



Research



Education

2024 State of Tech Talent Japan Report

Survey-Based Insights into the Leading Talent
Strategies and Modernization Initiatives
in Japan's Tech Sector

May 2024

Aдриенн Лавсон, The Linux Foundation
Стивен Хендрик, The Linux Foundation

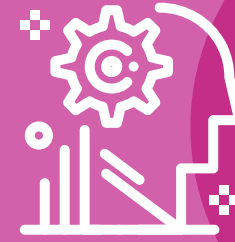
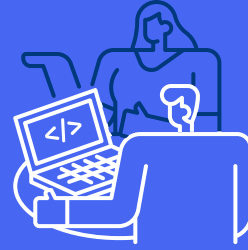
Foreword by Noriaki Fukuyasu, Vice President of
Japan Operations, The Linux Foundation

2024 State of Tech Talent Japan Report

Japanese organizations surveyed on average use a mix of **mainframe (45%) and cloud (51%) technologies.**



Despite talent challenges, **97% of Japanese organizations plan to modernize their current technology stack.**

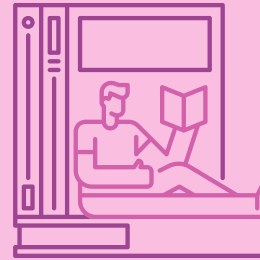


59% of organizations surveyed would significantly incorporate cloud technologies in their modernization efforts.

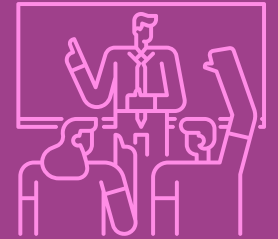


The most cited challenges in adopting new technologies are **the complexity of integrating legacy systems (52%)** and **the lack of skilled workforce (51%).**

35% of organizations surveyed would increase their staff due to GenAI integration with primary application areas in infrastructure monitoring, software development, and system maintenance.



Japanese organizations typically take **12 months to hire and onboard employees**, with a high turnover rate of **47% within six months of being onboarded.**



The most cited challenge in hiring technical staff in Japan is **certifying claimed technical skills (38%).**



97% of organizations consider upskilling an important strategy, with **41% rating it extremely important.**

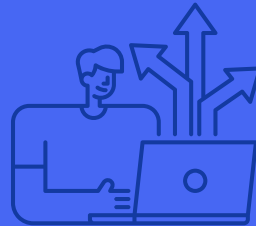


To address talent shortages, Japanese organizations lead the way globally in **upskilling inexperienced staff (55%)** and **cross-skilling existing staff (51%).**

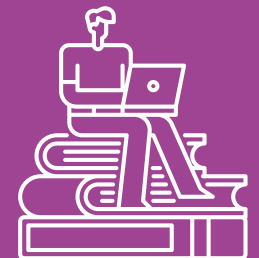


68% of Japanese respondents find employee training effective in facilitating technology adoption in their organization.

The most cited challenge in upskilling or cross-skilling staff is that it **takes time and can be ineffective at training for complex roles (44%).**



An opportunity arises to improve existing infrastructure with relevant content and expertise, as **60% of Japanese organizations plan increased investment over the next 18 months.**



Contents

- Foreword 4
- Executive summary.....5
- Introduction 6
- The technical talent market in Japan7
- Modernization..... 8
 - Legacy mainframes and emerging cloud.....8
- Addressing challenges in modernization efforts..... 10
- GenAI integration as strategic workforce enhancement 11
- Challenges in hiring..... 12
- Recognized potential in training..... 13
 - In-company training programs in Japan are built on strong foundations...14
- Opportunities for advancing training programs in Japan15
- Methodology17
 - Data.World access.....18
 - Demographics18
- About the authors.....21
- Acknowledgments.....21
- Further Reading.....21

Foreword

We are pleased to present the results from our Japanese 2024 State of Tech Talent survey. For those who are seeking out information on IT staffing trends in Japan, I believe this report provides valuable guidance for your own retention, recruitment, and training efforts – especially during this critical time period.

The bottom line? The Japanese IT industry is standing on the edge of a digital cliff.

In 2018, the Japanese Ministry of Economy, Trade and Industry (METI) published a report called [2025 Digital Cliff](#). It warned that the IT industry will face a digital cliff by 2025 and lose JPY 12 trillion every year, which is more than 2% of Japan's GDP in 2022, unless the industry updates the legacy technology-based systems to modern technology-based systems. METI strongly encouraged the industry to achieve a digital transformation to effectively navigate a fiercely competitive environment, or risk falling off the digital cliff.

Where have we come since 2018? In this year's State of Tech Talent Japan survey, the Linux Foundation sought to answer this question from the perspective of the talent market in Japan. The report provides some enlightening data and pathways forward to ensure we do not reach this cliff.

An important technical focus area is cloud native adoption. [A recent survey](#) conducted by the Cloud Native Computing Foundation (CNCF) reveals that Japan is behind North America and Europe in the adoption of cloud native techniques. The Tech Talent report confirmed the prevalence of legacy mainframe technologies, but it also revealed a growing push for cloud native technologies, with 97% of respondents committed to modernizing their stack - 59% of respondents through cloud integration.

However, there are not enough skilled workers to carry out this transition. We can see this in the data from the Linux Foundation's skill certification program for Kubernetes engineers. Since the start of 2024, for every engineer in Japan who has taken these exams there have been 2 in Korea, 5 in China and 7 in India. The Japanese workforce is falling increasingly far behind its Asian counterparts.

The report provides strategic content for how Japanese talent managers are confronting the shortage in technical talent. Japan has shown to be a global leader in hiring inexperienced professionals and training them, as well as providing cross-skilling opportunities for existing staff. Our respondents confirmed the importance of upskilling as a strategy to meet their heightened talent needs.

To prepare for modernization, our survey found that many organizations are enhancing their training programs. Additionally, many large Japanese companies have very well-organized onboarding programs for newly graduated employees, which effectively function as post-graduate job training schools. Some might criticize this as a legacy onboarding model from Japan's high economic growth era from the 1960s to the 1980s, but this can also be a model for consistently training large numbers of employees every year. There is significant value in high-quality and highly accessible training in order for Japan to build the technical talent it needs.

