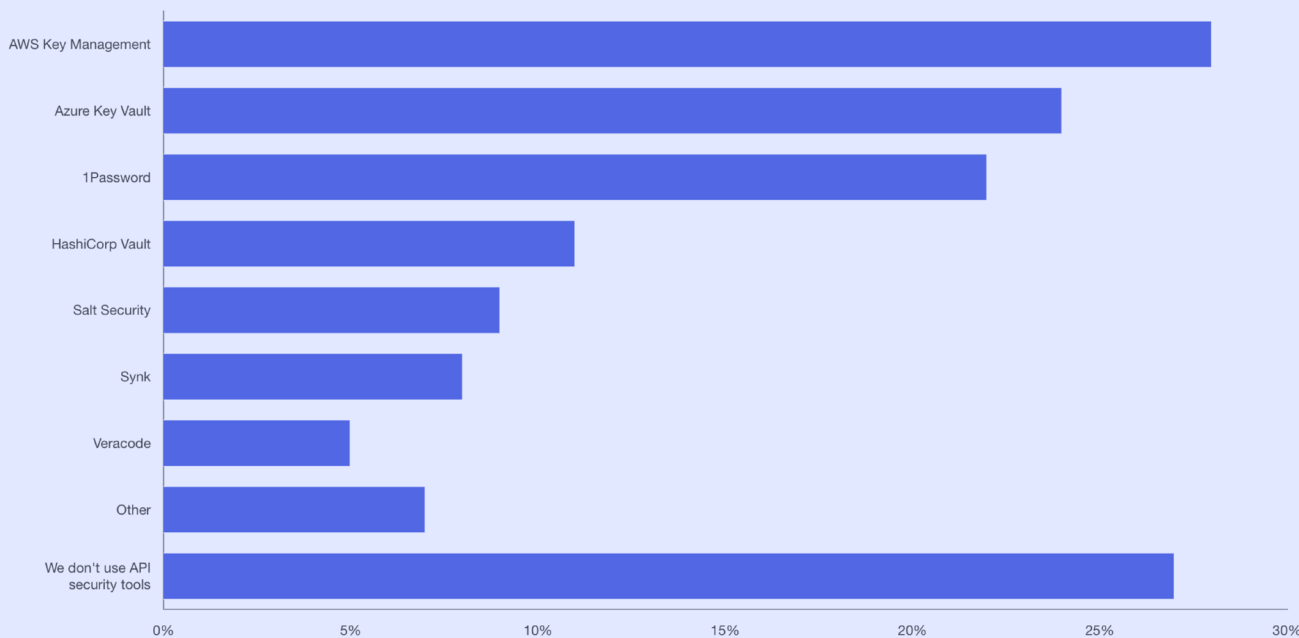
Pro tip

Postman Vault now integrates with external vaults like AWS Key Management, Azure Key Vault, and HashiCorp Vault. You can link secrets directly from these external systems into your Postman environment, streamlining security processes and removing the need for manual secret management.

The challenge

Without proper observability and governance, APIs can become vulnerable entry points for cyberattacks. It's essential for organizations to monitor their APIs to prevent security breaches and maintain operational integrity.
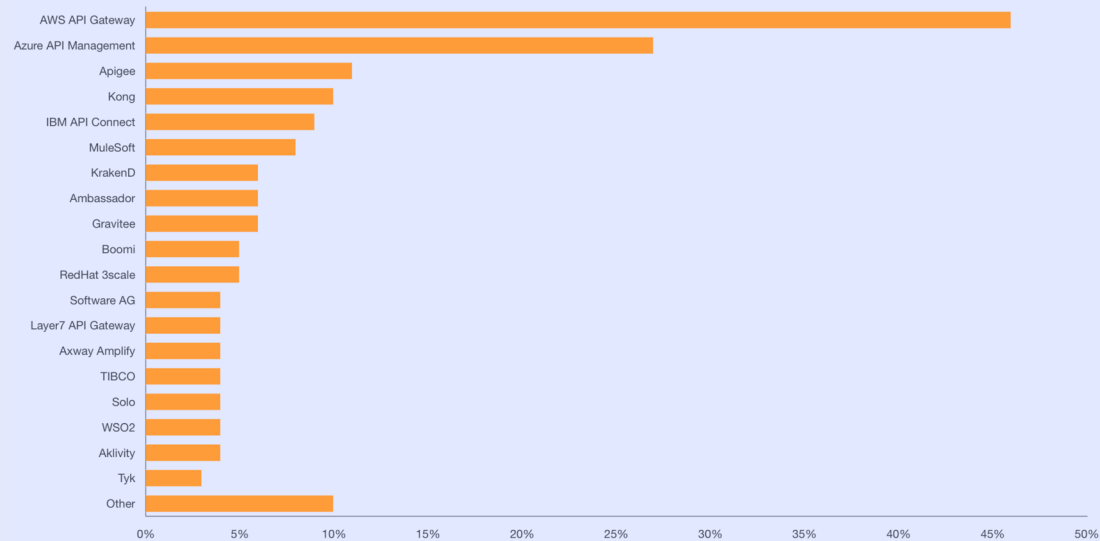
Top APM or IPM tools

