

The 2023 State of OSPPOs and OSS Initiatives

Open source software programs and
initiatives become mainstream

September 2023

Stephen Hendrick, Vice President, *Linux Foundation Research*
Ana Jiménez, OSPO Project Manager, *TODO Group*

In partnership with



KEY FINDINGS

In 2023, **OSPO ADOPTION AND OSS INITIATIVE ADOPTION** saw a **32%** increase compared with 2022.



OSPO GROWTH

Formally structured OSPOs in Asia-Pacific increased from **26%** in 2022 to **54%** in 2023. **THIS IS 108% GROWTH IN JUST ONE YEAR.**



OSPO GROWTH

96% of organizations reported that their OSPOs or OSS initiatives have **DRIVEN SIGNIFICANT IMPROVEMENTS** in software development best practices.



OSPO SUCCESS



85% of organizations reported that their OSPOs or OSS initiatives have **STRONGLY IMPROVED INTEROPERABILITY.**

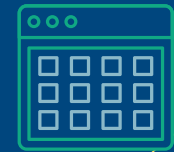
OSPO SUCCESS

90% of organizations that have an OSPO also have a formal policy regarding their use and contribution to OSS.



OSPO GROWTH

72% of organizations planning to implement an OSPO or an OSS initiative will do so in the next **12 MONTHS.**



OSPO GROWTH



93% of OSPOs and OSS initiatives provide **ADVICE OR DECISIONS ON OSS SECURITY ISSUES.**

SECURITY SUPPORT

52% of organizations with structured OSPOs and OSS initiatives have an **AUTOMATED PROCESS** for addressing OSS license compliance.

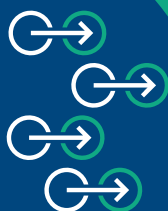


COMPLIANCE SUPPORT

Organizations with open source program offices (OSPOs) and open source software (OSS) initiatives are **NEARLY ALWAYS BETTER POSITIONED TO LEVERAGE LEADING-EDGE TECHNOLOGIES.**



INNOVATION SUPPORT



Organizations with an OSPO or an OSS initiative are nearly **4X MORE LIKELY** to provide **UPSTREAM CONTRIBUTIONS.**

PROJECT SUSTAINABILITY

More organizations think their **FUNDING** for OSPOs or OSS initiatives is likely to decrease—nearly doubling from **12%** of respondents in 2022 to **23%** in 2023.



OSPO BARRIERS



COLLABORATION WITH OSS ORGANIZATIONS is the **#1 RESPONSIBILITY** of an OSPO and an OSS initiative.

COMMUNITY SUPPORT

CONTENTS

INFOGRAPHIC.....	2
ABOUT THIS STUDY.....	4
INTRODUCTION	7
KEY FINDINGS.....	8
THE CURRENT STATE OF OSPOS AND OSS INITIATIVES	14
THE BENEFITS AND CHALLENGES OF AN OSPO OR AN OSS INITIATIVE.....	27
OSPO AND OSS INITIATIVE SUSTAINABILITY	32
PERSPECTIVES OF ORGANIZATIONS PLANNING TO IMPLEMENT AN OSPO OR AN OSS INITIATIVE	37
HOW OSPOS AND OSS INITIATIVES INFLUENCE LICENSE COMPLIANCE AND SECURITY.....	41
CONCLUSION	44
METHODOLOGY	44
ACKNOWLEDGMENTS.....	46
ABOUT THE AUTHORS.....	46



ABOUT THIS STUDY

This empirical study is based on a web survey conducted by the Linux Foundation and its partners in May and June 2023. Survey data were collected from end-user organizations, IT vendors and service providers, foundations, as well as academic and government organizations. Respondents spanned a wide variety of vertical industries, companies of all sizes, and geographies, including the Americas, Europe, and Asia-Pacific. The objective was to develop a worldwide view of OSPOs and OSS initiatives to reflect the characteristics and perspectives of all organization types. For more information about the methodology behind this survey and where to find its dataset and analysis, see the Methodology section at the end of this report.

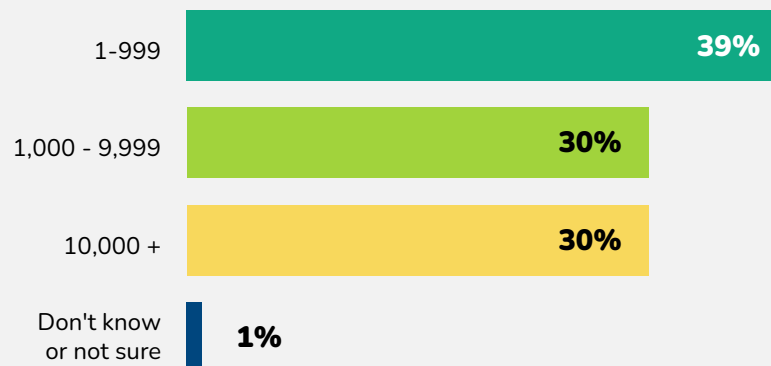
DEMOGRAPHICS

The demographic data in Figure 1 illustrate some of the consideration that we gave to survey stratification. The upper chart in Figure 1 shows company size as measured by number of employees. The seven categories originally presented in this question have been aggregated into the three categories shown here. The intention was to ensure that each of these three categories had enough responses so that when cross-tabulated, the results would be reliable. The upper chart in Figure 1 shows that 39% of the respondents fell into the 1–999 employee size class, 30% in the 1,000–9,999 employee size class, and 30% in the 10,000+ employee size class.

This same approach was used for the lower chart in Figure 1, which identifies the region where the respondent's corporate headquarters is located. Responses for Asia-Pacific (25%) were primarily populated by respondents from China and Japan. Likewise, respondents for the Americas (37%) primarily came from North America, and responses from Europe (33%) generally originated from Western European countries. The Other region, which primarily includes the Middle East and Africa, accounted for just 4% of respondents.

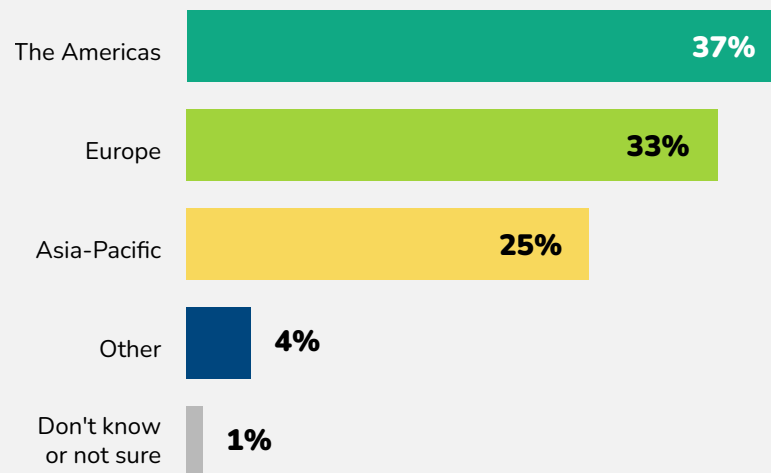
FIGURE 1 DEMOGRAPHICS: COMPANY SIZE AND HEADQUARTERS LOCATION

Company size measured by number of employees



2023 STATE OF OSPOS, Q4A, SAMPLE SIZE = 489

In which region does your organization have its headquarters? (select one)

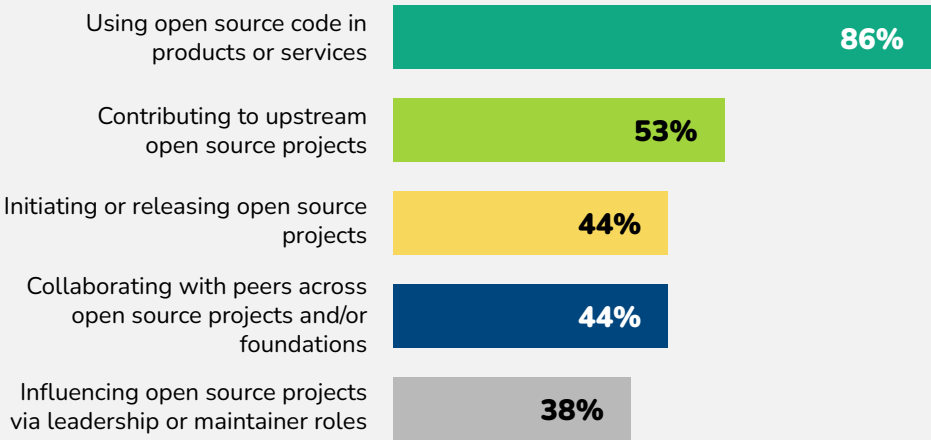


2023 STATE OF OSPOS, Q5A, SAMPLE SIZE = 489

FIGURE 2

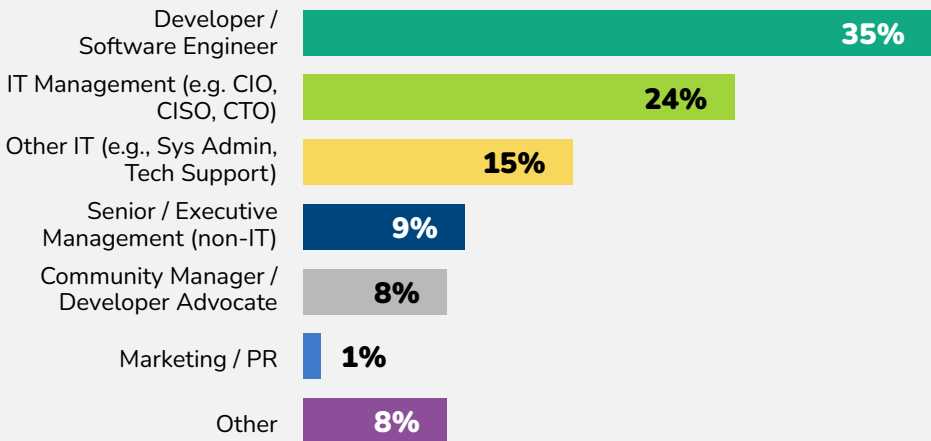
DEMOGRAPHICS: OSS JOURNEY AND RESPONDENT ROLE

Where is your organization on its open source journey? (select all that apply)



2023 STATE OF OSPOS, Q1, SAMPLE SIZE = 489, VALID CASES = 489, TOTAL MENTIONS = 1,290

Professionally, which of the following best describes your role? (select one)



2023 STATE OF OSPOS, Q3, SAMPLE SIZE = 489

Figure 2 provides additional demographic data regarding where the organization is in its open source journey and the role of the respondent.

The upper chart in Figure 2 allows the respondent to characterize where their organization is on its OSS journey. Respondents whose organization was not involved in open source and respondents who were unable to answer this question were disqualified from the survey. This is due to the design point of the survey, which is to understand the state of OSPO adoption in organizations that use OSS. It is therefore not surprising to see that 86% of the sample use open source code in their products and services and a lower level of contribution to upstream open source projects, at 53%. However, it is encouraging to see that 38% of the sample participates in open source leadership or maintainer roles, and 44% are collaborating with peers across open source projects or foundations, such as the Linux Foundation.

The lower chart in Figure 2 shows the role that best describes the respondent. Approximately 75% of the respondents were in IT roles.

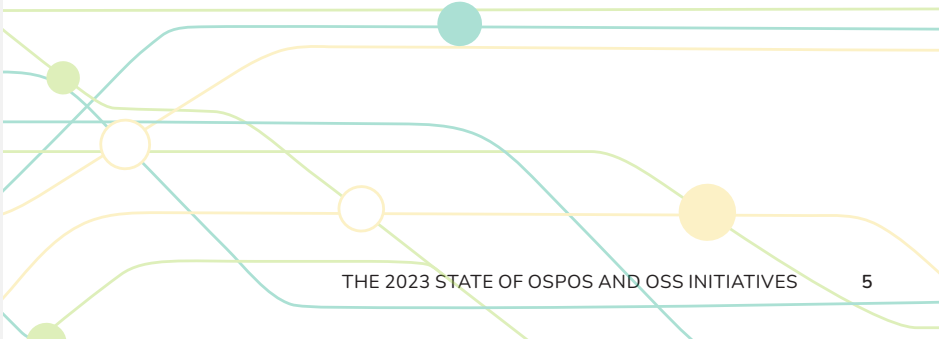
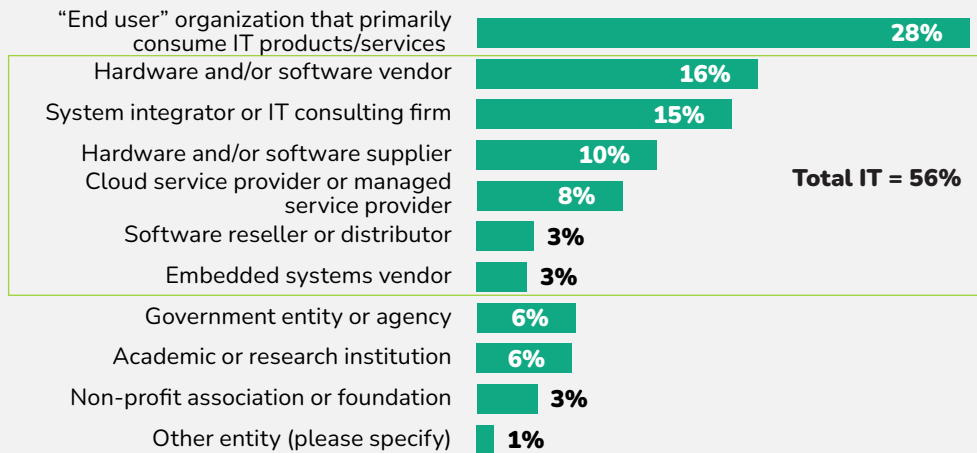


FIGURE 3

DEMOGRAPHICS: ORGANIZATION TYPE AND PRIMARY INDUSTRY OF ORGANIZATION

Which response best describes the organization you work for? (select one)

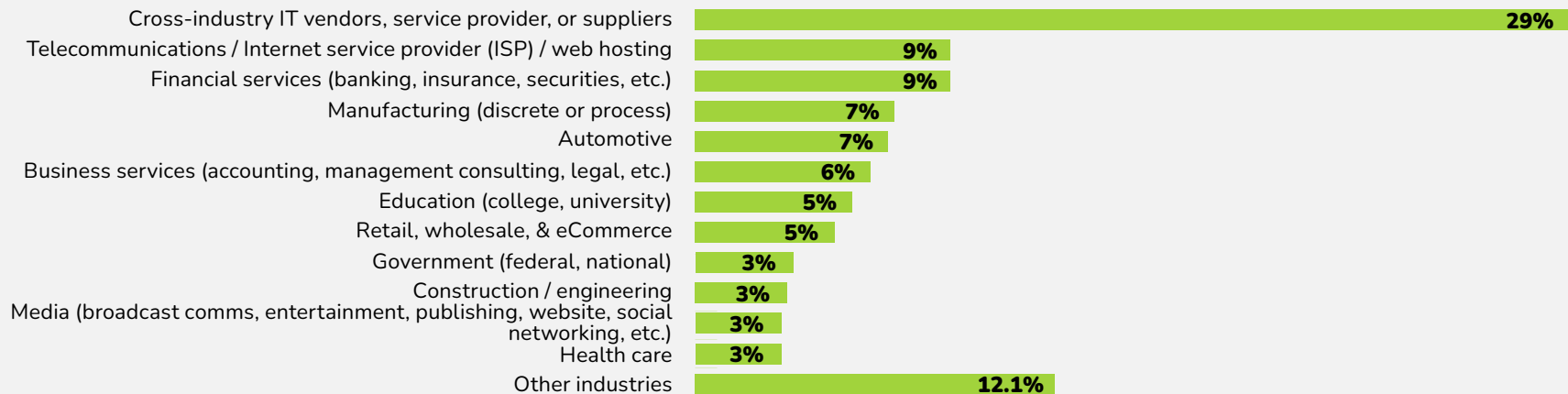


2023 STATE OF OSPOS, Q6A, SAMPLE SIZE = 489

Figure 3 shows the type of organizations that were surveyed and the industry of the organization. The upper chart shows the type of organization and contains a cross-section of IT vendors and service providers (56%), end-user organizations (28%), and other organizations, including non-profits, foundations, academic institutions, and government agencies (16%).

The vertical industry of the organization is shown in the lower chart. Cross-industry IT vendors comprised the single largest segment by industry at 29%. The difference between the cross-industry percentage in the lower chart (29%) and IT vendor/service provider/supplier in the upper chart (56%) is that the remaining 27% of IT vendor/service provider/supplier is embedded in individual industries in the lower chart.

Which of the following best describes your organization's primary industry? (select one)



2023 STATE OF OSPOS, Q7A, SAMPLE SIZE = 489

“

Though we've seen a number of hyperscalers and other software vendors decrease OSPO headcount and budgets in 2023 due to various economic pressures, I see this shift as the natural progression in the OSPO maturity model, with these organizations shifting many of the direct community engagement functions from their OSPO into sister departments, such as Developer Relations and Product Management. Simultaneously, businesses outside the traditional IT and software vendor space have rapidly adopted OSPOs as their central structure to support internal and external collaboration and innovation, with the largest growth areas to date in the [Automotive, FinTech, and Financial Services](#) verticals. [Academia](#) and [Public Sector agency](#) OSPOs are also an area of rapid expansion, including notable examples such as the creation of the [European Commission's Open Source Program Office](#) and the creation of the [SustainOSS Academic Working Group](#) to support academic OSPOs worldwide.

LESLIE HAWTHORN, RED HAT

INTRODUCTION

Open source program offices and OSS initiatives are common terms that organizations commonly use to describe where oversight of OSS assets and governance occurs. However, depending on the organization, its size, its industry, its geographic region, and its approach to IT, other terms may be used. Some common terms in use are open source office, open source center of competence, open source steering committee, and open source software team. Please refer to the [OSPO Definition](#) for more information regarding the attributes of an OSPO or an OSS initiative.

The implementation of an OSPO with a central interface for open source strategy and operations across the organization serves as a vital bridge between an organization and the open source community, helping to ensure that the organization is a good steward of OSS and reaps the benefits of open source adoption while minimizing risks. This is an effective way to ensure that there are voices advocating for OSS within the organization and that the organization engages with OSS with the appropriate use, governance, compliance, upstream contribution, and support for sustainability.

This year, 2023, marks the sixth straight year that the TODO Group has fielded a study into the state of OSPOs and OSS initiatives. This provides us with a unique and informed perspective on the adoption of open source programs and OSS initiatives over time. This year is proving to be an important one for the adoption and evolution of open source programs and initiatives, with significant, widespread adoption of OSPOs and OSS initiatives. As OSS use and contribution become mainstream, the role of OSPOs and OSS initiatives are better understood. This allows OSS oversight to be woven into the fabric of software development in more decentralized and virtual ways.

ABOUT THE RESEARCH PROJECT

This year's research into the state of OSPOs and OSS initiatives involves an empirical study with data collection occurring in May and June 2023. The focus of this survey was end-user organizations, IT vendors and service providers, and non-profit/academic/government organizations. Respondents spanned many vertical industries and companies of all sizes, and data were collected from geographies including the Americas, Europe, and Asia-Pacific. For more information about the methodology governing this research, please see the *Methodology* section near the end of this report.

