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Canonical

World of Open Source

The State of Open Source Japan 2025

Accelerating business value through strategic open source engagement

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STATE OF OPEN SOURCE JAPAN 2025

69% report **increased business value** from open source in the last year vs. 54% globally, with 74% considering it valuable for their future.

STATE OF OPEN SOURCE JAPAN 2025

Japan lags in foundational **infrastructure adoption** (cloud technologies at 33% vs. 52% globally) but leads in the adoption of **specialized technologies** such as AR/VR and manufacturing technology.

STATE OF OPEN SOURCE JAPAN 2025

Contributing organizations report improved **security** (78%), **innovation** (77%), staff **knowledge** (74%), and software **quality** (73%).

STATE OF OPEN SOURCE JAPAN 2025

IP concerns block deeper participation: 52% cite IP fears for contributions, 44% for adoption, and 34% are uncertain about ROI.

STATE OF OPEN SOURCE JAPAN 2025

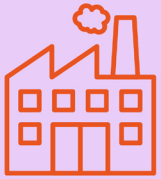
89% expect sub-12-hour **response times** from support providers for critical open source issues, exceeding the 69% global rate.

STATE OF OPEN SOURCE JAPAN 2025

45% expect **long-term support guarantees**, and 35% expect rapid security patching for production open source software.

STATE OF OPEN SOURCE JAPAN 2025

45% consider paid support essential for **industry regulated environments**, 43% for sensitive data systems, and 40% for mission-critical workloads.



STATE OF OPEN SOURCE JAPAN 2025

AR/VR (39%), **AI/ML & cloud** equally (28% each) are the top trending open source technologies in Japan.

STATE OF OPEN SOURCE JAPAN 2025

Only 26% check **community activity levels** when evaluating components, significantly below the 47% global rate for this practice.

STATE OF OPEN SOURCE JAPAN 2025

Very active organizations in open source are more likely to gain **competitive advantage** (73%) than passive organizations (56%).

STATE OF OPEN SOURCE JAPAN 2025

77% believe open source makes their organization a **better workplace**, with 68% citing **talent attraction** benefits.

STATE OF OPEN SOURCE JAPAN 2025

The **strategic value of OSS at the C-suite level** is not yet sufficiently clear, with fewer executives (70%) recognising its value than other employees (85%).

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Foreword

Japan's open source journey has reached a critical inflection point. After years of working alongside OSS champions across Japanese industry, government, and academia, I have witnessed the steady evolution of understanding and engagement with open source software. Today, that evolution is accelerating, driven by organizations that recognize OSS not merely as a technology choice but as a strategic imperative for competitiveness and innovation.

The findings from this year's report reveal both remarkable progress and persistent challenges. An impressive 69% of Japanese organizations report increased business value from OSS over the past year and 74% recognize OSS as valuable to their organization's future. This growing recognition reflects the dedication of countless leaders in Japan's OSS community who have built the foundation we stand on today. I am endlessly thankful to those who continue to nurture this ecosystem.

Yet recognition alone does not guarantee success. Japanese organizations excel in specialized domains, for instance, by leading globally in AR/VR, blockchain, and manufacturing technologies. However, they face significant gaps in foundational infrastructure adoption and governance maturity. Only 41% of survey organizations have implemented open source program offices, and just 39% have defined clear OSS strategies. Most importantly, Japanese organizations lag in adopting core open source technologies such as operating systems, DevOps, and cloud platforms that power digital transformation globally.

The path forward requires bridging this governance-adoption gap. Organizations must strengthen security evaluation practices beyond Common Criteria certification, establish comprehensive governance frameworks that address the intellectual property concerns cited by 52% of respondents, and transition from passive consumption to active participation. The data makes clear that competitive advantage scales with engagement intensity. Very active organizations are significantly more likely to gain competitive benefits, attract talent, and drive innovation.

I am thrilled to present the 2025 State of Open Source in Japan report and extend my heartfelt thanks to all survey participants for their contributions. Together, we can continue to support and promote open source innovation across Japan and beyond.

NORIAKI FUKUYASU
Vice President of Japan Operations,
The Linux Foundation

Executive summary

As we have done for the last three years, the Linux Foundation has engaged the open source community in its World of Open Source Survey. In this 2025 edition, we confirm that organizations depend on open source software as the backbone of their critical systems. However, most lack the governance and security frameworks to manage this dependency safely. While expecting enterprise-level reliability and support, organizations systematically underinvest in the security practices, formal governance structures, community engagement, and comprehensive strategies that production environments demand. This misalignment creates business risks and limits competitive advantages.

Despite open source's strategic importance, Japanese organizations face a governance maturity gap. While 69% report increased business value from open source over the past year, outpacing the global rate of 54%, operational implementation lags behind this recognition. Only 41% have implemented open source program offices (OSPOs), and just 39% have defined clear open source strategies. Even fewer (33%) have established public positions on open source, showing no growth from 2024.

Japanese organizations demonstrate an interesting adoption pattern. They lag significantly in foundational infrastructure, such as operating systems, DevOps, databases, and web development, yet excel in specialized applications. Japan leads globally in augmented/virtual reality and 3D simulation, blockchain, and manufacturing technologies.

The security posture reveals further complexities. While 40% of Japanese organizations use automated security testing tools, adoption of comprehensive evaluation practices remains limited. Only 35% evaluate direct dependencies, 33% manually review source code, and just 26% check community activity levels, which is lower than the global 47%. Common Criteria certification dominates the Japanese security framework evaluation at 52% adoption vs. only 13% globally, yet no single security framework achieves universal and global acceptance, creating fragmentation that undermines ecosystem-wide security.

These deficiencies drive Japanese organizations toward commercial support solutions. A striking 89% of Japanese organizations demand sub-12-hour response times (compared to 69% globally), reflecting even higher enterprise-grade expectations. Japanese organizations consider paid support essential for regulated industry environments (45% vs. 36% globally), systems handling sensitive data (43%), and mission-critical workloads (40%). This shift reflects open source's evolution in Japan from a cost-saving alternative to foundational business infrastructure requiring formal service level agreements.

Organizations seeking to capture full value from open source should consider establishing formal governance structures, implementing comprehensive security evaluation frameworks, and transitioning from passive consumption to active participation. Japanese organizations with very active open source engagement show 73% agreement that open source makes them more competitive, compared to just 56% for passive organizations. This is an advantage that demonstrates how competitive benefits scale with engagement intensity.

Systematic investment can help bridge the maturity gap. Japanese companies prioritize training developers (44%), contributing upstream (41%), and sponsoring critical dependencies (41%). Intellectual property concerns (52% for contributions, 44% for adoption) and the lack of clear policies (51%) remain the primary barriers requiring dedicated expertise and formal governance structures.

These findings suggest that Japanese organizations that successfully bridge the governance-adoption gap can capture competitive advantages in talent acquisition, operational excellence, and market positioning, especially in emerging areas. This should happen through active engagement, formal structures, and comprehensive security practices, while leveraging their existing strengths in specialized technologies.

Introduction

As part of our ongoing World of Open Source research series, the 2025 edition investigates how open source is adopted across core technology stacks and how organizations employ security evaluation practices, formal governance structures, and support for open source in production environments. This year's State of Open Source in Japan report (formerly named Japan Spotlight) examines variances in Japan's open source engagement patterns, the emergence of enterprise-level support expectations that challenge resource-constrained open source projects, and the competitive advantages gained by organizations that successfully transition from passive consumption to active participation in open source projects.

This research, based on 141 Japanese company responses within a global sample of 851 survey responses (see Methodology for demographics), explores the relationship between open source adoption and organizational maturity in the Japanese context. The study examines how Japanese organizations evaluate open source components for security and reliability, what governance structures they employ to manage open source dependencies, their expectations for commercial support in production environments, and how different levels of engagement with open source communities correlate with perceived business outcomes. These findings provide insights for technology leaders, executives, and policymakers making decisions in an era where open source has become critical to business operations and competitive positioning.

