



# DEVOPS

## IN SWITZERLAND REPORT

# 2024

# DevOps in Switzerland 2024

Practices, technology, and culture

VSHN – The DevOps Company & Zühlke

# Table of Contents

1. Introduction .....	3
2. Executive Summary .....	4
3. What's DevOps? .....	6
4. Demographics .....	9
4.1. Industry Distribution of Organizations in 2023 .....	10
4.2. Domains .....	12
4.3. Separation of Development & Operations .....	13
4.4. IT Budgets .....	14
4.5. IT Budgets: Forecast .....	16
4.6. IT Budgets: Correlations of Budgets 2023 & Forecasts 2024 .....	17
4.7. IT Budgets: Forecast 2022 vs. Reality 2023 .....	18
4.8. IT Budgets: Organization Size .....	19
4.9. Conclusion: Demographics .....	20
5. Tools & Technology .....	21
5.1. Operating Systems .....	22
5.2. Programming Languages .....	23
5.3. Auxiliary Back-end Services .....	25
5.4. Database Services .....	26
5.5. MLOps .....	27
5.6. Observability .....	29
5.7. FinOps .....	31
5.8. Infrastructure .....	33
5.9. Cloud Strategies .....	34
5.10. Production Application Deployment and Management .....	35
5.11. CI/CD Tools .....	36
5.12. Infrastructure as Code .....	37
5.13. Kubernetes .....	39
5.14. Conclusion: Tools & Technology .....	41
6. Processes & Culture .....	42
6.1. Perception .....	43
6.2. Adoption .....	44
6.3. Overall Results .....	45
6.4. Team Autonomy .....	48

6.5. Outsourcing .....	50
6.6. Conclusion: Processes & Culture .....	51
7. Conclusion .....	52
8. VSHN.....	54
9. Zühlke.....	58
10. Authors .....	60
10.1. Aarno Aukia.....	60
10.2. Markus Speth .....	61
10.3. Romano Roth.....	62
Index .....	65
Colophon.....	67

# Table of Images

Figure 1. DevOps

Figure 2. Who Benefits from DevOps

Figure 3. Demographics

Figure 4. Industries in 2023

Figure 5. Organization sizes in 2023

Figure 6. Domains of responsibility in 2023

Figure 7. Separation of development & IT operations in 2023

Figure 8. IT Budgets in 2023

Figure 9. IT Budgets in 2022

Figure 10. IT Budgets Forecast for 2024

Figure 11. Correlations between IT Budgets 2023 and Forecasts 2024

Figure 12. IT Budgets in 2023 vs. prediction about 2023

Figure 13. IT Budgets vs. Organization Size

Figure 14. Tools & Technology

Figure 15. Operating Systems in Production in 2023

Figure 16. Programming Languages in 2023

Figure 17. Programming Language Trends 2021-2023

Figure 18. Auxiliary Back-end Services in 2023

Figure 19. Database Services in 2023

Figure 20. Adoption of MLOps in 2023

Figure 21. MLOps Tools in 2023

Figure 22. Adoption of Observability in 2023

Figure 23. Observability Tools in 2023

Figure 24. Adoption of FinOps in 2023

Figure 25. FinOps Tools in 2023

Figure 26. Infrastructure Providers in 2023

Figure 27. Cloud Strategies in 2023

Figure 28. Production Application Deployment and Management in 2023

Figure 29. CI/CD Tooling 2023

Figure 30. Adoption of Infrastructure as Code in 2023

Figure 31. Infrastructure as Code Tools in 2023

Figure 32. Kubernetes Adoption in Production in 2023

Figure 33. Kubernetes Distributions 2023

Figure 34. Processes and Culture

Figure 35. DevOps Perception in 2021-2023

---

Figure 36. Adoption of DevOps in 2023  
Figure 37. Adoption of DevOps 2020-2024  
Figure 38. Return on Investment of DevOps 2021-2023  
Figure 39. Provisioning of Services in 2023  
Figure 40. Provisioning of Services in 2022  
Figure 41. Outsourcing DevOps in 2023  
Figure 42. Outsourcing DevOps in 2022  
Figure 43. Conclusion  
Figure 44. VSHN Logo  
Figure 45. Zühlke Logo  
Figure 46. Aarno Aukia  
Figure 47. Markus Speth  
Figure 48. Romano Roth

---

# Chapter 1. Introduction

The landscape of software development and IT operations has undergone a seismic shift over the past decade, driven by the rapid adoption of DevOps practices. In Switzerland, this transformation is particularly significant as organizations across industries increasingly recognize the strategic value of integrating development and operations to achieve agility, reliability, and faster time-to-market.

The "DevOps in Switzerland 2024" report, produced in co-collaboration with Zühlke and VSHN, provides an in-depth analysis of how Swiss companies are navigating this evolving landscape. By leveraging data from a comprehensive survey conducted between January and March 2024, this report offers a detailed examination of the current state of DevOps adoption, the tools and technologies in use, and the cultural shifts that are redefining the way teams work.

Our fifth edition of the report goes beyond merely capturing trends; it delves into the complexities and challenges faced by organizations of varying sizes, from small agile teams to large enterprises. It examines how DevOps is not just a set of practices but a cultural movement that necessitates a fundamental shift in mindset across all levels of an organization. The insights provided here are critical for understanding the direction in which DevOps is headed in Switzerland and for identifying the strategies that will drive future success.

As we embark on this analysis, our goal is to equip IT leaders, decision-makers, and practitioners with the knowledge needed to refine their DevOps strategies, overcome obstacles, and harness the full potential of this transformative approach.

Aarno Aukia, Markus Speth, VSHN – The DevOps Company

Romano Roth, Zühlke

---

# Chapter 2. Executive Summary

The "DevOps in Switzerland 2024" report offers a comprehensive analysis of the current DevOps landscape, reflecting on the maturity, challenges, and advancements within Swiss organizations. Drawing from quantitative research conducted through a detailed survey, the findings provide key insights into the adoption, tooling, processes, and cultural shifts within the industry.

## Key Conclusions:

1. **Widespread Adoption:** DevOps practices have been embraced by nearly 88% of Swiss organizations, highlighting its critical role in driving operational efficiency and innovation across various sectors.
2. **Tooling and Technology:** Kubernetes continues to dominate as the preferred container orchestration tool, with significant growth in Infrastructure as Code (IaC) practices, emphasizing the shift towards automated infrastructure management.
3. **Cultural Integration:** The integration of development and operations teams has become the norm, fostering a collaborative environment that enhances software delivery frequency and quality.
4. **Challenges in Scaling:** Larger organizations face distinct challenges in scaling DevOps practices, underscoring the need for tailored strategies to navigate organizational complexity and inertia.
5. **Optimism in IT Budgets:** Despite economic uncertainties, there is a prevailing optimism about IT budget increases for 2024, particularly among smaller companies, signaling a continued investment in DevOps capabilities.
6. **Strategic Importance of DevOps:** The involvement of C-suite executives in DevOps initiatives highlights its strategic importance, driving not just technological, but organizational transformation.

This report offers a reliable and data-driven reflection of the current state of DevOps in Switzerland, providing actionable insights for organizations

---



to refine their DevOps strategies, overcome challenges, and capitalize on emerging opportunities. The trends and data presented underscore the critical role of DevOps in the ongoing digital transformation, positioning it as a cornerstone for future innovation and efficiency.

## Methodology

This report draws on quantitative research conducted through a survey carried out between January and March 2024.

Our analysis is both descriptive and exploratory, with clustering techniques applied to the data from 81 complete and 103 incomplete responses. This sample is representative of the Swiss IT market, which comprises approximately 16,000 companies.<sup>[1]</sup> The margin of error, calculated at a 95% confidence level, is 10.86%

This approach ensures a reliable reflection of the current state of DevOps within Switzerland, offering insights grounded in solid data.

---

[1] Netzwoche, "So viele Unternehmen und Beschäftigte zählt die Schweizer IT," August 27th, 2018, [www.netzwoche.ch](http://www.netzwoche.ch)

# Chapter 3. What's DevOps?

DevOps is a captivating yet often misunderstood term, much like "cloud" or "container." Its meaning varies widely, and it's frequently reduced to a mere buzzword with superficial marketing implications. Despite these misconceptions, DevOps has become the mainstream approach, serving as the default organizational framework for software development teams around the globe to deliver superior software more frequently.

At its essence, DevOps represents the convergence of software development, IT operations, and system administration. It symbolizes a new culture of collaboration between departments that have traditionally pursued different objectives. Software development thrives on agility, creativity, and innovation to consistently deliver new features, while IT operations prioritize stability, security, and reliability. DevOps bridges these seemingly contradictory goals, merging agility with stability.

As an evolution of agile software development, DevOps seeks to integrate the entire value stream in an interdisciplinary manner. The primary objective of DevOps is to dismantle siloed thinking within organizations.

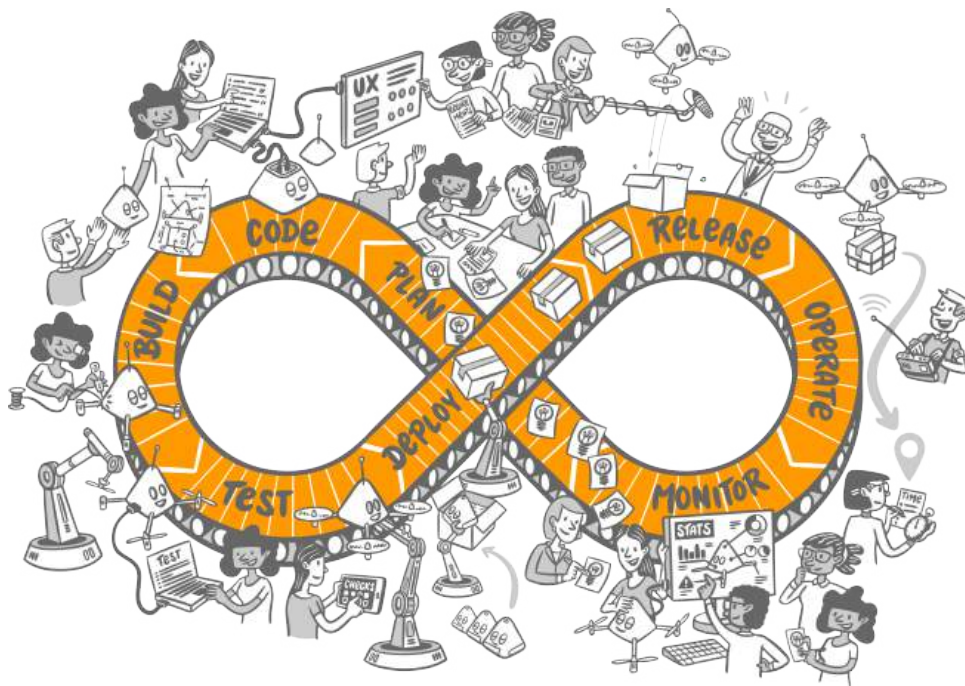


Figure 1. DevOps

DevOps is a blend of processes, tools, and cultural elements, heavily reliant on people. It's not something that can be simply "bought" or implemented by acquiring new tools, establishing new processes, or hiring a "DevOps engineer." DevOps requires a cultural shift—an interdisciplinary collaboration not only between development (Dev) and operations (Ops) but also involving all stakeholders in the product lifecycle, including Product Owners, Scrum Masters, testers, security experts, and more. Under the DevOps philosophy, the entire organization works together harmoniously.

Creating a DevOps culture within a company demands more than just breaking free from the "sysadmin vs. coder" mentality. It necessitates leadership that champions cooperation and collaboration across teams and management that is eager to share ideas and lead by example. DevOps is not merely a methodology or a management framework that can be imposed on an existing structure; it is a philosophy, a holistic approach to delivering better products and services.

## **Who Benefits from DevOps?**

DevOps transcends industries. In the era of digitization, its impact is not confined to software development. Today, many traditional industries—whether in banking, insurance, retail, or manufacturing—rely on software to support their core business. Digitization touches every sector, and DevOps ensures that all stakeholders, from customers to teams, benefit from its principles.

A culture of DevOps, emphasizing collaboration and automation, guarantees consistency, predictability, faster delivery, and enhanced code quality. While DevOps does not inherently prevent bugs or failures, it significantly improves the efficiency and speed of troubleshooting and problem-solving. This, in turn, reduces the cost of failure.

DevOps embodies the lean concept of Continuous Improvement and fosters a conscious, active feedback culture. Mistakes are seen as opportunities for continuous improvement in cooperation and processes. Everyone working on the value stream share responsibility for the final

---

product or service, working together towards common goals.

In the end, DevOps benefits everyone involved.

This report aims to delve deeper into the state of DevOps in Switzerland, examining its adoption, challenges, and the specific benefits realized within various sectors.

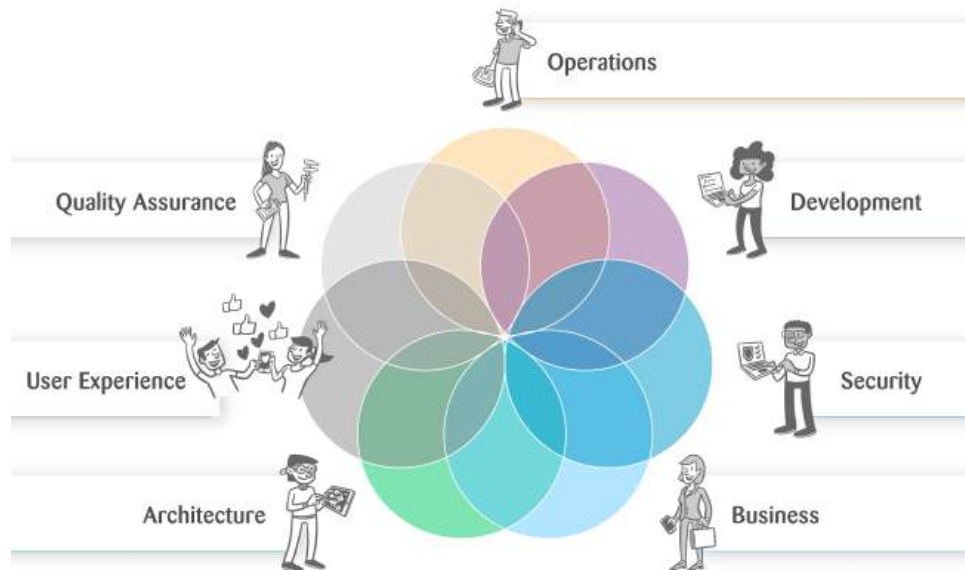


Figure 2. Who Benefits from DevOps

# Chapter 4. Demographics

*“Another Forrester report states that DevOps is accelerating technology, but that organizations often overestimate their progress (Klavens et al. 2017). Furthermore, the report points out that executives are especially prone to overestimating their progress when compared to those who are actually doing the work.”*

— Nicole Forsgren, *Accelerate: The Science of Lean Software and DevOps: Building and Scaling High Performing Technology Organizations*

At the beginning of the survey, we asked respondents a series of questions about their team organization and dynamics. These insights provide a snapshot of the prevailing organizational models in Switzerland and their evolution. This chapter summarizes the key findings.

