OpenLogic by Perforce **+** open source initiative®

2023

State of Open Source Infographic

Highlights From the 2023 State of Open Source Report

A selection of key findings from the 2023 State of Open Source Report, a collaboration between OpenLogic and the Open Source Initiative (OSI).

Download the complete report today to see the full results – including the most popular open source projects by technology niche, industry, and organization size.
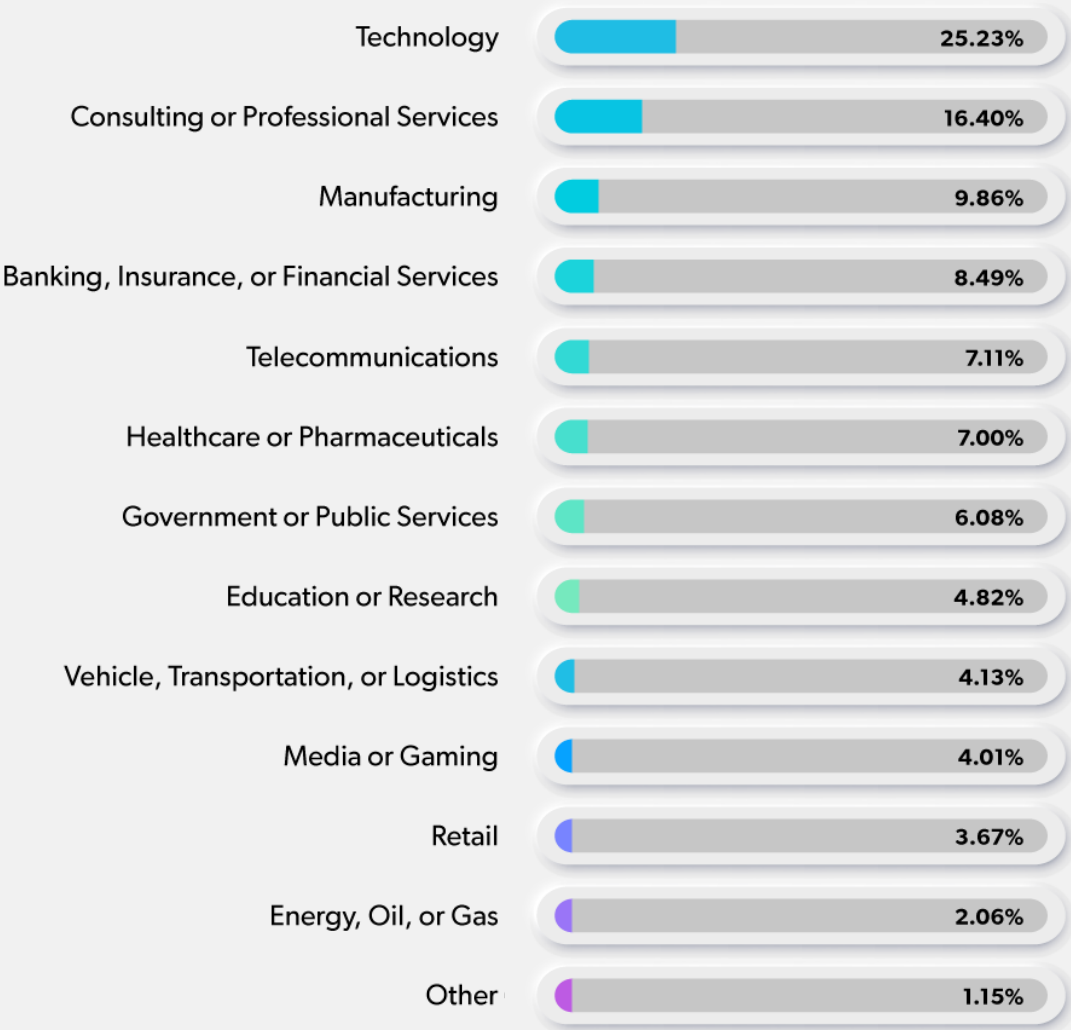
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About the Survey

The 2023 State of Open Source Report is based on an anonymous survey conducted between September 27 and November 15, 2022. It targeted professionals around the world working with open source software in their organizations. The survey received a total of 872 qualified responses.