Gains and gaps in Japan's OSS maturity

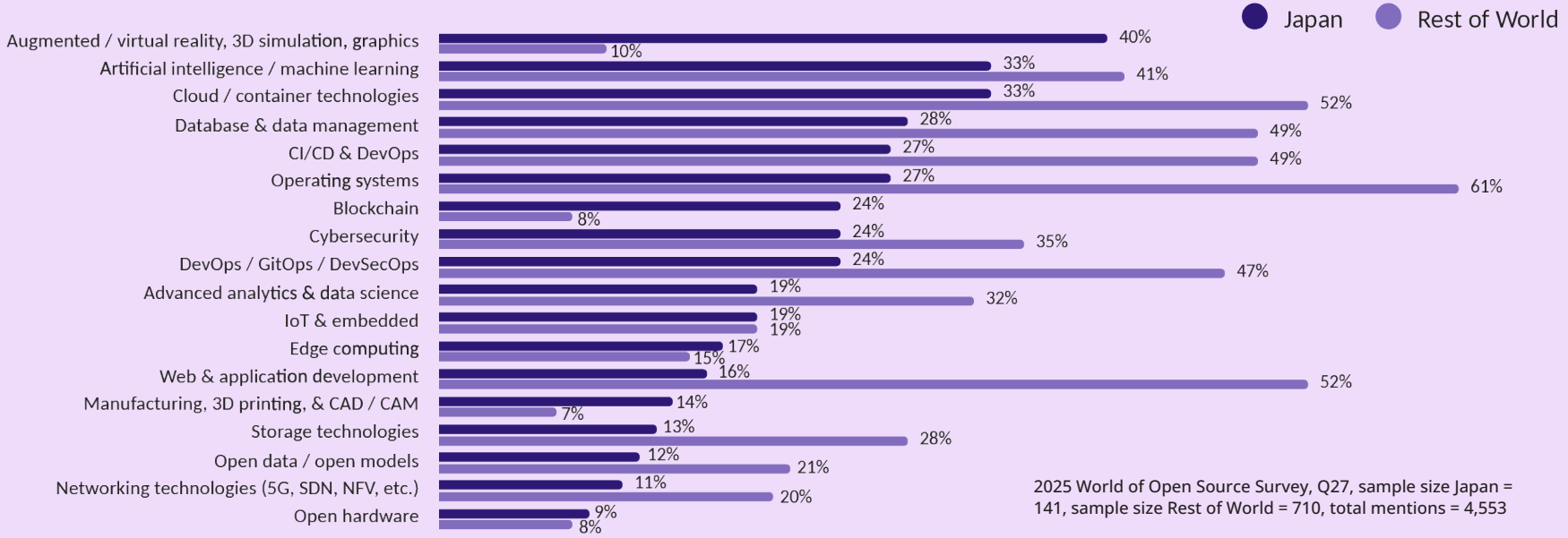
JAPAN LAGS IN OSS ADOPTION IN FOUNDATIONAL INFRASTRUCTURE DESPITE LEADING STRATEGIC SEGMENTS

Our survey reveals that the overall adoption of OSS is lower in Japan than in the rest of the world for foundational infrastructure that enables digital transformation, as Figure 1 shows. The adoption of operating systems at 27% vs. 61% globally represents a 38-point deficit—among the largest gaps observed. Other foundational technologies with large adoption gaps include web and application development (16% vs. 52%), DevOps/GitOps/DevSecOps (24% vs. 47%), database and data management (28% vs. 49%), storage technologies (13% vs. 28%), and cybersecurity (24% vs. 35%). This pattern suggests the presence of systemic barriers to infrastructure modernization based on globally adopted modern OSS technologies. Japanese organizations may face institutional resistance rooted in risk-averse decision-making cultures, preference for proven proprietary systems and mainframe technologies, or concerns about data sovereignty and regulatory compliance in cloud environments. Consequently, Japanese organizations may be missing the benefits of improved productivity, reduced vendor lock-in, and lower cost of ownership in these foundational technologies.[1]

FIGURE 1

USE OF OSS ACROSS TECHNOLOGY DOMAINS

In which of the following areas does your organization use OSS? (select all that apply)



2025 World of Open Source Survey, Q27, sample size Japan = 141, sample size Rest of World = 710, total mentions = 4,553

On the other hand, Figure 1 shows that Japan excels in the adoption of OSS for specialized applications, including visual technology (augmented/virtual reality, 3D simulation, graphics) at 40% vs. 10%, blockchain at 24% vs. 8%, and manufacturing technology (manufacturing, 3D printing, and CAD/CAM) at 14% vs. 7%. Indeed, Japanese respondents consider these the technologies that benefit the most from being open source, as Figure 2 illustrates.

For global counterparts, artificial intelligence/machine learning (AI/ML) is the technology that benefits the most from being open source, ranking second for Japanese organizations. Recent research from the Linux Foundation confirms significant benefits from open source AI.[2] However, AI/ML adoption in Japan at 33% vs. 41% globally (Figure 1) indicates that Japan is also trailing in this strategic domain. A previous study from the Linux Foundation shows that open source AI tools provide transparency and cost efficiency.[3] Additionally, open source enables flexible deployment, interoperability, and regulatory assurance.[3]

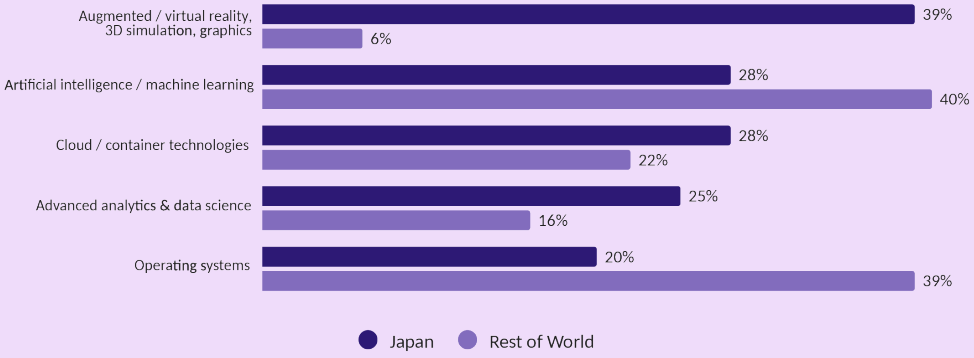
JAPAN OUTPACES THE REST OF THE WORLD IN OSS BUSINESS VALUE GROWTH

Despite lagging in foundational infrastructure adoption, Japanese organizations report stronger growth in perceived business value from open source than their global counterparts. As Figure 3 shows, 69% of Japanese organizations indicate that the business value that they derive from open source has increased over the past year, compared to 54% in the rest of the world. This is a 15-percentage-point gap that suggests accelerating recognition of open source's strategic importance in Japan. This pattern suggests that Japanese organizations that have committed to open source are experiencing substantial returns on their investments, potentially through cost savings in specialized applications or through improved efficiency in targeted use cases.

FIGURE 2

TECHNOLOGIES THAT BENEFIT THE MOST FROM BEING OPEN SOURCE

Which technologies do you believe would benefit the most from being open source? (select up to three responses)

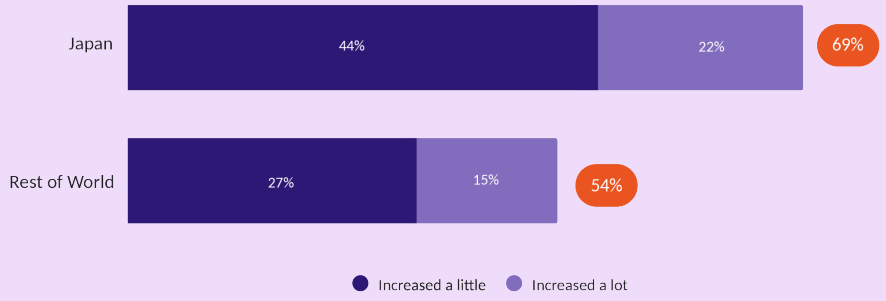


2025 World of Open Source Survey, Q13, sample size Japan = 141, sample size Rest of World = 710

FIGURE 3

THE BUSINESS VALUE OF OSS IN JAPAN COMPARED TO THE REST OF THE WORLD

Over the last year, how has the business value your organization derives from OSS use changed? (select one)



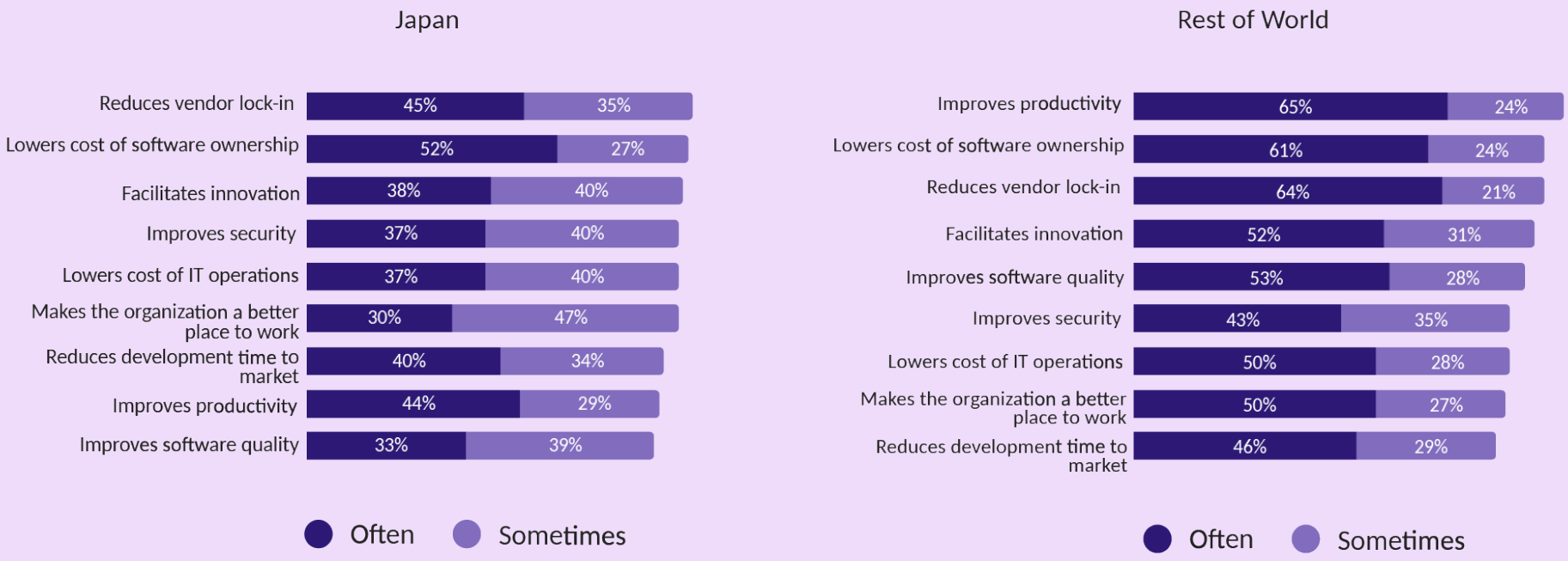
2025 World of Open Source Survey, Q31, sample size Japan = 141, sample size Rest of World = 710