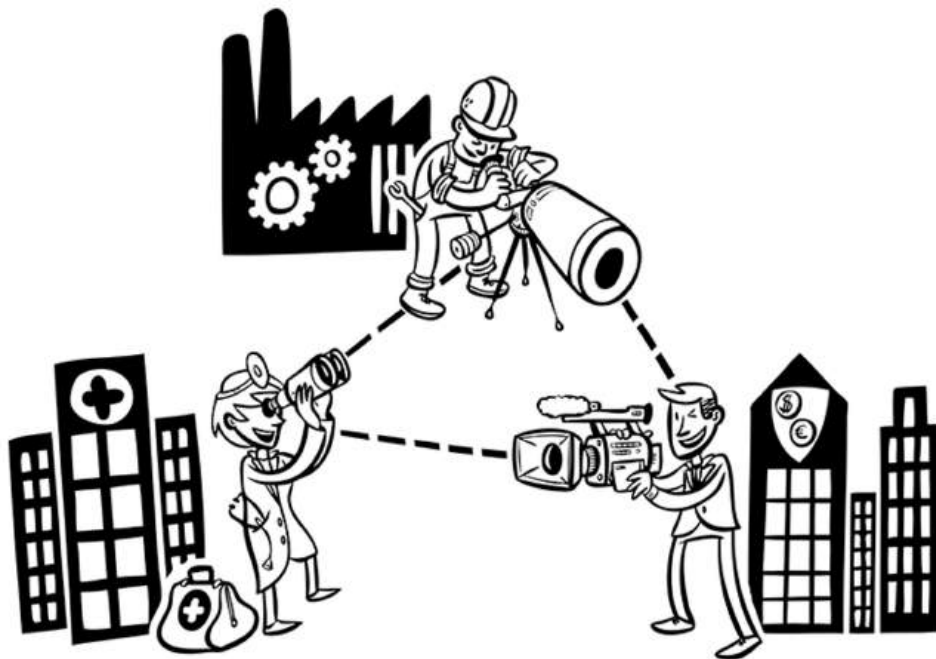


Figure 3. Demographics

## 4.1. Industry Distribution of Organizations in 2023

The 2023 industry distribution chart reveals a consistent pattern: over 50% of organizations are in the "Software or IT" sector, mirroring trends from previous years. The "Banking or Finance" sector follows with approximately 20%. Other sectors, such as "Retail," "Insurance," and "Engineering," represent significantly smaller portions of the distribution. This data underscores the continued dominance of DevOps practices within the Software and IT industries.

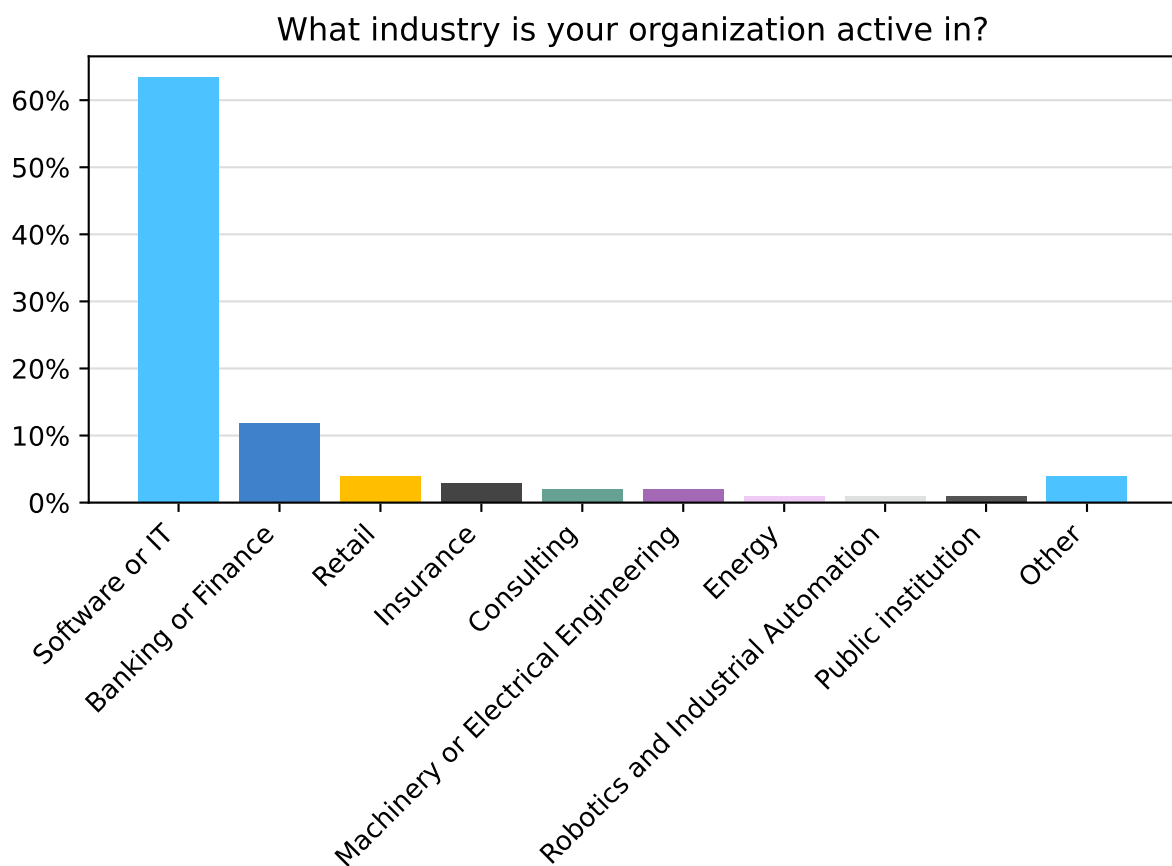


Figure 4. Industries in 2023

The 2023 data on organization sizes highlights the widespread adoption of DevOps practices across both small (1-50 employees) and mid to large-sized (1001-10,000 employees) organizations. This suggests that DevOps is flexible enough to be implemented by smaller, agile teams as well as in larger, more complex systems. However, the lower representation in very large organizations (10,000+ employees) indicates challenges in scaling

DevOps practices within these environments. These challenges likely stem from increased complexity and organizational inertia. This finding emphasizes the need for tailored DevOps strategies that can accommodate the varying scales and complexities of different organizations.

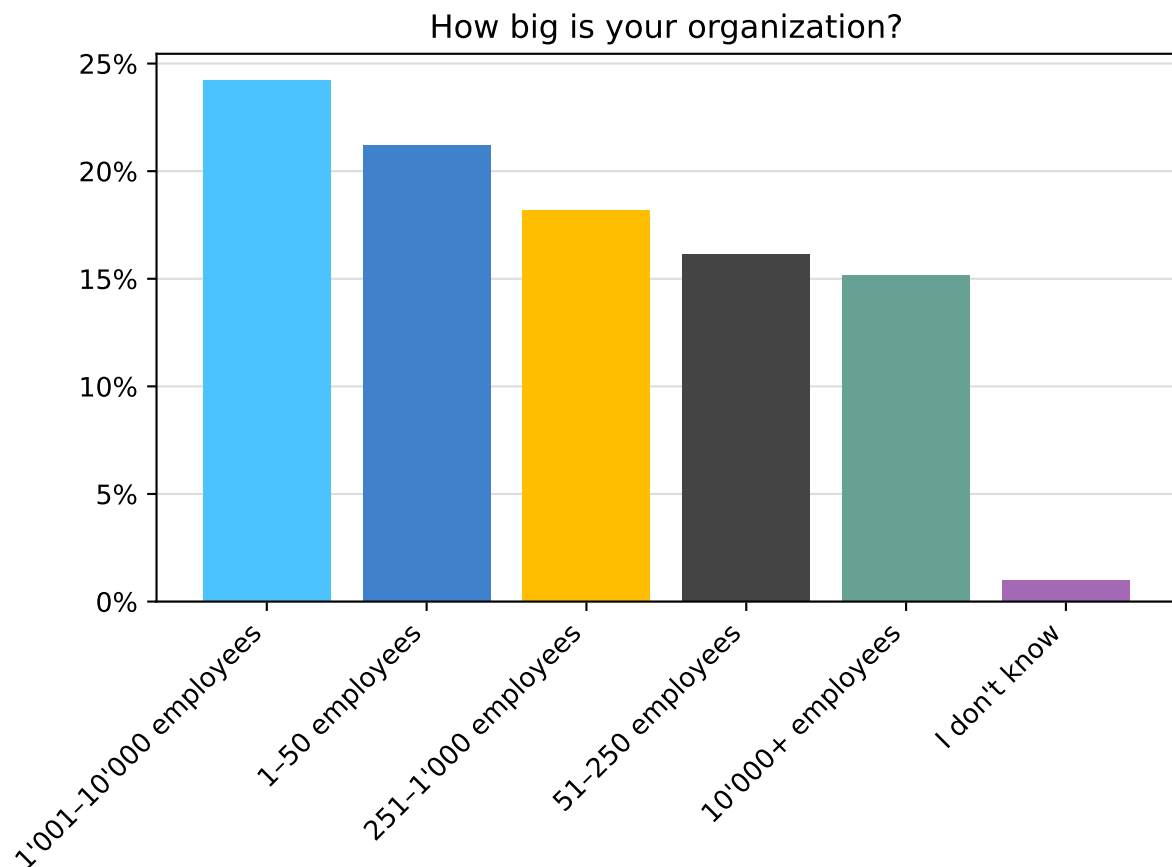


Figure 5. Organization sizes in 2023

## 4.2. Domains

The survey respondents primarily work in software development and engineering domains. Following these, many are engaged in DevOps teams, as well as IT operations and infrastructure teams.

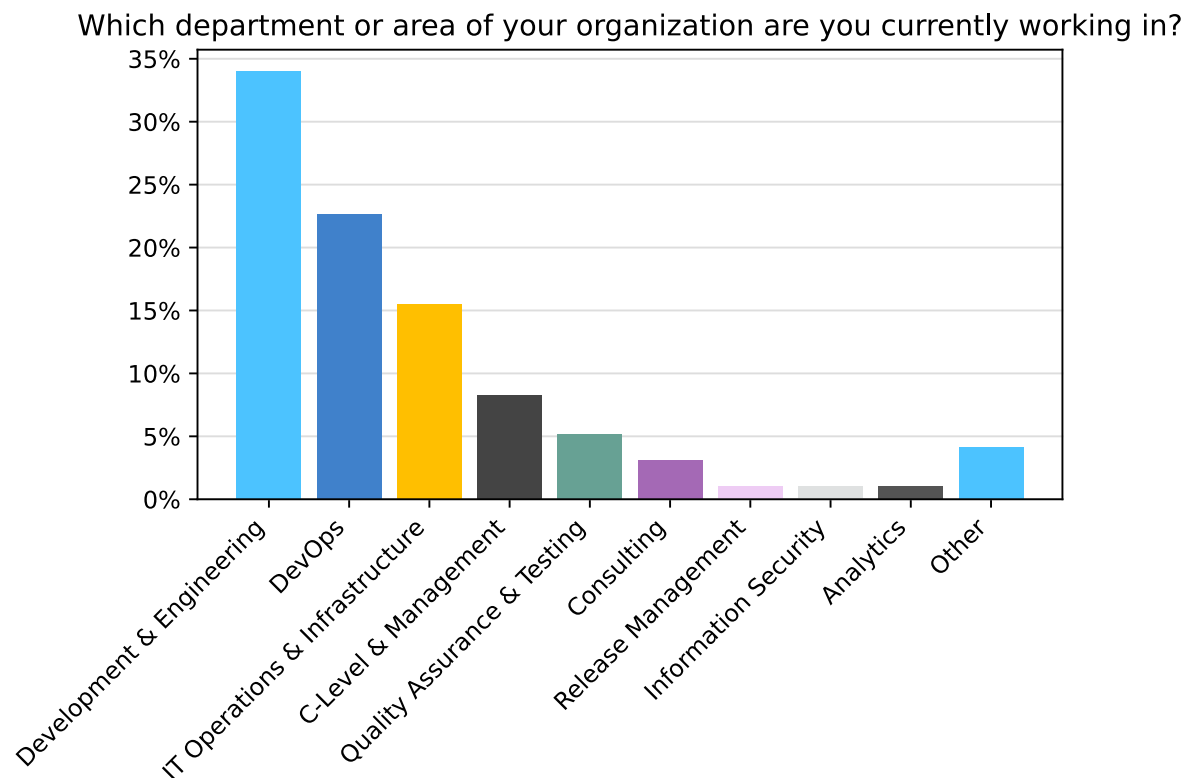


Figure 6. Domains of responsibility in 2023

The fourth largest group of respondents, making up 8.2%, are active C-suite members (e.g., CEOs, COOs, CMOs). This involvement is a strong indicator that DevOps has gained strategic importance in many organizations.

The distribution of responsibilities among these domains remains consistent with our previous report.



## 4.3. Separation of Development & Operations

The ongoing trend towards integrating software development and operations teams persists, with the majority now working in unison. This shift signals a positive move away from the siloed organizational models of the past, embracing a more collaborative and cohesive approach.

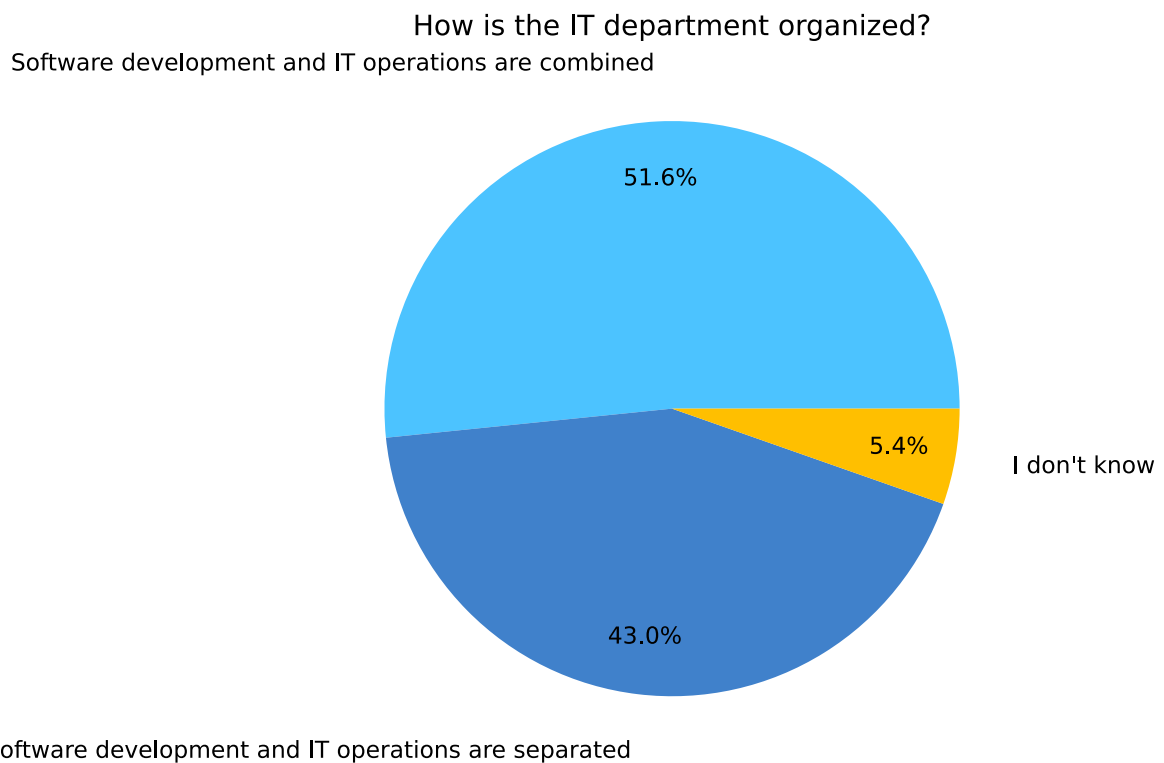


Figure 7. Separation of development & IT operations in 2023

## 4.4. IT Budgets

In 2023, IT budgets saw growth, albeit at a slower pace compared to 2022. The lingering effects of the pandemic, coupled with ongoing political and economic uncertainties, are prompting businesses to adopt a more cautious approach to spending. As we look ahead to 2025, this trend is expected to intensify, with organizations becoming increasingly vigilant in managing their IT investments.

During 2023, your IT budget has...