KEY FINDINGS

OSPOS AND OSS INITIATIVES BECOME MAINSTREAM IN 2023

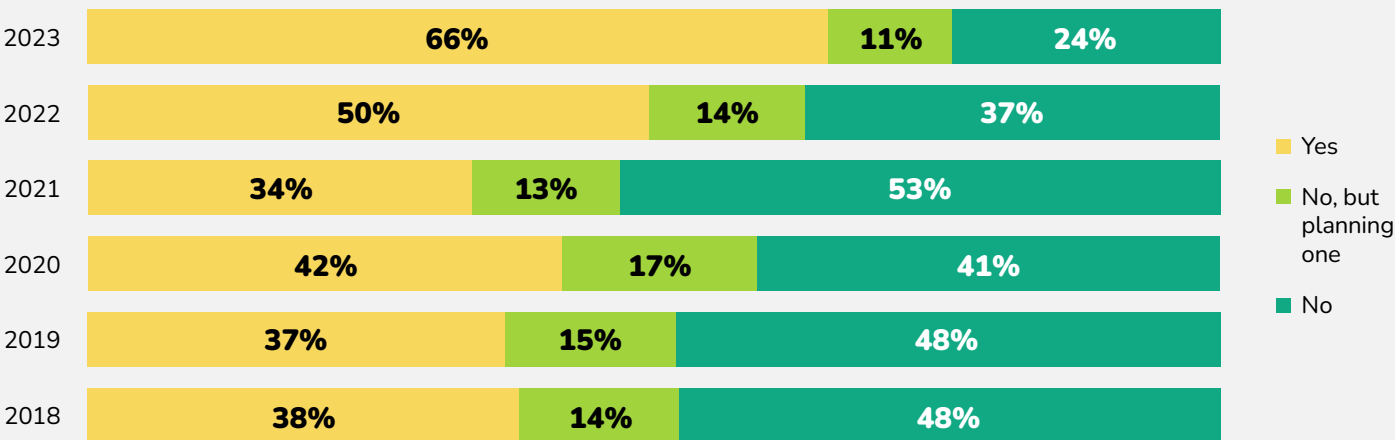
Between 2018 and 2021, the percentage of organizations that reported having an OSPO or an OSS initiative averaged around 38%, as shown in Figure 4. The first signs of material change occurred in 2022 when the percentage of organizations having an OSPO or an OSS initiative shot up to 50%, a 31% increase over the earlier 38% average penetration. While this was cause for celebration within the OSPO and open source community, some doubts persisted as to whether this number would hold up over time. We now seem to have

an answer. The percentage of organizations that have an OSPO or an OSS initiative in 2023 is now 66%, which is a 32% increase over 2022.

Even after allowing for margin-of-error variances, this 2023 penetration rate is significantly different (meaning higher) than 2022. We believe that this increased penetration rate is due to the increasing OSS use and contribution across the developer community, leading to growing experience, familiarity, and confidence in how to address OSS governance, compliance, security, risk, and sustainability. In Geoffrey Moore parlance, OSS is transitioning from the early majority (pragmatists) to the late majority (conservatives).

FIGURE 4
OSPOS AND OSS INITIATIVES BECOME MAINSTREAM IN 2023

Does your organization have an open source program or open source initiative? (select one)



2023 STATE OF OSPOS, Q9, SAMPLE SIZE: 2023 = 478
PRIOR YEAR SAMPLE SIZES: 2022 = 950, 2021 = 932, 2020 = 876, 2019 = 2345, 2018 = 676

CURRENT AND PLANNED OSPOS OR OSS INITIATIVES WILL INCREASINGLY SETTLE IN IT-FOCUSED ORGANIZATIONS

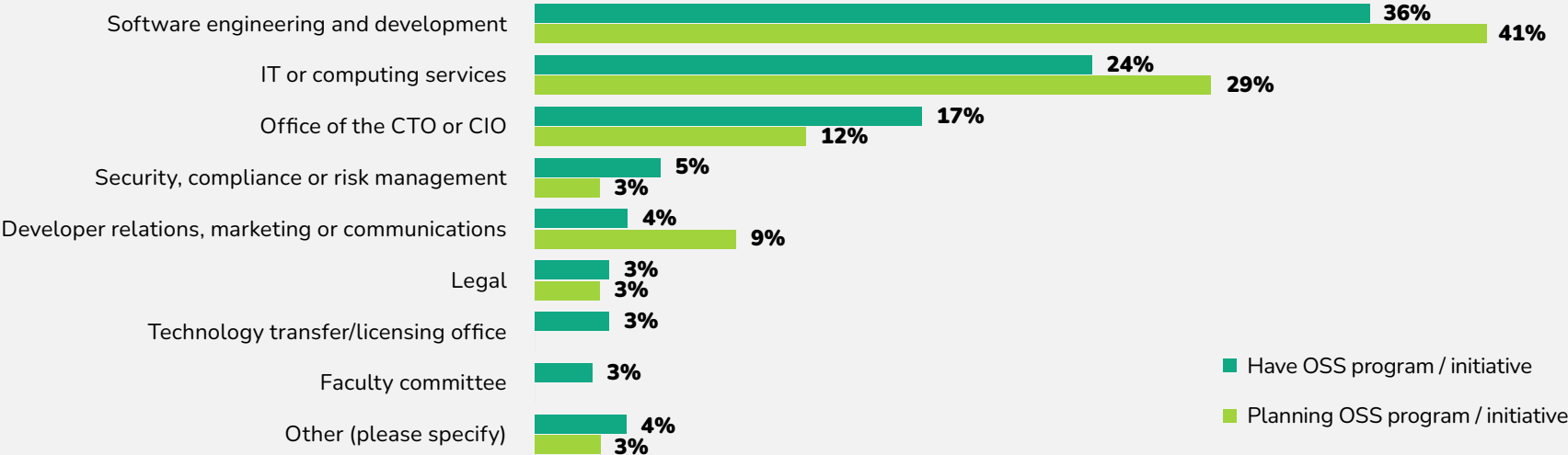
Figure 5 asks the question, “Where is the OSPO or OSS initiative located (or plan to be located) within the organization?” Currently, 77% of organizations that have an OSPO or an OSS initiative in place locate it in the IT domain (software engineering development, IT or computing services, or office of the CTO or CIO). Other locations, each of which garners between 3% and 5%, are security/compliance/risk management, legal, technology transfer/licensing office, faculty committee, and others.

When we look at those organizations planning to implement an OSPO or an OSS initiative, we see the transition away from legacy locations, such as security/compliance/risk management, technology transfer/licensing office, faculty committee, other, and office of the CTO or CIO. The preferred target for organizations planning to implement an OSPO or an OSS initiative is primarily focused on the developer community, including software engineering and development, IT and computing services, and developer relations.

As the IT and OSS domains age and evolve, growing experience with OSS allows it to be more approachable and less risky and enables it to look more like just another source for content used to facilitate application development. Consequently, we have yet another example of how the maturing of OSS is contributing to its mainstreaming.

FIGURE 5
CURRENT AND ESPECIALLY PLANNED OSPOS OR OSS INITIATIVES WILL INCREASINGLY HAVE THEIR ROOTS IN IT-FOCUSED ORGANIZATIONS

Where is the open source program or initiative located (or planned to be located) within the organization?

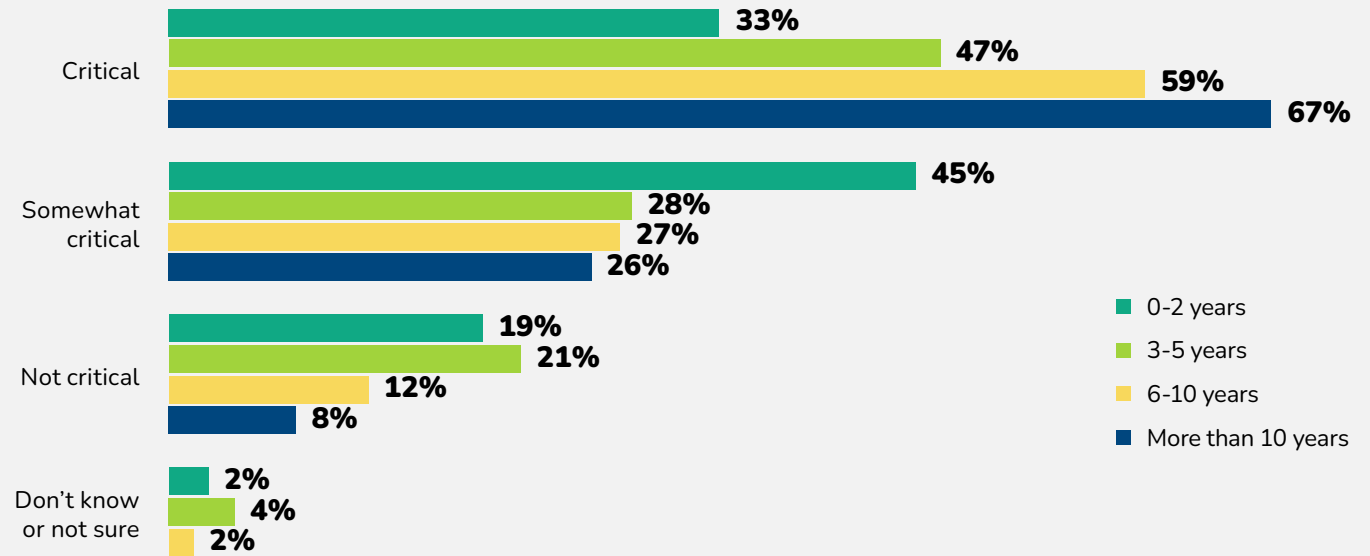


2023 STATE OF OSPOS, Q13, HAVE OSS PROGRAM OR INITIATIVE, SAMPLE SIZE = 287, DKNS RESPONSES EXCLUDED
2023 STATE OF OSPOS, Q35, PLANNING OSS PROGRAM OR INITIATIVE, SAMPLE SIZE = 46, DKNS RESPONSES EXCLUDED

FIGURE 6

THE VALUE OF OSPOS OR OSS INITIATIVES INCREASE WITH EXPERIENCE

OSPO Criticality to achieve organizational goals (regrouped) segmented by: How long ago was the program or initiative established? (select one)



2023 STATE OF OSPOS, Q23A X Q18, SAMPLE SIZE = 242

THE VALUE OF OSPOS AND OSS INITIATIVES INCREASES WITH EXPERIENCE

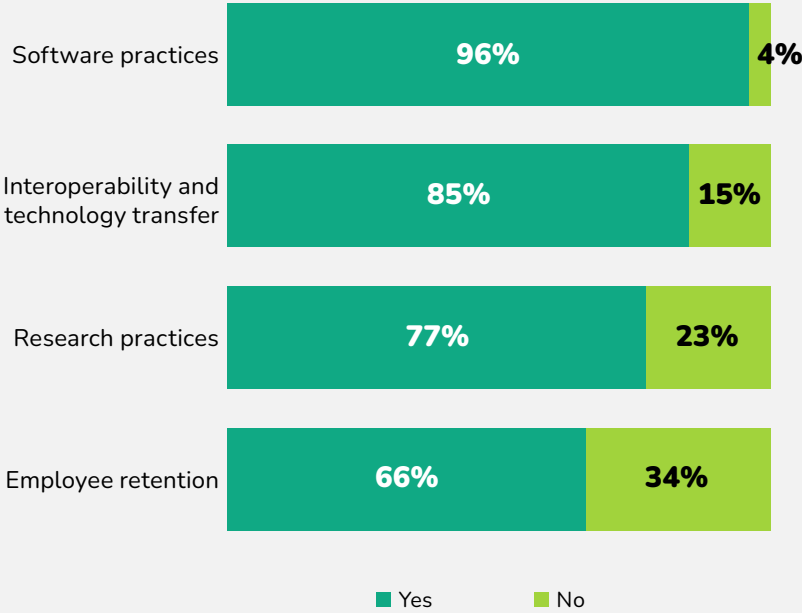
OSPOs and OSS initiatives are far more valuable to an organization than you might expect. This finding becomes even more dramatic when you factor in the number of years for which an OSPO or an OSS initiative has been active. Figure 6 shows that the older the OSPO or OSS initiative, the more critical it is to achieving organizational goals. For organizations that have had an OSPO or an OSS initiative in place for more than 10 years, 67% report that it is critical to the organization's goals, compared with just 8% who believe it is not critical. Contrast this with the organizations having an OSS initiative in place

for 0–2 years, where just 33% report that it is critical to their organization and 19% report that it is not critical. These represent the two extremes, with the remaining age classes residing in between with almost linear characteristics.

Our explanation for this comes back to the expanding experience and tribal knowledge developed by the OSPO or the OSS initiative, which enables it to more effectively address how OSS policy and processes need to evolve to allow OSS use within the boundaries of the organization's SDLC (software development life cycle) and corporate culture. This is a compelling finding, especially for those organizations that question the utility of implementing an OSPO or an OSS initiative.

FIGURE 7
OSPOS AND OSS INITIATIVES HAVE STRONG POSITIVE IMPACT ON SDLC ACTIVITIES AND EMPLOYEE RETENTION

Has the open source program or initiative had a positive impact on the following areas within your organization? (select one response per row)



2023 OSPO, Q24, SAMPLE SIZE = 243, DKNS RESPONSES EXCLUDED

OSS PROGRAMS HAVE STRONG POSITIVE IMPACTS ON THE SDLC AND EMPLOYEE RETENTION

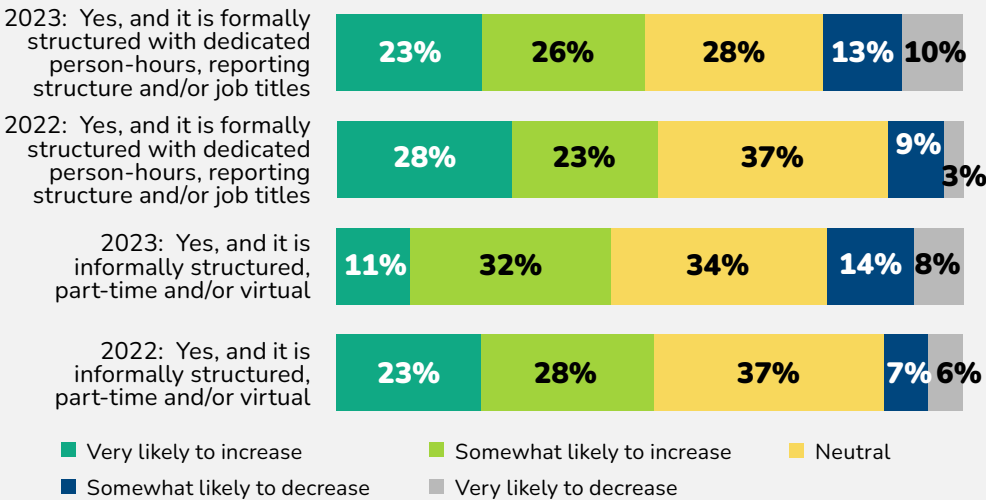
When asked if an existing OSPO or OSS initiative has a positive impact (in a variety of areas), organizations reported strong positive results. Figure 7 shows that software practices (96% positive) and interoperability/technology transfer (85% positive) were the leading areas where an OSPO or an OSS initiative had a positive impact. Research practices (77% positive) was also an area regarded as an OSS strength due to the economic advantages of consuming free components and the reduced time to market by avoiding having to build components. Finally, existing OSPOs or OSS initiatives positively impact employee retention (66% positive) through policy and process that enables the organization to better cater to developer needs.

OSS PROGRAM OR INITIATIVE
FUNDING INCREASES PERSIST DESPITE
ECONOMIC UNCERTAINTY

A recent tech talent report also released by Linux Foundation Research this year showed that many organizations were concerned about the impact that the economy could have on their business. These organizations either proactively reduced IT headcount or

FIGURE 8
OSPO OR OSS INITIATIVE FUNDING INCREASES BUT 2023 CONCERNS HAVE ESCALATED

Does your organization have an OSS program or initiative? (select one) segmented by: In light of recent macroeconomic conditions, what is the likelihood that funding for your organization’s OSS initiatives will increase or decrease in the upcoming fiscal year? (select one)



2023 STATE OF OSPOS, Q9 X Q17, SAMPLE SIZE = 287, DKNS RESPONSES EXCLUDED
2022 STATE OF OSPOS, Q6 X Q14, SAMPLE SIZE = 372, DKNS RESPONSES EXCLUDED

were prepared to reduce headcount if bearish economic conditions persisted. However, there was a sizable segment of organizations that did not anticipate that the economic climate would be problematic and were continuing forward with existing hiring plans.

In the OSPO survey, for those organizations that had an OSPO or an OSS initiative, we investigated how the recent macroeconomic conditions would increase or decrease funding for the upcoming fiscal year. Within a specific year, organizations that had a formally structured program with dedicated person hours performed better than their informally structured part-time or virtual counterpart. Figure 8 shows that in 2023, 49% of formally structured OSPOs or OSS initiatives thought their funding was very or somewhat likely to increase compared with 43% for informally structured OSPOs or OSS initiatives. This contrasts with the 23% of formally structured OSPOs or OSS initiatives that thought their funding was very or somewhat likely to decrease compared with 22% for informally structured OSPOs or OSS initiatives. The positive finding in Figure 8 is that regardless of year, the share of OSPOs and OSS initiatives that are somewhat or very likely to have increased funding is significantly higher than those that are concerned about budgets that are somewhat or very likely to decrease.

However, there is clearly more pessimism about how 2023 will unfold compared with where organizations were in 2022. Comparing 2023 to 2022 in Figure 8, we find that only 23% of formally structured OSPOs and OSS initiatives in 2023 believe that their funding is very likely to increase compared with 28% in 2022. The situation is more tenuous for informally structured OSPOs and OSS initiatives, where just 11% of OSPOs and OSS initiatives in 2023 believe that their funding is very likely to increase compared with 23% in 2022.

Comparing years where organizations believe there will be a decrease in funding, 2023 stands out as worrisome—23% of formally structured OSPOs and OSS initiatives in 2023 believe their funding will somewhat or very likely decrease compared with just 12% in 2022. The situation is much the same for informally structured OSPOs

and OSS initiatives in 2023, where 22% believe their funding will somewhat or very likely decrease compared with just 13% in 2022.

This concern about the defunding of OSPOs and OSS initiatives is very real, with an average of 23% of OSPOs and OSS initiatives expecting a decrease in funding during 2023.