Grafana leads the APM/IPM pack at 32%, but the crowded field shows a fragmented market—if you're not using Datadog or Elastic, you might be falling behind.
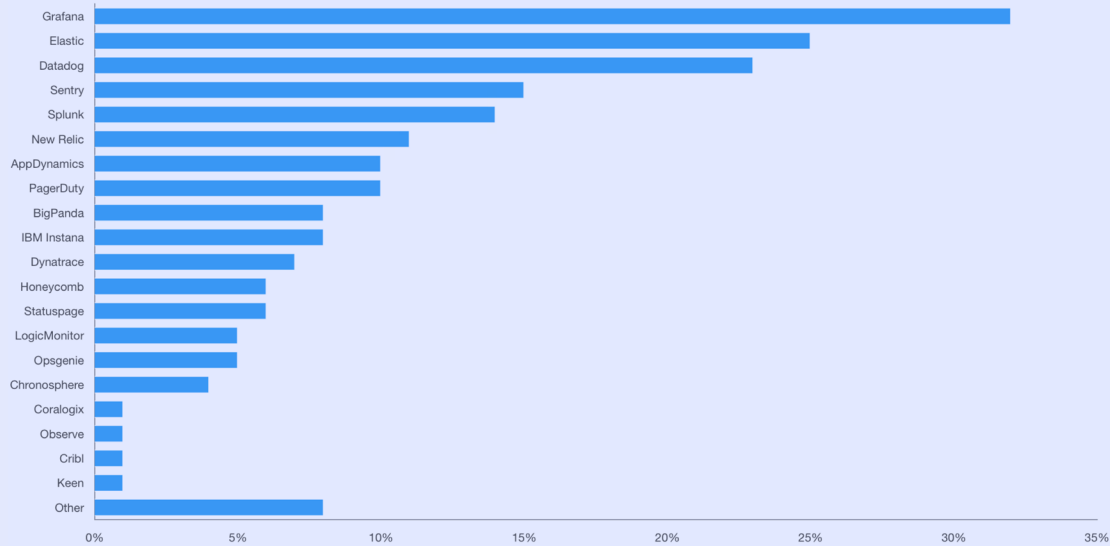
Gateways are multiplying:
A new era of API management

The traditional single-gateway model is becoming obsolete. Now, the market demands support for all types of APIs—whether private, partner, or public—regardless of the gateway in use. **Nearly a third of API publishers use multiple gateways**, reflecting the complexity of managing APIs in diverse environments. However, multiple gateways can cloud API discovery and observability, making it harder to monitor APIs effectively.


💡 Pro tip

Integrated API management platforms offer a consolidated view of APIs, regardless of their gateway. These tools streamline API discovery, observability, and security, reducing fragmentation.