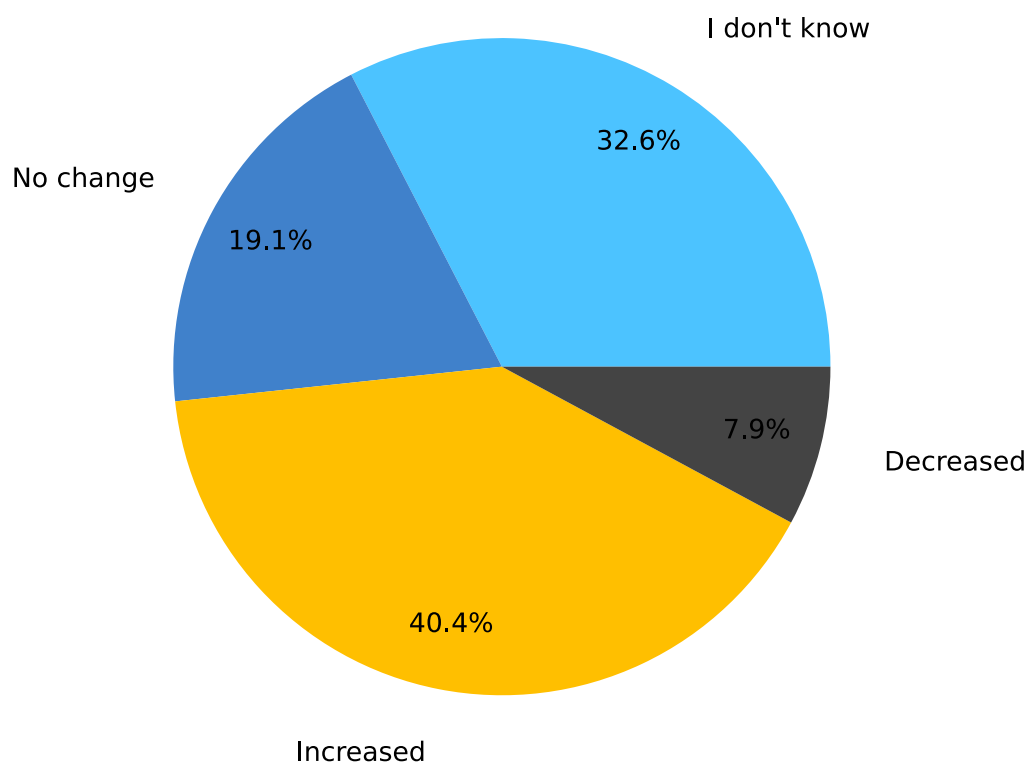


Figure 8. IT Budgets in 2023

During 2022, your IT budget has...

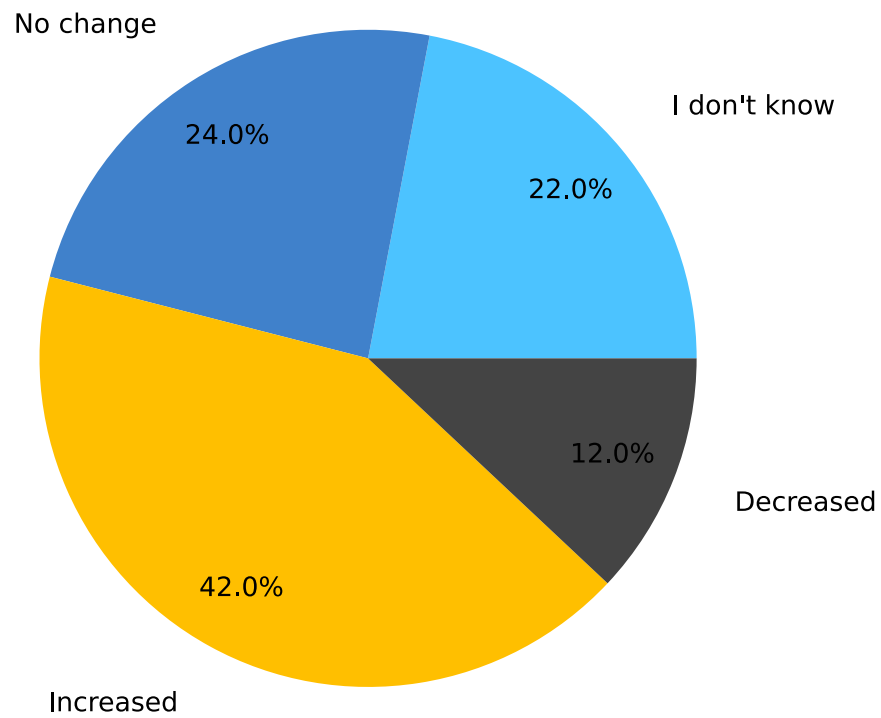


Figure 9. IT Budgets in 2022

## 4.5. IT Budgets: Forecast

In our survey, we asked respondents to forecast their IT budgets for 2024. The outlook is optimistic, with most expecting their budgets to increase once more.

In 2024, do you expect your IT budget to...

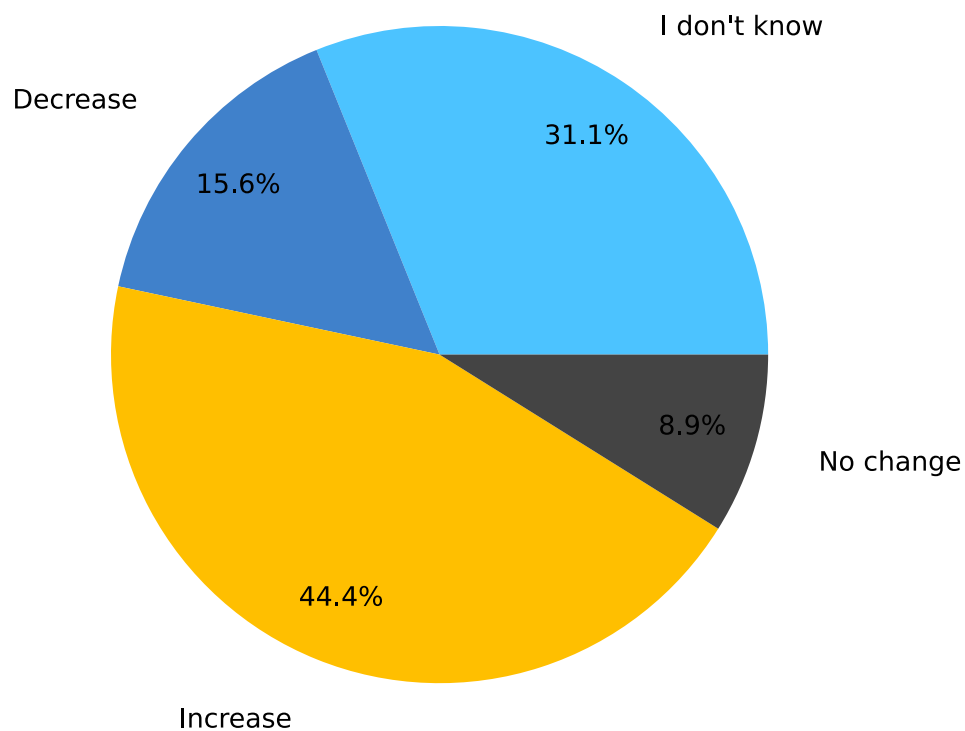


Figure 10. IT Budgets Forecast for 2024

# 4.6. IT Budgets: Correlations of Budgets 2023 & Forecasts 2024

A clear pattern emerges when comparing IT budgets for 2023 with forecasts for 2024. Respondents who reported an increase in their 2023 budget are also the ones most likely to anticipate a further increase in 2024, or at the very least, expect no change. Notably, only one respondent indicated a decrease in 2023 with an expected increase in 2024.

Uncertainty also carries over: those unsure about their 2023 budget are typically uncertain about 2024 as well.

Past budget (horizontal) vs Expectation (vertical): 2023 vs 2024 predictions

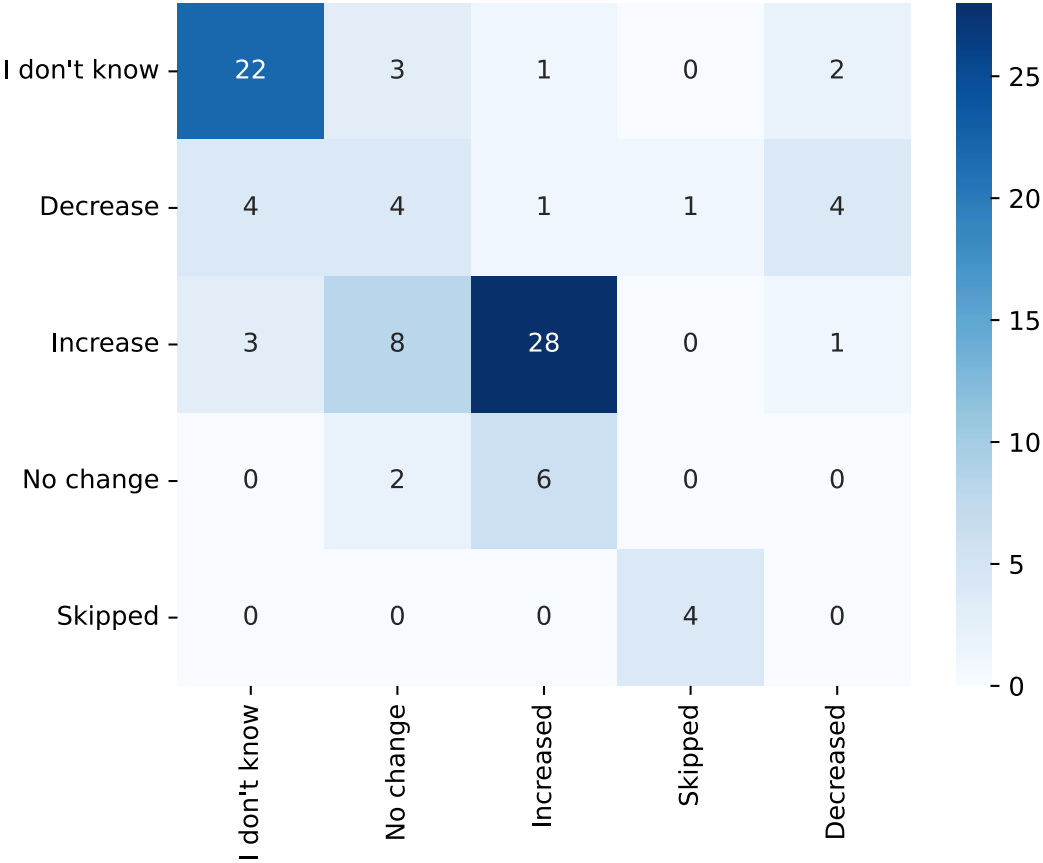


Figure 11. Correlations between IT Budgets 2023 and Forecasts 2024

## 4.7. IT Budgets: Forecast 2022 vs. Reality 2023

Most IT budget expectations for 2022 fell short in 2023. This gap may be attributed to a higher number of respondents in 2023 who were uncertain about the budget, compared to those who made predictions the previous year.

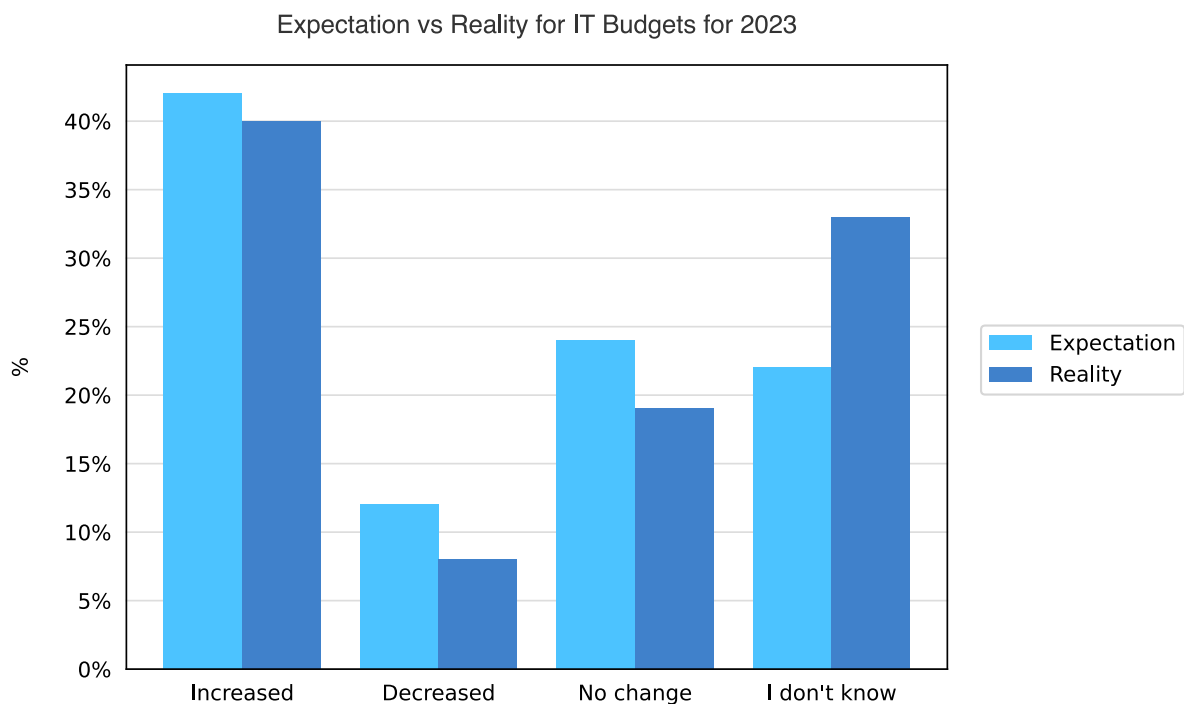


Figure 12. IT Budgets in 2023 vs. prediction about 2023

## 4.8. IT Budgets: Organization Size

Smaller companies appear more optimistic about their IT budgets compared to larger enterprises. However, this optimism might be skewed by a higher frequency of "don't know" responses among participants from larger organizations.

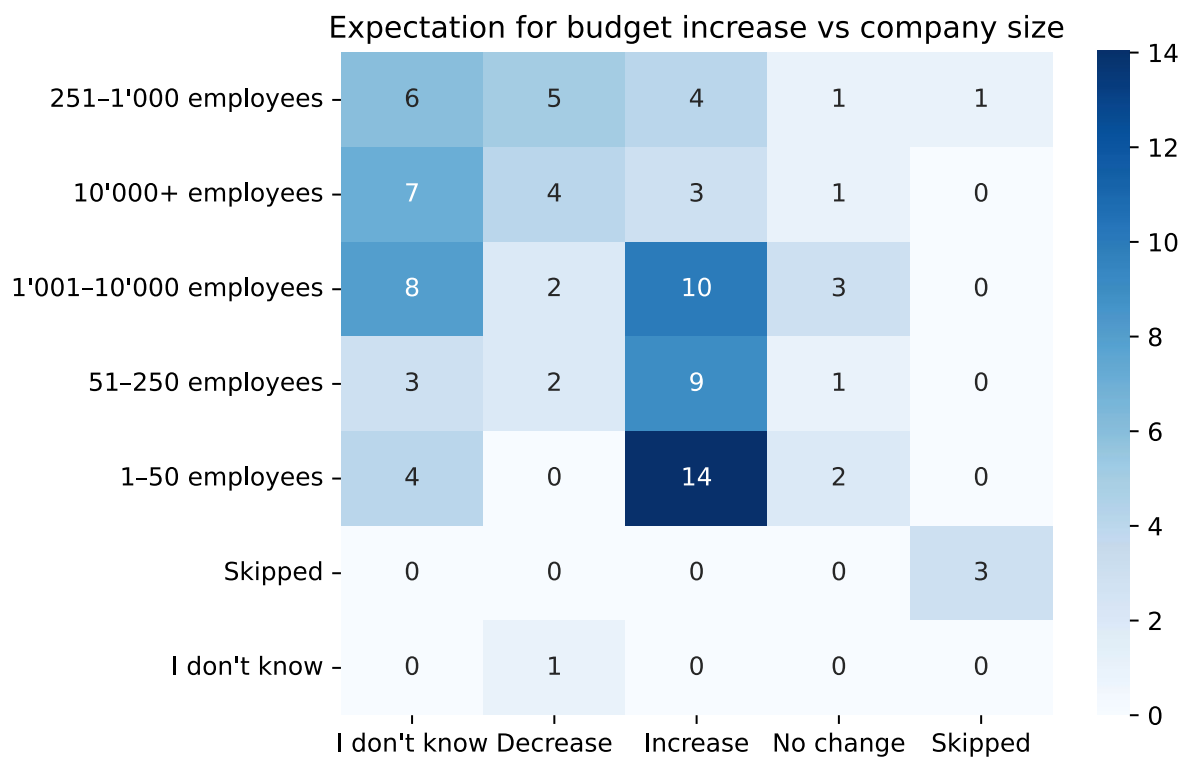


Figure 13. IT Budgets vs. Organization Size

## 4.9. Conclusion: Demographics

The demographic insights from our survey highlight the continued evolution of DevOps within Switzerland's diverse organizational landscape. The data reveals a strong presence of DevOps practices across industries, with a notable concentration in Software and IT sectors. Smaller and mid-sized organizations are at the forefront of this adoption, while larger enterprises face challenges in scaling these practices due to inherent complexities.