The specific benefits that organizations derive from open source use reveal where this business value originates. According to Figure 4, Japanese organizations report that open source delivers operational benefits across multiple dimensions, though with notably different patterns than global counterparts. In Japan, organizations report that open source lowers the cost of IT operations (77%) (by aggregating responses "Sometimes" and "Often") and facilitates innovation (78%) among the numerous other benefits open source provides.

FIGURE 4

THE KEY BENEFIT AREAS OF OSS IN JAPAN COMPARED TO THE REST OF THE WORLD

Which technologies do you believe would benefit the most from being open source? (select up to three responses)



2025 World of Open Source Survey, Q28, sample size Japan = 141, sample size Rest of World = 710

OPERATIONAL IMPLEMENTATION GAP PERSISTS IN OPEN SOURCE GOVERNANCE DESPITE IMPROVEMENTS

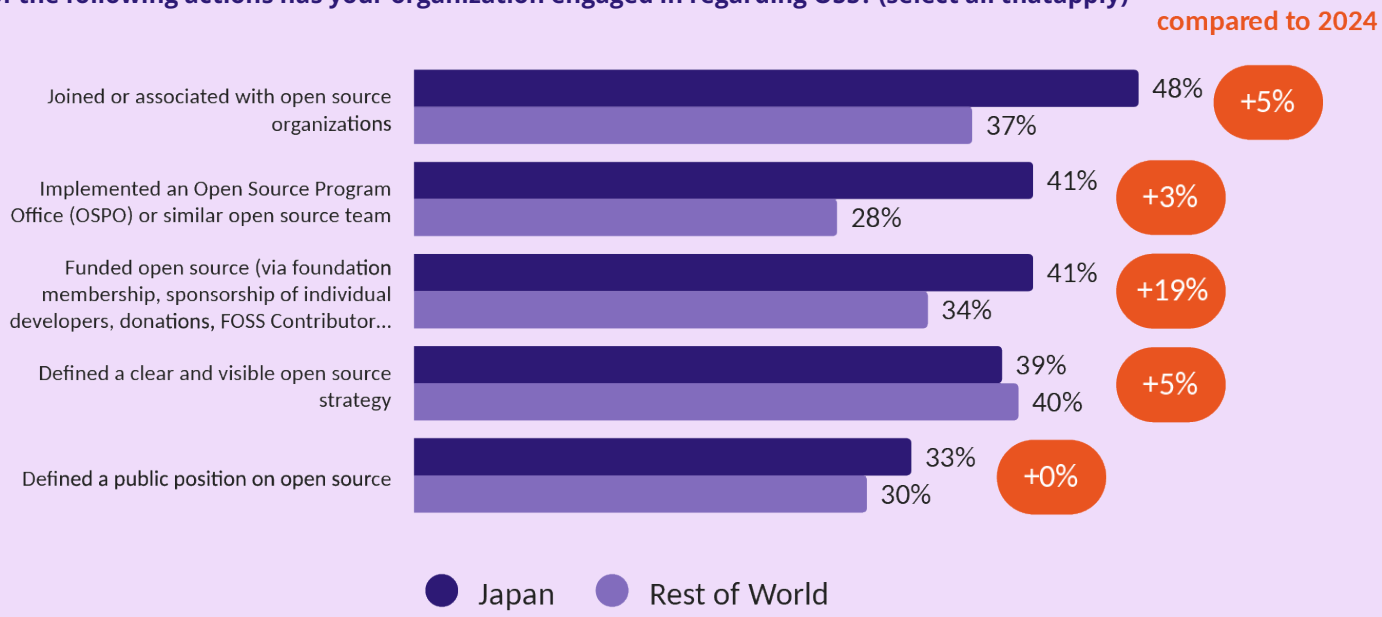
As Figure 5 shows, there is a gap in organizational maturity for open source governance, despite its business value importance. While 48% of organizations have joined or associated with open source organizations, a +5% increase in relation to 2024 and a +11% difference to the rest of the world, only 39% have defined a clear and visible open source strategy and 33% a public position on open source, showing no growth from 2024. Having a defined public position provides numerous benefits: It signals a commitment to developers and partners, attracts talent that values the open source culture, clarifies contribution policies for employees, and fosters trust within the open source community. Without such positions, organizations miss opportunities to differentiate themselves in competitive talent markets.

Notably, 41% have already implemented an OSPO, representing a 3% increase from the previous year. This growth in OSPOs reflects a structural change, documented in the 2025 OSPO Report.[4] Organizations are adopting less formalized, less centralized approaches to open source governance due to budget constraints, shifting priorities, and new strategic requirements. Nevertheless, whether centralized or distributed, dedicated open source governance remains critical for managing compliance, security, and contribution workflows, and it is still adopted by less than half of the organizations.

FIGURE 5

OSS ENGAGEMENT AREAS IN JAPAN COMPARED TO THE REST OF THE WORLD

Which of the following actions has your organization engaged in regarding OSS? (select all thatapply)



2025 World of Open Source Survey, Q12, sample size Japan = 141, sample size Rest of World = 710, DKNS excluded for year-over-year comparison (1% Japan, 17% Rest of World), 2024 World of Open Source Survey, Q13, sample size = 106

Support requirements reflect open source's business value

PRODUCTION OSS DEMANDS ENTERPRISE-LEVEL SUPPORTS

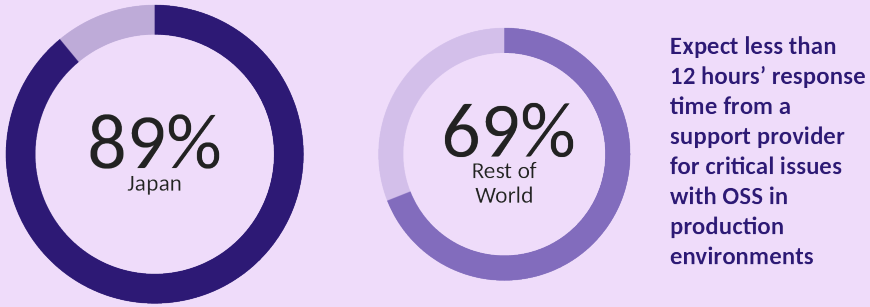
Organizations treat open source technologies as business value providers, with expectations for support that mirror commercial software standards. Figure 6 shows that 89% of organizations in Japan (69% in the rest of the world) anticipate response times of less than 12 hours from support providers for open source software in production environments. This expectation signals a fundamental shift from the traditional "community support" model to enterprise-grade service requirements, reflecting open source's role as a foundational business system.

The demand for structured support guarantees reinforces this enterprise positioning. As Figure 7 observes, almost half of organizations (45%) expect long-term support guarantees, while 35% require rapid security patching capabilities. These percentages indicate that many organizations view open source not as a low-cost alternative with acceptable compromises but as core infrastructure requiring strong reliability assurances. The emphasis on security patching particularly reflects the awareness of supply chain vulnerabilities and the need for predictable security maintenance cycles.