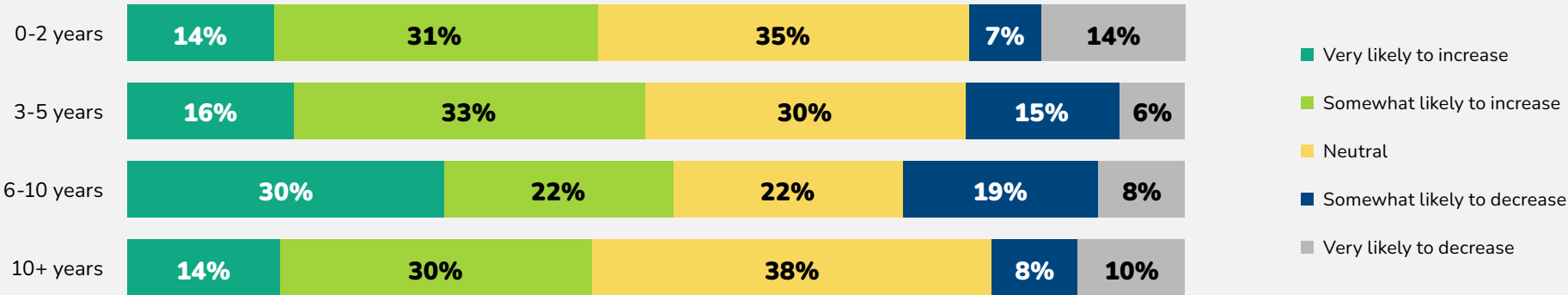
OSPOS OR OSS INITIATIVES SHOW POSITIVE FUNDING AVAILABLE BUT ALSO WEAKNESS FOR NEW PROGRAMS

When we evaluate concern over recent macroeconomic conditions by the age of an existing OSPO or OSS initiative, we gain a more nuanced understanding of the challenges facing OSPOs and OSS initiatives. Figure 9 shows that overall, 44–52% of OSPOs and OSS initiatives are somewhat likely or very likely to see increases in

funding in the upcoming fiscal year. This clearly contrasts with the 18–27% that are somewhat likely or very likely to see a decrease in funding. This is generally a positive outlook across organizations in our study and reflects an optimistic view of how the economy will evolve and the importance attached to OSPO and OSS initiative oversight. However, the overall growing share of organizations suggests that 2023 could still be a year of surprises, both positive and negative.

We see that 14% of younger OSPOs and OSS initiatives (0–2 years old) are very likely to see an increase in funding, which is similar to those programs 3–5 years old (16%) and 10+ years old (14%). However, 14% of younger programs report they are very likely to experience a decrease in funding compared with other age-specific segments, which range from 6% to 10%. This puts OSPOs and OSS initiatives under two years old at a greater risk of defunding than other, more mature programs.

FIGURE 9
OSPOS AND OSS INITIATIVES SHOW POSITIVE FUNDING AVAILABLE BUT WEAKNESS FOR NEW PROGRAMS
How long ago was the program or initiative established? (select one) segmented by: In light of recent macroeconomic conditions, what is the likelihood that funding for your organization’s OSS initiatives will increase or decrease in the upcoming fiscal year? (select one)



2023 STATE OF OSPOS, Q18 X Q17, SAMPLE SIZE = 287, DKNS RESPONSES EXCLUDED

THE CURRENT STATE OF OSPOS AND OSS INITIATIVES

The year 2023 is seeing significant gains in OSPO and OSS initiative adoption, which is one of the most important findings from this

year's study. In this section, we will look more deeply into where this adoption is happening, the primary responsibilities of OSPOs and OSS initiatives, and the technology areas that are the focus of open source activities.

“

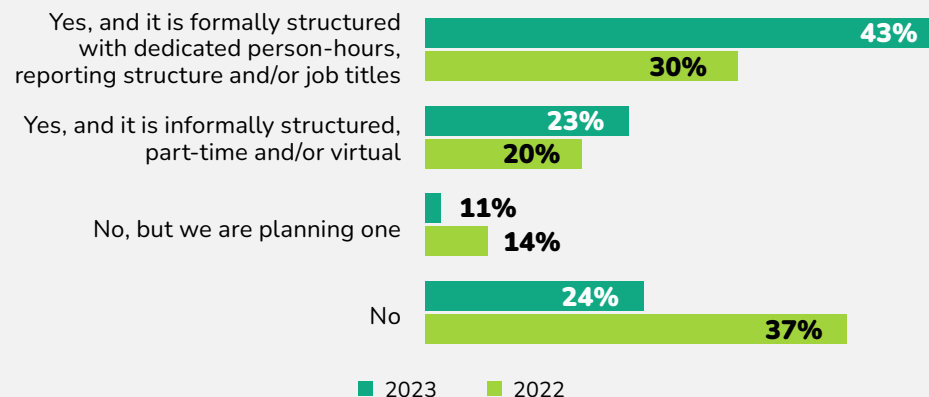
Among the organizations that took part in the study, almost half hosted a formally established OSPO or an equivalent open source initiative—increasing to more than 60% when including informal open source initiatives.

GEORG KUNZ, ERICSSON

FIGURE 10

SIGNIFICANT YEAR-OVER-YEAR GAINS ARE OCCURRING IN THE ADOPTION OF FORMALLY STRUCTURED OSPOS AND OSS INITIATIVES

Does your organization have an OSS program or initiative? (select one)



2023 STATE OF OSPOS, Q9, SAMPLE SIZE = 472
2022 STATE OF OSPOS, Q6, SAMPLE SIZE = 950

SIGNIFICANT YEAR-OVER-YEAR GAINS WERE OCCURRING IN THE ADOPTION OF FORMAL OPEN SOURCE PROGRAMS OR INITIATIVES

Figure 10 shows us that the penetration of OSPOs and OSS initiatives in organizations involved in OSS was 50% in 2022 and will increase to 66% in 2023. Figure 10 helps explore organizational plans regarding OSPOs and OSS initiatives. Most organizations that have an OSPO or an OSS initiative pursue it as a formally structured entity. Figure 7 shows that in 2023, 43% of our sample have implemented a formally structured approach compared with 23% who support an informally structured, part-time, or virtual approach. Twenty-four percent of our sample does not have an OSPO or an OSS initiative, and 11% are planning one.

The contrast between 2022 and 2023 is striking. The number of organizations without an OSPO or an OSS initiative declined from 37% to 24%, which is a change of 35% in one year. Correspondingly, the number of organizations implementing a formally structured approach increased from 30% to 43%, reflecting 43% growth, and the number of organizations adopting an informal approach increased from 20% to 23%, indicating 15% growth.

The preference for a more formally structured approach to OSPOs and OSS initiatives indicates that organizations understand the significance and importance of open source to their overall IT strategy and want to ensure the program is resourced appropriately.

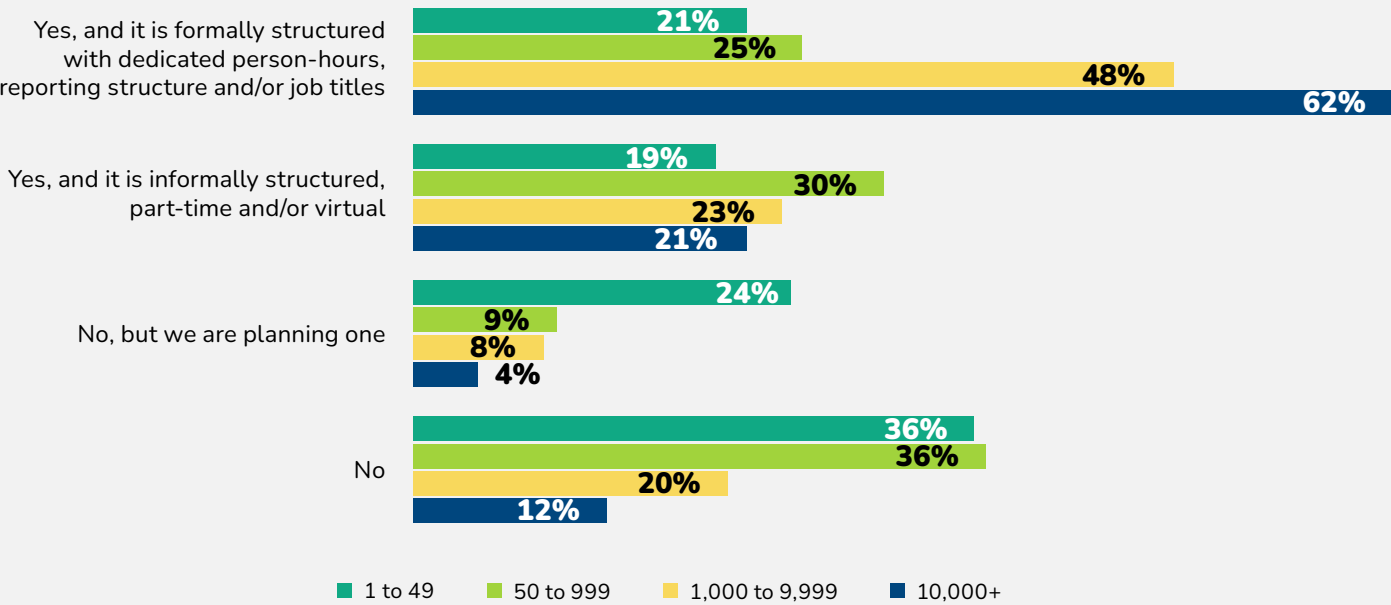
FORMALLY STRUCTURED OSPOS OR
OSS INITIATIVES ARE CORRELATED
WITH COMPANY SIZE

The same core question about how organizations are involved in OSPOs and OSS initiatives can provide some additional insights when we segment this question by company size, as shown in Figure 11. The most striking finding in Figure 11 is the high commitment to formally structured approaches for OSPOs and OSS initiatives and the increasing focus on a formally structured approach as the organizational size increases. The preference for a formally structured approach includes 21% of small organizations (1–49 employees), 25% for medium organizations (50–999 employees), 48% for larger organizations (1,000–9,999 employees), and 62% for very large organizations (10,000+ employees).

organizations (1,000–9,999 employees), and 62% for very large organizations (10,000+ employees).

Support for informally structured, part-time, or virtual approaches shows no distinct pattern other than adoption by 19–30% of organizations. However, for organizations that do not have an OSPO or an OSS initiative or are in the planning stages of implementing one, note the declining percentages relative to company size. The implication is that as companies grow larger, their involvement with open source increases, and their need for an organized approach to managing OSS grows increasingly acute. Figure 11 shows this very clearly in that 83% of very large organizations have a structured approach to managing OSS compared with 40% of small organizations.

FIGURE 11
HAVING A FORMALLY
STRUCTURED OSPO
OR OSS INITIATIVE IS
CORRELATED WITH
COMPANY SIZE
Does your organization
have an OSS program or
initiative? (select one)
segmented by: Company
size (4 size classes)



2023 STATE OF OSPOS, Q9 X Q4B, SAMPLE SIZE = 472, DKNS RESPONSES EXCLUDED

SOFTWARE PRODUCERS SHOW THE STRONGEST ADOPTION OF FORMALLY STRUCTURED OSPOS OR OSS INITIATIVES

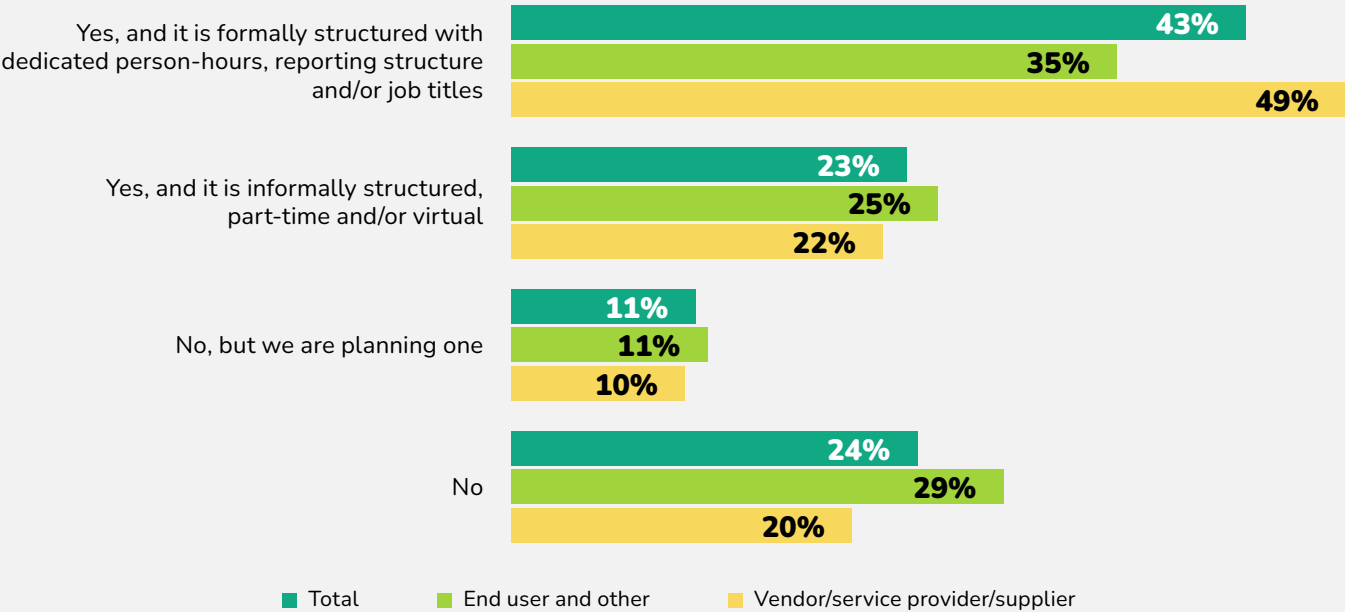
Using the same core question again about how organizations are involved in OSPOs and OSS initiatives, we also see differences in adoption between software producers and software consumers. Figure 12 shows that 49% of software producers (IT vendors, service providers, and suppliers) use a formally structured approach to

managing OSS. This contrasts with just 35% of software consumers (end-user companies, academia, government, and others). This is really no surprise because the business of software producers is software, so their demand for OSS is likely to be exceptionally high.

Reliance on informally structured approaches ranges between 22% and 25%, with no discernible preference when comparing producers and consumers. However, 20% of software producers do not explicitly manage OSS, and this rises to 29% for end-user organizations and others.

FIGURE 12
SOFTWARE PRODUCERS SHOW THE STRONGEST OSPO AND OSS INITIATIVE ADOPTION

Does your organization have an open source program or initiative? (select one)
segmented by: Organization type regrouping (2 categories)



2023 STATE OF OSPOS, Q9 X Q6B, SAMPLE SIZE = 478

ALL REGIONS SHOW SIGNIFICANT INCREASED OSPO AND OSS INITIATIVE ADOPTION—ESPECIALLY ASIA-PACIFIC

Leveraging this core question once again regarding how organizations are involved in OSPOs and OSS initiatives, we see interesting differences when we segment the data by geography and perform a year-over-year comparison between 2022 and 2023.

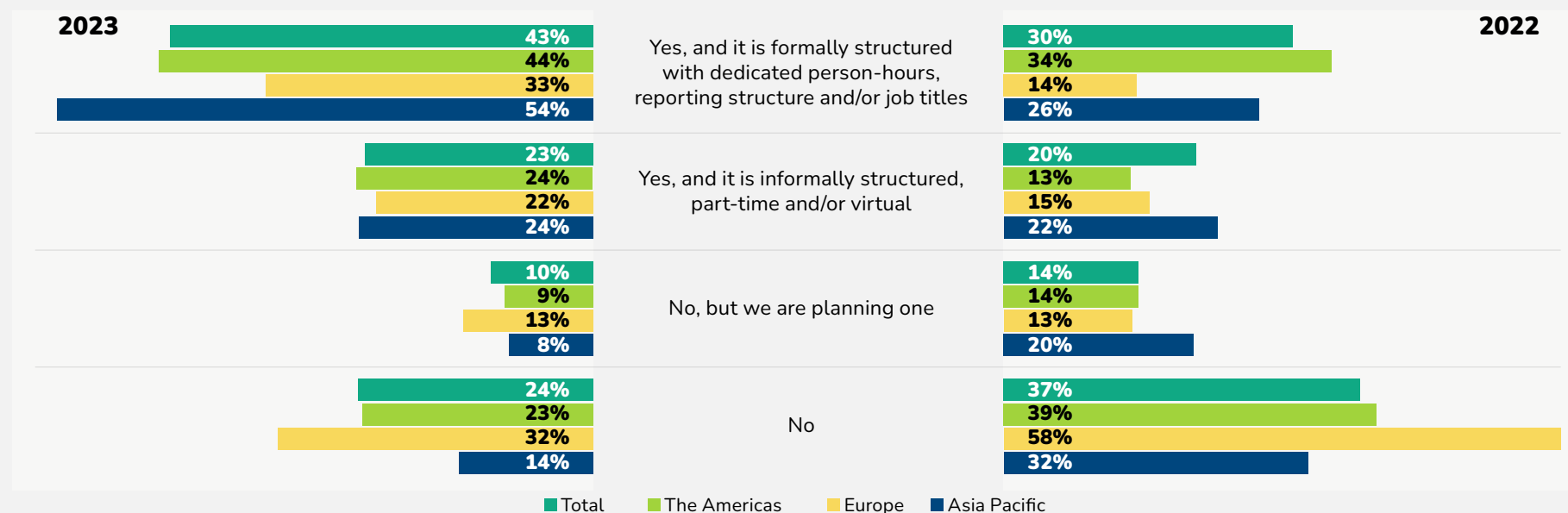
The most significant change in Figure 13 is the emergence of Asia-Pacific as the 2023 leader in formally structured OSPOs and OSS

initiatives. Formally structured OSPOs in Asia-Pacific increased from 26% in 2022 to 54% in 2023. This is a remarkable 108% growth in just one year. A factor potentially influencing this growth is our decision to focus more intently this year on respondents from China and Japan. The reason for this is that China (\$19.4T) and Japan (\$4.4T) are the GDP leaders in Asia-Pacific. It is possible that this effort to “follow the money” in 2023 in stratifying our sample is providing a somewhat more accurate picture of Asia-Pacific than in years past. However, because every other region also experienced high growth in 2023, only part of Asia-Pacific’s performance is attributed to sampling differences.