To help segment and analyze the survey results, we first asked respondents some basic demographic and firmographic questions about their industry, organization size, region, and job title.
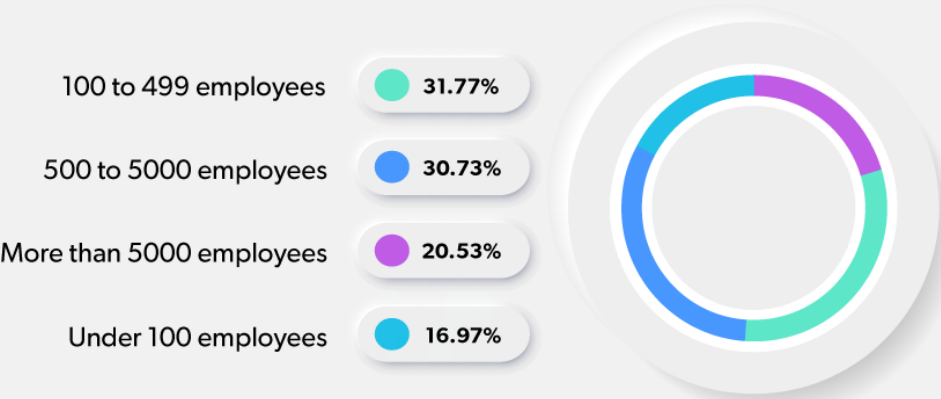
INDUSTRY

Unsurprisingly, the largest block of this year's survey respondents — about a quarter — work for technology companies. Consulting or professional services was the next most common sector, followed by manufacturing (including hardware and microprocessors), banking, and telecommunications.

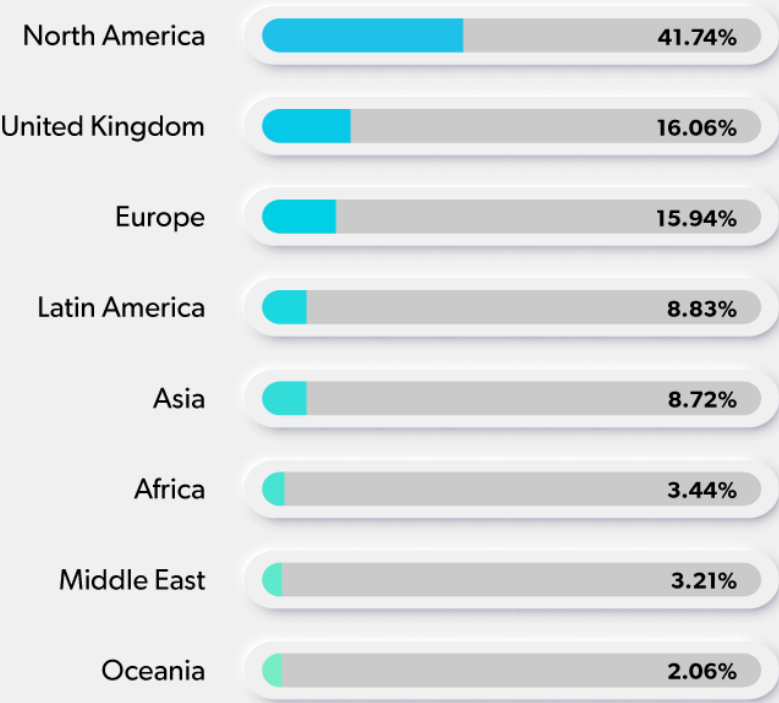| Industry	Percentage
Technology	25.23%
Consulting or Professional Services	16.40%
Manufacturing	9.86%
Banking, Insurance, or Financial Services	8.49%
Telecommunications	7.11%
Healthcare or Pharmaceuticals	7.00%
Government or Public Services	6.08%
Education or Research	4.82%
Vehicle, Transportation, or Logistics	4.13%
Media or Gaming	4.01%
Retail	3.67%
Energy, Oil, or Gas	2.06%
Other	1.15%

ORGANIZATION SIZE

Organizations of all sizes are working with open source, and the following graph shows the distribution of respondents by organization size.