FIGURE 6

EXPECTATIONS OF OSS SUPPORT RESPONSE TIMES

What response time do you expect from your support provider for critical issues with OSS in production environments? (select one)

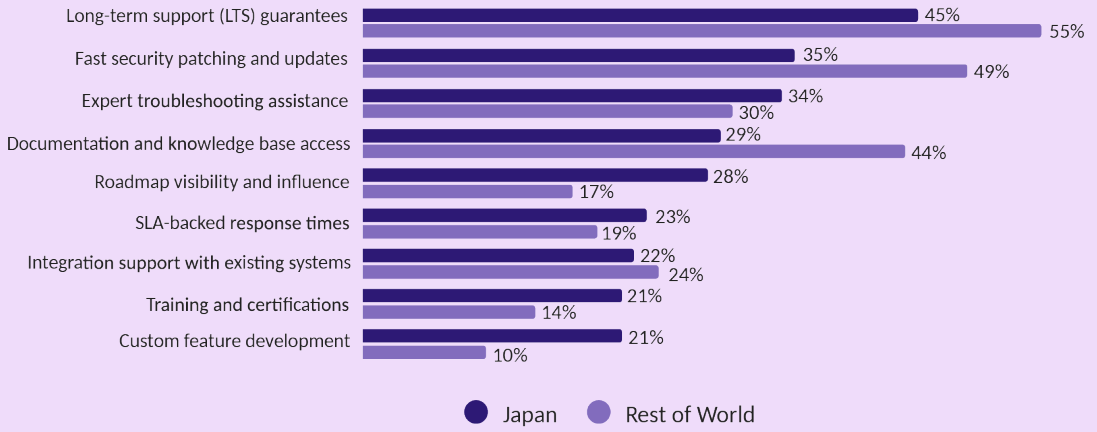


2025 World of Open Source Survey, Q34, sample size Japan = 141, sample size Rest of World = 710

FIGURE 7

TOP EXPECTATIONS FROM A SUPPORT PROVIDER WHEN USING OPEN SOURCE TECHNOLOGIES IN PRODUCTION

What are your top expectations from a support provider when using open source technologies in production? (select up to three responses)



2025 World of Open Source Survey, Q32, sample size Japan = 141, sample size Rest of World = 710, total mentions = 2,269

This transformation creates both opportunities and challenges for the open source ecosystem, as traditional community-driven maintenance models must evolve to meet enterprise requirements while preserving the collaborative development advantages that made open source valuable in the first place. This shift is creating new market opportunities for commercial support providers, particularly in environments where the cost of system failure far exceeds the price of professional support services.

PAID SUPPORT IS CONSIDERED ESSENTIAL ACROSS HIGH-STAKES USE CASES

Figure 8 reveals that regulated industry environments drive the highest demand for paid support at 45%, followed by systems handling sensitive data at 43%, and mission-critical workloads at 40%. This hierarchy reflects the escalating consequences of system failure across various operational contexts, ranging from regulatory penalties to data breach liabilities and business continuity risks.

Therefore, commercial support providers must provide guarantees for high-stakes scenarios, moving beyond traditional maintenance contracts to become partners in operational risk management. The community model remains viable for lower-risk deployments; however, organizations require professional support for regulated industry environments, systems handling sensitive data, and mission-critical workloads.

FIGURE 8

PRIORITY AREAS FOR PAID SUPPORT

In which environments would you consider paid support for OSS to be essential? (select all that apply)

2025 World of Open Source Survey, Q35, sample size Japan = 141, sample size Rest of World = 710, total mentions = 2,111, top 3 shown

Security practices require further strengthening

MOST OSS EVALUATION PRACTICES SEE LIMITED ADOPTION

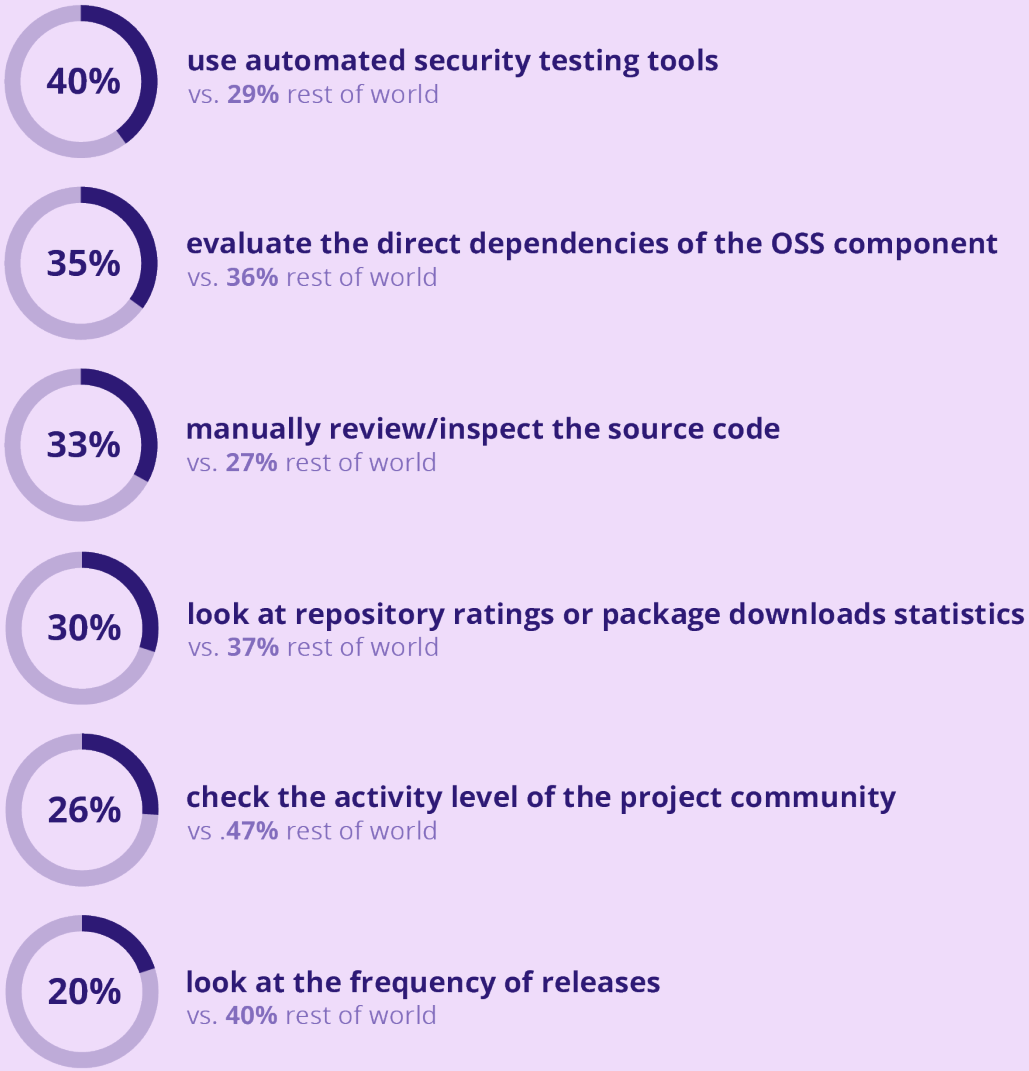
Organizations exhibit concerning gaps in their evaluation practices for open source components, with all security-focused assessments being adopted by fewer than half of the surveyed organizations. Figure 9 reveals that Japanese organizations prioritize component-focused OSS evaluation practices slightly more than their global counterparts, with 40% using automated security testing tools (vs. 29% globally) and 33% manually reviewing source code (vs. 36% globally). However, the limited adoption of security evaluation creates cascading risks: Organizations deploying unvetted components may face supply chain attacks, discover critical vulnerabilities in production systems, or encounter compliance violations in regulated environments. The failure to evaluate direct dependencies, adopted by only 35% of organizations, compounds these risks by creating blind spots in the supply chain, which have driven recent high-profile security incidents across multiple industries.

Notably, Japanese organizations are significantly less likely to rely on community-driven metrics such as community activity levels (26% in Japan vs. 57% globally), repository ratings and download statistics (31% in Japan vs. 44% globally), and release frequency (21% in Japan vs. 49% globally), indicating a lower reliance on leveraging community signals for OSS trustworthiness. Nevertheless, organizations that fail to evaluate project health may find themselves dependent on components with declining maintainer engagement and a lack of support.

FIGURE 9

EVALUATION PRACTICES BEFORE ADOPTING OSS COMPONENTS

What actions does your organization usually take before using a new OSS component? (select all that apply)