Please take a closer look into this report to learn more about the current technical talent market in Japan. We believe that organizations in Japan are keenly aware of the risks and many are committing to make the necessary recruiting, retaining, and upskilling changes needed to navigate their IT teams – and systems – through this evolution.

Noriaki Fukuyasu, Vice President of Japan Operations, The Linux Foundation



Executive summary

The 2024 State of Tech Talent Survey, conducted between December 2023 and February 2024, sought to understand global talent management practices within the IT sector. With insights from 418 respondents worldwide, including 80 from Japan, our report offers a nuanced perspective on talent management strategies amid the unique challenges faced by Japan's IT industry.

Japan confronts a significant shortage of technical talent, projected to worsen by 2030 due to wage structures and an aging population. However, there are signs of change. The government's initiatives for digital transformation and a shift toward mid-career hiring signal a departure from traditional employment practices.

Legacy mainframes persist in Japan's IT landscape, with on average 45% of the IT workload running on mainframe technologies, posing challenges to modernization efforts through legacy systems alongside the adoption of cloud technologies. While skill shortages persist, 97% of organizations are committed to modernizing their technology stack, including cloud integration and workforce enhancement through GenAI.

Japan leads in talent management strategies, with 55% of organizations surveyed hiring and training inexperienced professionals as well as cross-skilling existing staff to address technical talent needs (51%).

In-company training programs form the backbone of Japan's talent management strategies. However, there is room for improvement. Training programs can fall short in delivering the skills required for complex roles, with 44% of respondents citing concerns about lengthiness and ineffectiveness in training for complex roles.

Moving forward, organizations in Japan are ready to enhance their training programs, with 60% of Japanese organizations planning to increase their investment in training in the next 18 months. While organizations hope for an expansion of the talent pool, they leverage training as a tool to build the technical talent they need for their modernization efforts.

Photo: KubeCon + CloudNativeCon Europe 2024

Introduction

We ran the 2024 State of Tech Talent Survey between December 2023 and February 2024 to understand the current talent management practices in the ever-evolving landscape of the IT sector. Our findings are based on a survey conducted among individuals responsible for hiring or training within the IT sector. The [2024 Tech Talent](#) worldwide report, with 418 respondents contributing their insights, offers a deep understanding of the diverse talent management approaches adopted across industries and geographies.

We now shift our focus to Japan, a fascinating case study where technical talent management is approached in innovative ways due to structural challenges within the IT industry. The report first examines the technical talent market in Japan and then explores the survey results. We analyze the modernization efforts present in Japan, including GenAI integration, and identify a path showing how skilling is and will continue to be a crucial method to address the challenges of acquiring and retaining technical talent in Japan. The Japanese sample yielded 80 survey starts and 75 complete responses, which allowed for diverse perspectives to be shared across industries and company sizes. For a detailed understanding of our methodology, detailed demographics, and the survey framework, please refer to the Methodology section at the end of this document.



Photo: KubeCon + CloudNativeCon North America 2023



The technical talent market in Japan

Japan deals with a narrow technical talent market, with the Ministry of Economy, Trade, and Industry (METI) reporting a deficit of around 220,000 people in the IT field in 2018, which could worsen to as many as 790,000 by 2030¹. METI attributes this shortage to wage structures that favor long-term employment and offer lower salaries compared with the U.S. According to a METI study from 2019, local companies pay IT workers in their twenties less than half of what their American counterparts receive². Consequently, many young IT professionals are seeking jobs abroad or in foreign-owned companies. This challenge is compounded by Japan's aging population, with over 10% of the population now aged 80 or older³. The tight labor market is evident in hiring practices, as three-quarters of technology hiring managers in Japan found recruitment to be highly competitive last year, mainly due to a shortage of skilled candidates, according to recent research by the recruiting firm Morgan McKinley⁴.

However, there are signs of change. The government has launched initiatives for digital transformation, including the establishment of a Digital Agency in 2021. From a hiring perspective, there is a departure from the traditional practice of Japanese companies hiring fresh college graduates for lifelong employment. A study by Nikkei indicates that Japanese companies would fill 37.6% of job openings with mid-career hires in 2023, marking the largest-ever shift away from Japan's traditional employment model⁵. Our survey results offer further insights into the evolving Japanese technical talent market, highlighting modernization efforts such as GenAI integration, the adoption of cloud technologies, and a well-established training infrastructure. In this way, we demonstrate how Japanese organizations are addressing challenges while driving innovation.

1 Ministry of Internal Affairs and Communications (Japan) (2021): Introduction: History of Digitalization in Japan". Available at: <https://www.soumu.go.jp/johotsusintokei/whitepaper/eng/WP2021/chapter-introduction.pdf>

2 Ministry of Economy, Trade and Industry (Japan) (2019): Hataraku shitsu wo takameru tame no kiso joken [Basic Conditions of Improving the Quality of Work]. Available at: <https://www.jil.go.jp/institute/zassi/backnumber/2019/05/pdf/028-041.pdf>

3 BBC (2023): Japan population: One in 10 people now aged 80 or older. Available at: <https://www.bbc.com/news/world-asia-66850943>

4 The Japan Times (2024): Tech Firms in Japan are Scouring for Talent amid Labor Shortage. Available at: <https://www.japantimes.co.jp/business/2024/02/06/tech/japan-tech-firms-labor-shortage/>

5 Nikkei Asia (2023): Japan's midcareer hires jump to 37% of all new jobs: survey. Available at: <https://asia.nikkei.com/Spotlight/Work/Japan-s-midcareer-hires-jump-to-37-of-all-new-jobs-survey>