FIGURE 13

ALL REGIONS SHOW INCREASING ADOPTION OF OSPOS AND OSS INITIATIVES BUT ESPECIALLY BY ASIA-PACIFIC

Does your organization have an open source program or open source initiative?
segmented by: geographic location of company headquarters



2023 STATE OF OSPOS, Q9 X Q5B, SAMPLE SIZE = 458

2022 STATE OF OSPO, Q6 X Q55, SAMPLE SIZE = 577

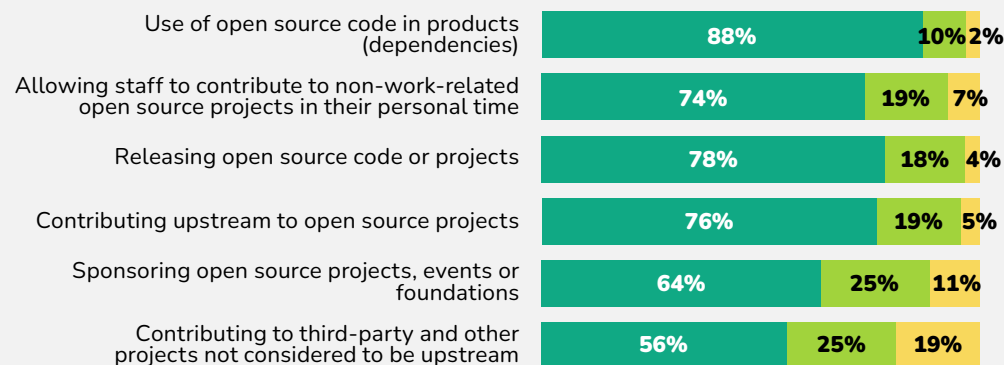
FIGURE 14

ORGANIZATIONS WITH OSPOS AND OSS INITIATIVES ARE DEEPLY INVOLVED IN OSS BUT EVEN ORGANIZATIONS WITHOUT AN OSPO OR OSS INITIATIVE STILL SEEK OSS INVOLVEMENT

Does your organization have a formal policy governing use and contribution to OSS projects in the following areas? (select one response per row)

filtered by: Does your organization have an OSS program or initiative

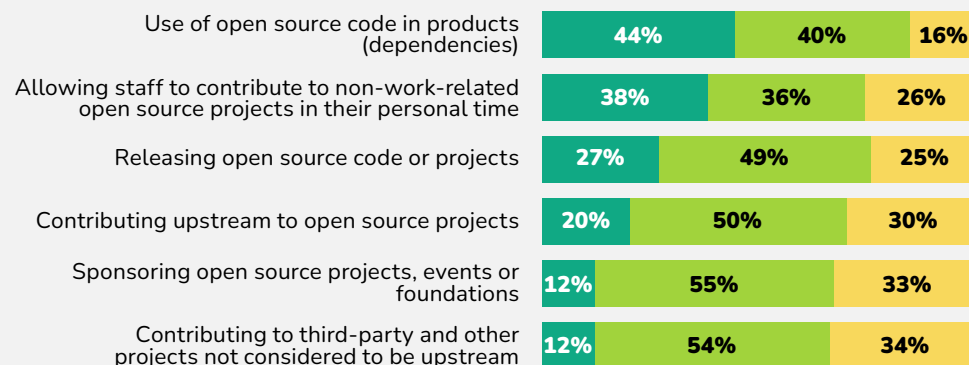
Organizations with OSS programs or initiatives



2023 STATE OF OSPOS, Q8, SAMPLE SIZE = 315, FILTERED BY Q9 (ORGANIZATIONS WITH OSS PROGRAM OR INITIATIVE)

■ Yes ■ No ■ Don't know or not sure

Organizations without OSS programs or initiatives



2023 STATE OF OSPOS, Q8, SAMPLE SIZE = 115, FILTERED BY Q9 (ORGANIZATIONS WITHOUT OSS PROGRAM OR INITIATIVE)

The Americas have traditionally been the leader in the adoption of OSPOs and OSS initiatives. Figure 13 shows that in the Americas, 34% of organizations with a formally structured OSPO or OSS initiative in 2022 saw 29% year-over-year growth to 44% in 2023. An even more impressive performance was seen in Europe, where just 14% of organizations with a formally structured OSPO or OSS initiative in 2022 saw 136% year-over-year growth to 33% in 2023.

Nearly all of this growth worldwide was a result of decisions and investments by organizations that previously did not have an OSPO or an OSS initiative. Overall, Figure 13 shows that growth in formally structured approaches grew from 30% in 2022 to 43% in 2023 reflecting 43% annual growth, and informally structured approaches grew from 20% in 2022 to 23% in 2023 reflecting 15% annual growth.

EVEN ORGANIZATIONS WITHOUT AN OSPO OR AN OSS INITIATIVE STILL SEEK OSS INVOLVEMENT

Organizations that use OSS generally define a policy that governs their actions using and/or contributing to OSS. Figure 14 compares a number of OSS attributes between organizations that have an OSS program or initiative and those organizations without an OSS program or initiative. When comparing the percentage of organizations that have a policy, organizations that have an OSPO or an OSS initiative dwarf those without. As an example, 88% of organizations that have an OSPO or an OSS initiative have a formal policy around the use of source code compared with just 44% of organizations without an OSPO or an OSS initiative. This 2x differential generally increases for activities with higher levels of OSS commitment, such as releasing OSS code (2.9x), contributing upstream to projects (3.8x), and sponsoring OSS projects (5.3x).

What becomes clear from Figure 14 is that organizations that get involved in OSS do so out of their interest in using open source code. However, it is a positive sign to see some of those organizations without an OSPO or an OSS initiative contributing to OSS 12–38% of the time, depending upon the type of contribution.

INVOLVEMENT IN OSS BEYOND CODE USE
IS LIMITED FOR ORGANIZATIONS WITHOUT
AN OSPO OR AN OSS INITIATIVE

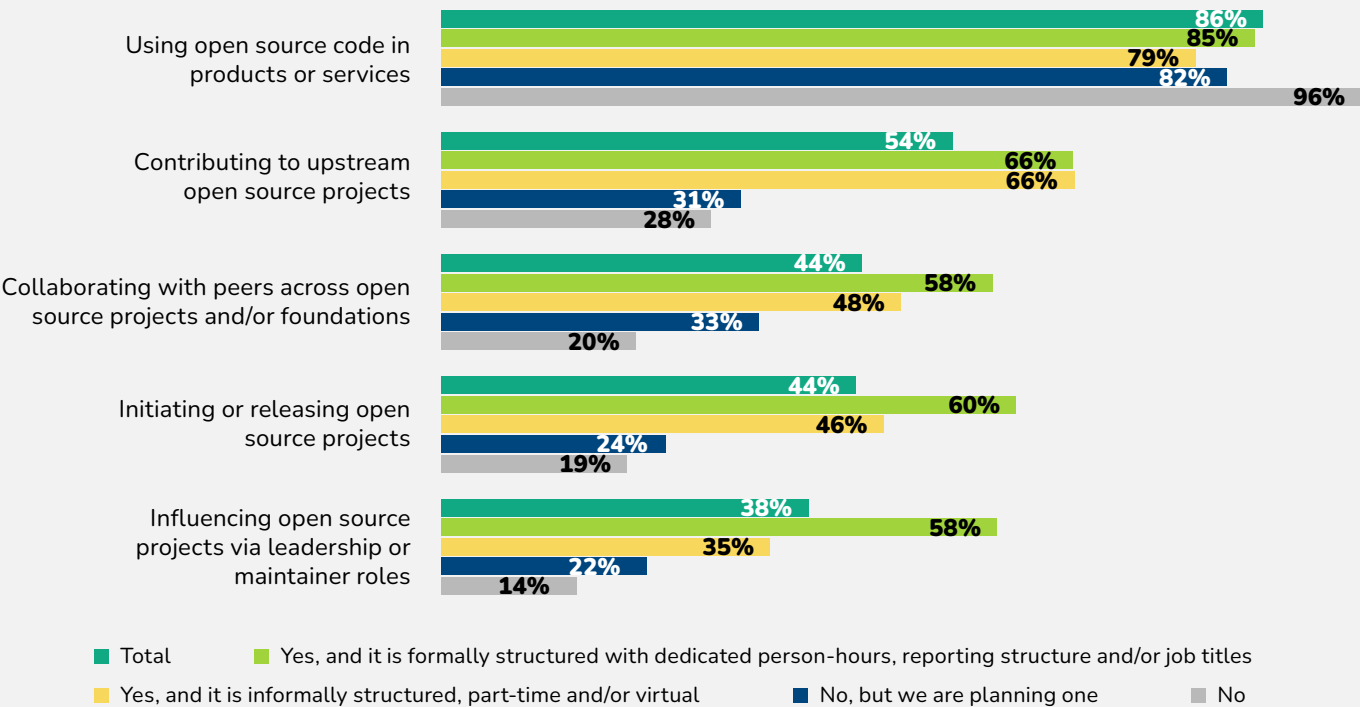
As we saw in Figure 14, the best way to be successful on an OSS journey is to have some type of OSPO or OSS initiative in place. Figure 15 looks at where an organization is on its OSS journey segmented by its approach to managing its OSS activities. Using open source code is widely practiced by organizations involved with OSS regardless of their approach to OSS oversight. The segmentation of those using open source code was 85% for those with a

formally structured OSS program, 79% for those with an informally structured program, 82% for those planning an OSPO or an OSS initiative, and a remarkable 96% for those without an OSPO or an OSS initiative.

Beyond the use of OSS, support for upstream OSS activities such as contributing to projects, collaborating with peers, releasing projects, and maintainership was more modest. In fact, the less an organization is involved in implementing an approach to OSS oversight, the less their participation in each of these upstream OSS activities. Once again, this is not surprising, and it follows that industry organizations should be looking at how to encourage greater involvement in OSS and how to break down those barriers to adoption that exist.

FIGURE 15
INVOLVEMENT IN
OSS BEYOND CODE
USE IS LIMITED FOR
ORGANIZATIONS
WITHOUT AN OSPO OR
OSS INITIATIVE

Where is your organization
on its OSS journey?
(select all that apply)
segmented by: Does
your organization have
an OSS program or
initiative? (select one)

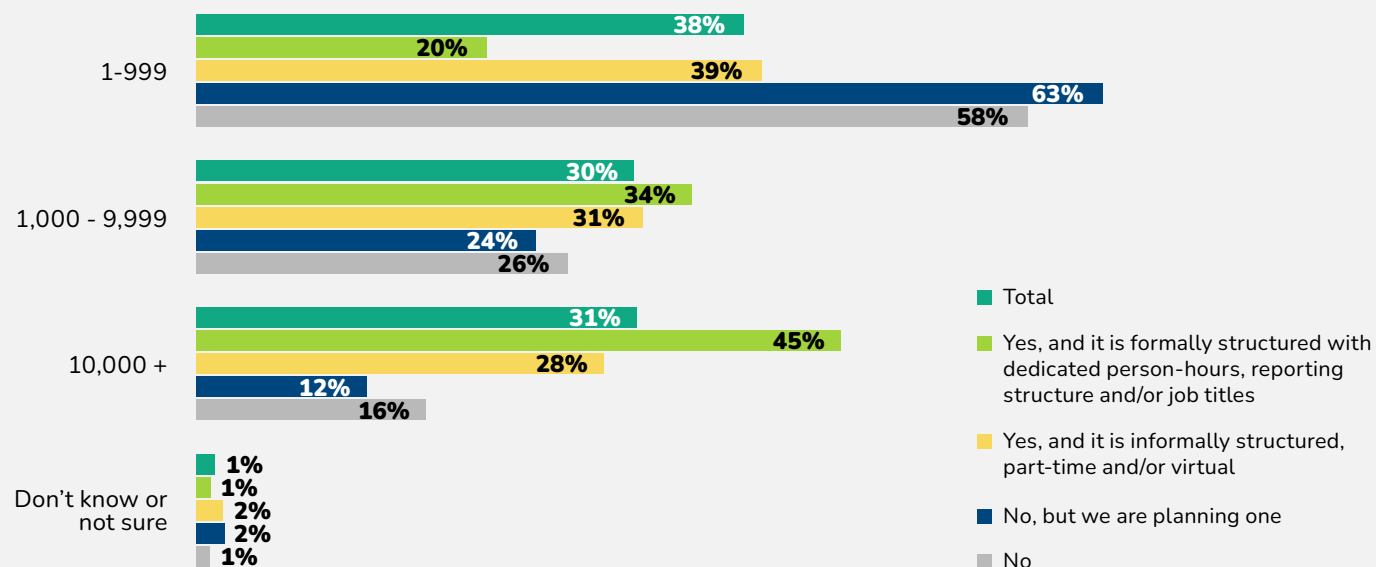


2023 STATE OF OSPOS, Q1 X Q9, SAMPLE SIZE = 478, VALID CASES = 478, TOTAL MENTIONS = 1,271

FIGURE 16

FORMALLY STRUCTURED OSPO OR OSS INITIATIVES DO NOT APPEAL TO SMALL ORGANIZATIONS

Company size (measured by number of employees) segmented by: Does your organization have an open source program or open source initiative? (select one)



2023 STATE OF OSPOS, Q4A X Q9, SAMPLE SIZE = 478

FORMALLY STRUCTURED OSPOS OR OSS INITIATIVES DO NOT APPEAL TO SMALL ORGANIZATIONS

Organization size, when segmented by the approach used to address OSS oversight, provides insight into how organizations become involved with an OSPO or an OSS initiative. Figure 16 shows that just 20% of small and medium organizations (1–999 employees) have instituted a formally structured OSPO or OSS initiative, and this rises to 39% for informal programs. The exciting news is that 63% of small

and medium organizations are planning an OSPO or an OSS initiative.

Large organizations (1,000–9,999 employees) reveal an inflection point in how organizations are involved with an OSPO or an OSS initiative—34% have implemented a formally structured approach, and 31% are leveraging an informal approach. Very large organizations (10,000+ employees) show a strong affinity with formally structured approaches to OSS oversight at 45%, declining to 28% using an informal approach.

EACH GEOGRAPHIC REGION HAS A UNIQUE LEGACY IN THE ADOPTION OF OSPOS AND OSS INITIATIVES

When we filter Figure 17 by each of the three primary geographic regions, we see unique characteristics emerge based on OSPO and OSS initiative adoption by organization size.

The Americas are best distinguished by the highest penetration in very large organizations (10,000+ employees) of formally structured (53%) and informally structured (38%) OSPOs and OSS initiatives. Europe follows in these same categories with formally structured (42%) and informally structured (29%) metrics and is trailed by Asia-Pacific with formally structured (36%) and informally structured (14%) results. The data for the Americas are a little surprising

because of the modest penetration of OSPOs and OSS initiatives in small/medium and large organizations. However, there is an over-abundance of very large tech vendors in the Americas, which might partially explain these results.

Europe shows the greatest uptake in small/medium organizations with formally structured (31%) and informally structured (47%) OSPOs or OSS initiatives. In the long run, this should accelerate overall Europe penetration because small/medium organization adoption is less of a challenge.

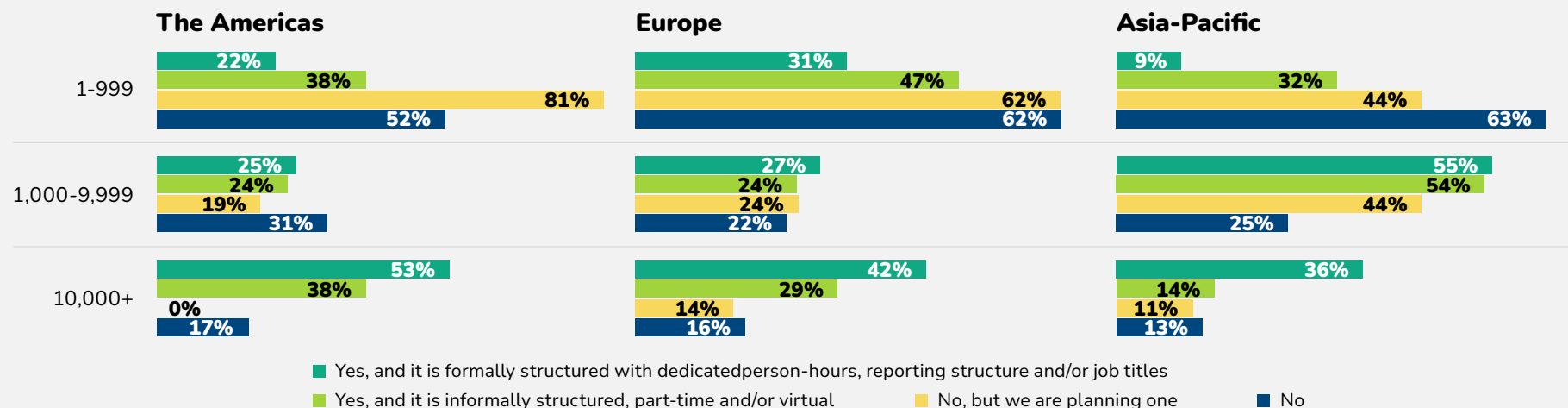
Finally, Asia-Pacific shows the greatest penetration in large organizations with formally structured (55%) and informally structured (54%) OSPOs or OSS initiatives. This seems to show that use of OSS has passed a tipping point and that large Asia-Pacific organizations have rapidly sought to leverage the value that OSS involvement provides.

FIGURE 17

EACH GEOGRAPHIC REGION EXCELS IN OSPO AND OSS INITIATIVE ADOPTION IN A UNIQUE WAY

Company size (measured by number of employees)

segmented by: Does your organization have an open source program or initiative? (select one)



2023 STATE OF OSPOS, Q4A X Q9, SAMPLE SIZE = 180 (THE AMERICAS), SAMPLE SIZE = 160 (EUROPE), SAMPLE SIZE = 118 (ASIA-PACIFIC), DKNS RESPONSES EXCLUDED

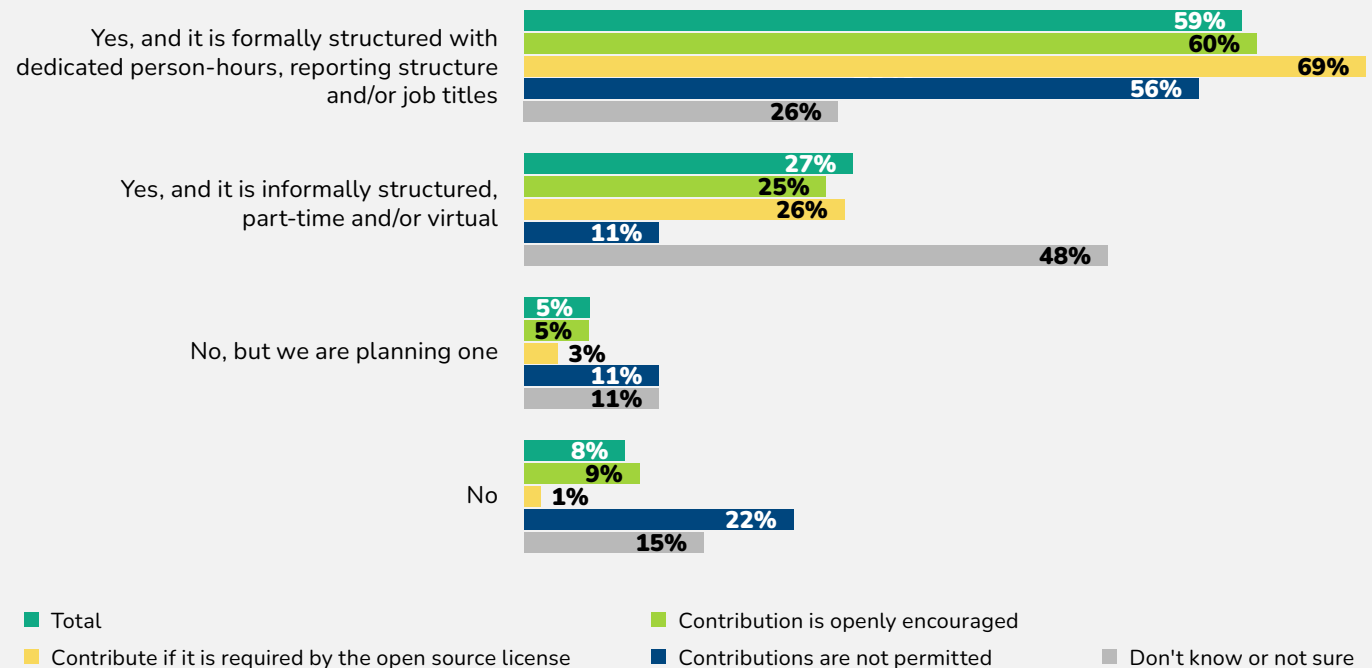
ORGANIZATIONS WITH A FORMAL OSPO OR OSS INITIATIVE ARE LEADERS IN UPSTREAM CONTRIBUTIONS

Organizational involvement in upstream OSS contributions is largely dependent on the organization's approach to OSS oversight. Figure 18 shows that the primary upstream

OSS contributors are organizations with formally structured OSPOs and OSS initiatives, with 60% reporting that contribution is openly charged and 69% contributing if required by the OSS license. These numbers drop dramatically for organizations with informally structured OSPOs or OSS programs, with just 25% indicating that contributions are openly encouraged and 26% contributing if required by the license.