2025 World of Open Source Survey, Q25, sample size Japan = 141, sample size Rest of World = 710

FRAGMENTATION IN SECURITY EVALUATION CRITERIA

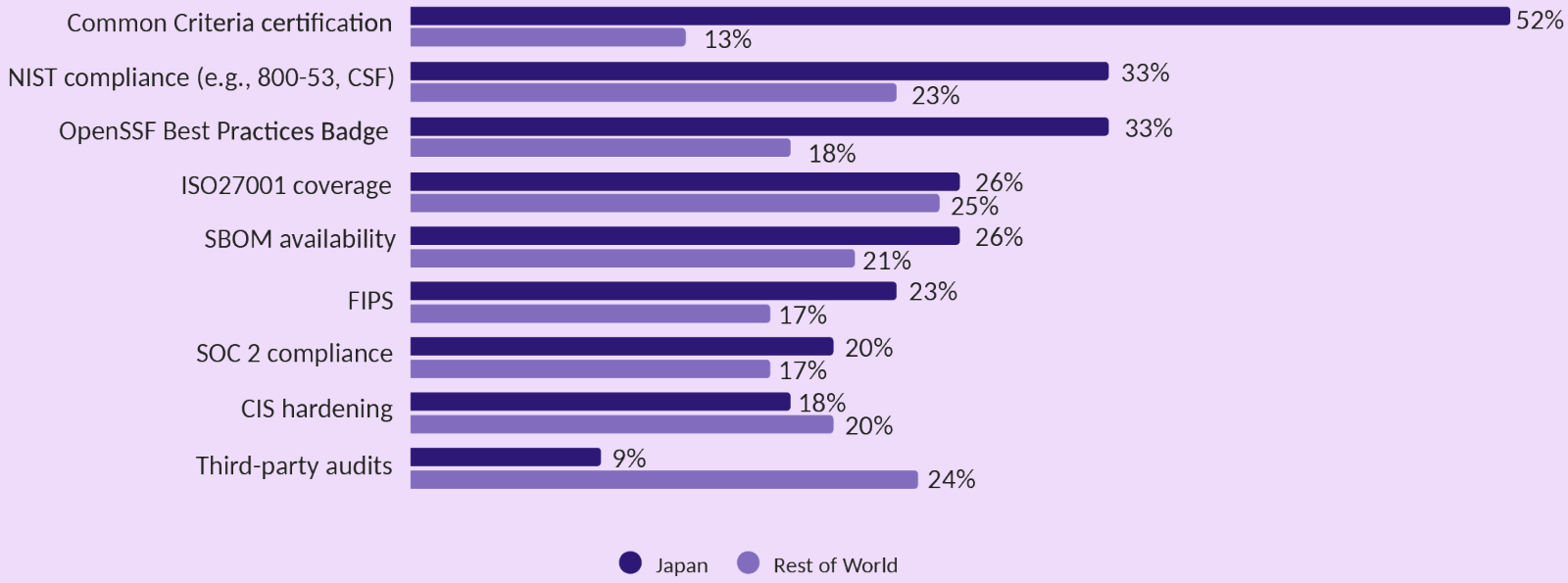
Organizations understand that security assurances matter, but Figure 10 reveals a lack of consensus for open source trust, with no certification or assurance mechanism achieving large-scale adoption. In Japan, Common Criteria certification leads with 52% adoption (vs. 13% globally). This highlights Common Criteria certification's unique position as a dominant assurance framework in the Japanese market. This is likely due to its government backing and long-standing integration into national security and procurement standards. Other regions show a more fragmented reliance on multiple lower-adoption schemes.

The absence of a dominant security standard creates operational challenges for both open source projects and consuming organizations. Projects need to pursue multiple, potentially conflicting certification pathways to satisfy diverse organizational requirements, while enterprises must develop internal expertise across numerous security frameworks rather than focus on a single, widely accepted standard. The implications extend to fundamental questions about the maturity of open source security. Without convergence toward common security evaluation criteria, the ecosystem risks perpetuate the security assessment gaps identified in previous sections, where organizations continue to rely on inconsistent evaluation practices rather than standardized security validation processes.

FIGURE 10

NO CLEAR CONSENSUS ON SECURITY ASSURANCES FOR OSS TRUST

Which certifications or security assurances would make you more likely to adopt or trust an OSS solution? (select all that apply)



2025 World of Open Source Survey, Q26, sample size Japan = 141, sample size Rest of World = 710, total mentions = 1,865

Business value of active open source engagement

ENGAGING IN OPEN SOURCE SOFTWARE DRIVES ORGANIZATIONAL EXCELLENCE ACROSS MULTIPLE DIMENSIONS

Organizations perceive engagement in open source as a strategic business asset. Figure 11 reveals that 74% believe open source is valuable to their organization's future. The perception of competitive advantage proves particularly significant, with 67% of organizations believing that engaging in open source projects makes them more competitive. This finding suggests that organizations view open source participation as a strategic investment that accelerates their competitive market positioning. However, awareness levels vary within organizations. Fewer C-level executives (70%) recognize the value of open source to their organization's future compared to non-C-level employees (85%). This difference suggests that the strategic value of OSS is better perceived by those who directly interact with it.

FIGURE 11

ORGANIZATIONS VIEW OSS AS VALUABLE FOR THEIR FUTURE AND COMPETITIVENESS

2025 World of Open Source Survey, Q19, Q18, Q19 by. Q5, sample size Japan = 141, sample size Rest of World = 710, percentages represent the number of respondents who agreed with the statements.

As Figure 12 conveys, organizations with very active open source engagement show 73% agreement that open source makes them more competitive, compared to just 56% for passive organizations. This gap means that active organizations are more likely to recognize competitive advantages than passive ones, suggesting that competitive advantage scales with the intensity of engagement.

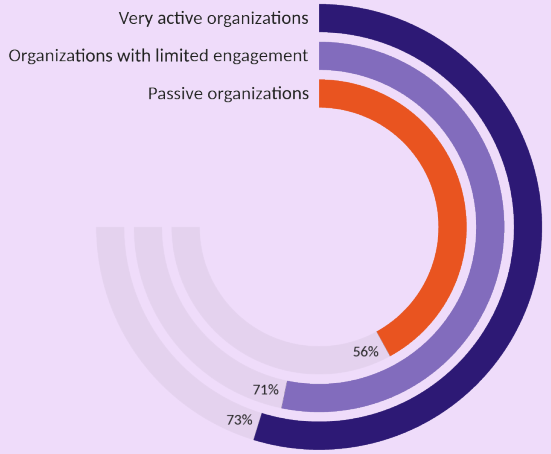
Figure 13 shows that organizations that engage in open source contributions report benefits such as improved security (78%), innovation (77%), fulfilling a moral obligation (78%), developing staff knowledge and skills (74%), and improved software quality (73%) (by aggregating "Sometimes" and "Often"). These benefits directly translate to competitive advantage through reduced maintenance costs and more reliable products that strengthen customer relationships and market positioning.

These findings indicate that open source engagement represents a strategic choice with implications for competitive positioning. Organizations that embrace active engagement position themselves to shape, rather than adapt to, the industry's technological evolution.

FIGURE 12

GREATER OSS ENGAGEMENT IS LINKED TO HIGHER COMPETITIVENESS

% agreeing that open source makes their organization more competitive



2025 World of Open Source Survey, Q18 by Q36, responses from Japan, sample size = 141

FIGURE 13

BENEFITS OF OSS CONTRIBUTION

How often do OSS contributions in your organization deliver the following benefits? (select one response per row)

2025 World of Open Source Survey, Q37, aggregating Often and Sometimes, sample size Japan = 123, sample size Rest of World = 552, question only answered by organizations with some level of engagement with OSS projects (Q36 different than "Passive").

ENGAGING IN OPEN SOURCE SOFTWARE HELPS ATTRACT AND RETAIN TECHNICAL TALENT

Open source engagement has another key advantage: It creates compelling workplace environments that technical professionals seek. Figure 14 demonstrates that 77% of surveyed professionals say that open source makes their organization a better place to work. Engagement with open source projects may come from the intellectual stimulation of contributing to meaningful projects, the professional development opportunities inherent in open source collaboration, and the sense of purpose that comes from participating in technology advancement that extends beyond organizational boundaries.[5]

According to 68% of respondents, engaging in open source projects also helps attract technical talent. Recent studies support this finding, such as the 2025 State of Tech Talent Report, which showed that 68% of organizations are offering an open source culture to retain talent, and 84% evaluate this strategy as effective.[6] Organizations that actively participate in open source projects demonstrate their technical capabilities publicly, showcase the quality of their development practices, and signal their investment in cutting-edge technologies that talented developers want to work with.

FIGURE 14

OSS IMPROVES WORKPLACE SATISFACTION AND RECRUITMENT POTENTIAL

believe OSS makes the organization a better place to work (vs. 77% rest of world)

believe that engaging in OSS projects better positions their organization to attract technical talent (vs. 75% rest of world)

2025 World of Open Source Survey, Q28 "How often does using OSS deliver the following benefits in your organization? (Makes the organization a better place to work)", respondents who answered Sometimes and Often, Q17 "To what extent do you agree or disagree that engaging in open source projects better positions your organization to attract technical talent? (select one)", respondents who answered Agree, sample size Japan = 141, sample size Rest of World = 710, DKNS excluded (6% and 1% Japan, 14% and 3% Rest of World)

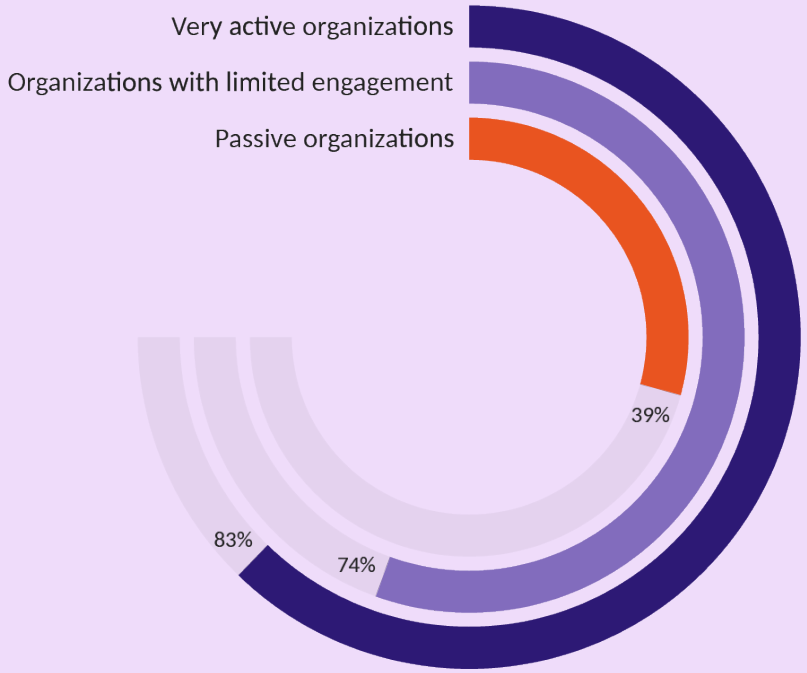
Indeed, as Figure 15 conveys, very active organizations show stronger agreement that open source better positions them for talent attraction than passive organizations (83% vs. 39%). Very active organizations may offer developers the opportunity to work on projects with industry-wide impact, contribute to technologies they may have previously used or admired, and build professional reputations within open source communities that extend far beyond their current employer. These organizations also tend to attract talent that brings external open source experience and connections, creating virtuous cycles where strong open source engagement attracts contributors who further strengthen the organization's open source capabilities.