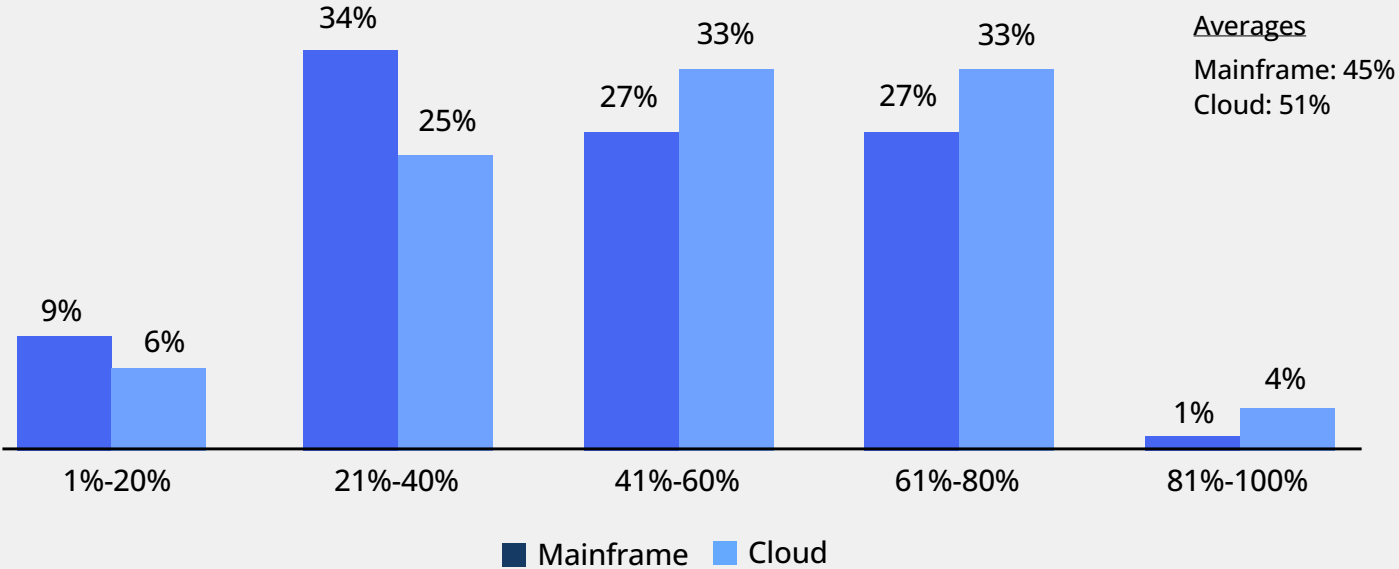
Modernization

Legacy mainframes and emerging cloud

Mainframes are often the foundation of legacy systems due to their historical role in managing critical business operations deeply integrated within organizational infrastructures. Despite their reliability, modernizing these legacy mainframe systems can present challenges, as they may use sophisticated proprietary technologies and lack compatibility with newer systems and methodologies. This pattern is also observed in our Japanese sample, where 55% of organizations run more than 40% of their IT workload on mainframe technologies (Figure 1) and the most cited challenge in adopting new technologies is the complexity of integrating legacy systems (Figure 2).

FIGURE 1: JAPANESE ORGANIZATIONS USE A MIX OF MAINFRAME AND CLOUD TECHNOLOGIES

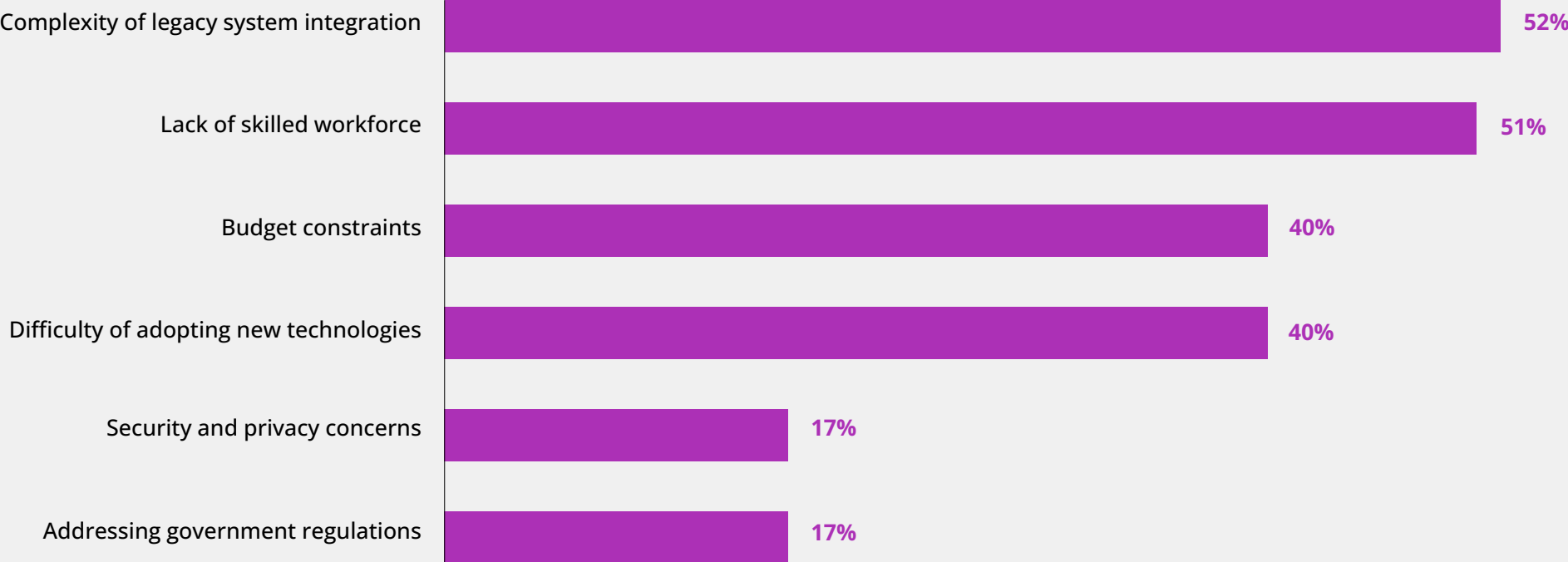
Please estimate the percent of your company's or entity's IT workload running on mainframe hardware. (select one)



Replace with: 2024 Tech Talent Survey, Q45, question only asked to respondents from Japan, and Q17, Sample Size = 77

FIGURE 2: TOP CHALLENGES FOR ADOPTING NEW TECHNOLOGIES: LEGACY SYSTEM AND SHORTAGE OF SKILLED LABOR

What are you organization’s primary challenge(s) in adopting new technologies in your organization? (select all that apply)