Organization Size	Percentage
100 to 499 employees	31.77%
500 to 5000 employees	30.73%
More than 5000 employees	20.53%
Under 100 employees	16.97%

REGION

Open source software usage is truly global, and this year, we received responses from every major region in the world.

| Region	Percentage
North America	41.74%
United Kingdom	16.06%
Europe	15.94%
Latin America	8.83%
Asia	8.72%
Africa	3.44%
Middle East	3.21%
Oceania	2.06%

This year's survey respondents held a variety of job titles including:

- Firmware or Embedded Systems Developer
- Tech Lead
- Full Stack Developer
- Product Manager
- Backend Developer
- Engineering Manager
- Support Engineer
- Devops Engineer
- Evangelist
- Architect
- CIO and CTO

Survey Results

? **Has Your Organization Increased the Use of Open Source Software Over the Last Year?**

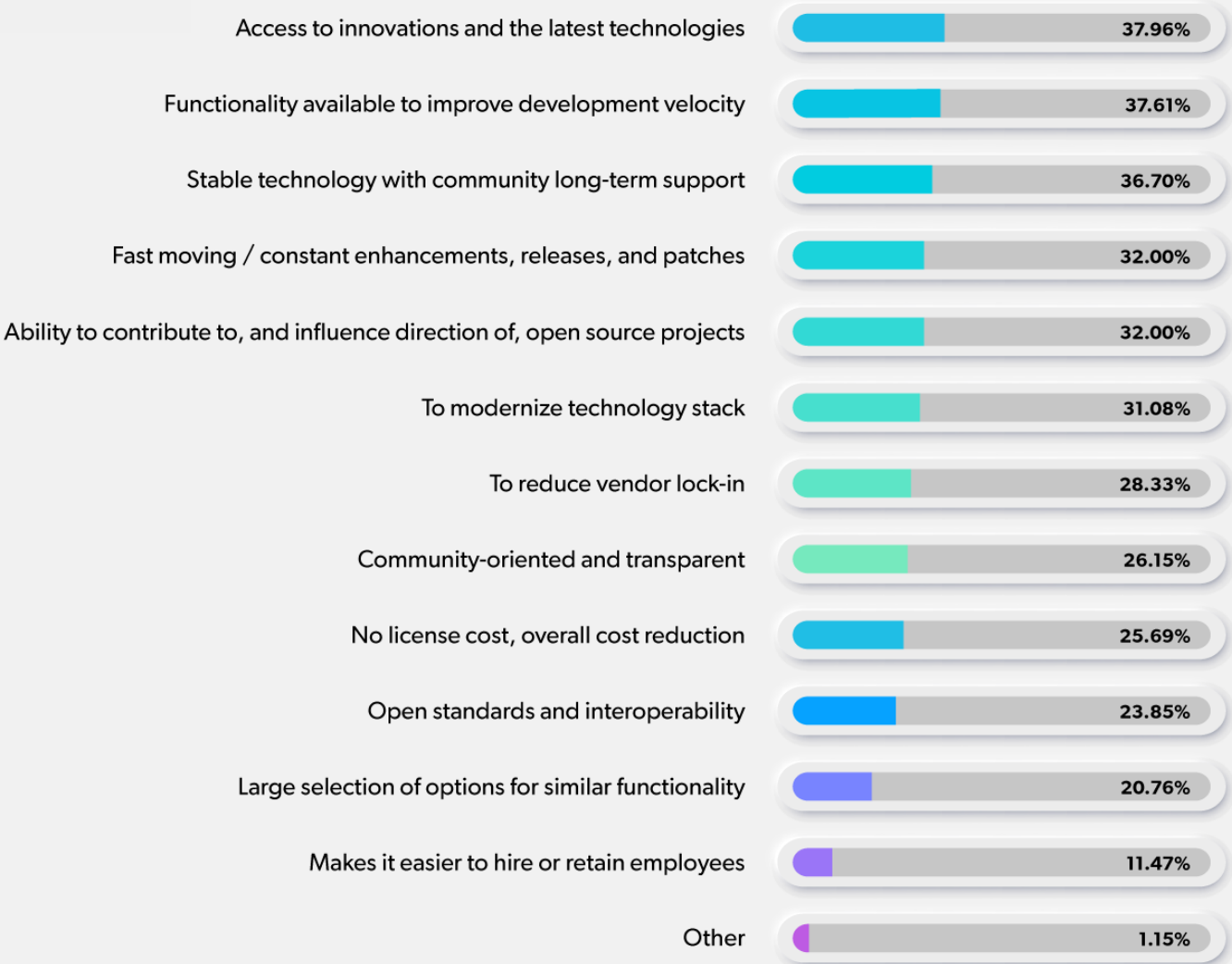|	
Yes, significantly	🟢 **41.28%**
Yes	🔵 **38.76%**
Remain the same	🟣 **18.46%**
Reduced the use of open source	🔵 **1.49%**
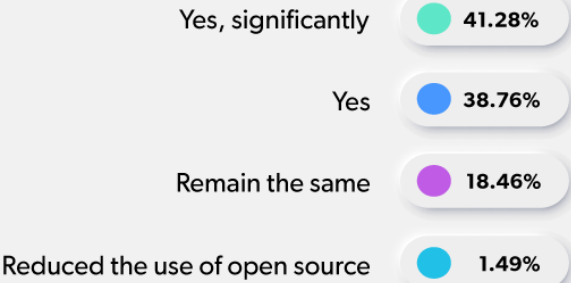
Looking at the responses to this question by industry, we see that the Telecommunications and Energy, Oil & Gas sectors are among those that have significantly increased their use and adoption of open source software in the past year.