The consistent involvement of C-suite executives underscores the strategic importance of DevOps, reinforcing its role as a critical component in modern organizational strategy. The integration of development and operations teams is progressing, signaling a shift towards more collaborative, efficient models that break down traditional silos.

However, the caution seen in IT budget growth, influenced by external uncertainties, suggests that while optimism exists, organizations remain vigilant in their investments. The correlation between current and future budget expectations points to a cautious yet forward-looking approach.

Overall, these findings provide a clear snapshot of the current state of DevOps in Switzerland, laying the foundation for further exploration and strategic development as organizations continue to navigate the complexities of digital transformation.

---



# Chapter 5. Tools & Technology

*You haven't mastered a tool until you understand when it should not be used.*

— Kelsey Hightower, Twitter 13.02.2018

As Kubernetes enters its second decade, the Cloud Native landscape continues to evolve. The tools and technologies available to DevOps teams are stabilizing, becoming more reliable and mature.

This chapter provides a structured overview of the tools and technologies currently employed by survey respondents in their DevOps implementations.

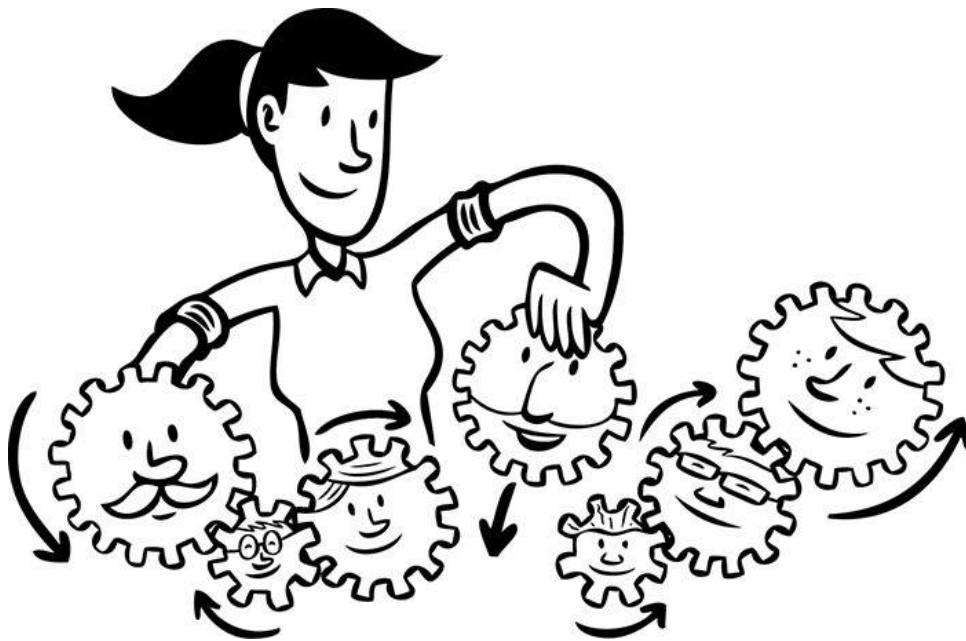


Figure 14. Tools & Technology

## 5.1. Operating Systems

Linux remains the backbone of the Cloud Native ecosystem, commanding dominance in cloud markets and seeing widespread adoption among DevOps teams. However, a slight decline in Linux usage within production environments hints at a broader shift towards cloud-native solutions.

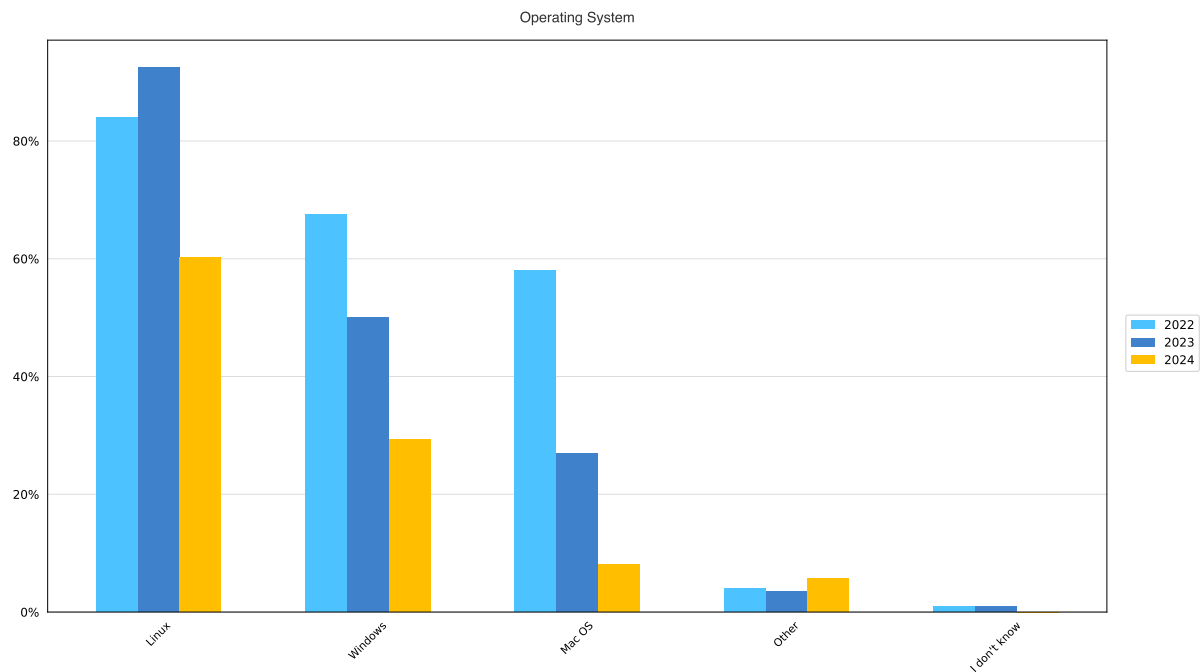


Figure 15. Operating Systems in Production in 2023

Linux's leadership is bolstered by the growing use of containerization.

## 5.2. Programming Languages

Java has surged to become the most popular programming language, displacing Python, which now ranks second. JavaScript holds steady in third place. These three languages have consistently led the rankings over the past three years.

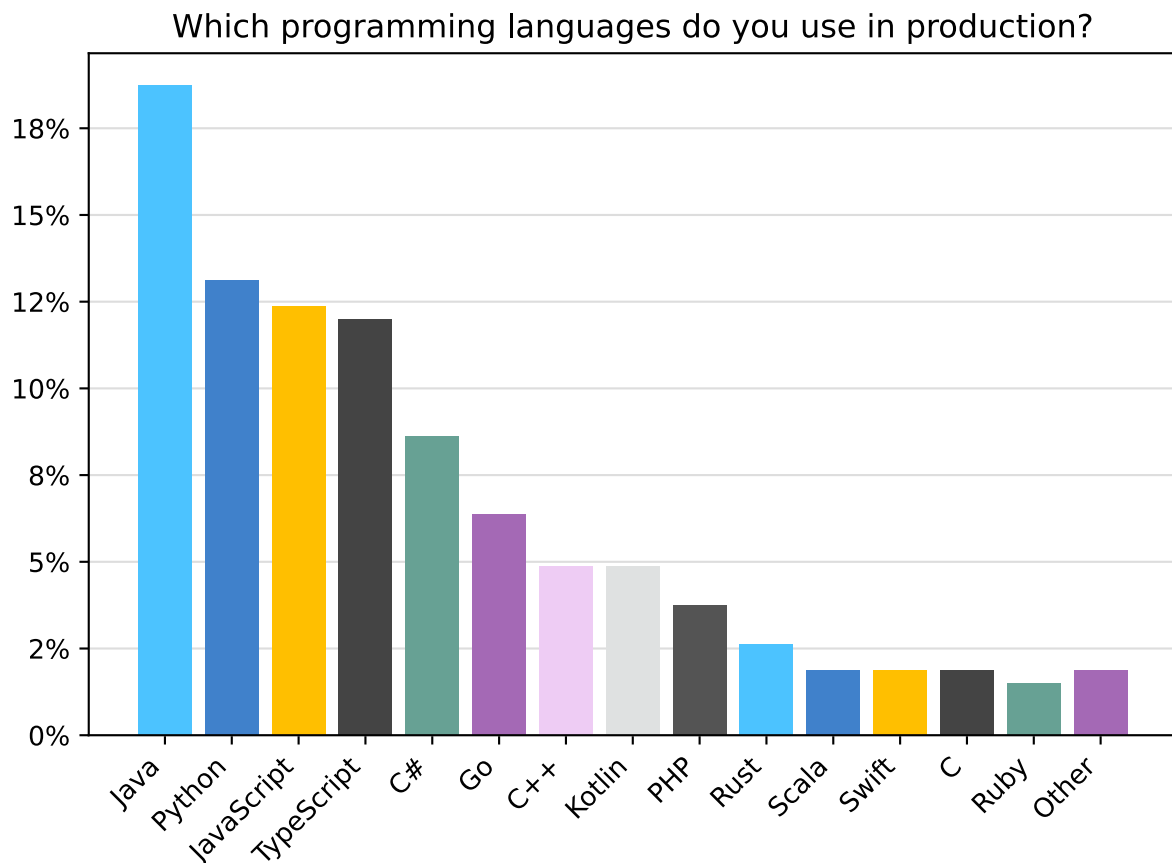


Figure 16. Programming Languages in 2023

C# and Rust are on the rise, reflecting their increasing traction in the industry. In contrast, JavaScript, Go, PHP, Ruby, and C have seen a gradual decline, indicating shifting developer preferences.

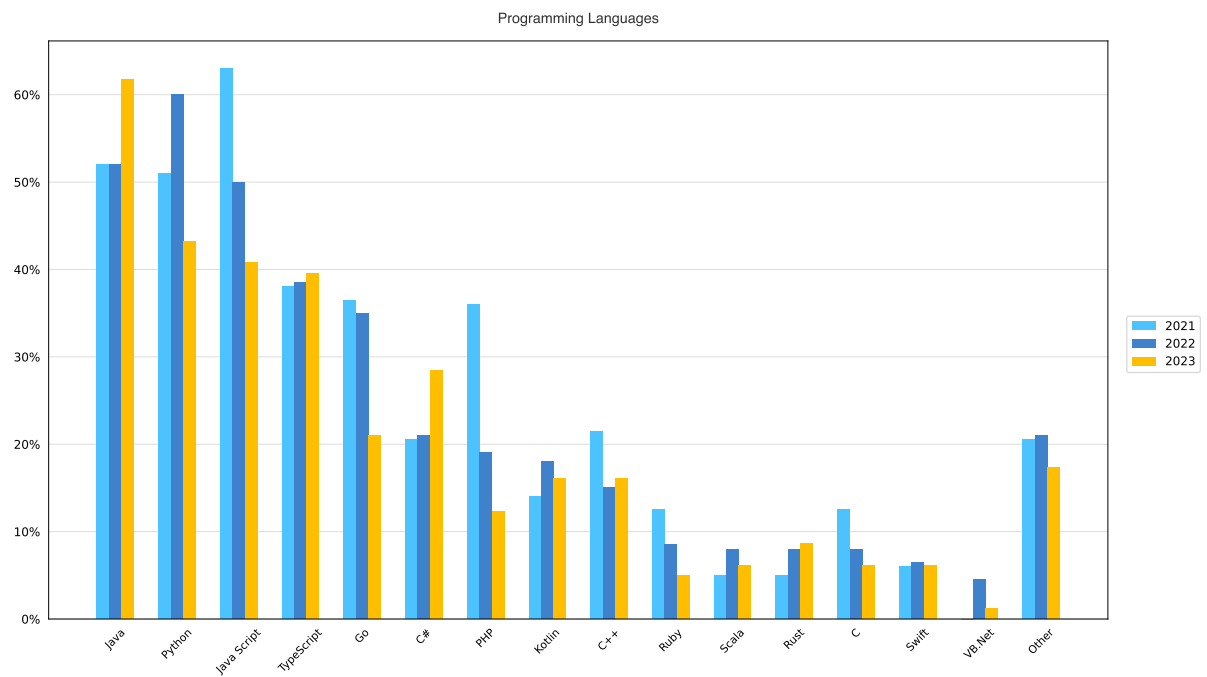


Figure 17. Programming Language Trends 2021-2023

## 5.3. Auxiliary Back-end Services

This year, we refined our survey categories, distinguishing "Database Services" from the broader "Auxiliary Back-End Services" and introducing "MLOps," "Observability," and "FinOps." These areas are integral to modern DevOps practices.

Excluding databases, the top auxiliary services in 2023 were Kafka, which climbed to 1st place, ElasticSearch, which held 2nd place, and NGINX, the previous leader.