2024 Tech Talent Survey, Q47, Sample Size = 77, Valid Cases = 77, Total Mentions = 167

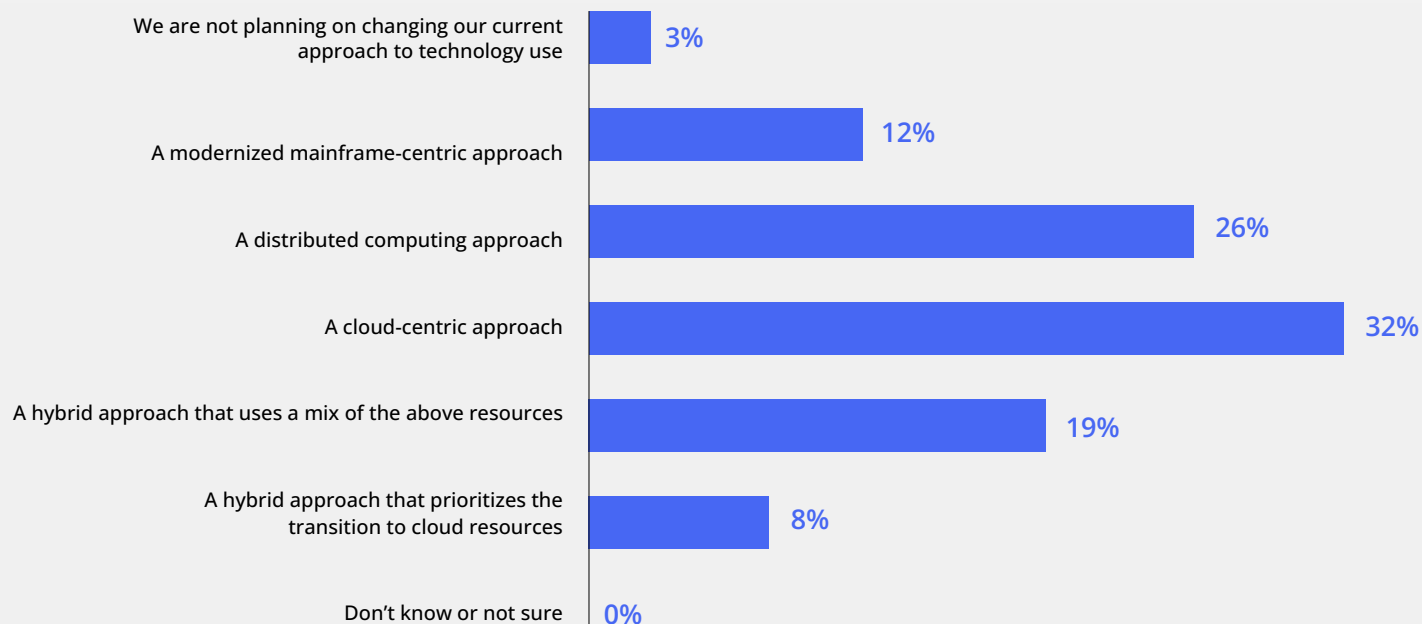
Since cloud technologies continue to emerge, the data reveals a complex blend of mainframe and cloud technologies, with an average of 45% of the IT workload running on mainframe and 51% in cloud in the Japanese organizations surveyed (Figure 1). Mainframe systems continue to be vital and highly effective at supporting critical applications and data processing in numerous Japanese organizations, emphasizing their enduring significance alongside the rise of newer technologies. However, cloud technologies are steadily gaining traction, offering flexibility, scalability, and cost-effectiveness, gradually complementing the role of mainframes in modern IT infrastructures.

Addressing challenges in modernization efforts

Not surprisingly, given the narrow technical talent market in Japan, the second most cited challenge of modernization efforts was a lack of skilled workforce (Figure 2). Despite facing challenges related to legacy systems and the lack of skilled workforce, Japanese organizations remain dedicated to modernizing their technology stack. Nearly all organizations are intent on taking this crucial step forward. Specifically, 59% of organizations intend to significantly incorporate cloud resources, with the majority of them prioritizing cloud approaches (40%). Meanwhile, others will opt for a modernized mainframe and/or distributed computing approach (Figure 3).

FIGURE 3: 97% OF JAPANESE ORGANIZATIONS PLAN TO MODERNIZE THEIR TECHNOLOGY STACK

Over the next 18 months, which approach will best describe your organization's use of mainframe and/or cloud technologies? (select one)



GenAI integration as strategic workforce enhancement

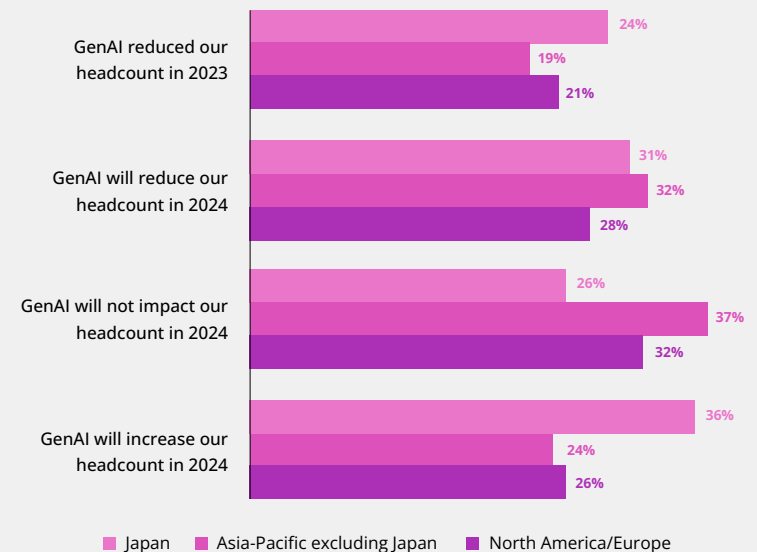
Improving technology processes can take various forms, one of which involves integrating generative AI (GenAI) capabilities into organizational structures. GenAI's impact on headcount is complex and does not necessarily mean solely replacing staff. Interestingly, in Japan, a higher percentage of organizations are expected to increase their staff due to GenAI (36% compared with 25%, as shown in Figure 4). This reflects a strategic approach by Japanese companies to leverage GenAI as a complement to the existing workforce as well as amplifying the effects of a newly hired workforce by integrating AI capabilities. They clearly recognize the significance of both human expertise and AI-driven efficiency in their operations.