These findings suggest that open source engagement is a significant component of technical talent strategy, particularly as the competition for skilled developers intensifies across various industries. Organizations that embrace active open source participation position themselves to access a broader spectrum of technical talent and can leverage community engagement as a differentiating factor in competitive hiring markets.

FIGURE 15

GREATER OSS ENGAGEMENT IS LINKED TO STRONGER TALENT ATTRACTION

% agreeing that open source better positions their organizations to attract technical talent



2025 World of Open Source Survey, Q17 by Q36, responses from Japan, sample size = 141

Organizational investment priorities and barriers

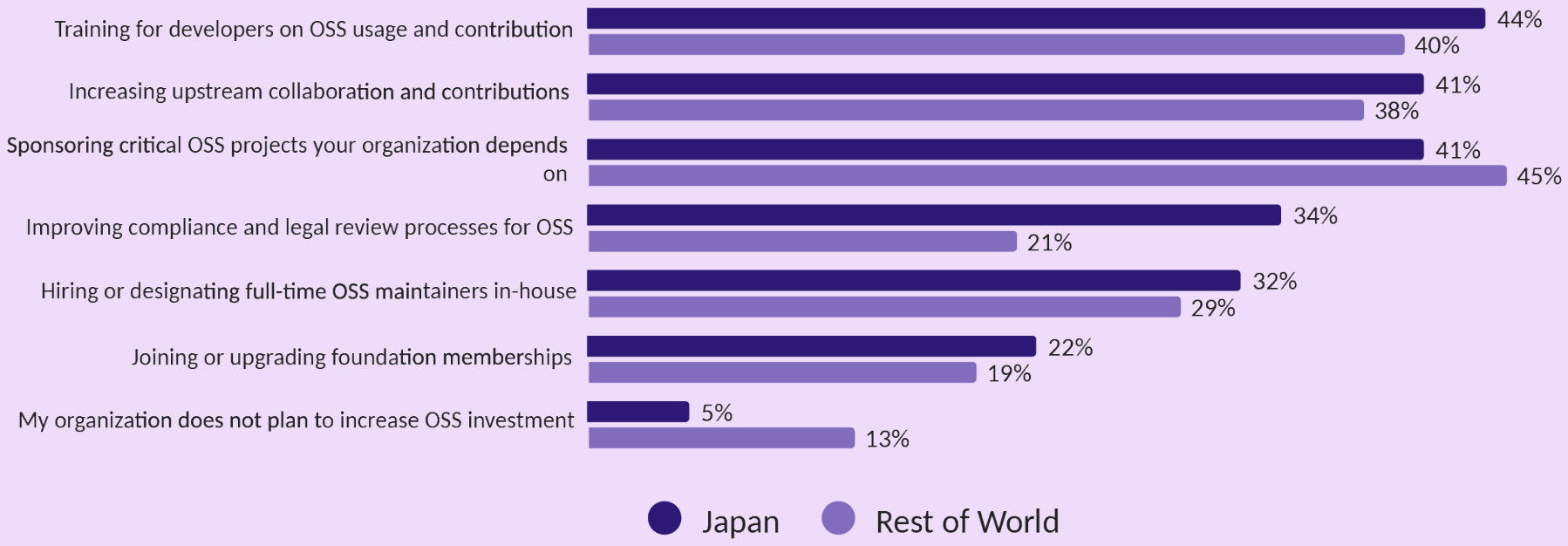
INVESTMENT PRIORITIES SIGNAL ASPIRATION FOR MORE ACTIVE PARTICIPATION

In response to questions about investment priorities, organizations reveal a willingness to engage in deeper, more proactive OSS participation. Activities such as training developers for OSS usage and contribution (44%), contributing or collaborating upstream (41%), and sponsoring critical OSS dependencies (41%) rank higher than internal operational goals, such as compliance or licensing (34%), as Figure 16 illustrates. These leading priorities indicate that organizations recognize the business value of engaging in open source development, as the previous section covered.

FIGURE 16

INVESTMENT PRIORITIZATION IN OSS

If your organization were to invest more in OSS over the next year, what would you prioritize funding or resourcing? (select up to three responses)



2025 World of Open Source Survey, Q22, sample size Japan = 141, sample size Rest of World = 710

BARRIERS TO A MORE ACTIVE OSS PARTICIPATION

Intellectual property concerns dominate organizational barriers to open source engagement, creating tension between participation aspirations and risk management requirements. Figures 17 and 18 reveal that IP concerns rank second in the barriers to adopting OSS (44%) and rank first among the barriers to contributing to OSS (52%). These IP-related concerns reflect organizations' deliberate assessment of how to engage in open source while protecting against legal vulnerabilities or compromising competitive positioning.

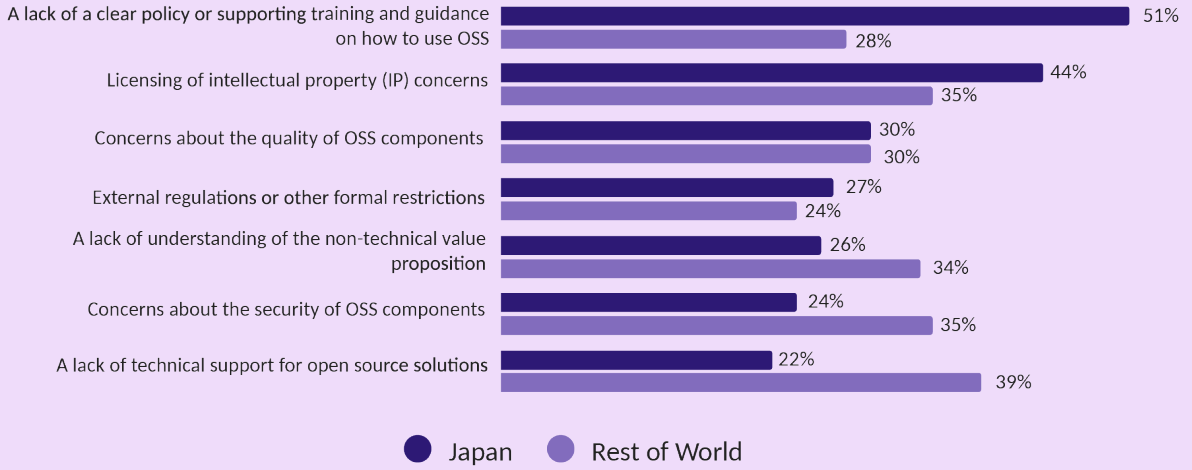
Notably, 51% cite a lack of clear policy or supporting training and guidance on how to use OSS. Technology constraints and challenges also rank highly in the barriers to contribution to OSS. These findings help to explain the focus on training developers on OSS usage and contributions that the previous section highlighted.

Uncertain return on investment emerges as a barrier to contribution (34%), indicating that organizations struggle to quantify the business value of open source participation, despite recognizing its strategic importance. This measurement challenge may reflect the indirect nature of many open source benefits, such as talent attraction and technical reputation, which resist traditional ROI calculations but provide substantial long-term value.