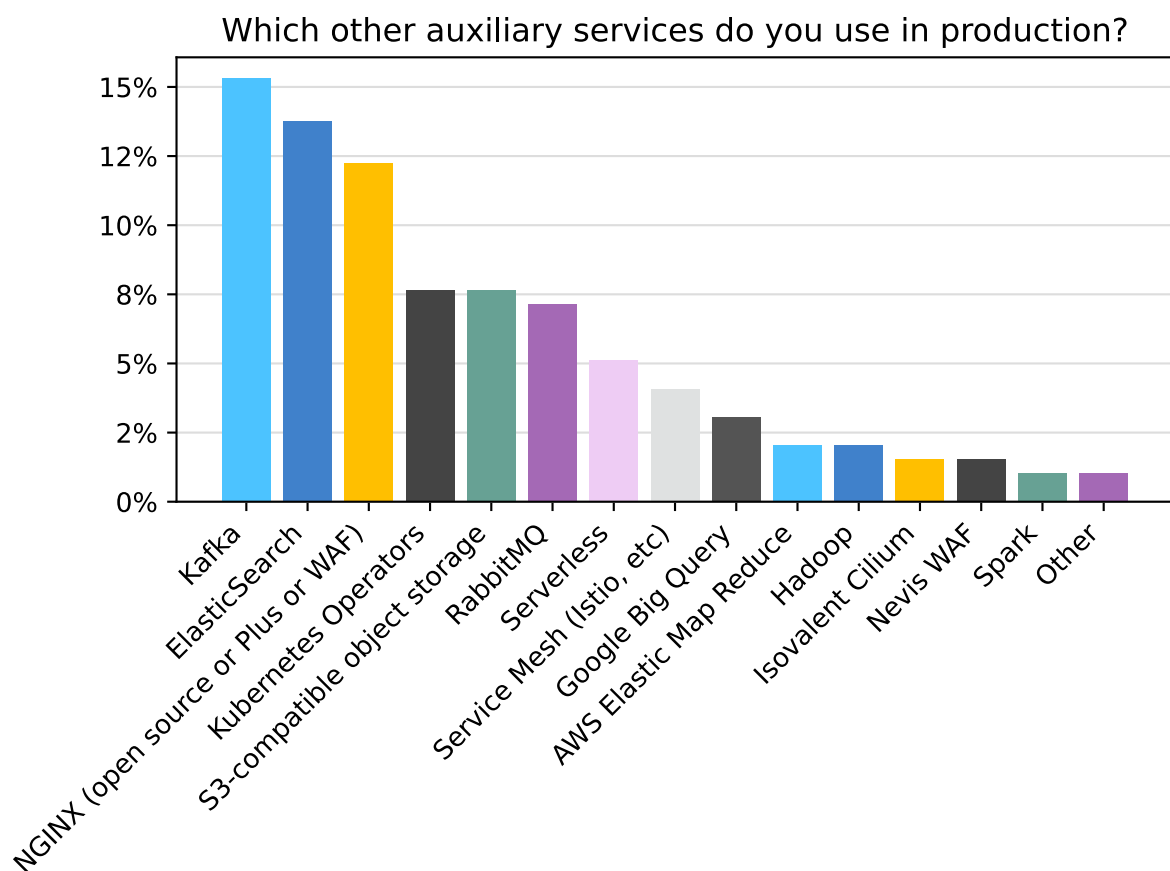


Figure 18. Auxiliary Back-end Services in 2023

## 5.4. Database Services

PostgreSQL maintains its position as the leading database, with MongoDB rising to second place and MySQL dropping to third. The rankings reflect ongoing shifts in database preferences within the industry.

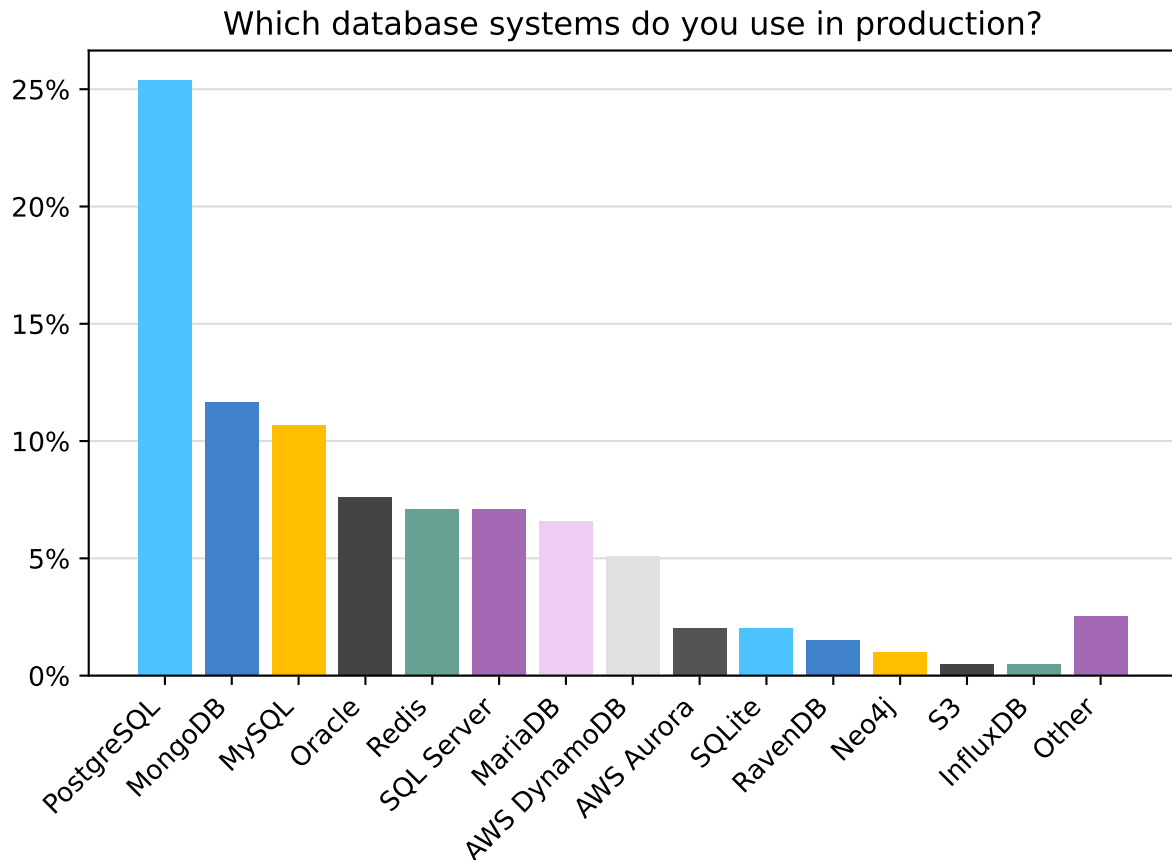


Figure 19. Database Services in 2023

## 5.5. MLOps

MLOps, the integration of machine learning development with operational processes, aims to automate and optimize the entire ML lifecycle—from model creation to deployment and monitoring.

In Switzerland, only a minority of organizations are managing their own ML models. Most respondents have no immediate plans to engage in MLOps, signaling that adoption is still in its early stages.

Is your organization using MLOps?

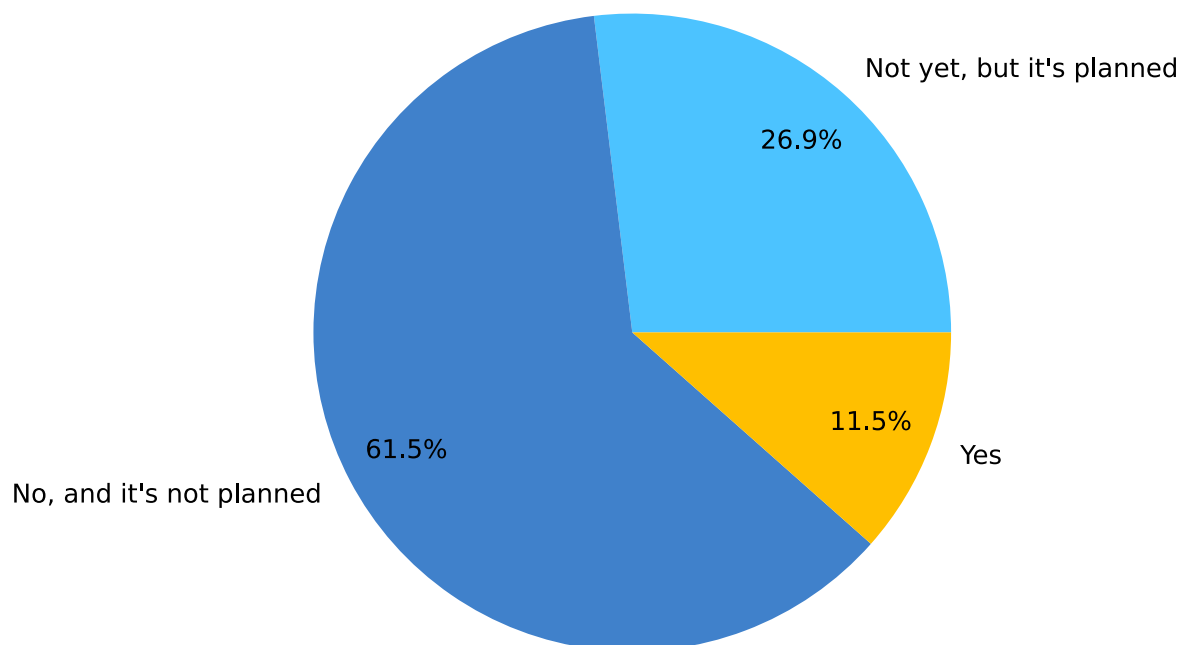


Figure 20. Adoption of MLOps in 2023

AWS SageMaker, Kubeflow, and Jupyter are the leading tools in this category.

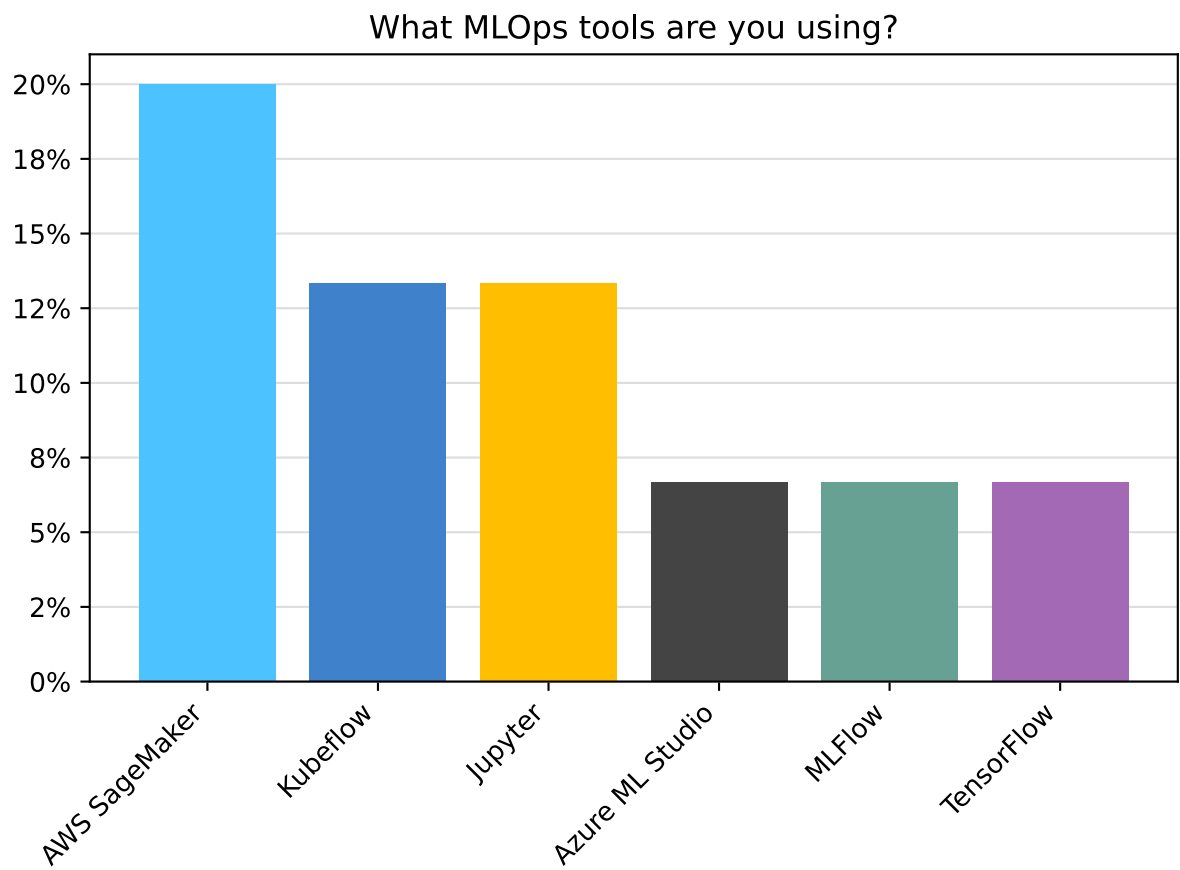


Figure 21. MLOps Tools in 2023



## 5.6. Observability

Observability is the ability to assess and understand a system's internal states by analyzing its outputs—a critical component of effective monitoring and troubleshooting.

Most organizations have already implemented observability practices.

Is your organization using observability tools?

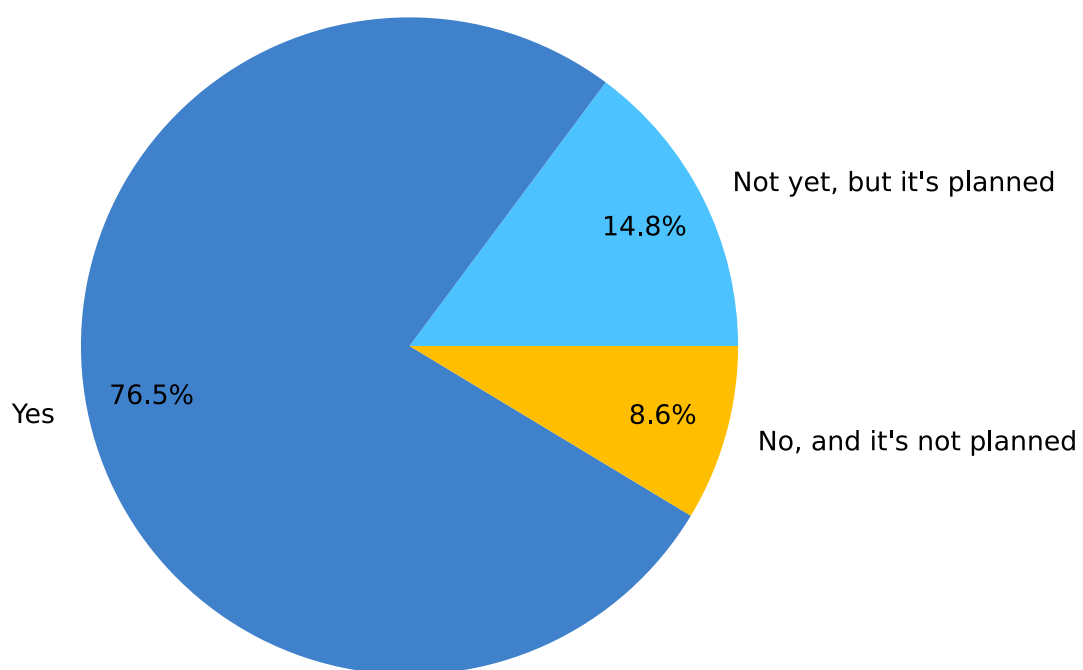


Figure 22. Adoption of Observability in 2023

Grafana and Prometheus dominate this space, with a significant lead over other tools.

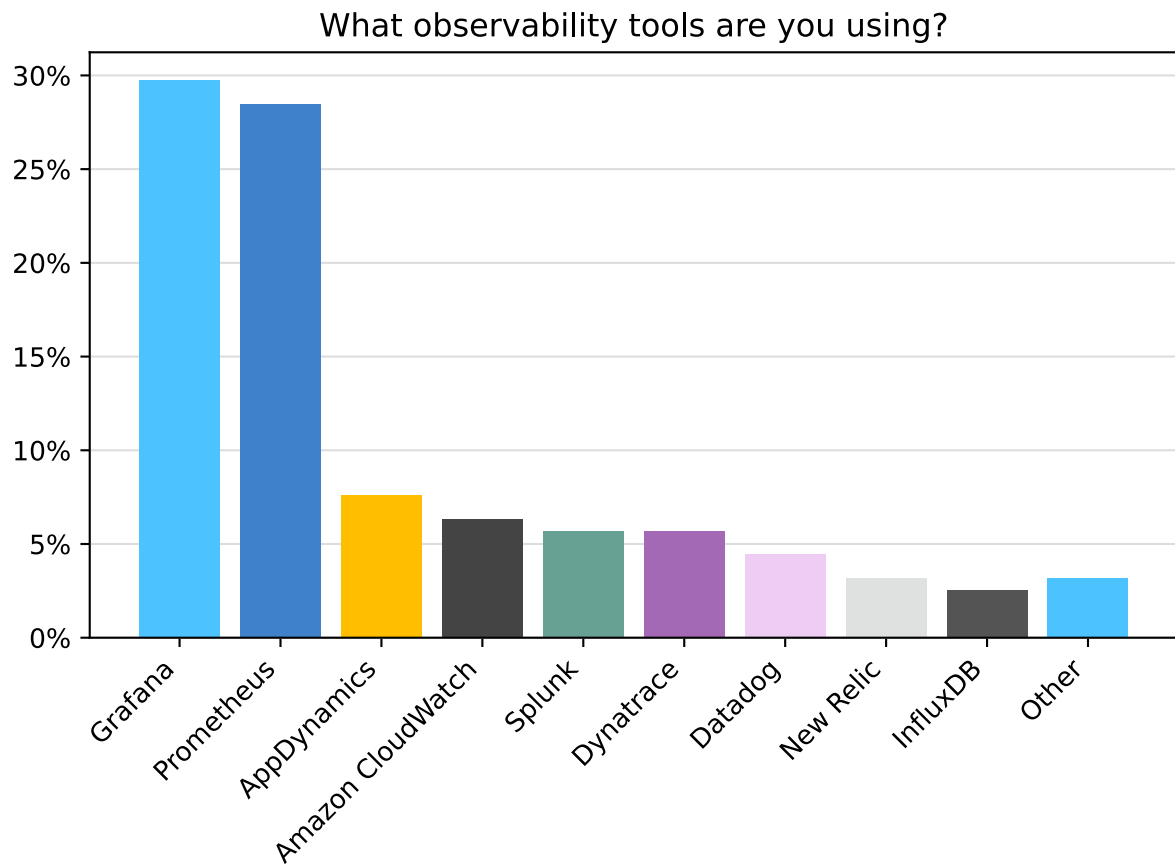


Figure 23. Observability Tools in 2023

## 5.7. FinOps

FinOps is the strategic approach to managing cloud financial operations, integrating financial management with operational practices and cost optimization.