The main applications of GenAI in Japan will include IT infrastructure monitoring, software development, and system maintenance (Figure 5). What is noteworthy is that while data analysis ranks highest in application areas in other regions, it does not hold the same position in Japan. Instead, project management is ranked higher as an application area.

Another important application area not mentioned earlier but of particular significance for this report is the potential impact of GenAI on IT training. One way GenAI could improve training programs is the use of simulated environments to achieve scenario-based learning. In addition, customized training experiences have the potential to increase engagement and address specific skill gaps the company faces, moving away from a universal training approach.

FIGURE 4: JAPANESE ORGANIZATIONS SURVEYED SEE HIGH IMPACT OF GENAI ON HEADCOUNT, FOR BOTH REDUCTION AND INCREASE

How has GenAI impacted or will impact the headcount of your organization? (select all that apply)



2024 Tech Talent Survey, Q23, Sample Size = 366, Valid Cases = 366, Total Mentions = 399, DKNS responses excluded

FIGURE 5: THE TOP THREE USE CASES FOR GENAI IN JAPAN ARE INFRASTRUCTURE MONITORING, SOFTWARE DEVELOPMENT, AND SYSTEM MAINTENANCE

In which activities does your organization plan to use GenAI? (select all that apply)

	JAPAN	ASIA-PACIFIC EXCL. JAPAN	NORTH AMERICA / EUROPE
1	IT infrastructure monitoring	Data analysis and reporting	Data analysis and reporting
2	Software development	IT infrastructure monitoring	IT infrastructure monitoring
3	System maintenance and updates	Software development	Software development
4	Project management tasks	System maintenance and updates	Network management and security
5	Data analysis and reporting	Customer support and helpdesk services	Project management tasks

2024 Tech Talent Survey, Q24, Sample Size = 366, Valid Cases = 366, Total Mentions = 1,024

Challenges in hiring

In Japan, the narrow technical talent market poses significant challenges in hiring individuals with the necessary skills. Due to the common practice of hiring technical talent straight out of university, who have been conventionally expected to remain with their first employer for their entire career, there is limited mobility between IT companies. Once a candidate is hired, which typically takes around six months in Japan, an additional 5.9 months are spent on onboarding (Figure 6). Compounding this issue is the fact that a considerable portion of these new hires (on average 47%) leave within six months of completing their onboarding process. This high turnover rate can be attributed to various factors, including dissatisfaction with the working environment. Issues such as the long training period and rigid promotion and wage structures based mainly on seniority likely contribute to this trend. These aspects may create a sense of frustration among employees, prompting them to seek opportunities elsewhere, despite the extensive investment made by their employers in their initial training and onboarding.

FIGURE 6: AVERAGE TIME TO HIRE AND ONBOARD AND AVERAGE TURNOVER RATE IN JAPAN COMPARED TO OTHER REGIONS

	TIME TO HIRE	TIME TO ONBOARD	TURNOVER RATE
	On average, how long does it take to hire a headcount to fill an open technical position in your organization? (select one)	How long does the onboarding process take for a new technical headcount to reach normal productivity? (select one)	On average, what percentage of new technical staff hires resign or were asked to leave within 6 months of being onboarded? (select one)
Japan	6.0 months	5.9 months	47%
AP excl. Japan	4.8 months	4.6 months	34%
North America / Europe	5.4 months	4.6 months	38%

Recognized potential in training

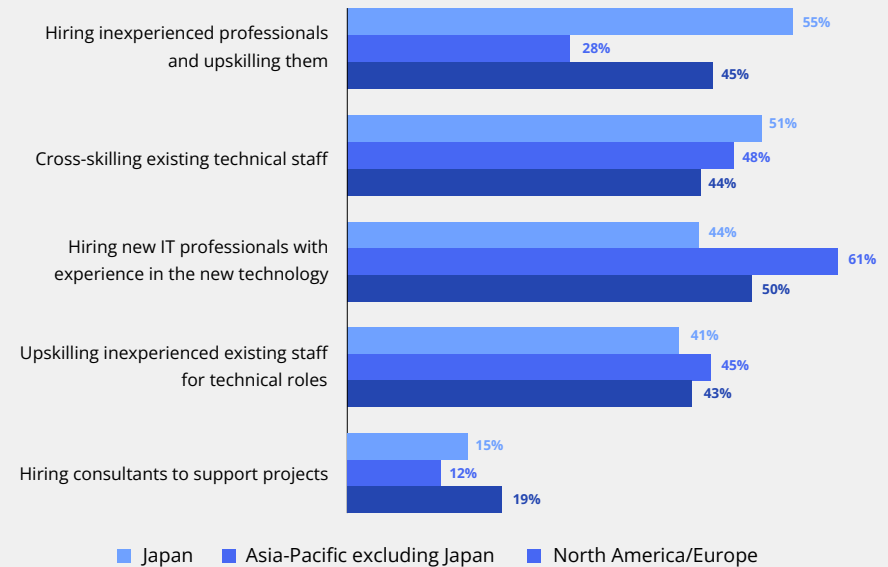
In this section, provide insight into the critical concepts of upskilling and cross-skilling in the Japanese tech talent market. Upskilling refers to the process of enhancing the skills of existing employees, equipping them with the latest technological competencies and domain knowledge to meet evolving job requirements. Cross-skilling involves diversifying the skill sets of technical staff, enabling them to proficiently handle tasks beyond their primary expertise, thereby enhancing organizational flexibility and resilience.

Japanese organizations leading in talent management strategies

Considering the challenges discussed earlier, it is evident that Japanese organizations recognize the issues and actively seek new ways to adapt to technological changes while ensuring that their workforce has the necessary skills. This explains why Japan leads in the strategy of hiring inexperienced professionals and then training them (55%, Figure 7). This approach may also involve recruiting fresh graduates, who are readily available. Additionally, the second most popular talent management strategy in Japan is cross-skilling existing staff (51%), once again highlighting Japan's leadership compared with other regions. Cross-training provides an opportunity to develop new skills within the workforce without the challenges associated with hiring new employees. This data is further confirmed by the respondents' answers on the importance of upskilling as a strategy to address technical talent needs (Figure 8).