Industry	Yes Significantly	Yes	No, it remained the same	No, we reduced the use of OSS	Total
Technology	41.82%	39.55%	17.27%	1.36%	25.52%
Consulting or Professional Services	41.96%	36.36%	20.98%	0.70%	16.59%
Telecommunications	**46.77%**	43.55%	8.06%	1.61%	7.19%
Banking, Insurance, or Financial Services	39.19%	43.24%	14.86%	2.70%	8.58%
Education or Research	40.48%	30.95%	26.19%	2.38%	4.87%
Vehicle, Transportation, or Logistics	27.78%	38.89%	27.78%	5.56%	4.18%
Government or Public Services	43.40%	41.51%	13.21%	1.89%	6.15%
Healthcare or Pharmaceuticals	37.70%	39.34%	22.95%	0.00%	7.08%
Manufacturing	39.53%	44.19%	16.28%	0.00%	9.98%
Retail	40.63%	28.13%	31.25%	0.00%	3.71%
Media or Gaming	45.71%	34.29%	17.14%	2.86%	4.06%
Energy, Oil, or Gas	**66.67%**	27.78%	5.56%	0.00%	2.09%

?

What Are the Top Reasons Your Organization Uses Open Source Software?

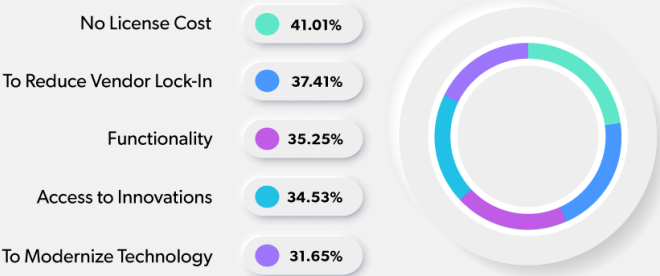|	
Access to innovations and the latest technologies	37.96%
Functionality available to improve development velocity	37.61%
Stable technology with community long-term support	36.70%
Fast moving / constant enhancements, releases, and patches	32.00%
Ability to contribute to, and influence direction of, open source projects	32.00%
To modernize technology stack	31.08%
To reduce vendor lock-in	28.33%
Community-oriented and transparent	26.15%
No license cost, overall cost reduction	25.69%
Open standards and interoperability	23.85%
Large selection of options for similar functionality	20.76%
Makes it easier to hire or retain employees	11.47%
Other	1.15%

The #1 reason organizations use open source software is to have access to innovations and the latest technologies.

Looking at responses by geography, it turns out that **access to innovations and latest technologies** — while consistently in the top four — is not the first choice in other parts of the world.
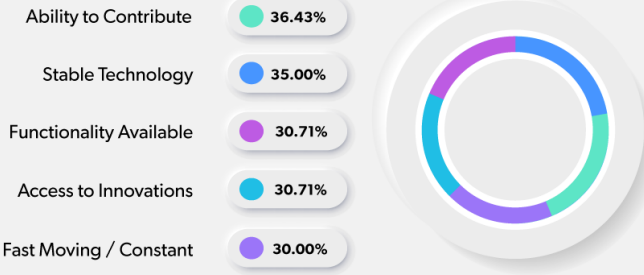
Top Reasons In North America

Reason	%
Functionality	42.86%
Access to Innovations	40.11%
Stable Technology	39.84%
To Modernize Technology	34.89%
Ability to Contribute	33.79%