FIGURE 18
ORGANIZATIONS WITH A FORMAL OSPO OR OSS INITIATIVE ARE STRONG OSS UPSTREAM CONTRIBUTORS

Does your organization have an open source program or open source initiative? (select one) segmented by: Which of the following best describes your organization's formal policy on contributing to upstream open source projects? (select one)



2023 OSPO SURVEY, Q9 X Q10, SAMPLE SIZE = 277

“

Moreover, among these organizations, the KPIs for measuring success indicate that the key objectives of OSPOs are focused on forming and executing an open source strategy as well as improving the collaboration with open source projects. Notably, license compliance and related processes are ranked slightly lower. From my perspective, this does not indicate that compliance is not important anymore—on the contrary, when considering the increasing focus on software regulation. Instead, organizations are evolving along the maturity model of OSPOs, shifting to a strategic view on OSS after establishing foundational compliance processes.

GEORG KUNZ, ERICSSON

IDENTIFYING THE PRIMARY RESPONSIBILITIES OF AN OSPO OR AN OSS INITIATIVE

An important question in the survey that was asked only of organizations that currently have an OSPO or an OSS initiative was to identify the primary responsibilities of the program. This question allowed the respondent to select multiple responses. Figure 19 shows the results, with eight of the responses selected by 40% or more of the respondents and three responses selected by 50% or more of the respondents.

The leading responses were collaborating with open source organizations (53%), developing and executing open source strategy (51%), and establishing and improving open source

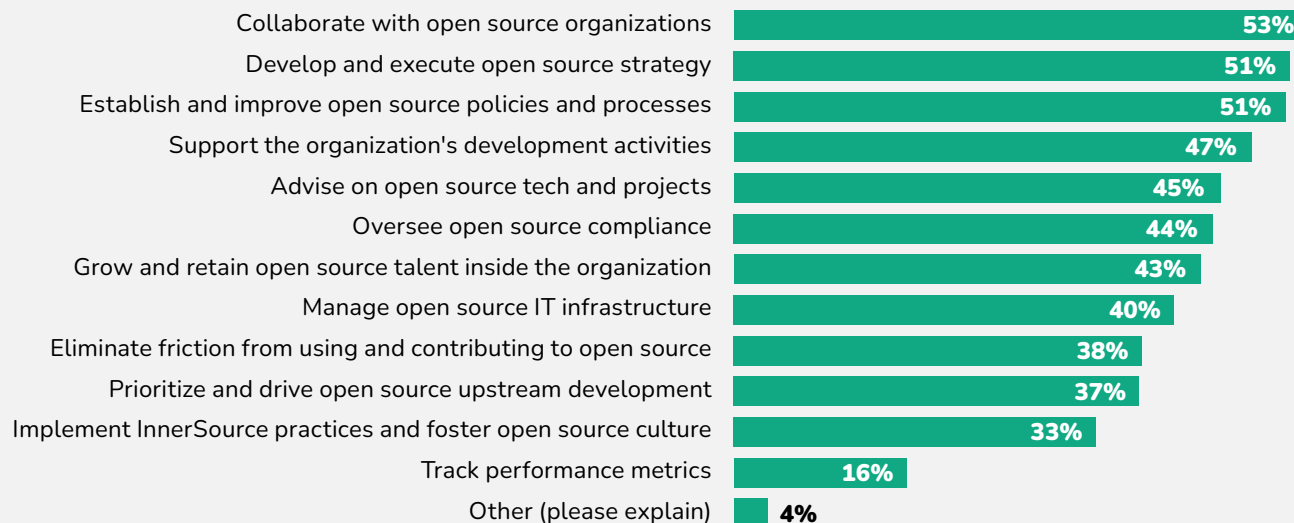
policies and processes (51%). It is especially exciting and rewarding to see that organizations see it as their responsibility to collaborate with open source organizations, such as the Linux Foundation. This suggests that these open source organizations are perceived as facilitators when it comes to open source use, contribution, and sustainability. This means that organizations involved with open source see this collaboration as valuable to their open source journey.

The development and execution of open source strategies, along with the responsibility to define and improve open source policies and processes, is at the forefront of what an OSPO or an OSS initiative is all about. This confirms what we would expect from organizations with OSPOs and OSS initiatives.

FIGURE 19

THE PRIMARY RESPONSIBILITIES OF AN OSPO OR OSS INITIATIVE ARE TO COLLABORATE WITH OSS ORGANIZATIONS, IMPLEMENT OSS STRATEGY, AND IMPROVE OSS POLICIES AND PROCESSES

What are the primary responsibilities of the open source program or initiative? (select all that apply)



2023 STATE OF OSPOS, Q11, SAMPLE SIZE = 285, VALID CASES = 285, TOTAL MENTIONS = 1,427

OSPO AND OSS INITIATIVE ADOPTION IS INCREASING

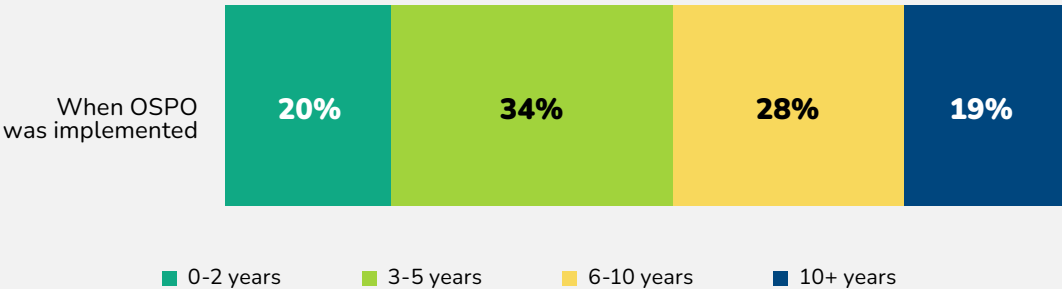
Although we know that there has been a significant increase in OSPO and OSS initiative adoption in the last two years, Figure 20 helps emphasize how adoption has changed over the last 15 years. Figure 20 shows that 54% of OSPOs or OSS initiatives were implemented in the last five years. Likewise, 28% were implemented 6–10 years ago, and 19% were implemented 10–15 years ago. Somewhat

simplistically, this means that, on average, adoption increased four percentage points each year 10–15 years ago, six percentage points each year 6–10 years ago, and 11 percentage points in each of the last five years.

We anticipate that actual growth in OSPO adoption will begin to slow because 66% of organizations involved with open source already have an OSPO or an OSS initiative, and, based on market penetration statistics, most markets are assumed to be fully penetrated when they reach 85–90%.

FIGURE 20
THE MAJORITY OF OSPOS HAVE BEEN IMPLEMENTED IN THE LAST FIVE YEARS

How long ago was the program or initiative established? (select one)



2023 OSPO, Q18, SAMPLE SIZE = 287, DKNS RESPONSES EXCLUDED

“

The establishment and prevalence of OSPOs within organizations are on a noticeable upward trend. A substantial majority (54%) of these OSPOs have been established in the last five years (including my office—F5 OSPO, established late 2021), and a significant number are actively considering creating OSPOs in the coming year. This growth highlights a clear trend of increased investment in and enthusiasm for open source across various industries.

ANNANIA MELAKU, F5

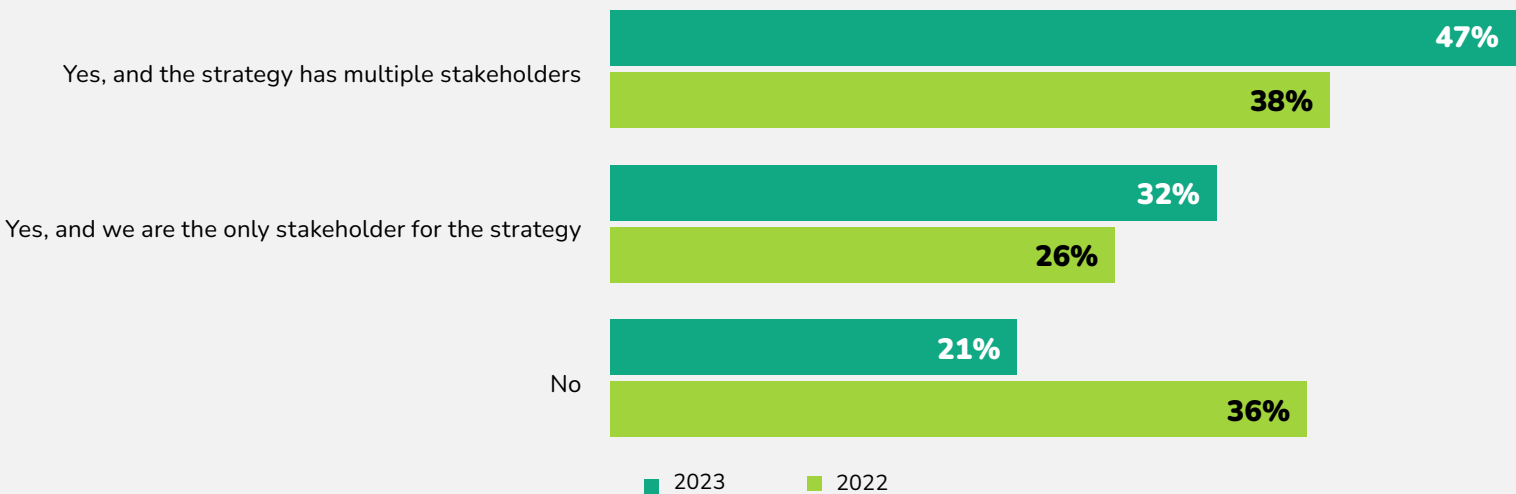
INNERSOURCE INVOLVEMENT ADVANCES IN 2023

InnerSource is a development approach for closed source software utilizing best practices from large-scale open source projects. Figure 21 shows that the increasing penetration of OSPOs and OSS initiatives is enabling organizations to evolve their SDLC methodology to embrace the best attributes of open source use and contribution.

The transition from an open source program being the only stakeholder to multiple stakeholders is an endorsement of OSPO and OSS initiative attributes by IT leadership. Figure 21 shows that single-stakeholder strategies have increased 23% from 26% in 2022 to 32% in 2023. More importantly, multiple-stakeholder strategies have increased 24% from 38% in 2022 to 47% in 2023.

FIGURE 21
**INNERSOURCE INVOLVEMENT (W/MULTIPLE STAKEHOLDERS) ADVANCES IN 2023
DESPITE ECONOMIC HEADWINDS**

Does your open source program have an inner source team, strategy, or implement principles to drive open source culture within the organization? (select one)



2023 STATE OF OSPOS, Q14, SAMPLE SIZE = 287, DKNS RESPONSES EXCLUDED
2022 STATE OF OSPOS, Q11, SAMPLE SIZE = 372, DKNS RESPONSES EXCLUDED

ORGANIZATIONS WITH OSPOS AND OSS INITIATIVES ARE BETTER POSITIONED TO LEVERAGE LEADING-EDGE TECHNOLOGIES

Cloud native computing, containerization, AI/ML, and DevOps are all technology areas where open source has a significant footprint. Figure 22 shows that these are also the leading technology areas where organizations focus their open source activities. However, when we segment this information based on the organizational approach to open source oversight, organizations with a formal or informal OSPO or OSS initiative have a significantly higher level of engagement with nearly every one of these technologies. This suggests that an OSPO or an OSS initiative is an important facilitator in helping the organization engage with these technologies in ways that can dramatically benefit the organization.

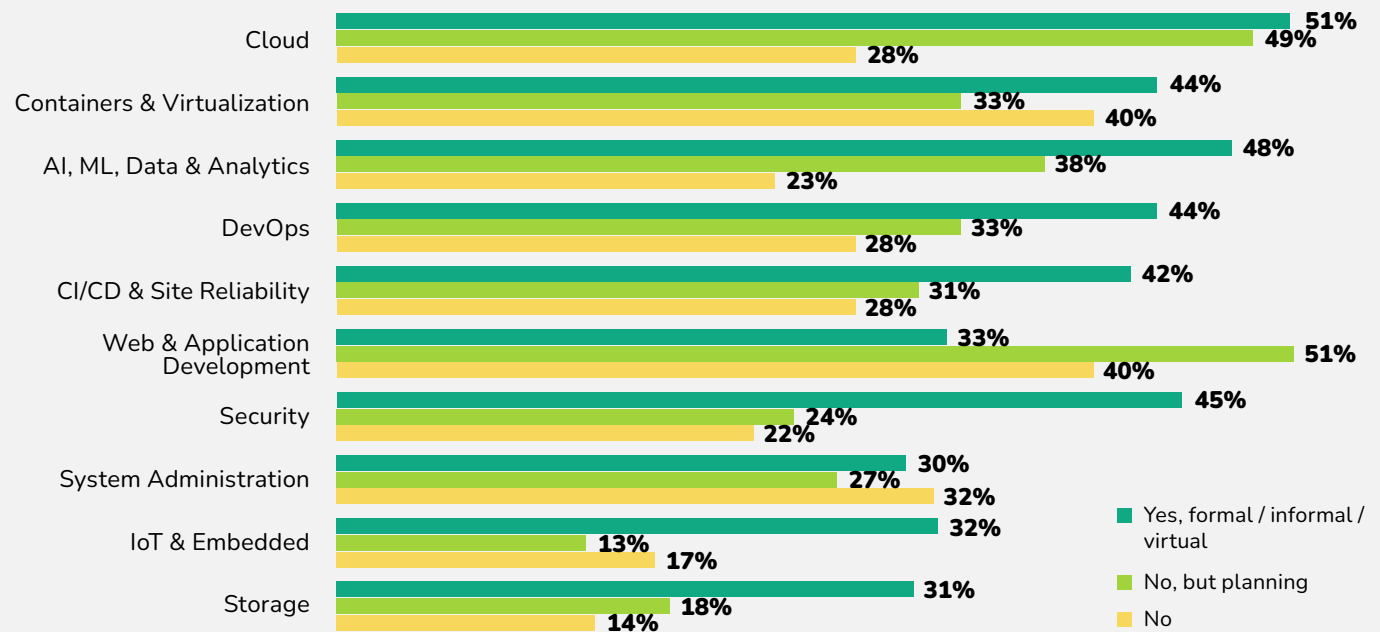


Looking ahead, in the face of emerging technologies such as AI-generated code and an increased focus on software security, OSPOs and equivalent organizations will continue to be important centers of competence for enabling organizations to successfully navigate these challenges.

GEORG KUNZ, ERICSSON

FIGURE 22
ORGANIZATIONS WITH OSPOS AND OSS INITIATIVES ARE BETTER POSITIONED TO ASSIMILATE LEADING EDGE TECHNOLOGIES

Which technology area does your organization focus its open source activities on? (select all that apply) segmented by: Does your organization have an open source program or initiative



2023 STATE OF OSPOS, Q48 X Q9B, SAMPLE SIZE = 363, VALID CASES = 363, TOTAL MENTIONS = 1,596

THE BENEFITS AND CHALLENGES OF AN OSPO OR AN OSS INITIATIVE

WHERE ORGANIZATIONS BENEFIT THE MOST FROM AN OSPO OR AN OSS INITIATIVE

An OSPO or an OSS initiative provides a wide array of benefits to an organization. Figure 23 shows that responses for the top six benefits range between 36% and 39%. This helps support the claim that an OSPO or an OSS initiative provides many benefits.

The leading benefit reported by 39% of organizations with OSPOs or OSS initiatives is the awareness of open source use and commercial dependencies. Understanding use facilitates compliance, and a

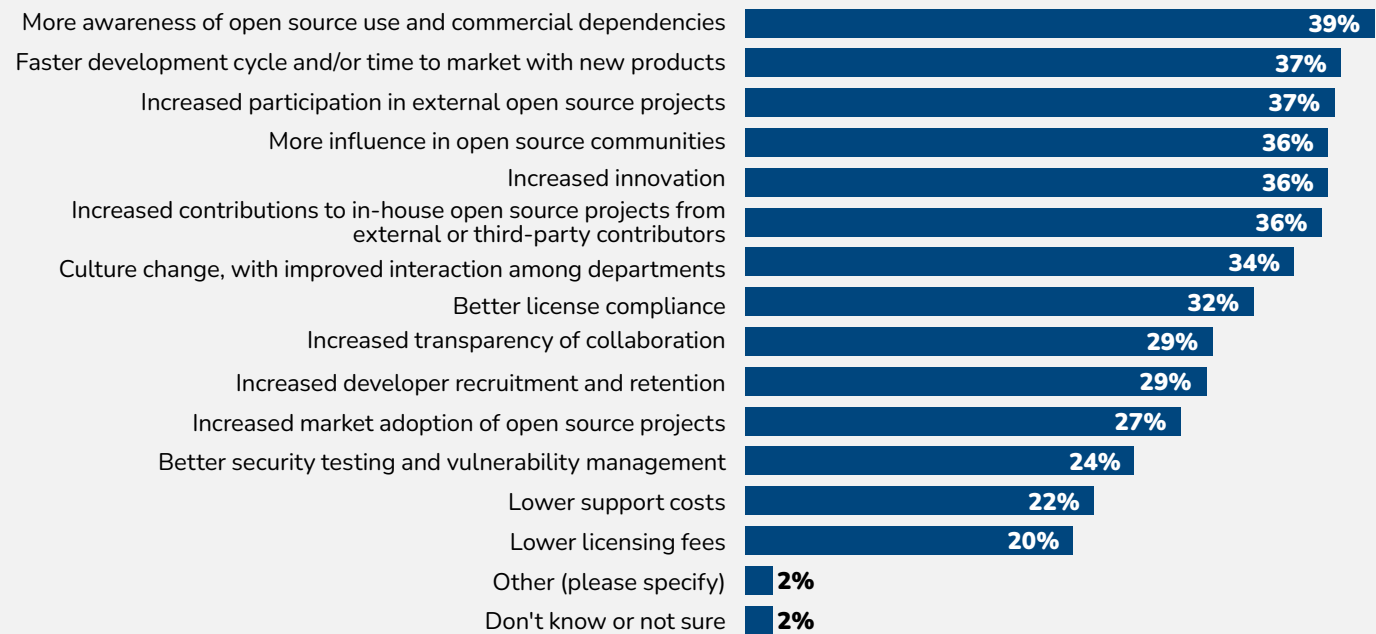
knowledge of dependencies (including transitive dependencies) is an important element in addressing security concerns.

Faster development, faster time to market (37%), and increased innovation (36%) were likewise hallmarks of open source use and facilitated by OSPOs and OSS initiatives.

Finally, increased participation in external open source projects (37%), more influence on open source communities (36%), and increased contributions to enhance OSS projects from third-party contributors (36%) are all examples of activities that are typically led by OSPOs and OSS initiatives.