FIGURE 17

BARRIERS THAT LIMIT OSS ADOPTION IN ORGANIZATIONS

Which of the following factors limit OSS use in your organization? (select all that apply)

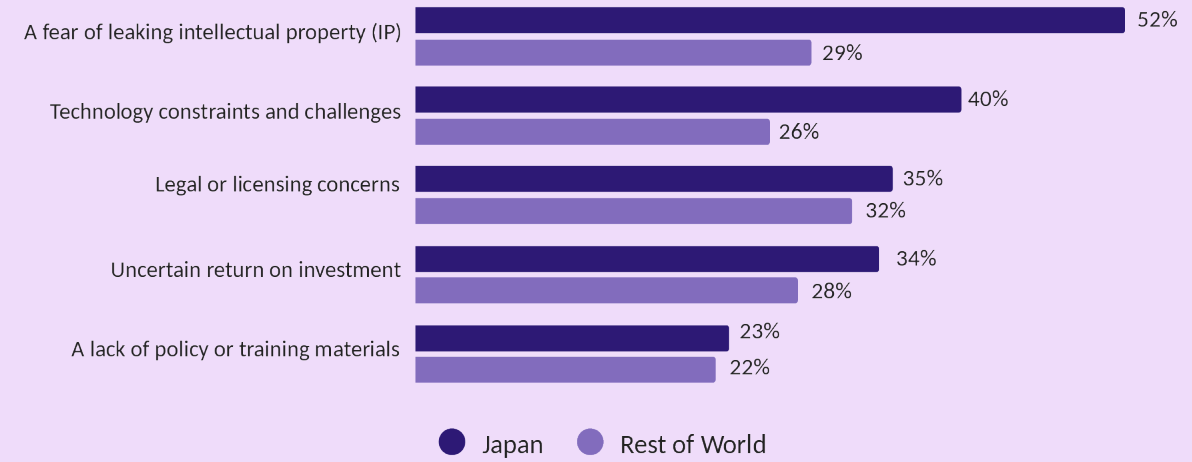


2025 World of Open Source Survey, Q29, sample size Japan = 141, sample size Rest of World = 710, total mentions = 2,037,

FIGURE 18

BARRIERS THAT LIMIT OSS CONTRIBUTION IN ORGANIZATIONS

Which of the following factors limit OSS contributions in your organization? (select all that apply)



2025 World of Open Source Survey, Q44, sample size Japan = 141, sample size Rest of World = 710, total mentions = 1,472.

Conclusion

The 2025 World of Open Source Japan Survey reveals a distinctive pattern: Japanese organizations recognize open source's strategic value more acutely than ever, with 69% reporting increased business value over the past year compared to 54% globally. However, they face persistent challenges in foundational infrastructure adoption and governance maturity that create significant business risks.

Key recommendations for Japanese organizations include:

Accelerate foundational infrastructure adoption while leveraging specialized strengths. Japanese organizations should address the significant adoption gaps in operating systems, DevOps, databases, and web development to capture productivity gains and reduce vendor lock-in, while continuing to build on existing leadership in AR/VR, blockchain, and manufacturing technologies. This dual approach enables organizations to modernize core infrastructure while maintaining competitive advantages in specialized domains that Japanese respondents identify as benefiting most from open source.

Establish comprehensive open source governance structures. Organizations should move beyond OSPO implementation to define clear open source strategies and establish public positions on open source. Public positions signal commitment to developers and partners, attract talent that values open source culture, clarify contribution policies for employees, and improve trust within communities. Without such positions, organizations miss opportunities to differentiate themselves in competitive talent markets. Developing comprehensive IP governance frameworks is essential to address the IP concerns cited by 52% of organizations as barriers to contributions and 44% as barriers to adoption.

Strengthen security evaluation practices beyond Common Criteria. While Common Criteria certification's 52% adoption reflects strong government-backed assurance in Japan, organizations must implement complementary security assessment frameworks. This includes increasing automated security testing adoption beyond the current 40%, establishing systematic direct dependency evaluation, and implementing comprehensive code review processes. Organizations should also increase inspection of community health signals to identify sustainable, well-maintained projects and avoid dependencies on components with declining maintainer engagement.

Establish enterprise-grade support arrangements matching Japan's high expectations. Given that 89% of Japanese organizations expect sub-12-hour response times, higher than the 69% global rate, organizations must establish formal support arrangements with commercial providers for mission-critical workloads. This includes negotiating long-term support guarantees and rapid security patching capabilities. Organizations should define clear criteria for when paid support is essential, prioritizing regulated industry environments, sensitive data systems, and mission-critical workloads.

Promote strategic participation through active engagement. Investment priorities should focus on training developers on OSS usage and contribution, increasing upstream collaboration and contributions, and sponsoring critical open source dependencies. These investments address the primary barriers identified: lack of clear policy or training, IP concerns, and technology constraints. Active engagement delivers a competitive advantage gap observed between very active and passive organizations, while also improving workplace satisfaction and talent attraction capabilities.

These findings suggest that Japanese organizations stand at a critical juncture. Those that successfully address infrastructure adoption gaps, strengthen governance frameworks, implement comprehensive security practices, and transition to active ecosystem participation can leverage open source as a strategic differentiator in global markets. Organizations that continue to treat open source primarily as a cost-saving tool rather than a strategic ecosystem requiring dedicated investment and expertise risk falling behind competitors who understand that open source involvement has become integral to technological leadership, innovation capacity, and competitive positioning in both established and emerging technology domains.

Methodology

The 2025 World of Open Source Global Spotlight Survey included 45 questions on the topics of open source use, contribution, value, and sustainability. The survey was in the field in May 2025. For information about access to the survey instrument, see the Data.world access heading below.

Survey screening involved a set of questions to validate the respondent.

- The respondent had to be at least somewhat familiar with the concept of OSS.
- The respondent needed to self-identify as a real person willing to share their OSS experience and perceptions.
- The respondent needed to be able to identify their employment status and represent an organization.

A total of 1,790 candidates started the survey, but 939 did not finish or were disqualified due to our screening criteria. Ultimately, 851 participants reached the end of the survey and qualified to be included in the study. The margin of error for this sample size was ±2.8% at a 90% confidence level. Regarding the data filtered for Japan and included in this report, 141 respondents completed the survey who work for an organization that is headquartered in Japan. The margin of error for the Japan data is ±7% at the 90% confidence level. The research team stratified data collection by company size and organization type. The stratification was designed to allow segmentation by these variables and other variables correlated with these.

Although respondents had to answer nearly all questions in the survey, there were times when the respondents were 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 just like any other response, so that the percentage of respondents who answered with "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 (i.e., responses where respondents could answer the question). Some of the analyses in this report exclude DKNS responses. 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 percentage 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 data, we add the information in the footnote for the figure.

The percentage values in this report may not total exactly 100% because of rounding or because they relate to "select all that apply" questions.

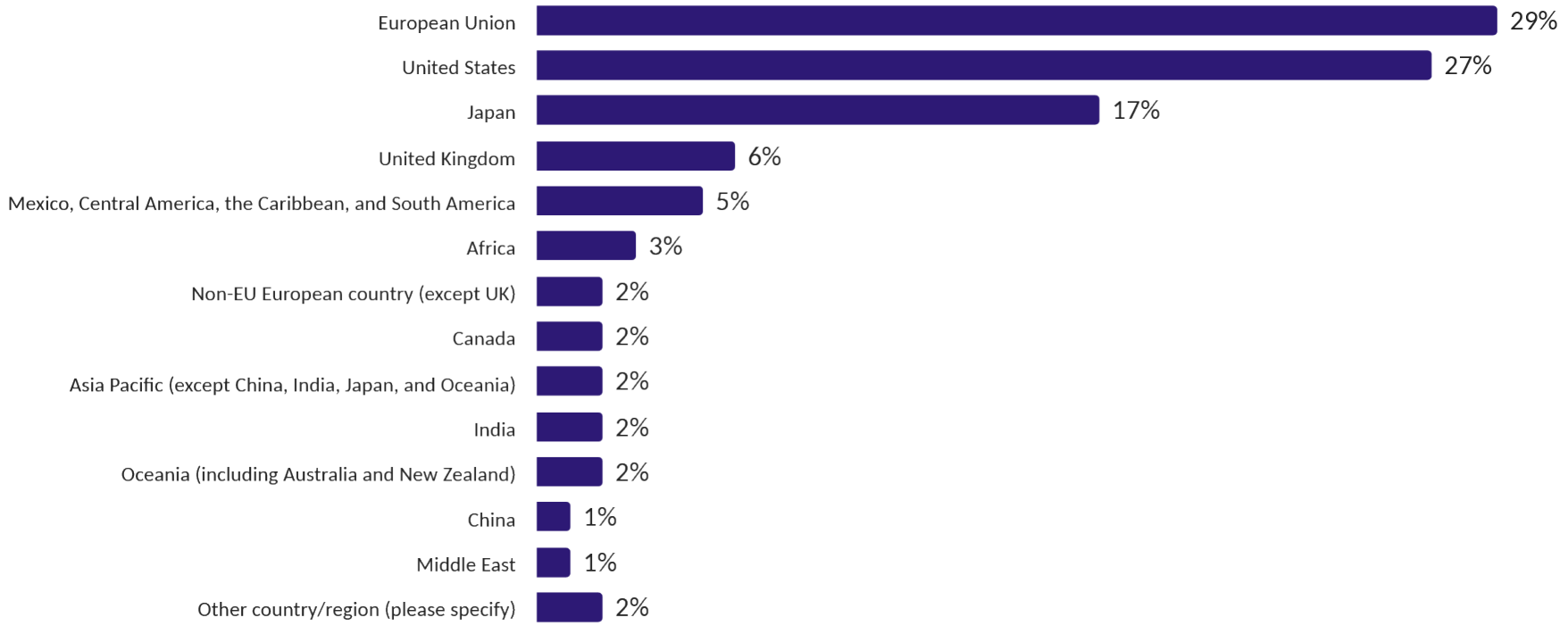
Survey demographics

The demographic data in Figure 19 illustrates the geographic distribution of the survey. The survey asked respondents to identify the region where their corporate headquarters was located. We aggregated the participants into North America (the United States and Canada), Europe (European Union, U.K., and Non-E.U. European Countries), and Asia-Pacific (China, India, Japan, and other Asia-Pacific countries), with 29%, 37%, and 21% of the sample, respectively. We omitted other regions in this report due to low representation. We aimed to gather responses from all parts of the world, but given the Linux Foundation's primary presence in North America and Europe, we received the majority of responses from those regions. We focused efforts on gathering a sufficient sample from Japan to create a Japan Spotlight report from the survey results. Therefore, Japan (17%) is over-represented in the Asia-Pacific sample (21%).