Top Reasons In Europe

Reason	%
No License Cost	41.01%
To Reduce Vendor Lock-In	37.41%
Functionality	35.25%
Access to Innovations	34.53%
To Modernize Technology	31.65%
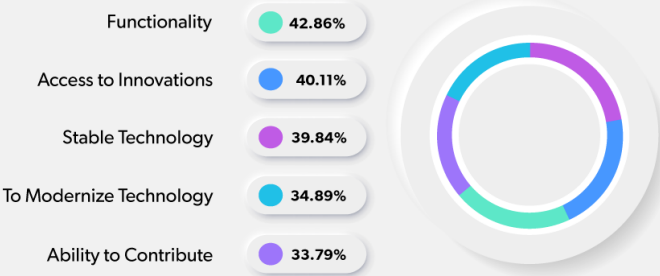
Top Reasons In United Kingdom

Reason	%
Ability to Contribute	36.43%
Stable Technology	35.00%
Functionality Available	30.71%
Access to Innovations	30.71%
Fast Moving / Constant	30.00%

Top Reasons In Asia

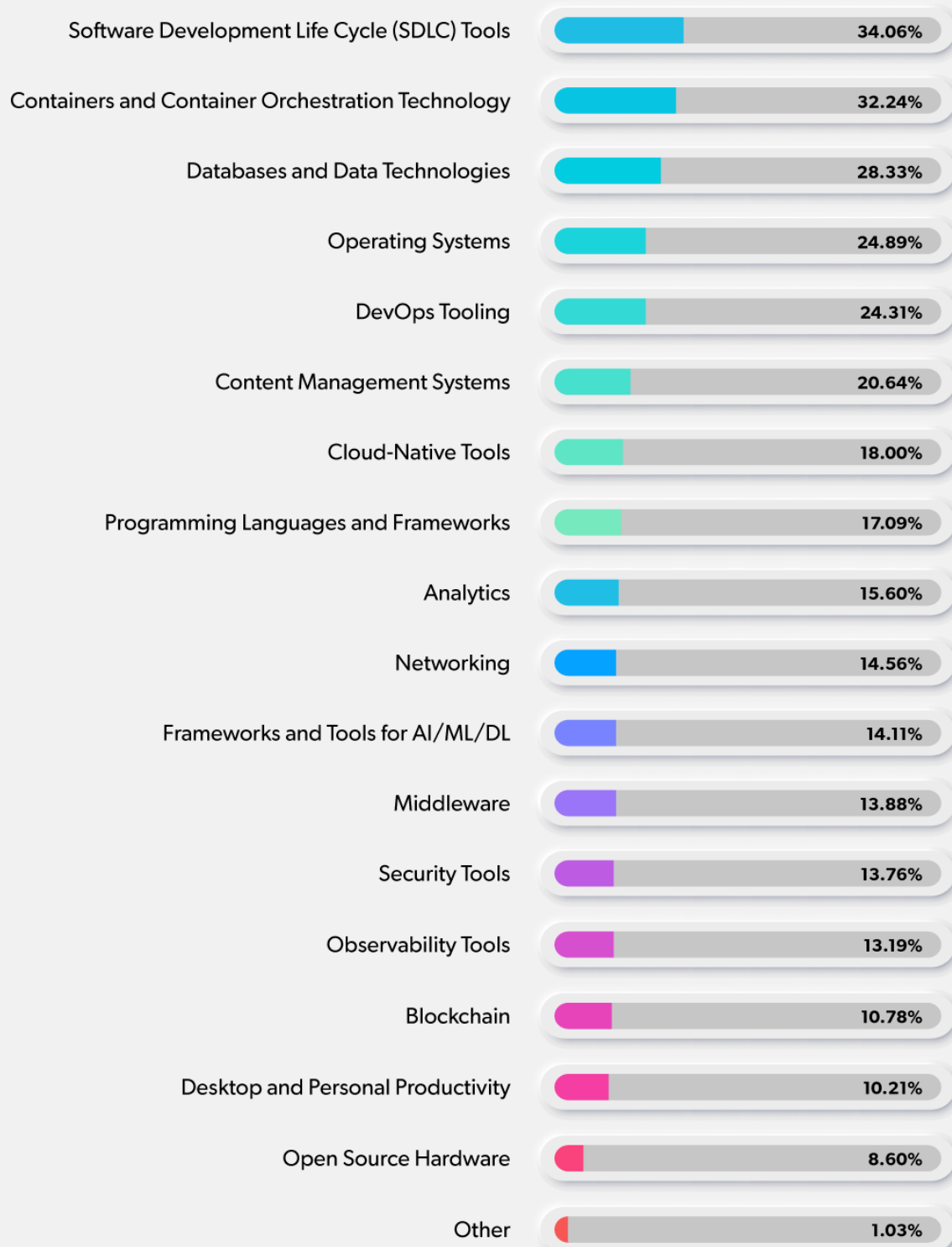| Reason	%
Access to Innovations	48.68%