Despite its importance, FinOps adoption remains limited, with only 39% of respondents having implemented or planning to implement FinOps practices.

Is your organization using FinOps tools (to manage infrastructure costs)?

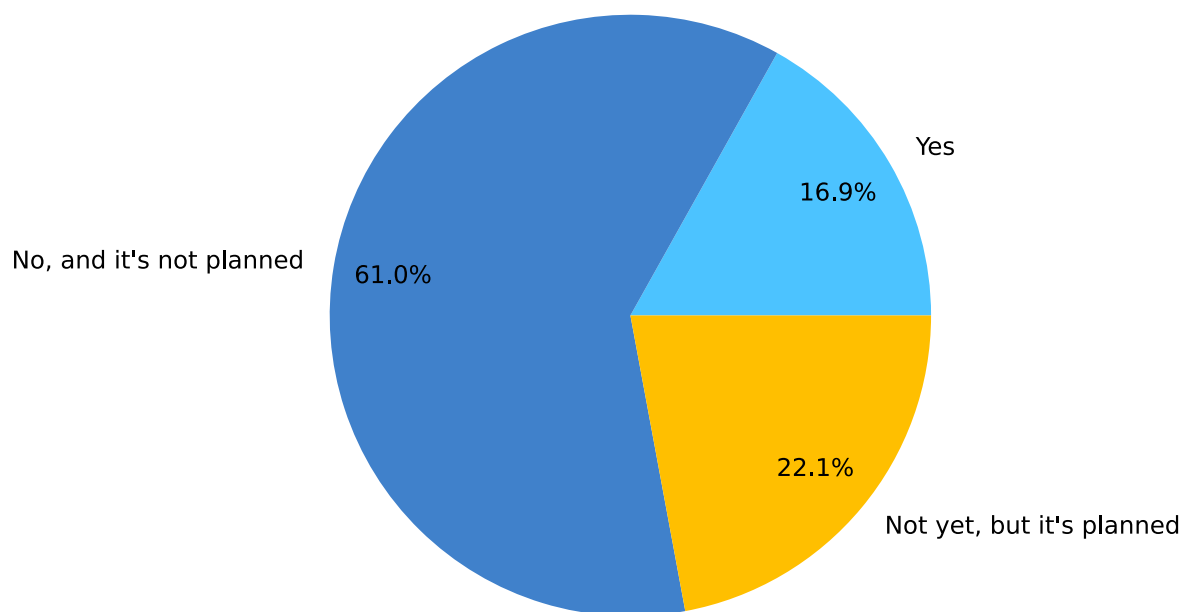


Figure 24. Adoption of FinOps in 2023

AWS Cost Explorer and Azure Cost Management are the preferred tools, while a significant number of respondents rely on custom-built solutions.

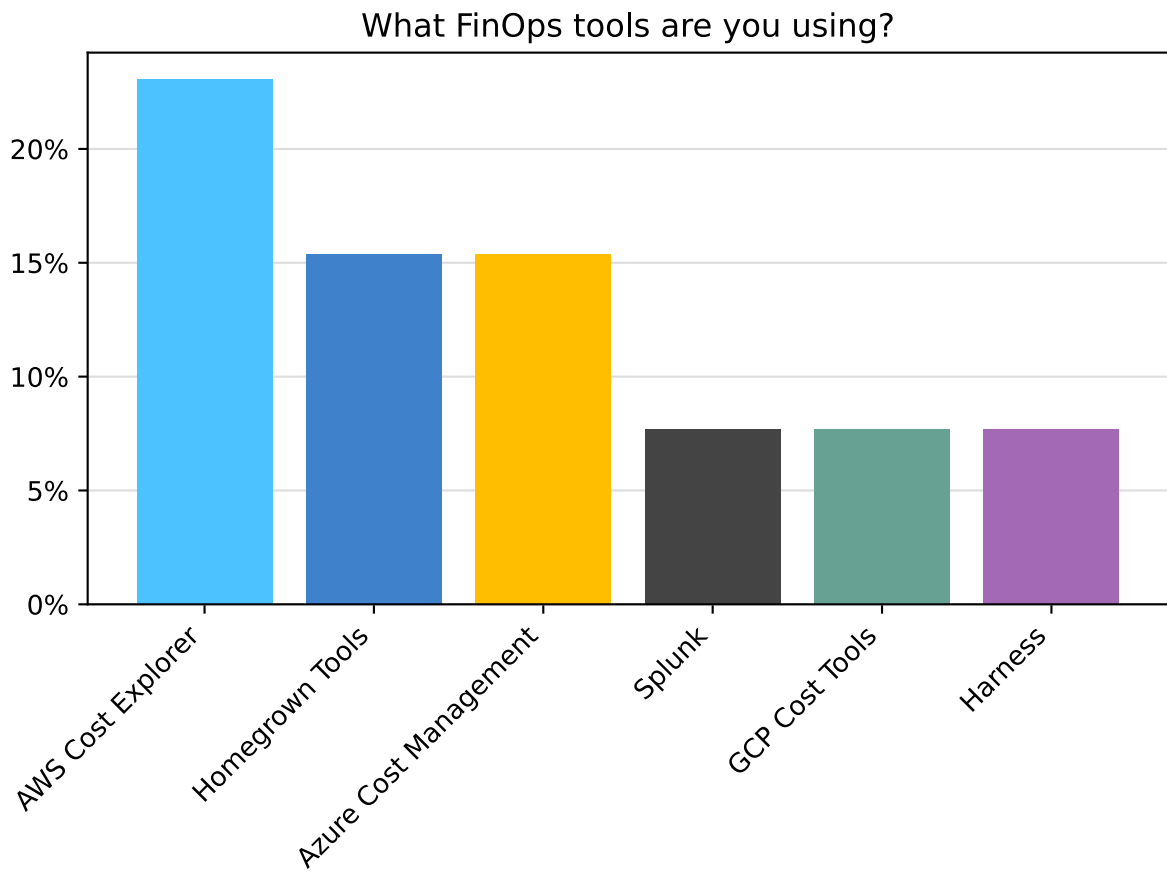


Figure 25. FinOps Tools in 2023

## 5.8. Infrastructure

Microsoft Azure continues to lead as the dominant cloud infrastructure provider, with Amazon AWS gaining ground. Google Cloud now matches Private/On-Premise solutions, while VMware usage continues to decline.

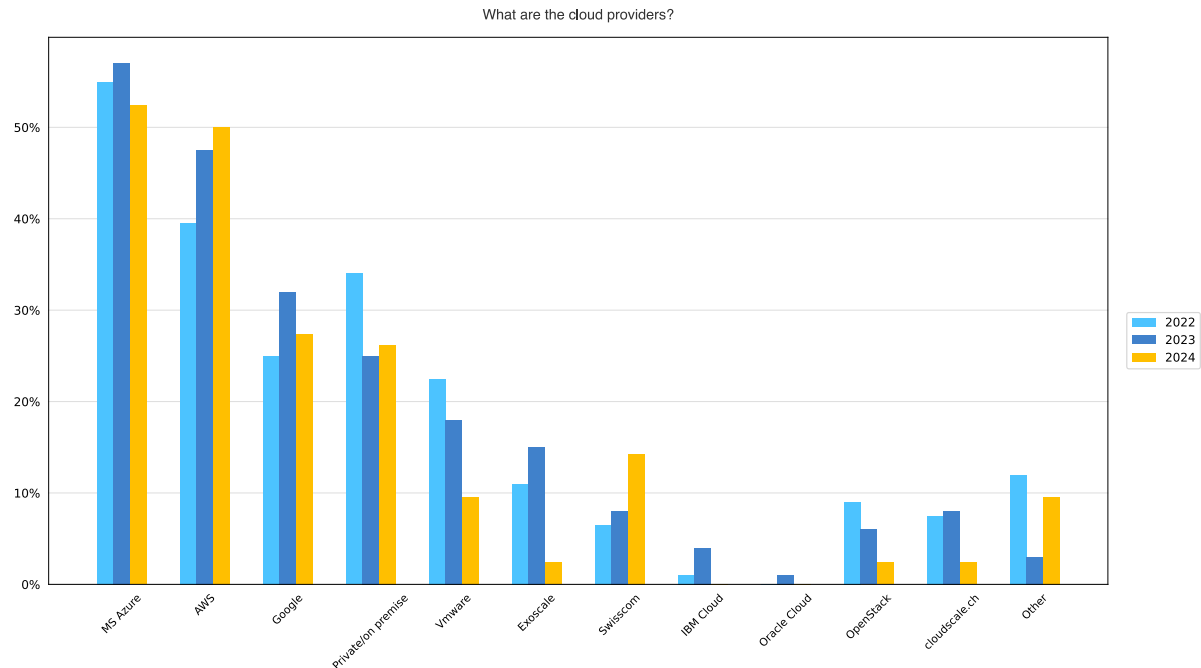


Figure 26. Infrastructure Providers in 2023

## 5.9. Cloud Strategies

This year's survey highlights a shift in cloud adoption strategies. Hybrid Cloud and Multi-Cloud have overtaken Public Cloud as the top strategies, reflecting a move towards more flexible cloud approaches.

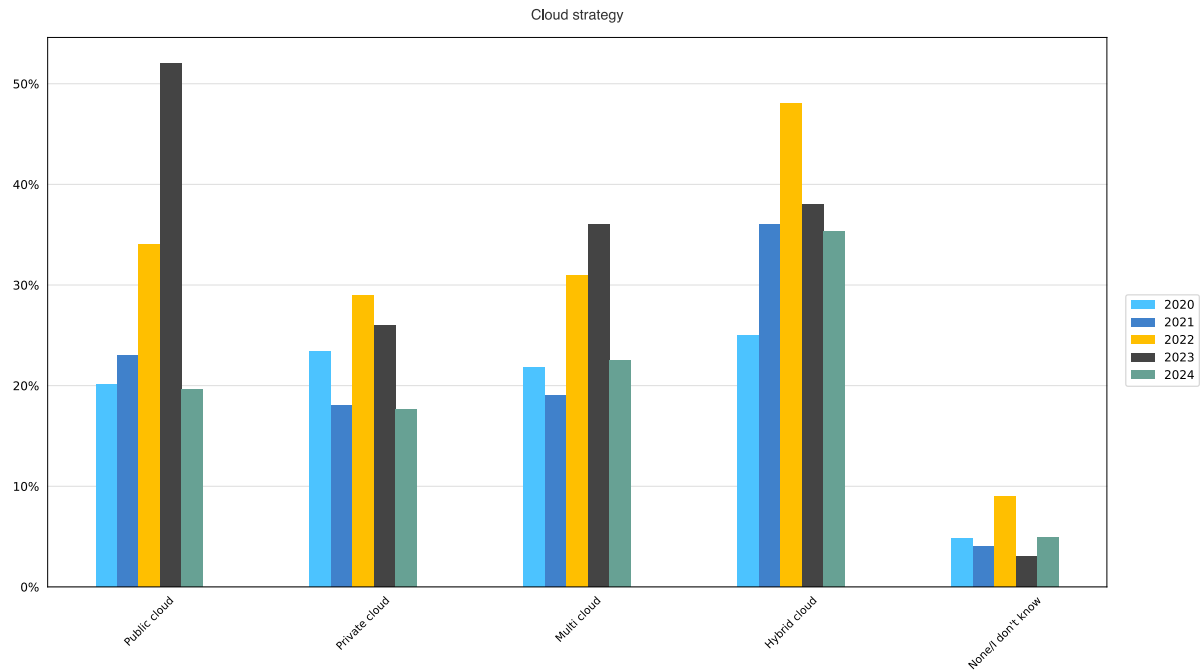


Figure 27. Cloud Strategies in 2023

## 5.10. Production Application Deployment and Management

With containers becoming the de facto standard, this category now focuses on production application deployment and management.

More respondents are using containers for production deployment than virtual machines, and serverless technology is now slightly more prevalent than physical servers.

Which technologies do you use in production environments for deploying and managing applications?

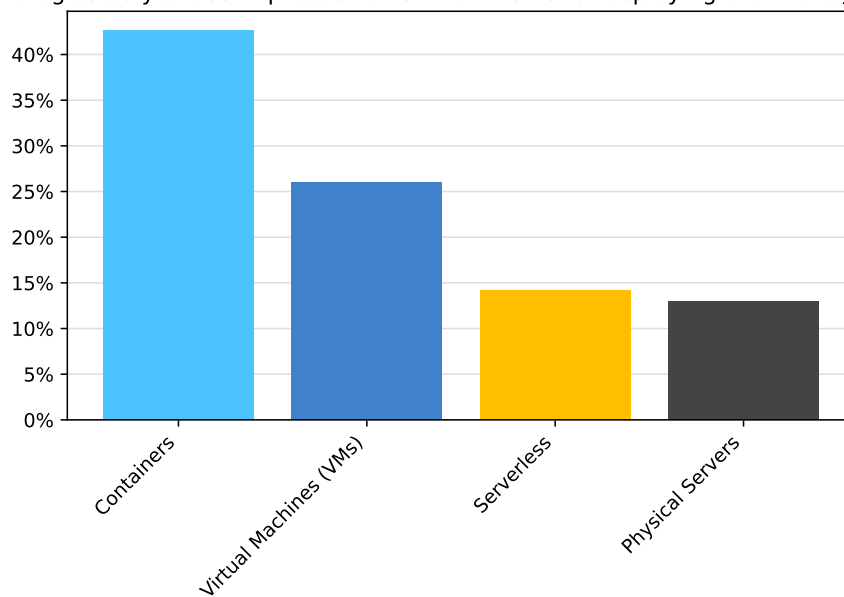


Figure 28. Production Application Deployment and Management in 2023

## 5.11. CI/CD Tools

In 2023, we introduced "Infrastructure as Code" as a separate category, distinguishing it from "CI/CD Tools."

GitLab remains the top CI/CD tool, followed by GitHub and Azure DevOps, with Jenkins and ArgoCD also prominent in the Swiss DevOps landscape.