FIGURE 19

REGIONAL DISTRIBUTION OF THE SURVEY RESPONDENTS

In what country or region does your organization have its headquarters? (select one)

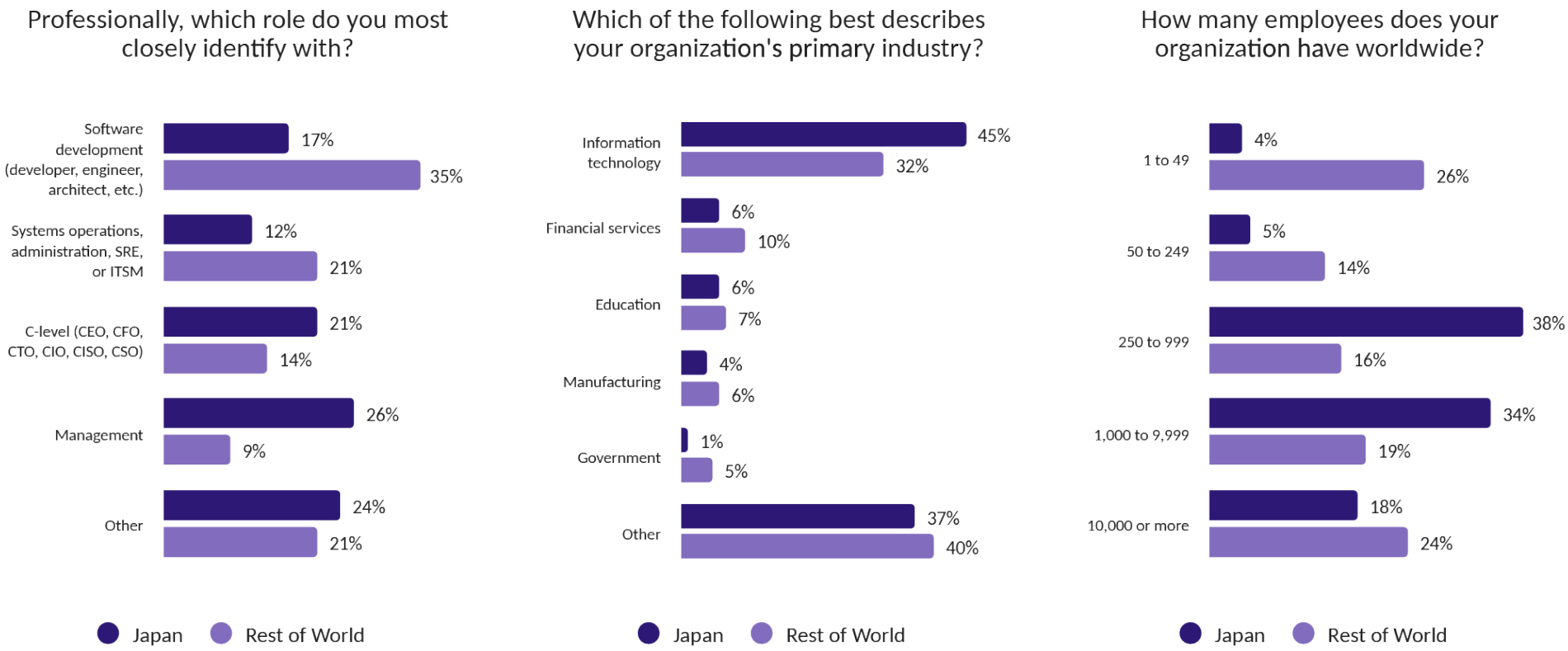


2025 World of Open Source Survey, Q6, sample size = 851

The chart in Figure 20 shows the professional role of respondents, the organization industry, and company size as measured by the number of employees. The right-hand chart shows that the size of the surveyed organizations ranges from microbusinesses with 1 to 10 employees to large organizations with more than 20,000 employees. We regrouped these respondents into three categories: 1 to 249, 250 to 9,999, and 10,000 or more.

FIGURE 20

RESPONDENT DEMOGRAPHICS



2025 World of Open Source Survey, Q5, Q10, Q11, some demographics were regrouped, sample size = 841

As Figure 21 illustrates, organizations have a wide range of engagement levels with open source projects. About 29% are highly active, regularly contributing code to key projects, while 27% engage at a moderate level by submitting code, reporting bugs, or improving documentation. Limited participation, such as reporting issues or joining discussions, accounts for 15%, and 13% of organizations take a passive stance—using OSS without contributing.

We invite the reader to further explore the data, which is available on Data.world.

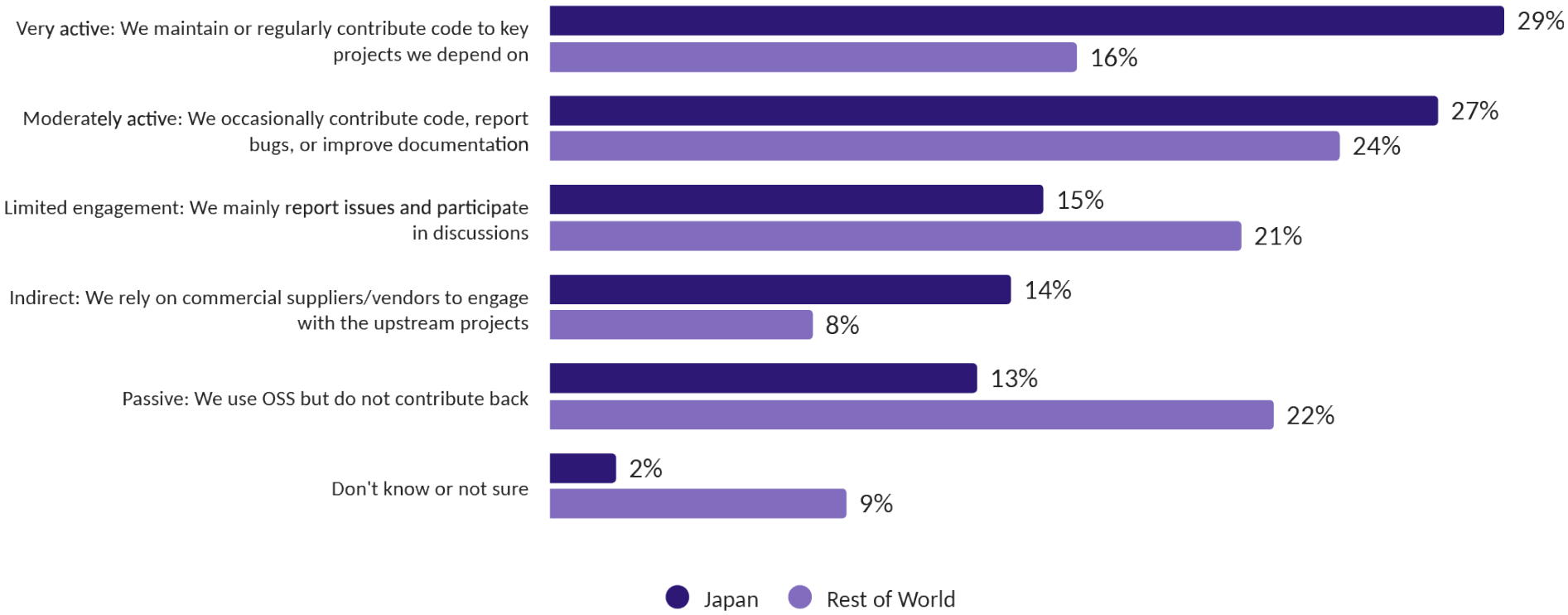
Data.world access

LF Research makes each of its empirical project datasets available on Data.world (**http://data.world/thelinuxfoundation**). This dataset includes the survey instrument, raw survey data, screening and filtering criteria, and frequency charts for each question in the survey. Access to Linux Foundation datasets is free, but it requires you to create a Data.world account.

FIGURE 21

ENGAGEMENT LEVELS

Which of the following best describes your organization's engagement with OSS projects?



2025 World of Open Source Survey, Q36, sample size = 841

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