No License Cost	43.42%
Functionality Available	36.84%
Large Selection	31.58%
Community Oriented	31.58%
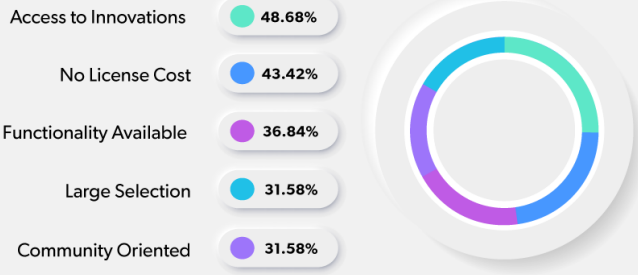
Organizations also choose open source because of the functionality to improve development velocity and the ability to contribute to open source projects and influence their direction.
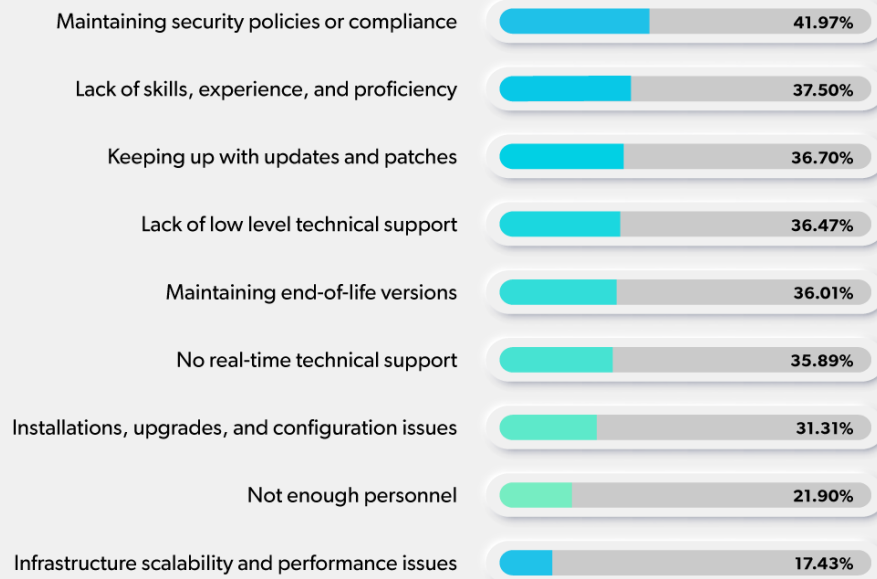
? Which Categories of Open Source Software Has Your Organization Invested In the Most In Terms of Projects, Budget, and Resources?