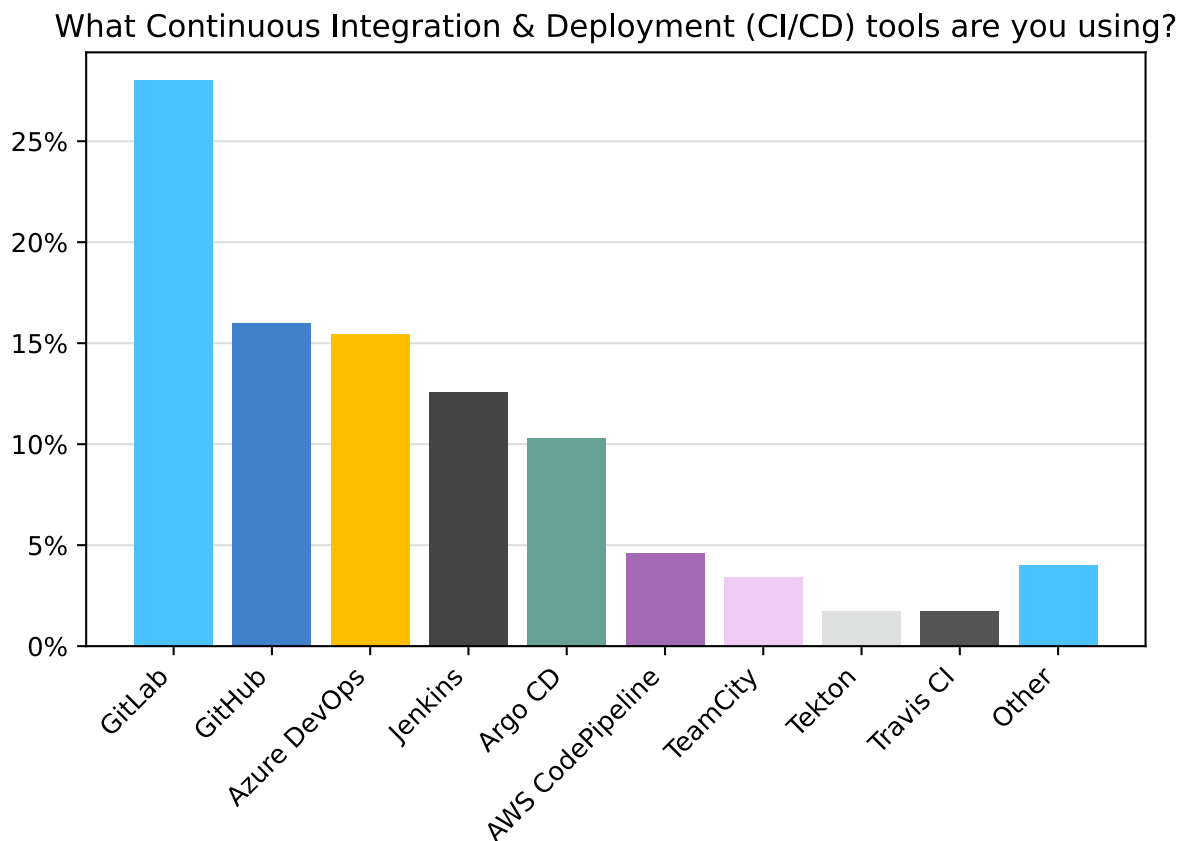


Figure 29. CI/CD Tooling 2023



## 5.12. Infrastructure as Code

Infrastructure as Code (IaC) emerged as a distinct category this year, reflecting the growing importance of managing infrastructure through code.

Is your organization using Infrastructure as Code?

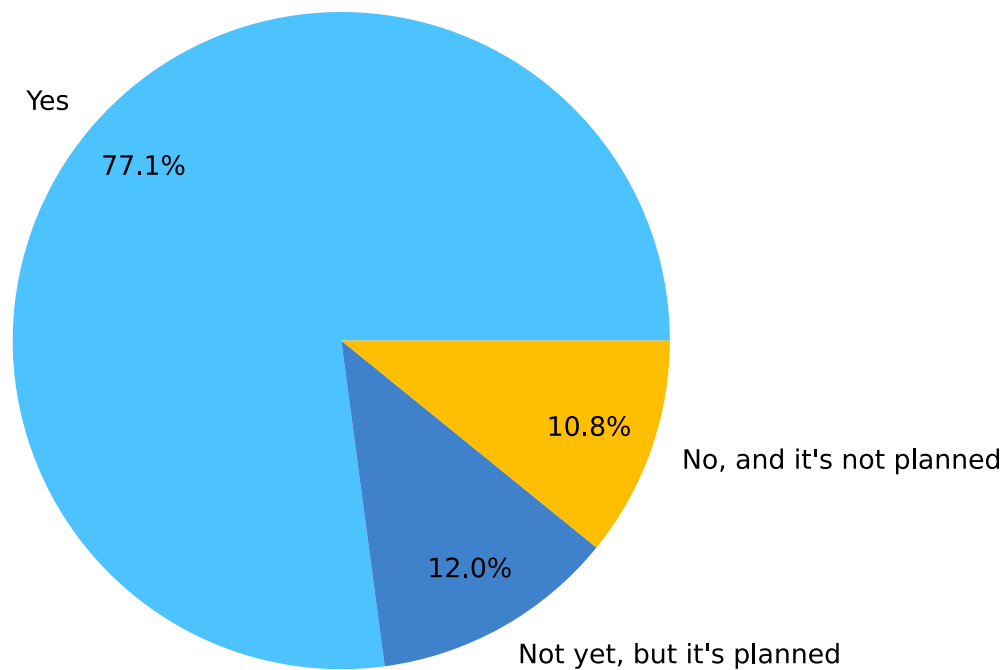


Figure 30. Adoption of Infrastructure as Code in 2023

HashiCorp's Terraform leads the way, with OpenTofu and Ansible following. The popularity of these tools remains consistent from last year.

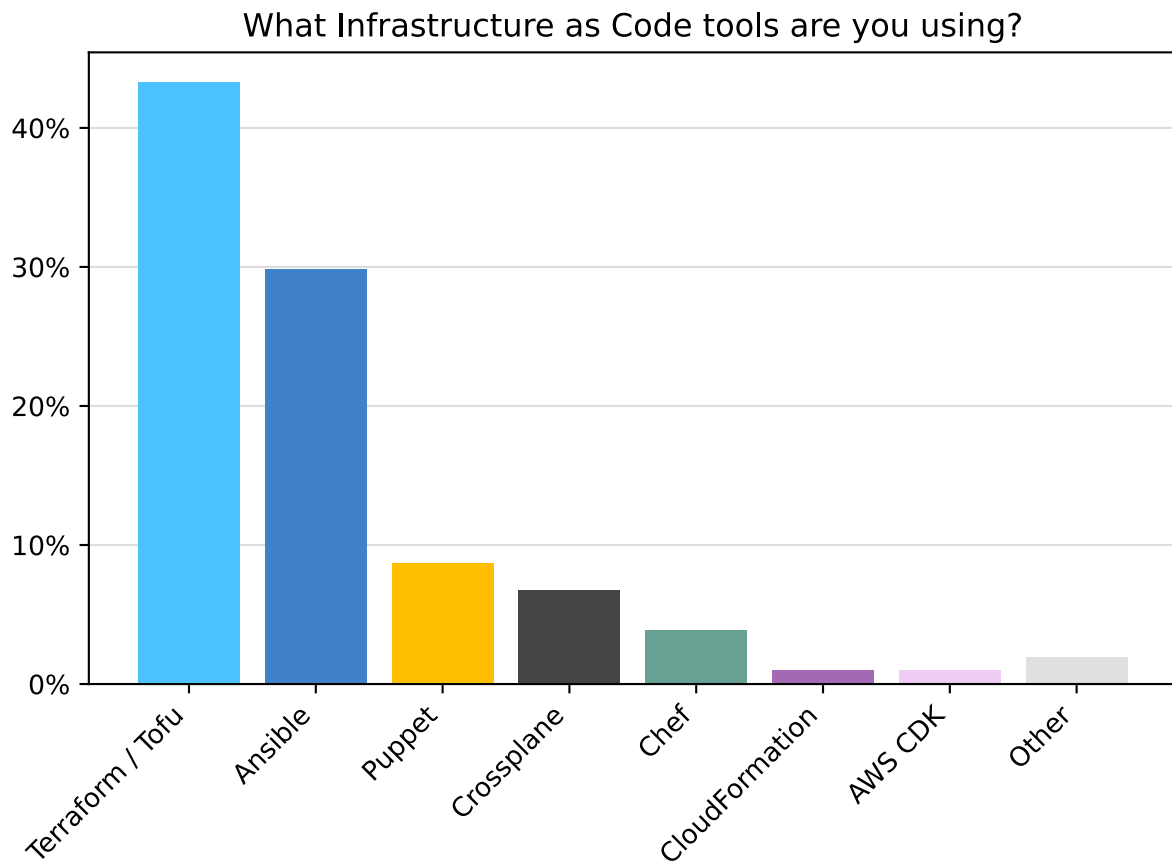


Figure 31. Infrastructure as Code Tools in 2023

## 5.13. Kubernetes

Kubernetes is now the standard for container orchestration, with 84% of respondents using it in production.

Is your organization using Kubernetes in production?

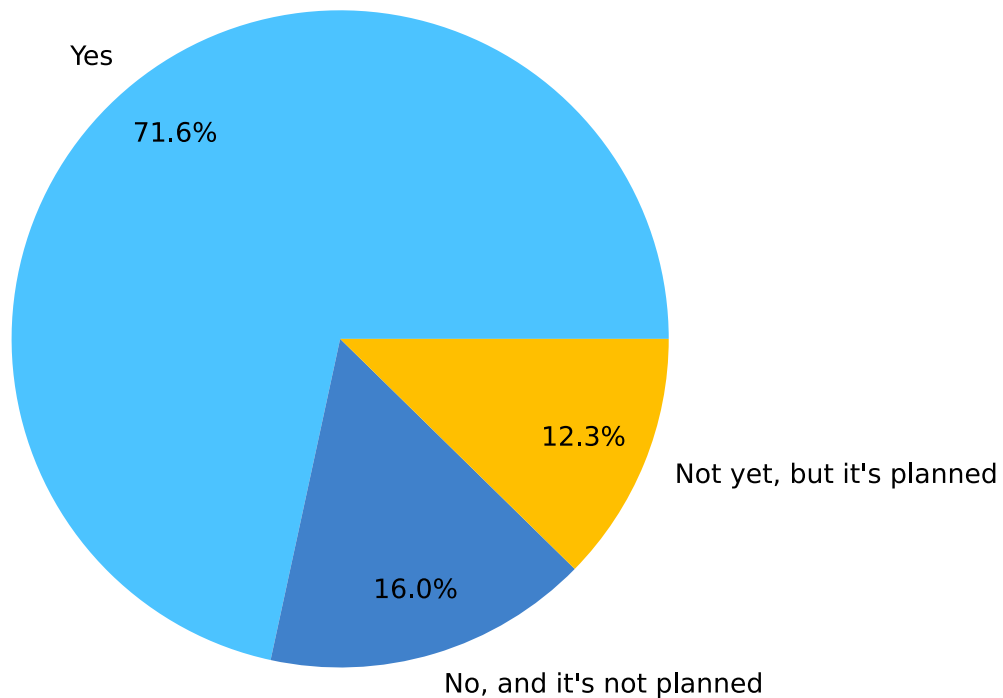


Figure 32. Kubernetes Adoption in Production in 2023

In 2024, Azure AKS and AWS EKS emerged as the top managed Kubernetes services, surpassing Red Hat OpenShift. SUSE Rancher and Docker Desktop follow closely behind.

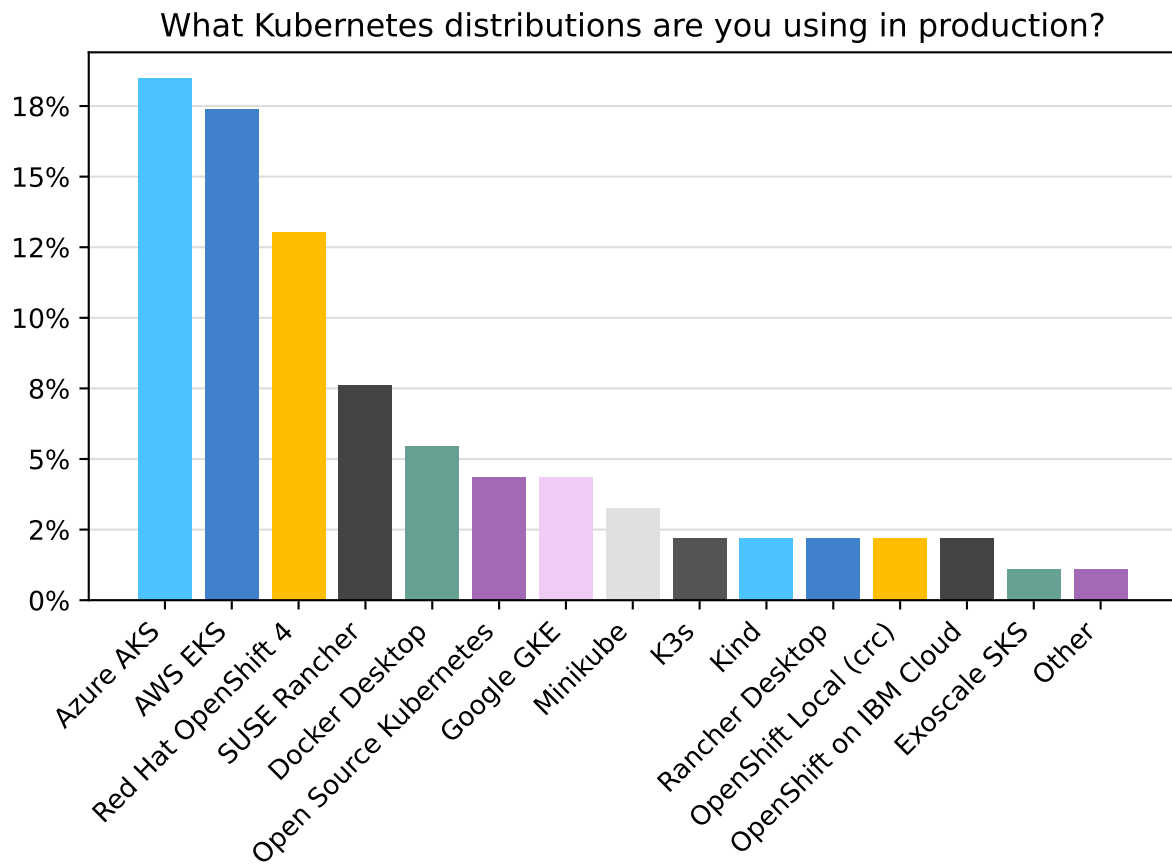


Figure 33. Kubernetes Distributions 2023

## 5.14. Conclusion: Tools & Technology

The DevOps landscape in Switzerland, as reflected by the tools and technologies discussed in this chapter, is both dynamic and evolving. Linux continues to underpin cloud-native environments, despite subtle shifts towards cloud-centric solutions. Java's resurgence, coupled with the rise of languages like Rust and C#, underscores the changing preferences within development teams. The maturity of auxiliary services, database solutions, and emerging fields such as MLOps and FinOps, demonstrates the broadening scope of DevOps practices.

Moreover, the increasing adoption of observability practices and Infrastructure as Code highlights a growing focus on system reliability and automated infrastructure management. Kubernetes remains the linchpin for container orchestration, further solidifying its role in modern DevOps. As Swiss organizations refine their cloud strategies and continue to embrace containers and serverless architectures, the emphasis on choosing the right tools for the job has never been more critical. These trends will undoubtedly shape the future trajectory of DevOps in Switzerland, driving innovation and efficiency across the board.