FIGURE 23
WHERE ORGANIZATIONS BENEFIT THE MOST FROM AN OSPO OR OSS INITIATIVE: SECURITY, REDUCED TIME TO MARKET, AND INCREASED OSS PROJECT PARTICIPATION

What are the areas where your organization has most benefited from the open source program or initiative? (select all that apply)



2023 STATE OF OSPOS, Q20, SAMPLE SIZE = 241, VALID CASES = 241, TOTAL MENTIONS = 1,060

HOW OSPOS AND OSS INITIATIVES MEASURE SUCCESS

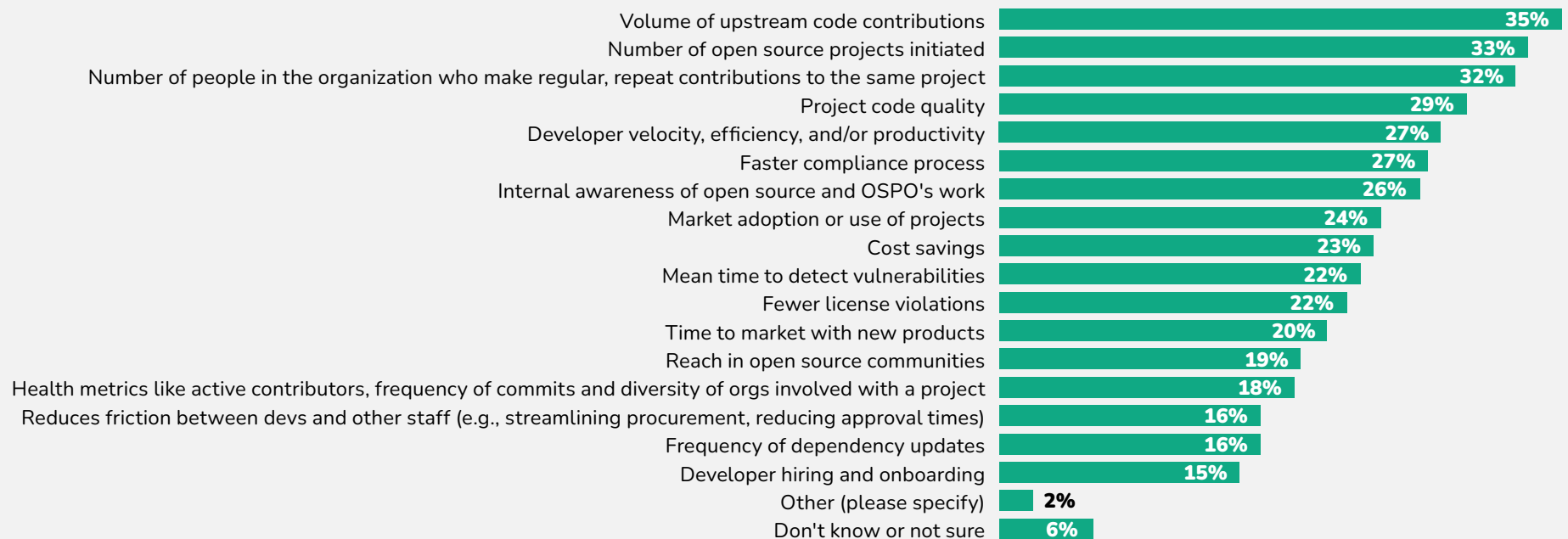
There are a wide variety of KPIs that OSPOs and OSS initiatives use to measure performance. Figure 24 identifies 17 of these KPIs, but there are three that stand out relative to others on the list. The leading KPIs include the volume of upstream code contributions (35%), the number of open source projects initiated (33%), and the number of people in the organization who make regular contributions (32%).

to the same project (32%). What's interesting about these three leading metrics is that they all focus on OSS development or upstream contribution rather than focusing on how OSS code is being used. To be fair, project code quality, at 29%, just misses being a part of this list—and while code quality could refer to OSS being used or contributed to, it makes sense that this refers to code usage. It is useful to scan this list because the metrics do give a sense of which KPIs are more important or less important.

FIGURE 24

THE LEADING WAYS THAT OSPOS OR OSS INITIATIVES MEASURE SUCCESS IS BY: VOLUME OF UPSTREAM CONTRIBUTIONS, OSS PROJECTS INITIATED, AND NUMBER OF PEOPLE CONTRIBUTING

What are the ways your OSS program or initiative quantifies success? (select all that apply)



2023 STATE OF OSPOS, Q21, SAMPLE SIZE = 241, VALID CASES = 241, TOTAL MENTIONS = 993

LEADING CHALLENGES TO OSPOS AND OSS INITIATIVES

The approach used in Figure 25 was to ask organizations with an OSPO or an OSS initiative to identify their top three program challenges. The top five responses stand out relative to the others. These top five responses are insufficient budget and program cost (34%), executive awareness and support (34%), getting teams on board with compliance and security approaches (32%), internal awareness of the program (30%), and ability to influence open source projects (29%).

Insufficient budget, program cost, and executive awareness are common challenges that we see year after year. Despite these persistent issues, we did see in Figure 8 that the likelihood of funding increases in 2023 was 49% for formally structured approaches and 43% for informal approaches. So, concerns about an insufficient budget are very real, although executive awareness should be

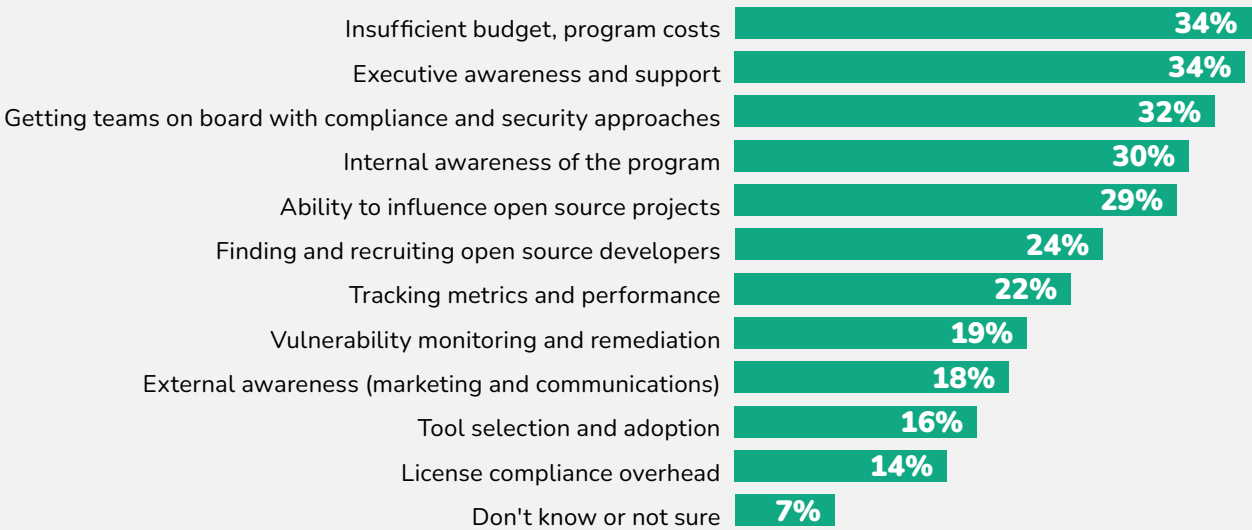
addressable given the significant increase in organizations with OSS involvement, which communicates the increasing value of OSS.

Getting teams on board with compliance and security approaches is clearly an issue for all software being developed and deployed. Security is a significant concern across all IT, and despite some differences between the security concerns of open source, InnerSource, and closed source, each domain needs to address its own risk management assessments.

“ This year’s survey responses indicate ongoing challenges, including limited budgets and insufficient executive support and awareness. Nevertheless, I am encouraged by the overall increase in investment.

ANNANIA MELAKU, F5

FIGURE 25
LEADING CHALLENGES TO OSPOS AND OSS INITIATIVES INCLUDE: INSUFFICIENT BUDGET, LEVEL OF EXECUTIVE SUPPORT, AND ORGANIZATIONAL COMPLIANCE WITH POLICY
What are the top three challenges your open source program or initiative faces? (select up to three responses)

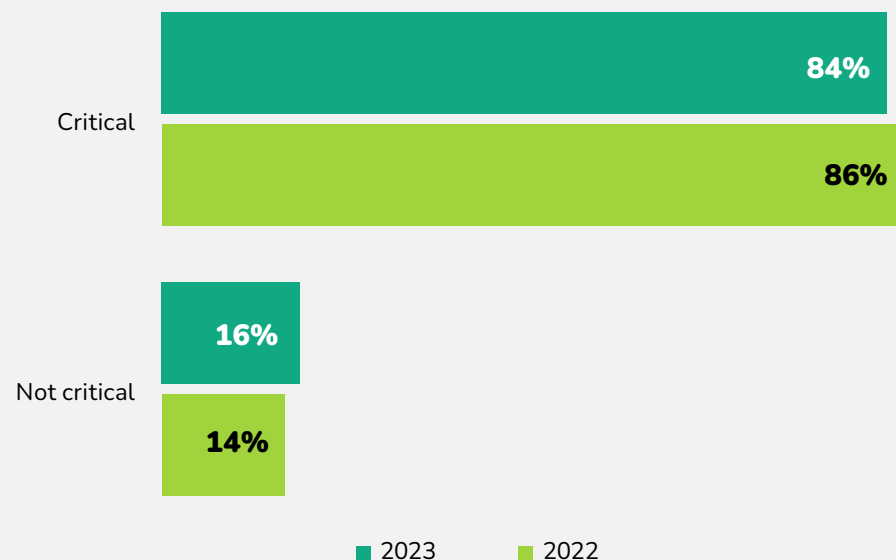


2023 STATE OF OSPOS, Q22, SAMPLE SIZE = 243, VALID CASES = 243, TOTAL MENTIONS = 679

FIGURE 26

THE MAJORITY OF ORGANIZATIONS SEE AN OSPO OR OSS INITIATIVE AS CRITICAL TO ACHIEVING ORGANIZATIONAL GOALS

How critical is your open source program or initiative to achieving organizational goals? (select one)



2023 STATE OF OSPOS, Q23B, SAMPLE SIZE = 242, DKNS RESPONSES EXCLUDED
2022 STATE OF OSPO, Q19, SAMPLE SIZE = 294, DKNS NOT INCLUDED AS A RESPONSE

THE MAJORITY OF ORGANIZATIONS SEE AN OSPO OR AN OSS INITIATIVE AS CRITICAL TO ACHIEVING ORGANIZATIONAL GOALS

This is one area where the perspectives from 2022 were not significantly different in 2023. That said, Figure 26 shows that in 2023, 84% of organizations with an OSPO or an OSS initiative reported that this program was critical to achieving organizational goals. This is a compelling statement and clearly ties back to the benefits that an OSPO or an OSS program facilitates, such as faster development cycles and time to market, more awareness of commercial dependencies (which leads to improved security), and increased innovation.

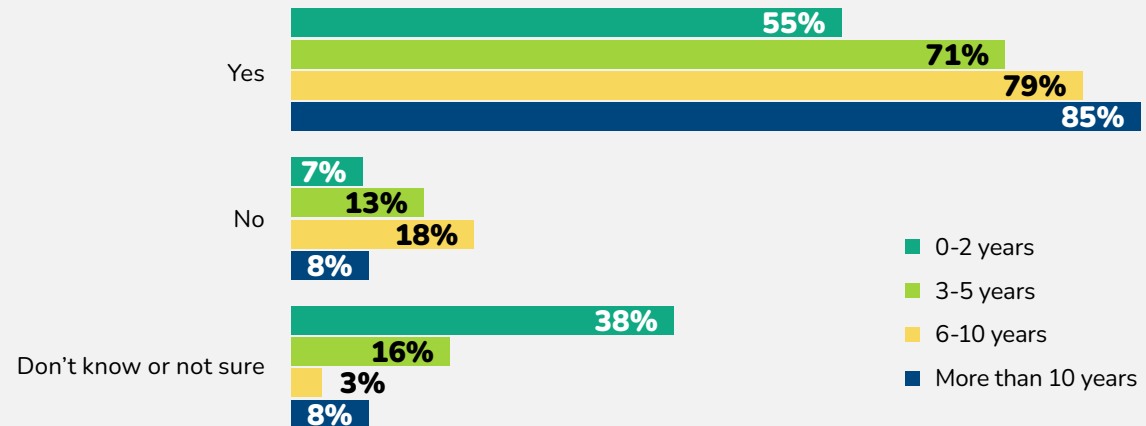
OSPO OR OSS INITIATIVE TENURE IS KEY TO ADDRESSING COMPLEX SDLC REQUIREMENTS

The length of time or tenure that an organization has had with an OSPO or an OSS initiative has a profound impact on organizational software practices, research practices, employee retention, interoperability and technology transfer. Figure 27 is an example of not only the positive impact that an OSPO or an OSS initiative is having in the area of interoperability and technology transfer but also the difference that OSPO tenure has in realizing this positive impact.

FIGURE 27

THE TENURE OF AN OSPO OR OSS INITIATIVE IS KEY TO ADDRESSING COMPLEX SDLC ACTIVITIES

Has your OSS program or initiative had a positive impact on interoperability and technology transfer segmented by: How long ago was the OSS program or initiative established? (select one)



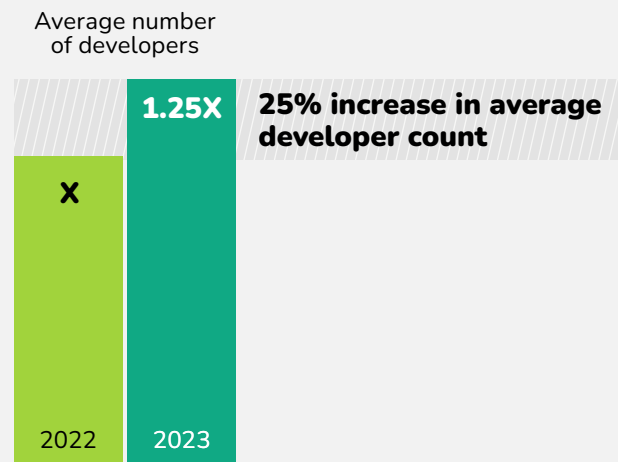
2023 STATE OF OPSP, Q24.4 X Q18, SAMPLE SIZE = 243

Figure 27 shows that the percentage of organizations experiencing a positive impact increases in lockstep with the age or tenure of the OSPO or OSS initiative. Fifty-five percent of OSPOs or OSS initiatives in use for 0–2 years show a positive impact, and this increases to 71% at 3–5 years, 79% at 6–10 years, and 85% at 10+ years. So not only does having an OSPO or OSS initiative drive increased benefits, but, in many cases, the longer the OSPO has been operational, the more pronounced these benefits become.

FIGURE 28

THE AVERAGE NUMBER OF DEVELOPERS INVOLVED IN OPEN SOURCE INCREASED 25% IN 2023

Average number of developers per organization contributing to OSS projects in 2023 and 2022 regardless of whether the organization has an OSPO or OSS initiative



2023 STATE OF OSPOS, Q45, SAMPLE SIZE = 363, DKNS RESPONSES EXCLUDED
2022 STATE OF OSPO, Q44, SAMPLE SIZE = 669, DKNS RESPONSES EXCLUDED
INCLUDES ALL DEVELOPERS CONTRIBUTING TO OSS REGARDLESS OF WHETHER ORGANIZATION HAS AN OSS PROGRAM OR INITIATIVE
AVERAGES BASED ON MIDPOINT OF DEVELOPER RANGES, UPPER LIMIT USED ON 100+ RANGE WAS 400

OSPO AND OSS INITIATIVE SUSTAINABILITY

DEVELOPER INVOLVEMENT IN OPEN SOURCE INCREASED 25% IN 2023

Developer involvement is an important yardstick for verifying the health of OSS. Figure 28 provides a relative comparison of the average number of developers contributing to open source in 2022 and 2023. We used a relative comparison because of a critical assumption we need to make regarding the upper limit of developers reported by those organizations that have more than 100 developers contributing to OSS projects. Based on the scenario that we used, where the upper limit would be 400 developers, the average number of developers contributing to OSS increases 25% in 2023.

Because very large organizations have development teams in the thousands or tens of thousands, the 100+ developer size class becomes the theoretical limit in this analysis. In a scenario where this upper limit is significantly higher than 400 developers, the average number of developers contributing to OSS grows 18% in 2023. Therefore, we can say with confidence that the average number of developers contributing to OSS in 2023 increased between 18% and 25% from 2022.

ORGANIZATIONS WITH AN OSPO OR AN OSS INITIATIVE HAVE FIVE TIMES MORE DEVELOPERS INVOLVED IN OSS THAN THOSE WITHOUT

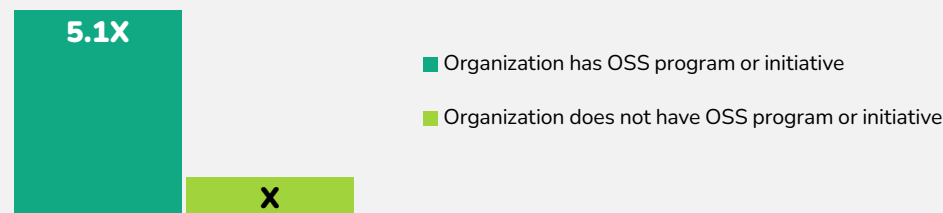
Using the same relative approach, we compared the average number of developers working for an organization with an OSPO or an OSS initiative to those organizations without one. Figure 29 shows the result of this comparison and indicates that organizations with an OSPO or an OSS initiative have five times more developers involved in OSS. The reason for this stark contrast is that the profile of organizations without an OSPO or an OSS initiative largely consists of small and medium organizations, while the profile of organizations with an OSPO or an OSS initiative is skewed toward large and very large organizations.

FIGURE 29

ORGANIZATIONS WITH AN OSPO OR OSS INITIATIVE HAVE 5X MORE DEVELOPERS INVOLVED IN OSS THAN ORGANIZATIONS WITHOUT AN OSPO OR OSS INITIATIVE

Comparing the average number of developers per organization contributing to OSS projects in 2023 segmented by whether the organization has an OSPO or OSS initiative or not

Average number of developers



2023 STATE OF OSPOS, Q45, SAMPLE SIZE = 363, DKNS RESPONSES EXCLUDED
COMPARING AVERAGE NUMBER OF DEVELOPERS CONTRIBUTING TO OSS IN ORGANIZATIONS WITH OSS INITIATIVES / PROGRAMS (N=224) TO THOSE WITHOUT (N=139)
AVERAGES BASED ON MIDPOINT OF DEVELOPER RANGES, UPPER LIMIT USED ON 100+ RANGE WAS 400

“

The 2023 State of OSPO Report highlights exciting progress in the world of OSPOs and similar initiatives. It's great to see more OSPOs and open source initiatives working together, adopting each other's ideas, and ensuring long-term success. The report shows that these organizations are making a positive difference in software, research, and open source management practices. Those with open source initiatives have five times the number of developers contributing, indicating that OSPOs are gaining advantages through improved practices and structures, supporting open source and their organizational goals effectively.