Category	Percentage
Software Development Life Cycle (SDLC) Tools	34.06%
Containers and Container Orchestration Technology	32.24%
Databases and Data Technologies	28.33%
Operating Systems	24.89%
DevOps Tooling	24.31%
Content Management Systems	20.64%
Cloud-Native Tools	18.00%
Programming Languages and Frameworks	17.09%
Analytics	15.60%
Networking	14.56%
Frameworks and Tools for AI/ML/DL	14.11%
Middleware	13.88%
Security Tools	13.76%
Observability Tools	13.19%
Blockchain	10.78%
Desktop and Personal Productivity	10.21%
Open Source Hardware	8.60%
Other	1.03%

SDLC tools, containers, and databases are the top three most invested in and most commonly used open source technologies.

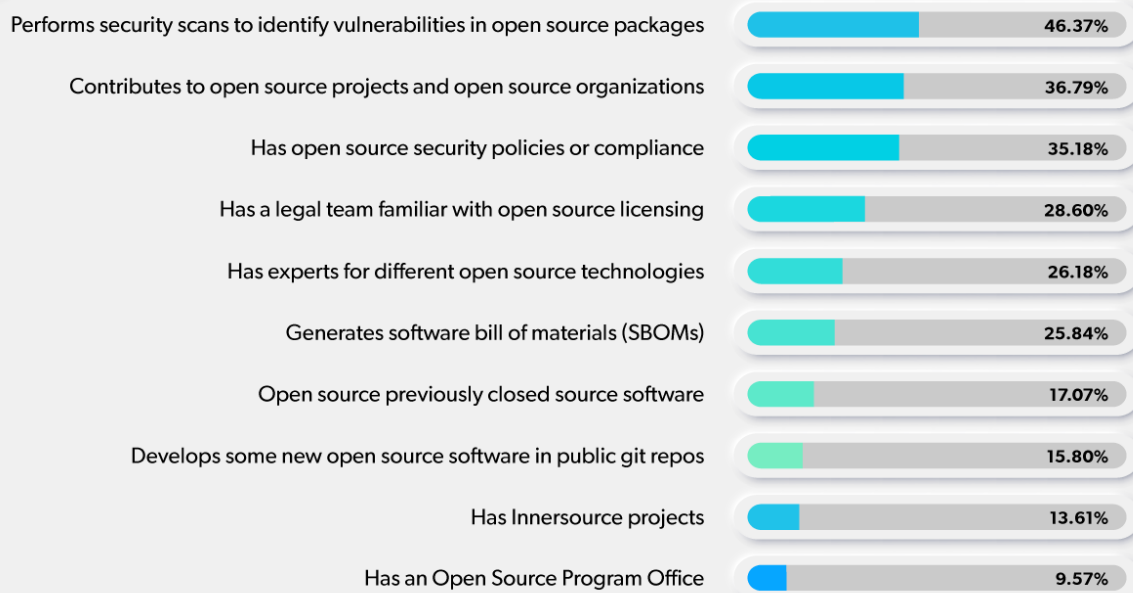## **?** What Are Your Organization's Top Support Challenges While Using Open Source Software?

Challenge	Percentage
Maintaining security policies or compliance	41.97%
Lack of skills, experience, and proficiency	37.50%
Keeping up with updates and patches	36.70%
Lack of low level technical support	36.47%
Maintaining end-of-life versions	36.01%
No real-time technical support	35.89%
Installations, upgrades, and configuration issues	31.31%
Not enough personnel	21.90%
Infrastructure scalability and performance issues	17.43%

While it's evident that open source software adoption is increasing, there are certainly areas where organizations have challenges, especially when it comes to technical support.

? How Do You Describe the Level of Open Source Maturity In Your Organization?

Description	Percentage
Performs security scans to identify vulnerabilities in open source packages	46.37%
Contributes to open source projects and open source organizations	36.79%
Has open source security policies or compliance	35.18%
Has a legal team familiar with open source licensing	28.60%
Has experts for different open source technologies	26.18%
Generates software bill of materials (SBOMs)	25.84%
Open source previously closed source software	17.07%
Develops some new open source software in public git repos	15.80%
Has Innersource projects	13.61%
Has an Open Source Program Office	9.57%

Security is top of mind for organizations using OSS — 46% perform scans to identify vulnerabilities and 35% have security and/or compliance policies.

? In Order of Importance, From Not Important to Most Important, Rank the Following Technologies in Relation to Your Organization's Desire To Implement Them in the Next 18 Months

Technology	Not Important	Mildly Important	Important	Very Important	Most Important
Kubernetes or Kubernetes Operators	16.34%	20.30%	31.97%	21.00%	10.39%
Data Science	11.88%	23.52%	29.22%	27.20%	8.19%
Artificial Intelligence / Machine Learning / Deep Learning	11.29%	20.82%	30.12%	26.24%	11.53%
Virtual Reality or Augmented Reality	19.74%	20.21%	24.82%	24.94%	10.28%
Blockchain/Crypto	20.98%	20.38%	27.46%	21.22%	9.95%
Nonfungible Tokens	25.30%	17.87%	28.66%	20.02%	8.15%
Serverless/Functions	11.88%	21.26%	33.25%	25.06%	8.55%
Quantum Computing	20.72%	22.16%	26.35%	22.28%	8.50%

This year, Artificial Intelligence (AI)/Machine Learning (ML)/Deep Learning (DL) edged Kubernetes by 1% as the most desirable and important technology to implement in the next 18 months.

For more data and insights, download the full report.

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