FIGURE 7: JAPAN LEADS GLOBALLY IN HIRING INEXPERIENCED PROFESSIONALS AND UPSKILLING THEM AND CROSS-SKILLING EXISTING STAFF

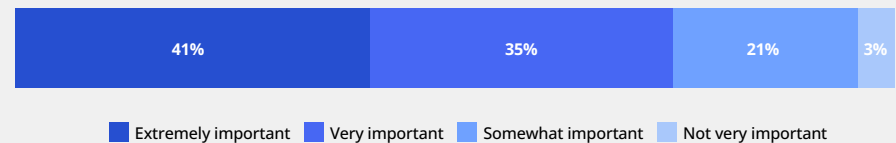
How does your organization ensure that its technical staff has the necessary skills to fulfill the technological needs of the organization? (select all that apply)



2024 Tech Talent Survey, Q25, Sample Size = 366, Valid Cases = 366, Total Mentions = 737

FIGURE 8: UPSKILLING IS EXTREMELY IMPORTANT FOR 41% OF JAPANESE ORGANIZATIONS

How important is upskilling as a strategy to address technical talent needs? (select one)



2024 Tech Talent Survey, Q26, Sample Size = 366

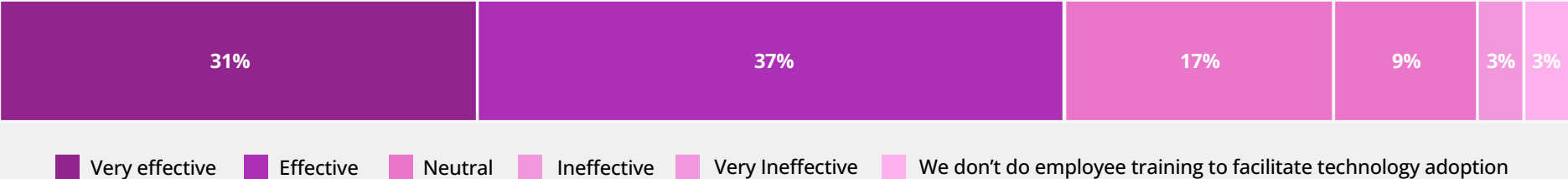
In-company training programs in Japan are built on strong foundations

Japan already possesses the infrastructure for training, which is evident in the talent strategies they employ, as they rely heavily on training. Moreover, since there is a need to train fresh graduates once hired, training is integrated into most job positions. This gives Japan an advantage in effectively ensuring that employees receive the necessary training. The survey data confirms this, with Figure 9 showing that 68% of organizations find their training programs effective in facilitating technology adoption.

However, there is certainly room for improvement. Many training programs for fresh graduates might focus on basic software skills, even for those already proficient in software development. This is likely due to the fact that numerous graduates did not major in computer science but in other fields. As a result, training programs might be outdated or attempt to cater to various backgrounds without fully meeting employees' needs. The following section will outline ways in which training programs could be more effective in Japan.

FIGURE 9: 68% OF JAPANESE ORGANIZATIONS FIND EMPLOYEE TRAINING EFFECTIVE IN THEIR ORGANIZATIONS

How effective is employee training in facilitating technology adoption in your organization? (select one)



2024 Tech Talent Survey, Q48, Sample Size = 75

Opportunities for advancing training programs in Japan

Moving forward, the effectiveness of training in Japan will rely heavily on the existing training infrastructure. However, given the additional challenges of managing legacy systems, modernizing existing technology stacks, and integrating newer technologies such as cloud computing and GenAI, the current content and skills being taught may fall short.

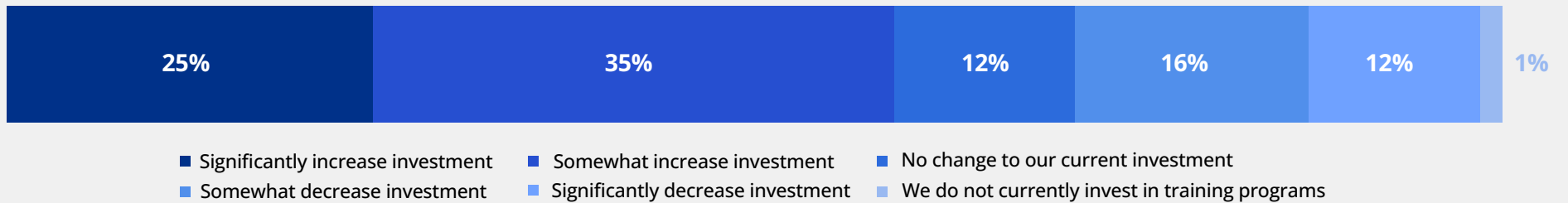
Implementing structural changes to expand the technical talent market will be challenging, and include raising wages, adopting more flexible pay structures tailored to diverse backgrounds and skills, and attracting younger individuals to the IT industry in Japan. Until then, organizations will need to invest in training programs that offer the necessary content and expertise to drive their modernization efforts.

Fortunately, Japanese organizations are making strides in this direction, with 60% of surveyed organizations intending to increase their investment in training (Figure 10). The primary challenge mentioned by Japanese organizations is in verifying the claimed technical skills of potential hires (left-hand panel of Figure 11). Since many training programs occur within companies, there might not be a system in place for acquiring certifications that can be presented to new employers during the hiring process. An opportunity arises to collaborate with external training programs to obtain certifications.

One of the main difficulties that Japanese organizations encounter in training is that it is lengthy and might not be suitable for complex roles, a challenge cited by 44% of respondents (right-hand panel of Figure 11). Creating targeted curriculums and personalized learning paths for each role could help tackle this issue. Moreover, offering a more flexible training program that employees can adjust to fit their own schedules would be beneficial.