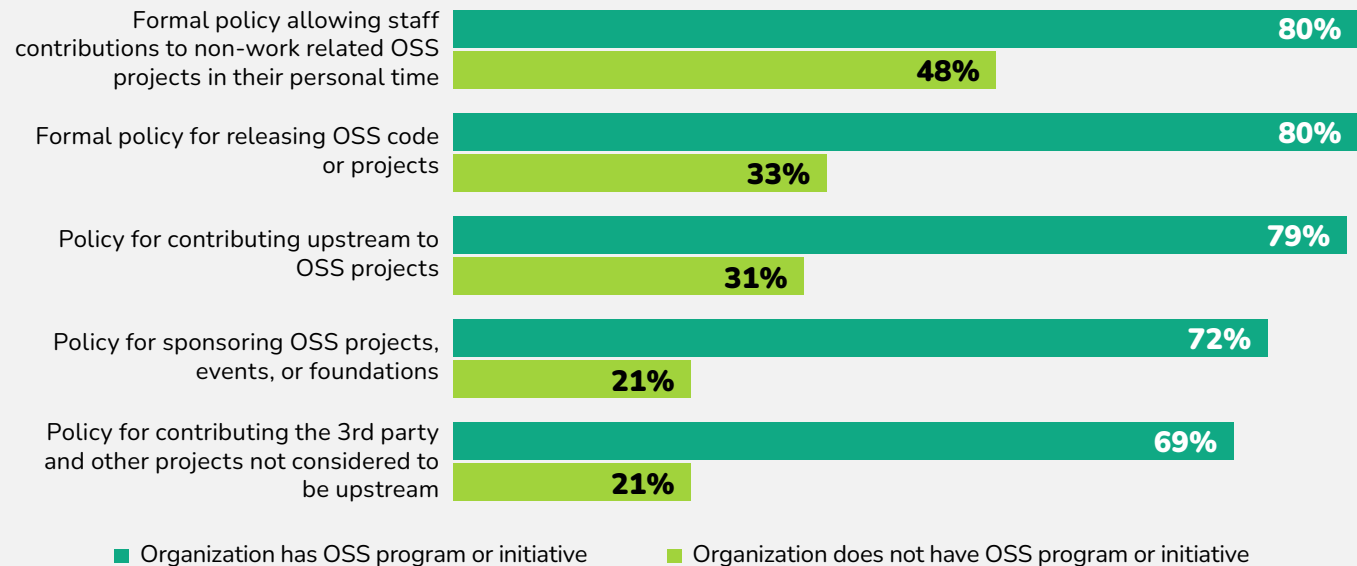
SOURAV DAS, TODO
GROUP MAINTAINER

FIGURE 30

ORGANIZATIONS WITH AN OSPO OR OSS INITIATIVE EXCEL AT OSS POLICY AND GOVERNANCE

Does your organization have a formal policy governing use and contribution to the following OSS activities?

segmented by: Does your organization have an OSS program or initiative?



2023 STATE OF OSPOS, Q8 X Q9A, SAMPLE SIZE = 478, DKNS RESPONSES EXCLUDED

ORGANIZATIONS WITH AN OSPO OR AN OSS INITIATIVE EXCEL AT OSS POLICY AND GOVERNANCE

A key part of the OSPO and OSS initiative value proposition is its contribution policy and governance regarding how the organization is involved with OSS. Figure 30 compares a variety of different areas where OSS policy is important between organizations that have an OSPO or an OSS initiative and those that do not. The results show stark differences in those areas where policy decisions are complicated.

The area where organizations with and without an OSS policy were closest revolved around a policy allowing staff contributions to non-work-related open source projects in their personal time. Because it's hard to see how this policy would be contentious, it's

not surprising that 80% of organizations with an OSPO or an OSS initiative have a policy like this compared with 48% of organizations without an OSPO or an OSS initiative.

Significant differences exist regarding more important policies, such as formal policies for releasing OSS code, contributing to upstream OSS projects, event sponsorship, or contributing to projects not considered to be upstream. Figure 30 shows that between 69% and 80% of organizations that have an OSPO or an OSS initiative have a policy in each of these areas. This contrasts with the 21% to 33% of organizations without an OSPO or an OSS initiative that have established policies in these areas. The widespread use of OSS across nearly all organizations will put increasing pressure on organizations without an OSPO or an OSS initiative to establish OSS policy, which helps explain the significant increase in 2023 of organizations that do have an OSPO or an OSS initiative, as seen in Figure 4.

UPSTREAM CONTRIBUTIONS CONTINUE TO BE OPENLY ENCOURAGED

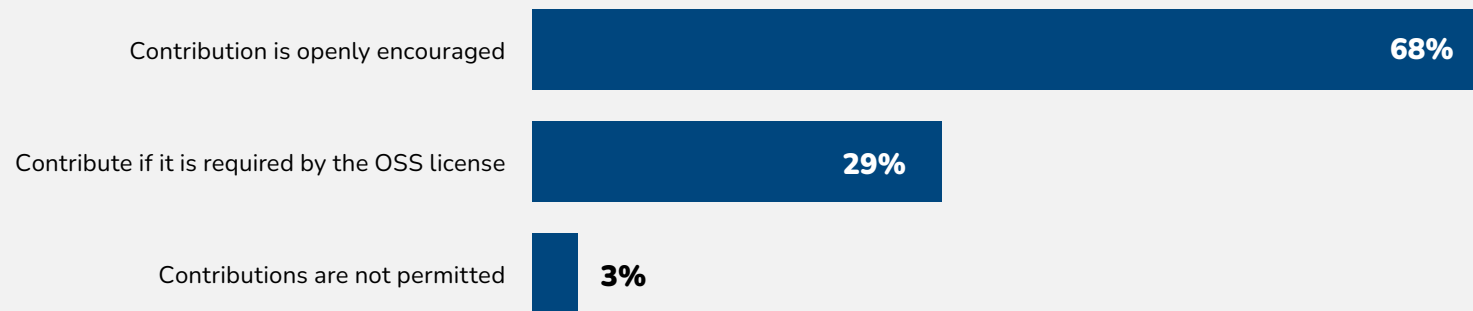
Sixty-five percent of organizations involved in OSS have a policy for contributing to upstream OSS projects (source: 2023 State of OSPOs, Q8.4, DKNS responses excluded). Figure 31 shows that 97% of these

organizations have a policy that allows contribution. These contributions are split into three categories: where contributions are openly encouraged (68%), contribution is required by the OSS license (29%), and contributions are not permitted (3%). This 2023 distribution is similar to the results from our 2022 survey other than a welcome 50% decline in the number of organizations where contributions are not permitted.

FIGURE 31

THE MAJORITY OF OPEN SOURCE CONTRIBUTIONS ARE OPENLY ENCOURAGED AT ORGANIZATIONS WITH A FORMAL POLICY ON UPSTREAM CONTRIBUTIONS

Which of the following best describes your organization's formal policy on contributing to upstream open source projects? (select one)
(for those organizations that contribute to upstream to OSS projects)



2023 STATE OF OSPOS, Q10, FILTER: FOR ORGANIZATIONS WITH A POLICY FOR UPSTREAM CONTRIBUTIONS, SAMPLE SIZE = 277, DKNS RESPONSES EXCLUDED

As reported in *The European Public Sector Open Source Opportunity* (<https://www.linuxfoundation.org/research/european-public-sector-opportunity>), Leonardo Favario, Head of OSPO, PagoPa S.p.A., Italy stated that, “Many organisations consume OSS, but it’s time to give back right. The OSPO is the place where you figure out how to give back; it could be financially, it could be technically, it could be opening pull requests, or just being there.”

COLLABORATION WITH OSS ORGANIZATIONS RANKS #1 AS AN OSPO OR OSS INITIATIVE RESPONSIBILITY

Earlier in this report, Figure 19 showed that collaborating with open source organizations was identified as the leading responsibility by organizations with an OSPO or an OSS initiative. Figure 32 shows a comparison of the top 10 responsibilities in 2023 compared with their stack ranking in 2022. The most striking change in Figure 32 is the increase in stack ranking position of the responsibility to collaborate with open source organizations from a ranking of #3 in 2022 to #1 in

2023. The only other significant change in Figure 32 is the increase in stack ranking of the responsibility to manage open source IT infrastructure from #11 in 2022 to #8 in 2023.

The importance of collaborating with open source organizations confirms their status as an epicenter of thought leadership and open source stewardship and a focal point for helping companies and developers identify, develop, and contribute to the OSS projects that matter the most to them.

Increasing demand for OSS is also driving countries to implement creative approaches to supporting OSS communities.

FIGURE 32
COLLABORATION BY OSPOS AND OSS INITIATIVES WITH OSS ORGANIZATIONS IS NOW VIEWED AS SIGNIFICANTLY MORE IMPORTANT

What are the primary responsibilities of the open source program or initiative? (select all that apply)

RESPONSIBILITY	2023 RANKING	CHANGE FROM 2022	2022 RANKING
Collaborate with open source organizations	1	+2	3
Develop and execute open source strategy	2	-1	1
Establish and improve open source policies and processes	3	-1	2
Support the organization's development activities	4	0	4
Advise on open source tech and projects	5	0	5
Oversee open source compliance	6	0	6
Grow and retain open source talent inside the organization	7	+1	8
Manage open source IT infrastructure	8	+3	11
Eliminate friction from using and contributing to open source	9	-2	7
Prioritize and drive open source upstream development	10	-1	9

2023 STATE OF OSPOS, Q11, SAMPLE SIZE = 285, VALID CASES = 285, TOTAL MENTIONS = 1,427
2022 STATE OF OSPOS, Q8, SAMPLE SIZE = 367, VALID CASES = 367, TOTAL MENTIONS = 2,035

As stated *The European Public Sector Open Source Opportunity* (<https://www.linuxfoundation.org/research/european-public-sector-opportunity>),

Bastien Guerry highlighted their efforts to build micro-communities around OSS solutions listed in France's Interministerial Free Software Catalogue (SILL). This platform allows developers within the public sector to connect, exchange expertise, and collaborate on specific software projects, promoting a culture of knowledge sharing and interaction. 'For example, if you want to work with PostgreSQL, you can see there are at least 10 experts. The aim is to facilitate expertise exchange. We think the catalogue should evolve as a place where people can interact', Guerry explained.

Also mentioned in *The European Public Sector Open Source Opportunity* (<https://www.linuxfoundation.org/research/european-public-sector-opportunity>),

Gijs Hillenius from the EC's OSPO highlighted the importance of OSPOs within the public sector in removing both legal and organisational barriers against open source adoption by developers, aiding developers in using open source more easily and facilitating collaboration.

PERSPECTIVES OF ORGANIZATIONS PLANNING TO IMPLEMENT AN OSPO OR AN OSS INITIATIVE

ORGANIZATIONS PLANNING TO IMPLEMENT AN OSPO OR AN OSS INITIATIVE SEE IT AS AN IMPORTANT PRIORITY

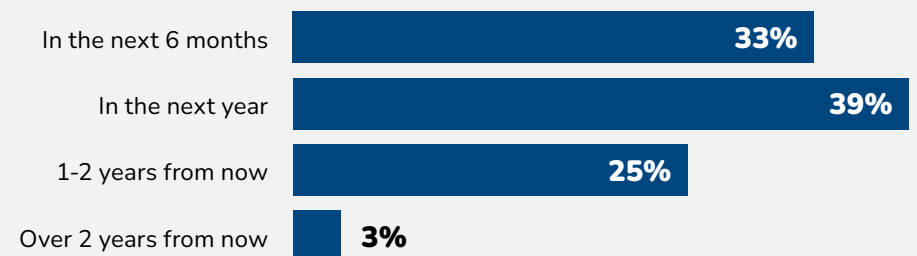
Earlier in this report, we saw in Figure 4 that 11% of organizations involved in open source were planning to implement an OSPO or an OSS initiative. One of the follow-up questions for these organizations

was exactly when the organization planned to start this OSPO or OSS initiative. The answer to this question, as shown in Figure 33, is that 72% of organizations planning to implement an OSPO or an OSS initiative expect to do so in the next year, and 33% plan to begin implementation in the next six months. Only 25% plan to wait a year, and just 3% plan to wait more than two years. This indicates the urgency that most organizations attach to their OSPO or OSS initiative plans.

FIGURE 33

ORGANIZATIONS PLANNING TO IMPLEMENT AN OSPO OR OSS INITIATIVE SEE IT AS A HIGH PRIORITY WITHIN THE NEXT YEAR

When does your organization plan to start a program or initiative? (select one)



2023 STATE OF OSPOS, Q33, SAMPLE SIZE = 46, DKNS RESPONSES EXCLUDED

NEW OSPO OR OSS INITIATIVES WILL RESIDE AT THE LOCUS OF SOFTWARE DEVELOPED

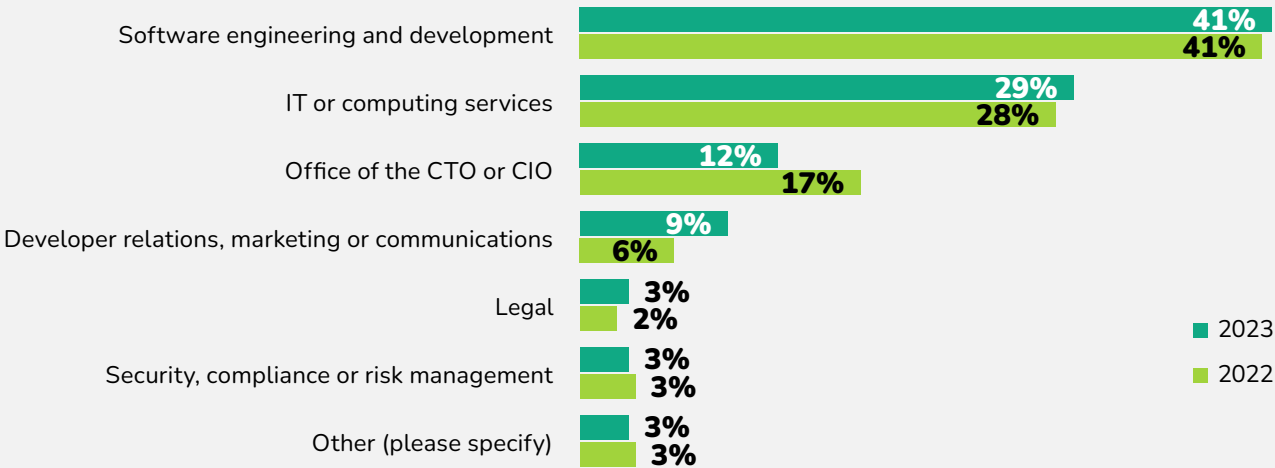
In the early days of OSPOs, license compliance was a key issue. For that reason, many OSPOs were located within the legal department. Over the years, OSPOs and OSS programs have migrated to the IT department. Figure 34 shows that IT is indeed the epicenter for OSPOs and OSS initiatives. The majority of OSPOs and OSS initiatives are now located within software engineering and development, IT or computing services, or the office of the CTO or CIO. Figure 34 confirms this trend and shows that in 2023, 41% of OSS programs are located in software engineering and development, 29% in IT or computing services, and 12% in the office of the CTO or CIO. The

distribution in 2022 is very similar, with the exception of the office of the CTO and CIO, which had been more popular at 17%.

The primary difference between 2022 and 2023 is the reduced focus on the office of the CTO or CIO from 17% to 12% and increased efforts to locate OSPOs and OSS initiatives in developer relations, marketing, or communications, where these numbers increased from 6% in 2022 to 9% in 2023. Developer relations are attracting significant attention these days because of their important role in developer advocacy, developer enablement, and the developer community. The strong alignment between developers and open source means that DevRel is becoming a new focal point for how organizations, developers, and open source come together.

FIGURE 34
OSPOS OR OSS INITIATIVES TO BE IMPLEMENTED WILL RESIDE AT THE APEX OF SOFTWARE DEVELOPMENT DECISION MAKING

Where will the open source program or initiative be located within the organization? If the effort is informal, answer based on who the primary organizers will report to. (select one)



2023 STATE OF OSPOS, Q35, SAMPLE SIZE = 46, DKNS RESPONSES EXCLUDED
2022 STATE OF OSPOS, Q24, SAMPLE SIZE = 120, DKNS RESPONSES EXCLUDED

WHAT ORGANIZATIONS AIM TO ACCOMPLISH WITH AN OSS PROGRAM

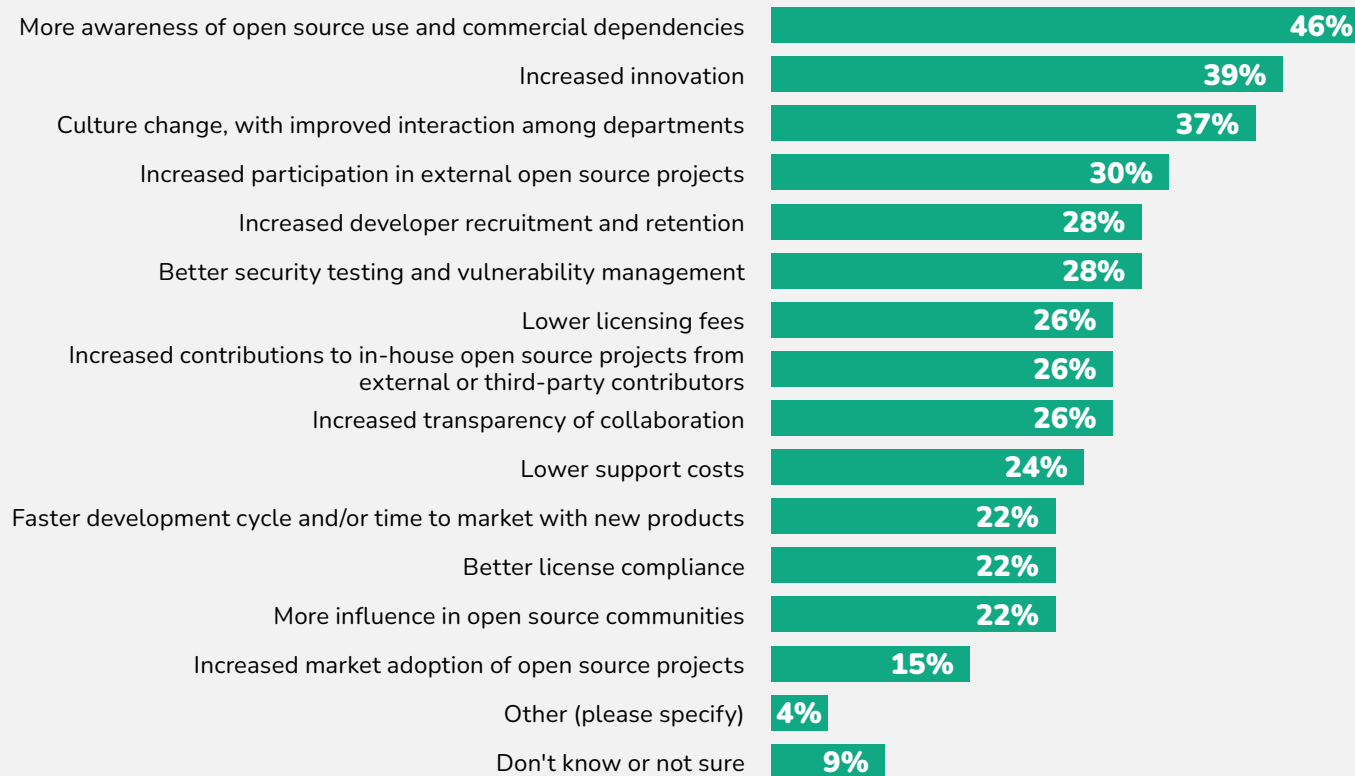
The leading goals of organizations implementing an OSPO or an OSS initiative are shown in Figure 35. The leading goals are more awareness of open source use and commercial dependencies (46%), increased innovation (39%), culture change with improved interaction among departments (37%), and increased participation in external open source projects (30%).

These findings align remarkably well with the benefits observed from an OSPO or an OSS initiative shown in Figure 23. In both cases, more awareness of open source use in commercial dependencies was the #1 aim or benefit. This highlights the importance of understanding where open source is being used in its evolving impact on license compliance, security, and risk.

Increased innovation is the #2 aim shown in Figure 35 and is consistent with industry and empirical evidence gathered across multiple surveys by the Linux Foundation, where innovation is generally a leading objective and characteristic of open standards and open source.