Github Actions reigns supreme in the competitive CI/CD landscape

GitHub Actions dominates at 41%, leaving Jenkins and Docker trailing behind, but with so many tools in play, the CI/CD landscape is a fierce battleground for developer loyalty.
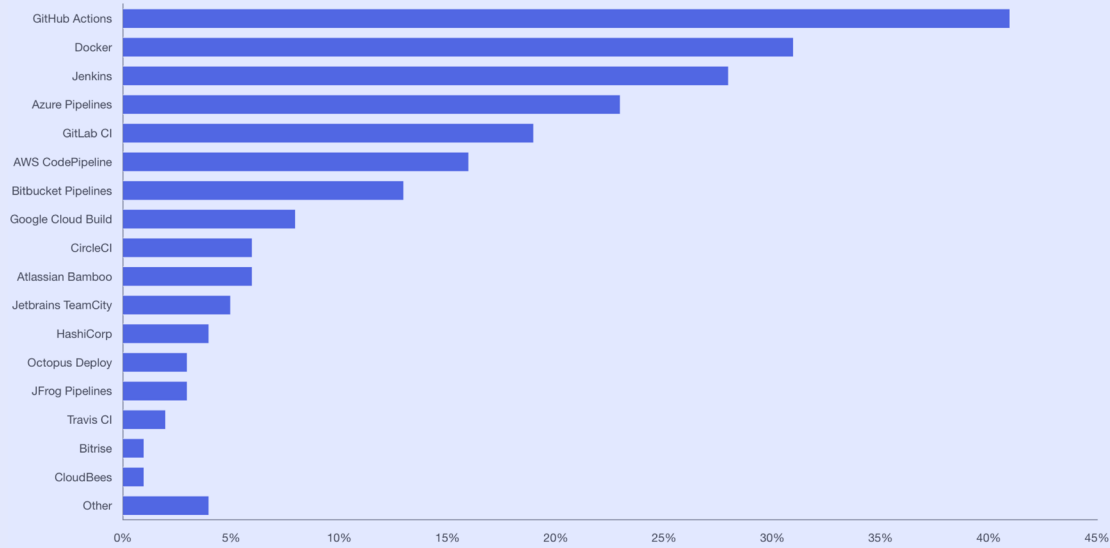
Top API collaboration tools

Developers are scattered across collaboration tools like Slack, Jira, and Microsoft Teams, making it easy for critical API updates to get lost in the noise. With 46% relying on Jira/Confluence, and 44% on email, keeping everyone in sync is a challenge. Pipe Postman updates directly into the tools your teams already use — ensuring no one misses a beat.
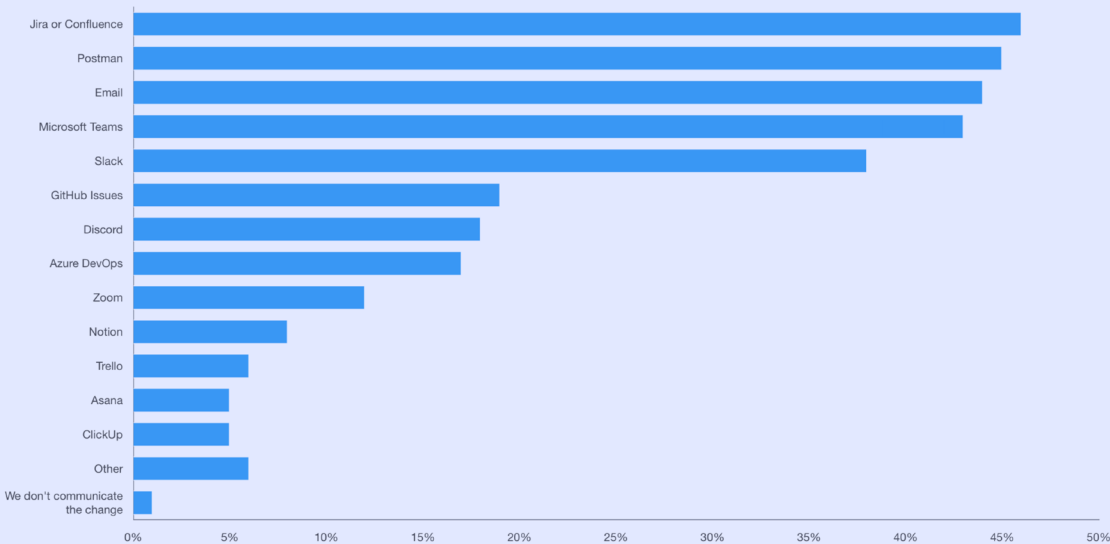
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