FIGURE 10: 60% OF JAPANESE ORGANIZATIONS PLAN TO INCREASE INVESTMENT IN TRAINING

Over the next 12 months, will your organization change its investment in training programs to support technology adoption? (select one)



2024 Tech Talent Survey, Q48, Sample Size = 75

FIGURE 11: CHALLENGES OF HIRING AND UPSKILLING: OPPORTUNITY FOR SKILL CERTIFICATIONS IN JAPAN

What are the main challenges to hiring for technical staff? (select all that apply)

Verifying claimed technical skills	38%
Recruitment is costly, time consuming, and often does not lead to the right candidate for the position	36%
Onboarding takes valuable internal resources away from other critical projects and is time consuming	35%
Hiring the wrong candidate and then having to onboard again is an issue	33%
Problems in finding the right candidate can delay projects	33%

2024 Tech Talent Survey, Q36, Sample Size = 80, Valid Cases = 80, Total Mentions = 179

What are the main challenges to upskilling or cross-skilling staff? (select all that apply)

Upskilling takes time and can be ineffective at training for complex roles	44%
Creating and nurturing an environment for continuous learning takes effort and time	36%
Finding the appropriate training materials is a challenge	33%
Upskilled staff doesn't help us to fill new positions because we still have to backfill for the positions vacated	28%
It can be difficult to translate new knowledge into practical applications	28%

2024 Tech Talent Survey, Q41, Sample Size = 80, Valid Cases = 80, Total Mentions = 173

Methodology

This study is based on a web survey conducted by the Linux Foundation (LF) and its partners from the end of December 2023 to the beginning of February 2024. The survey's goal was to gain fresh insight into the current state of technology talent acquisition, retention, and management globally. In the following, we present the study methodology, context regarding how we analyzed the data, and the demographics of the respondents.

From a research perspective, it was important to eliminate any perception of sample bias and ensure high data quality. We handled the elimination of sample bias by sourcing our usable sample from the LF membership, partner communities, social media, and a third-party panel provider. We addressed data quality through extensive prescreening, survey screening questions, and data quality checks to ensure that respondents had sufficient professional experience to answer questions accurately on behalf of the organization they worked for.

We collected survey data from industry-specific IT vendors and service providers and non-profit, academic, and government organizations. Respondents spanned many vertical industries and companies of all sizes, and we collected data from geographies including the Americas, Europe, and Asia-Pacific.

The 2024 State of Tech Talent Survey comprised 42 questions exploring the topics of technical talent management, GenAI integration, and upskilling and cross-skilling initiatives. For respondents from Japan, an additional five questions were asked on mainframe technologies, modernization efforts, and skilling initiatives. For information about access to the 2024 State of Tech Talent Survey, its dataset, and survey frequency charts, see the Data.World access section below.

Survey screening involves the use of five variables to validate the respondent. The respondent needed to answer all the demographic questions.

- The respondent had to hire or recruit IT professionals.
- The respondent had to self-identify as a real person.
- The respondent had to be employed.
- The respondent had to speak for at least from the perspective of their team.
- The respondent had to accurately answer a verbatim question.

A total of 1,455 candidates started the survey worldwide. There were 993 candidates disqualified due to the screening criteria outlined above, 34 were eliminated because of data quality concerns, and 418 records remained as the basis for this analysis. The margin of error for this sample size was $\pm 4.1\%$ at the 90% confidence level. To get the sample from Japan, we used Q9: "In what country or region does your organization have its headquarters? (select one)" to filter for respondents

answering “Japan.” The Japanese sample consists of 80 qualified survey starts, 75 of which answered every question. In an effort to include as much sample as possible for the Japan segment, footnotes will show a sample size between 75 and 80. The margin of error for the Japanese sample was $\pm 9.5\%$ at the 90% confidence level.

We stratified the data collection by company size, geographic region, and organization type. The data was primarily segmented by geographic region (Q9), company size (Q14), and industry (Q10 and Q13).

Although respondents were required to answer nearly every question in the survey, there were times when the respondents were unable to answer one 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 created a variety of analytical challenges.

One approach was to treat a DKNS answer just like any other response so that the percentage of respondents that answered DKNS was 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. This is because we can classify the missing data 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 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, the footnote for the figure includes the phrase “DKNS responses excluded.”

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

Data.World access

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

Demographics

These demographics provide a profile of the 2024 State of Tech Talent Survey respondents filtered for the Japanese sample.

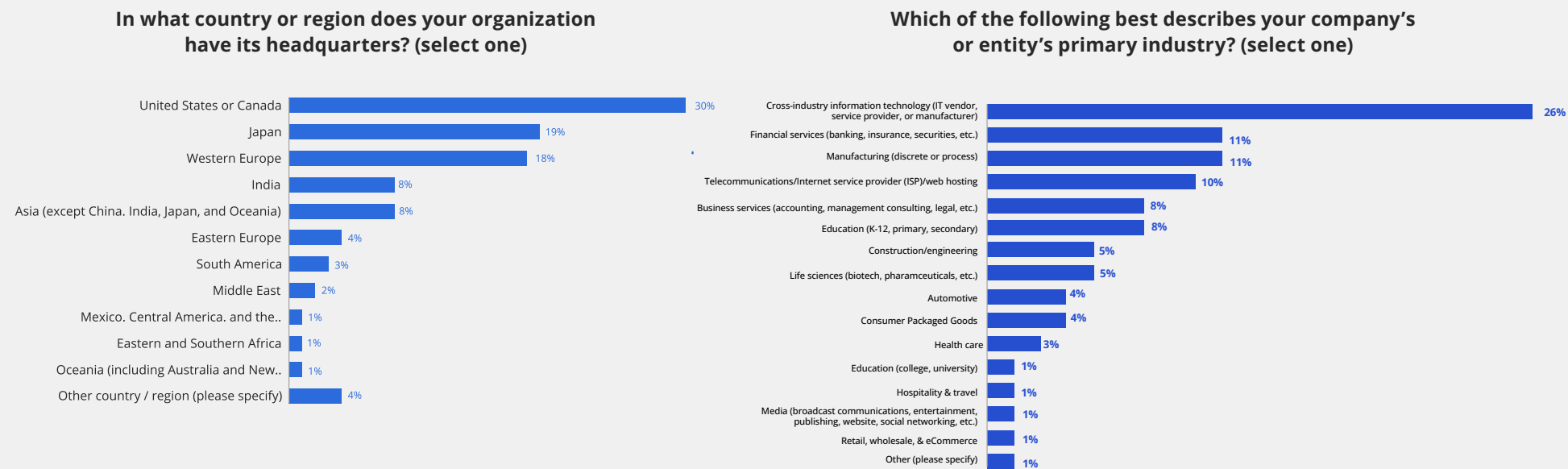
The left-hand panel of Figure 12 shows the majority of the sample hires for their team or department. The other 37% of respondents are internal HR/talent managers or internal recruiters. The center panel shows the perspectives that respondents were able to take; 60% of respondents were able to speak for their entire company or organization while 35% were only able to speak for the team or department they work for. The right-hand panel asked respondents about their roles; at least 64% of respondents were in technical roles.