FIGURE 35
THE LEADING GOALS
OF ORGANIZATIONS
IMPLEMENTING AN OSPO
OR OSS INITIATIVE
INCLUDE: SECURITY,
INNOVATION, AND
COLLABORATION

What does your organization aim to accomplish by starting an open source program? (select all that apply)



2023 STATE OF OSPOS, Q36, SAMPLE SIZE = 46, VALID CASES = 46, TOTAL MENTIONS = 186

FIGURE 36
THE LEADING CHALLENGES IN IMPLEMENTING AN OSPO OR OSS INITIATIVE INCLUDE: IMPLEMENTATION STRATEGY, EXEC SUPPORT, & SETTING POLICY
 What have been the top three biggest challenges in establishing an open source program or initiative? (select up to three responses)



2023 STATE OF OSPOS, Q37, SAMPLE SIZE = 46, VALID CASES = 46, TOTAL MENTIONS = 101

THE CHALLENGES IN IMPLEMENTING AN OSPO OR AN OSS INITIATIVE

The leading challenges in implementing an OSPO or an OSS initiative are shown in Figure 36 and are dominated by a strategy focused on determining the best way to plan and implement an OSPO or an OSS initiative. While the complexity of this challenge is undoubtedly

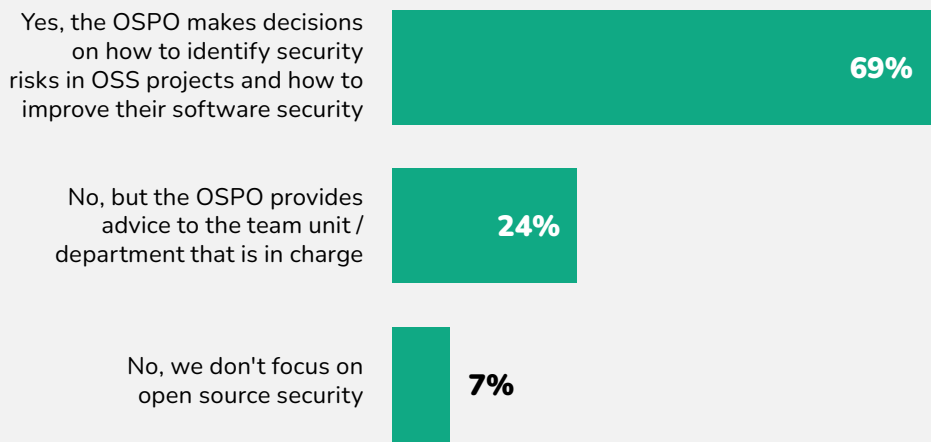
linked to organization size, industry experience and understanding of OSPOs and OSS initiatives has never been better. The Linux Foundation, the TODO Group, and a variety of other industry organizations and foundations have deep knowledge and experience of the role of an OSPO and best practices around its implementation and operation.

HOW OSPOS AND OSS INITIATIVES INFLUENCE LICENSE COMPLIANCE AND SECURITY

License compliance and security are long-standing issues in open source. While developer tools provide a tactical way to address license compliance and security needs, what is the role of an OSPO or an OSS initiative in addressing licensing and security needs?

FIGURE 37
ORGANIZATIONS WITH AN OSPO OR OSS INITIATIVE SEE IT AS KEY TO ADDRESSING OSS SECURITY

Does your OSPO or similar OSS initiative directly address OSS security issues? (select one) (for organizations who have a formal OSS program or initiative)



2023 STATE OF OSPOS, Q50, FILTERED BY: Q9.1 (ORG MUST HAVE A FORMAL OSS PROGRAM OR INITIATIVE IN PLACE), SAMPLE SIZE = 222, DKNS RESPONSES EXCLUDED

OSPOS AND OSS INITIATIVES ARE KEY TO ADDRESSING OSS SECURITY

Security often dominates IT discussions these days. OSS security is even more complex because development often takes place outside the reach of the organization. Even though organizations were not overly concerned about the security of OSS components, vigilance is still necessary because of the continuously evolving state of vulnerabilities. Figure 37 shows the extent to which OSPOs and OSS initiatives participate in OSS security issues. Figure 37 shows that 93% of OSPOs or OSS initiatives are directly or indirectly involved in addressing OSS security concerns. This 93% is composed of 69% where an OSPO or an OSS initiative is in a decision-making role and 24% where the OSPO or OSS initiative provides advice to a team or department that is making the decisions. Only 7% of OSPOs and OSS initiatives don't focus on OSS security.

LICENSE COMPLIANCE IS SIGNIFICANTLY IMPROVED WHERE OSS PROGRAMS ARE PRESENT

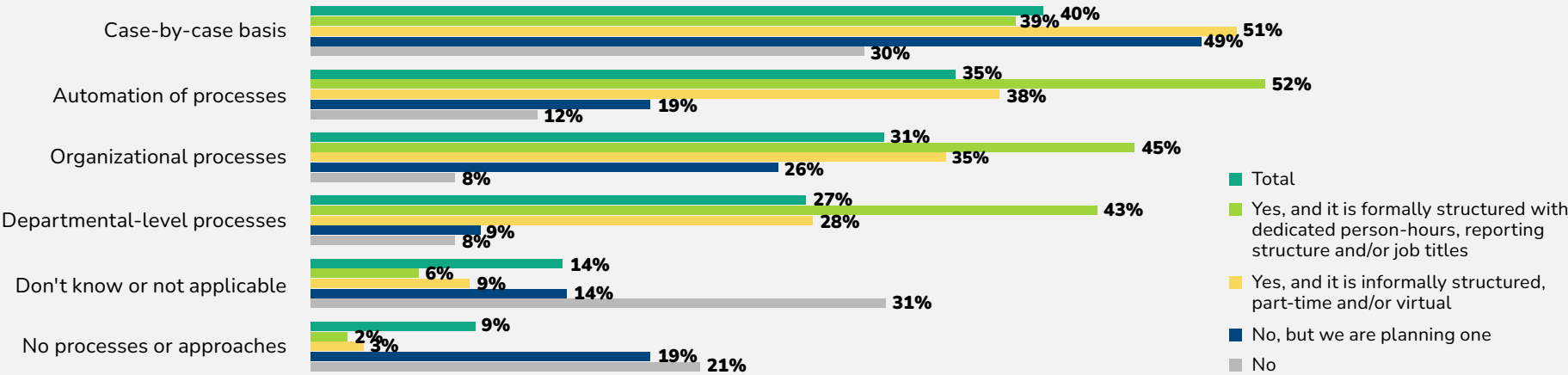
License compliance and vulnerabilities are long-standing topics where OSS consumers need policy, governance, and ongoing operational support. Figure 38 shows how organizations involved in OSS address open source license compliance. These data have been segmented to show how approaches to open source license compliance vary by approach to OSS oversight. Responses in Figure 38 are presented in descending order of overall involvement and show the dramatic differences between organizations with and without an OSPO or an OSS initiative.

Organizations with formally structured OSPOs or OSS initiatives excel at policy and processes for addressing open source license compliance at both organizational (45%) and departmental (43%) levels. Having policies and processes enables an organization to automate license compliance (52%). Automation has the advantage of driving high levels of reliability and productivity and should be the objective of all organizations needing to address OSS license compliance.

The significant number of organizations without an OSPO or an OSS initiative and with no processes or approaches to OSS license compliance is a reminder that there is still educational work to be done.

FIGURE 38
OSS LICENSE COMPLIANCE IS SIGNIFICANTLY IMPROVED FOR ORGANIZATIONS WITH A FORMALLY STRUCTURED OSPO OR OSS INITIATIVE

How does your organization check for open source license compliance? (select all that apply) segmented by:
Does your organization have an open source program or open source initiative? (select one)



2023 STATE OF OSPOS, Q53 X Q9, SAMPLE SIZE = 354, VALID CASES = 354, TOTAL MENTIONS = 555

OSS SECURITY IS SUBSTANTIALLY IMPROVED WHEN OSPOS OR OSS INITIATIVES ARE PRESENT

Figure 39 shows how organizations involved in OSS address open source security concerns regarding vulnerabilities. These data have been segmented to show how approaches to open source vulnerability scanning vary by approach to OSS oversight. Responses in Figure 39 are presented in descending order of overall involvement, and they show again the dramatic differences between organizations with and without OSPOs or OSS initiatives.

Organizations with a formally structured OSPO or OSS initiative excel at policy and processes for addressing open source security compliance at both organizational (48%) and departmental (41%) levels.

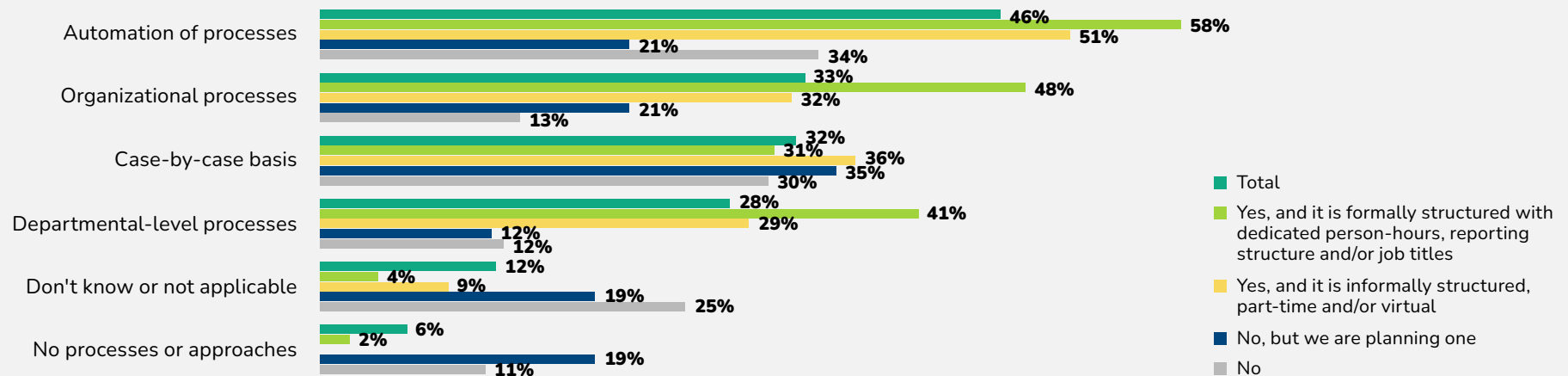
Having policies and processes enables an organization to automate vulnerability scanning (58%). Automation of vulnerability scanning is critical because new vulnerabilities will continue to be found in OSS components, which need to trigger a new risk assessment, update priority, and sequence of how the organization intends to resolve these vulnerabilities.

Once again, organizations either without an OSPO or an OSS initiative or that are in the process of planning one lag far behind those organizations with an OSPO or an OSS initiative except where vulnerabilities are addressed on a case-by-case basis. However, reliance on using a case-by-case basis for addressing vulnerabilities is best left for only the most serious vulnerabilities and should not be the primary approach by which all vulnerabilities are evaluated because it lacks scalability.

FIGURE 39

OSS SECURITY IS SIGNIFICANTLY IMPROVED FOR ORGANIZATIONS WITH A FORMALLY STRUCTURED OSPO OR OSS INITIATIVE

How does your organization scan for vulnerabilities and OSS security compliance? (select all that apply) segmented by: Does your organization have an OSS program or initiative? (select one)



2023 STATE OF OSPOS, Q54 X Q9, SAMPLE SIZE = 354, VALID CASES = 354, TOTAL MENTIONS = 554

CONCLUSION

The key findings of this study show that adoption of an OSPO or an OSS initiative has expanded across various industries, and we now see their presence in many sectors, including governments and academia. On the other hand, recent layoffs in 2023 and potential funding reductions in 2023/2024 spotlight a significant challenge to address. It is therefore essential to recognize the importance of adopting a holistic approach when establishing these open source

centers of excellence. Merely creating an OSPO or an OSS initiative isn't enough; it's about understanding its purpose beyond just the name. This means building a comprehensive framework encompassing compliance, community, strategy, governance, and leading by example. That way, we can cultivate healthy and sustainable OSPOs that benefit both the organization and the open source community.

METHODOLOGY

Study research goals included eliminating potential sample bias and ensuring high data quality. Eliminating potential sample bias was addressed by sourcing our usable sample from the Linux Foundation membership, partner communities, social media, and a third-party panel provider. Data quality was addressed through extensive pre-screening, screening criteria, and data quality checks to ensure that respondents had sufficient open source familiarity and professional experience to answer questions accurately on behalf of the organization they worked for.

Survey screening involved the use of four variables to validate the respondent:

- The respondent needed to work part-time or full-time for an organization involved with OSS. The design point of this survey was therefore to understand the penetration and attributes of open source programs or initiatives at organizations involved with OSS.
- The respondent needed to self-identify as a real person willing to share their OSS experience and perceptions.

- The respondent could not be unemployed, a full-time student, or retired.
- The respondent was required to answer all of the demographic questions.

A total of 763 candidates started the survey; 274 were disqualified due to our screening criteria, and 489 answered a significant number of survey questions or all of them. The margin of error for this sample size was $\pm 4.5\%$. Data collection was stratified by geographic region, company size, and organization type. The stratification was designed to allow segmentation by these variables and other variables correlated with these.

Although respondents were required to answer nearly all questions in the survey (the only exceptions being open-ended questions), there were times when the respondent was unable to answer a question because it was outside the scope of their role or experience. For this reason, we added a "Don't know or not sure" (DKNS) response to the list of responses for nearly all questions. However, this creates a variety of analytical challenges.

One approach was to treat a DKNS response just like any other response so that the percentage of respondents that answered the DKNS is known. The advantage of this approach is that it reports the exact distribution of data collected. The challenge with this approach is that it can distort the distribution of valid responses—those responses where respondents could answer the question, especially when doing year-over-year comparisons.

Some of the analyses in this report exclude DKNS responses. This is done because the data missing can be classified as either missing at random or missing completely at random. Excluding DKNS data from a question does not change the distribution of data (counts) for the other responses, but it does change the size of the denominator used to calculate the percent of responses across the remaining responses. This has the effect of proportionally increasing the percentage values

of the remaining responses. Where we have elected to exclude DKNS responses, the footnote for the figure includes the phrase “DKNS responses excluded.”

The percentage values in this report may not total exactly 100% due to rounding.

FIGURE 40
2023 STATE OF OSPOS AND OSS INITIATIVES: SURVEY LAYOUT

PAGES	QUESTIONS	DESCRIPTION	CONDITIONS
P1		Introduction	All respondents
P2 - P3	Q1 – Q8	Tell us about yourself and the organization you work for	All respondents
P4	Q9 – Q10	OSS programs and initiatives	All respondents
P5	Q11 – Q19	Tell us about the OSS program or initiative and its structure	For orgs with an OSS program (Q9.1-2)
P6	Q20 – Q26	Tell us about the program or initiative impact	For orgs with an OSS program (Q9.1-2)
P7 – P9	Q27 – Q32	OSS program or initiative sustainability	For orgs with an OSS program (Q9.1-2)
P10	Q33 – Q37	OSS program or initiative plans	For orgs planning an OSS program (Q9.3)
P11 – P13	Q38 - Q42	Why an OSS program or initiative is not in the plans	For orgs not planning an OSS program (Q9.4)
P14	Q43 – Q49	OSS usage and software practices	All respondents
P15	Q50 – Q55	License compliance and security	All respondents (except Q50 if no OSS program)
P16	Q56 – Q57	Name of organization and follow-up	All respondents

SURVEY DESIGN

The 2023 state of OSPO survey included 57 questions grouped as shown in Figure 40. For information about access to the 2023 state of OSPO project and survey instrument, see the Data.World access heading at the end of this section.

DATA.WORLD ACCESS

Linux Foundation Research makes each of its empirical study datasets available on Data.World. Included in this dataset are the survey instrument, raw survey data, screening and filtering criteria used in LFR analysis, and frequency charts for each question in the survey. Linux Foundation Research datasets, including this project, can be found at data.world/thelinuxfoundation.

ACKNOWLEDGMENTS

We thank all of the people who participated in the survey and interview process, as well as those who have dedicated time and effort toward developing open standards. Special thanks to Linux Foundation colleagues for their involvement in the various stages of the research process: Mike Dolan, Chris Aniszczyk, Hilary Carter, Leslie Hawthorn (Red Hat), Lawrence Hecht, Anna Hermansen, Ana Jimenez (TODO Project Manager), Georg Kunz (Ericsson), Adrienn Lawson, Christina Oliviero, Sourav Das (TODO Maintainer), Cailean Osborne, and Melissa Schmidt.

We also want to thank all the supporter and collaborator organizations and open source projects for their careful review and thoughtful feedback on the draft of this report:

- TODO Group
- OpenChain
- OpenSSF
- CHAOSS
- InnerSource Commons
- Open Infrastructure Foundation
- Open Source Initiative
- Alibaba
- CyberTrust
- Dynatrace
- GitHub
- Kaiyuanshe
- Salesforce

ABOUT THE AUTHORS

Stephen Hendrick is Vice President of Research at the Linux Foundation, where he is the principal investigator on a variety of research projects core to the Linux Foundation's understanding of how OSS is an engine of innovation for producers and consumers of IT. Steve specializes in primary research techniques developed over 30 years as a software industry analyst. Steve is a subject matter expert in application development and deployment topics, including DevOps, application management, and decision analytics. Steve brings experience in a variety of quantitative and qualitative research techniques that enable deep insight into market dynamics and has pioneered research across many application development and deployment domains. Steve has authored over 1,000 publications and provided market guidance through syndicated research and custom consulting to the world's leading software vendors and high-profile start-ups.

Ana Jiménez Santamaría is the OSPO Project Manager at the TODO Group, a Linux Foundation project that brings together OSPO practitioners to collaborate on developing best practices, tools, and educational resources to drive successful open source offices within organizations. Ana has a strong background in open source, DevRel, community health analytics, and InnerSource. She previously worked at Bitergia, a software development analytics firm, where she completed her MSc in Data Science. Her thesis focused on measuring the success of developer relations in open source communities. For more details on her thesis work, check out <https://anajimenezsantamaria.gitlab.io/>.



Founded in 2021, Linux Foundation Research explores the growing scale of open source collaboration, providing insight into emerging technology trends, best practices, and the global impact of open source projects. Through leveraging project databases and networks, and a commitment to best practices in quantitative and qualitative methodologies, Linux Foundation Research is creating the go-to library for open source insights for the benefit of organizations the world over.



twitter.com/linuxfoundation



facebook.com/TheLinuxFoundation



linkedin.com/company/the-linux-foundation



youtube.com/user/TheLinuxFoundation



github.com/LF-Engineering



TODO

TODO is an open community of practitioners who aim to create and share knowledge, collaborate on practices, tools, and other ways to run successful and effective Open Source Program Offices and similar Open Source initiatives. Explore the TODO resources and learn more about this Linux Foundation's hosted project at <https://todogroup.org/>



Copyright © 2023 [The Linux Foundation](https://www.linuxfoundation.org/)

This report is licensed under the [Creative Commons Attribution-NoDerivatives 4.0 International Public License](https://creativecommons.org/licenses/by-nd/4.0/).

To reference this work please cite as follows: Stephen Hendrick and Ana Jimenez Santamaria, "The 2023 State of OSPOs and OSS Initiatives: Open Source Software Programs and Initiatives Become Mainstream," The Linux Foundation, September 2023.