FIGURE 12: SELECTED DEMOGRAPHICS FROM THE 2024 TECH TALENT SURVEY FILTERED FOR JAPAN



2024 Tech Talent Survey, Q2, Q4, Q8, Sample Size = 80, filtered for Japan

FIGURE 13: SELECTED DEMOGRAPHICS FROM THE 2024 TECH TALENT SURVEY



2024 Tech Talent Survey, Q9, Sample Size = 418

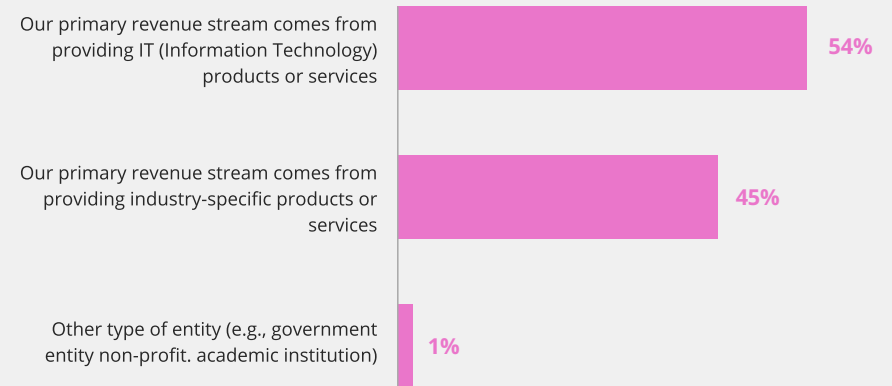
2024 Tech Talent Survey, Q13, Sample Size = 80, filtered for Japan

The left-hand panel of Figure 13 shows the geographic distribution of the worldwide sample, which is balanced between the three regions: North America (30%), Europe (22%), and Asia-Pacific (35%). Responses from Japan are purposefully overrepresented to filter for this specific country and create this separate analysis and report. The right-hand panel of Figure 13 shows that most organizations in the sample are IT companies operating across industries, the second largest industry present is financial services, and the third is manufacturing.

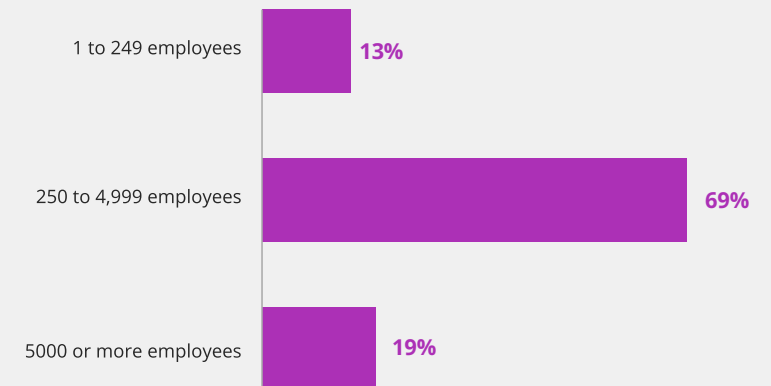
An important variable used for segmentation is shown in the upper panel of Figure 14. This question helped us to differentiate between vendors and end-user organizations (the sample consisted of 54% vendors and 45% end-user organizations). The lower panel shows company size, with 69% middle-sized organizations with between 250 and 4,999 employees.

FIGURE 14: SELECTED DEMOGRAPHICS FROM THE 2024 TECH TALENT SURVEY FILTERED FOR JAPAN

Which option best describes the company or entity you work for? (select one)



Please estimate how many total employees are in the company or entity you work for. (select one)



2024 Tech Talent Survey, Q10, Q14, Sample Size = 80, filtered for Japan

About the authors

ADRIENN LAWSON is a data analyst at the LF. Adrienn obtained a master's degree in social data science from the University of Oxford. She supports LF Research with survey development, analysis, and report writing. Adrienn has previously conducted research at the University of Oxford, the Budapest Institute for Policy Analysis, and the U.K.'s Office for National Statistics.

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 open source software 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.

Acknowledgments

Special thanks to Linux Foundation colleagues Hilary Carter, Noriaki Fukuyasu, Anna Hermansen, Christina Oliviero, Scott Punk, Clyde Seepersad, and Mary Simpkins for your contributions to and in support of this research project.

Further Reading

[2024 State of Tech Talent Report](#)

[World of Open Source: Japan Spotlight 2023](#)

[State of Open: The UK in 2023. Phase 3: Skills or Bust](#)

 twitter.com/linuxfoundation

 facebook.com/TheLinuxFoundation

 linkedin.com/company/the-linux-foundation

 youtube.com/user/TheLinuxFoundation

 github.com/LF-Engineering

May 2024



Copyright © 2024 [The Linux Foundation](#)

This report is licensed under the [Creative Commons Attribution-NoDerivatives 4.0 International Public License](#).

To reference this work, please cite as follows:
Adrienn Lawson and Stephen Hendrick, "2024 State of Tech Talent Japan Report," foreword by Noriaki Fukuyasu, The Linux Foundation, May 2024.



Founded in 2021, [the 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, the Linux Foundation Research is creating the go-to library for open source insights for the benefit of organizations the world over.



The Linux Foundation's training program features [courses](#) developed and taught by expert instructors, many of whom are well-respected professionals in the open source community. Our [certification](#) team performs comprehensive industry and job analyses to ensure every professional certification program we offer meets our exceedingly high standards. Combined with our outstanding customer success team, we can deliver responsive [support](#) and customized [training solutions](#) to enable individuals and businesses to succeed.