---

# Chapter 6. Processes & Culture

*Our analysis is clear: in today's fast-moving and competitive world, the best thing you can do for your products, your company, and your people is institute a culture of experimentation and learning, and invest in the technical and management capabilities that enable it.*

— Nicole Forsgren, *Accelerate: The Science of Lean Software and DevOps: Building and Scaling High Performing Technology Organizations*

How do Swiss teams work? This chapter addresses that question. The data reveals a trend towards increased collaboration and autonomy among teams in Switzerland. This evolution has fostered more efficient and productive work environments, resulting in more frequent and higher-quality software releases.

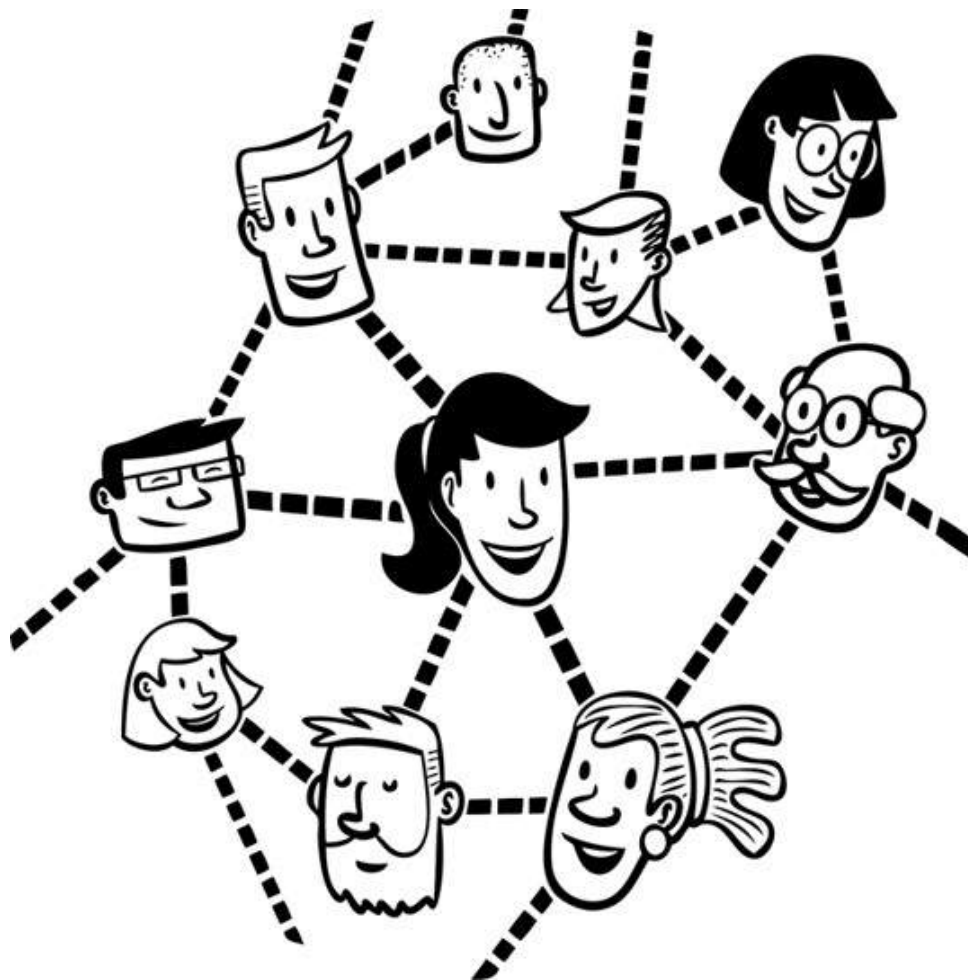


Figure 34. Processes and Culture

## 6.1. Perception

The perception of DevOps in Switzerland remains strongly positive from 2021 to 2023. However, there's a noticeable uptick in negative perceptions, rising from 1% in 2021 to 4% in 2023. This suggests the presence of challenges such as implementation difficulties, mismatched expectations, cultural resistance, resource constraints, and scalability issues.

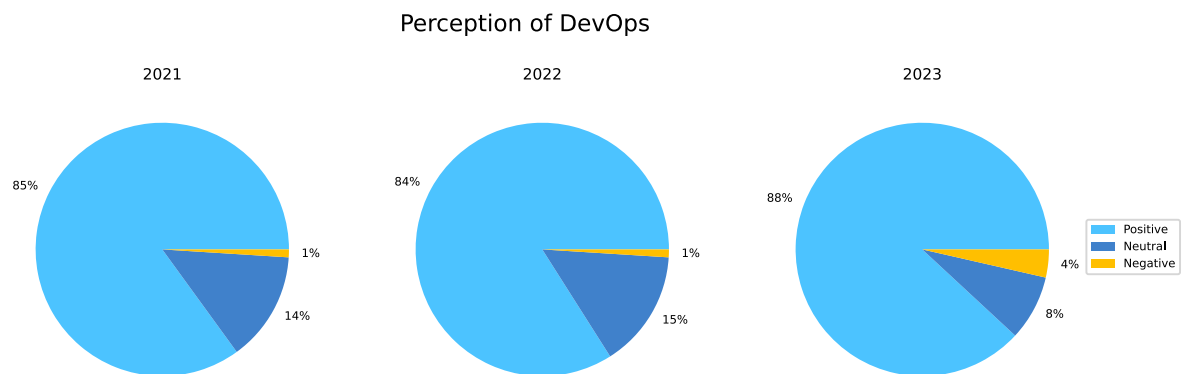


Figure 35. DevOps Perception in 2021-2023

## 6.2. Adoption

DevOps has firmly established itself in the Swiss IT landscape, with nearly 88% of organizations having partially or fully adopted it. Only a consistent 7% of respondents indicate no plans to adopt DevOps within the next two years.

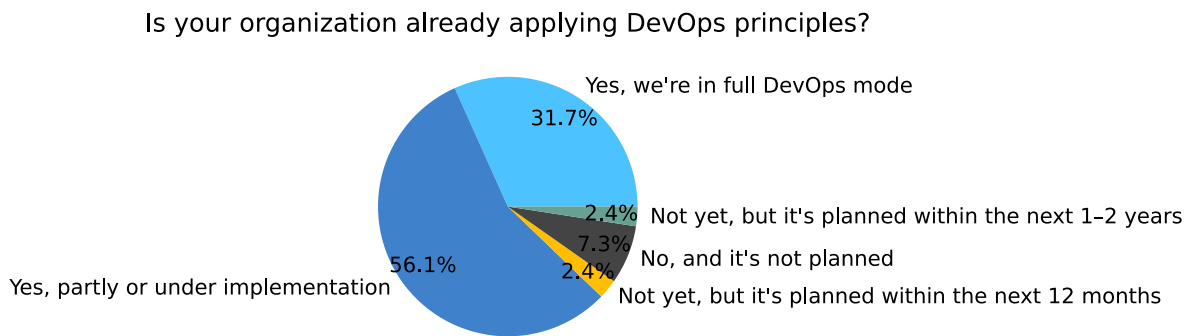


Figure 36. Adoption of DevOps in 2023

Over the past three years, adoption rates have remained stable, reflecting a steady commitment to DevOps practices.

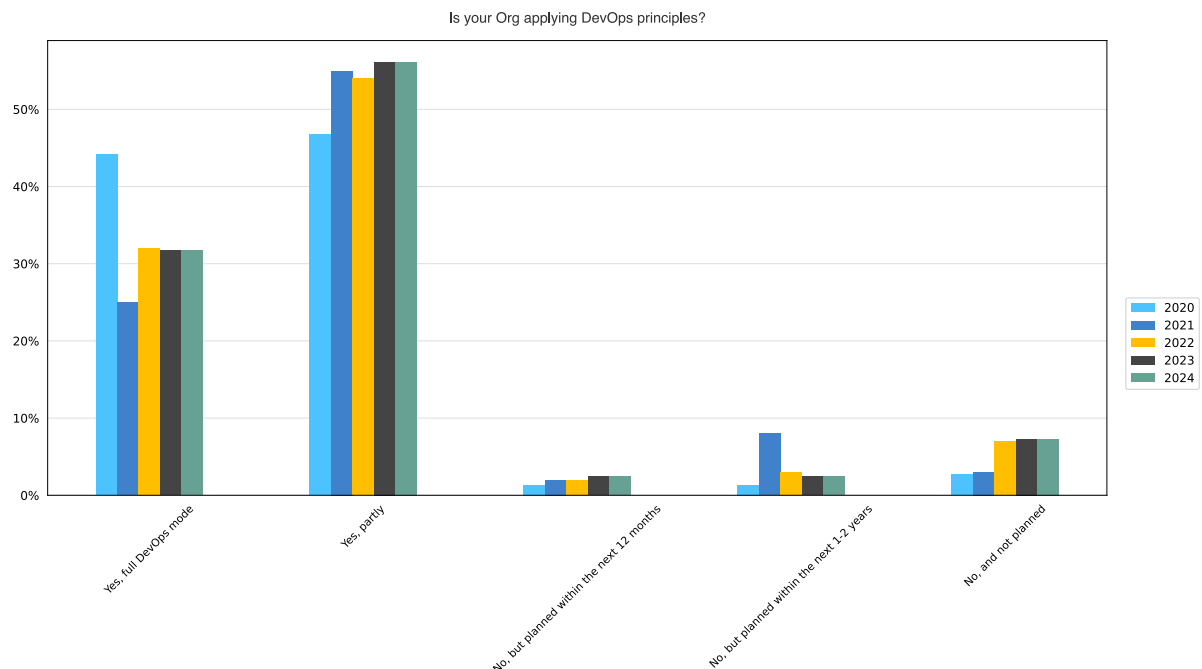


Figure 37. Adoption of DevOps 2020-2024



## 6.3. Overall Results

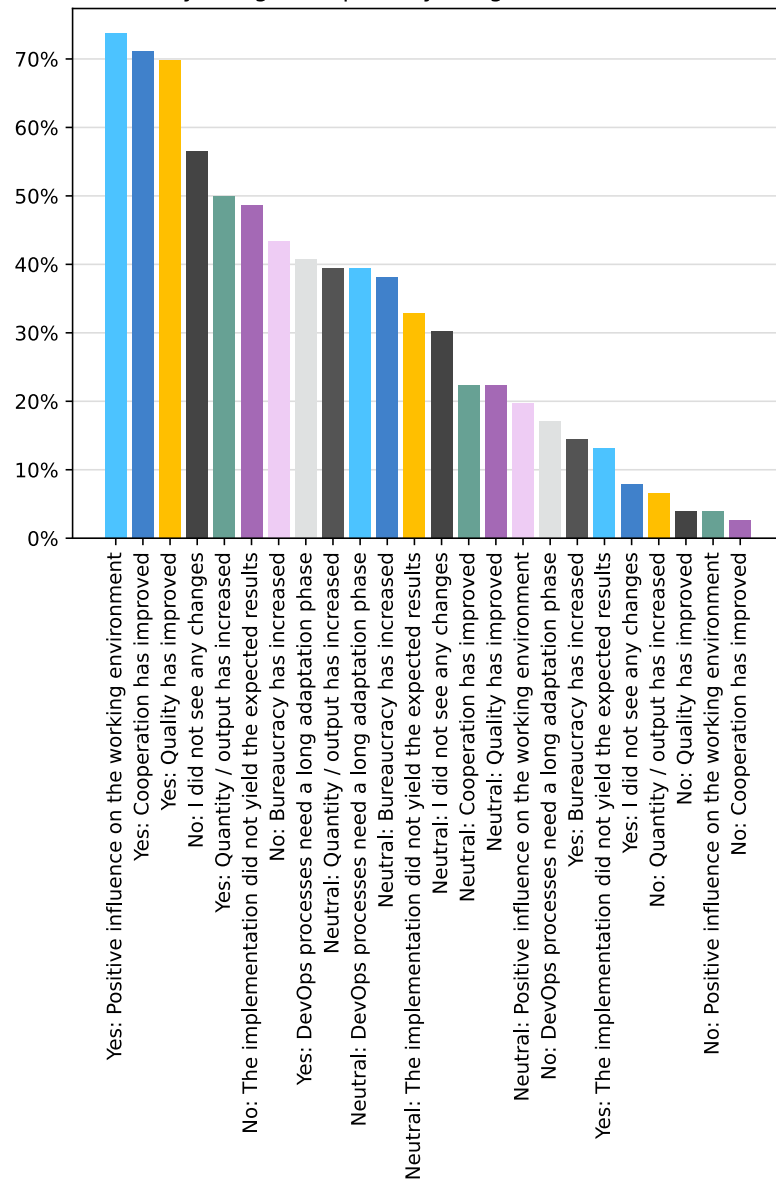
What is the return on investment (ROI) for DevOps? The numbers speak for themselves:

- 74% of respondents report a positive influence on their working environment.
- 71% observe increased cooperation among teams.
- 70% note an improvement in the quality of work.
- 57% have witnessed a visible organizational change due to DevOps.
- 50% report an increase in the quantity/output of final products.

Return on Investment of DevOps in 2023

---

If your organization is already using DevOps, do you agree (or not) with the following statements?



These benefits have grown significantly over the years, particularly in "Positive Influence" and "Better Quality."

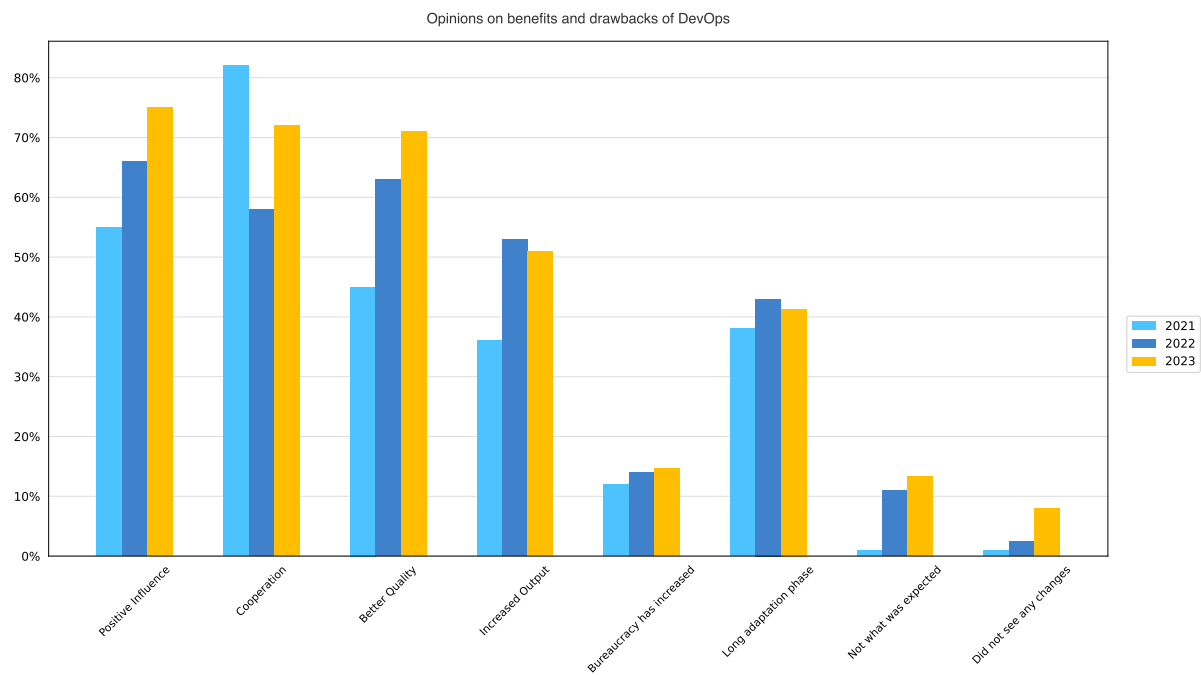


Figure 38. Return on Investment of DevOps 2021-2023

## 6.4. Team Autonomy

In 2023, we observed a rise in team autonomy within Swiss DevOps practices. The percentage of respondents indicating that their teams could provision services themselves, at least in non-production environments, increased from 48% to 50%.

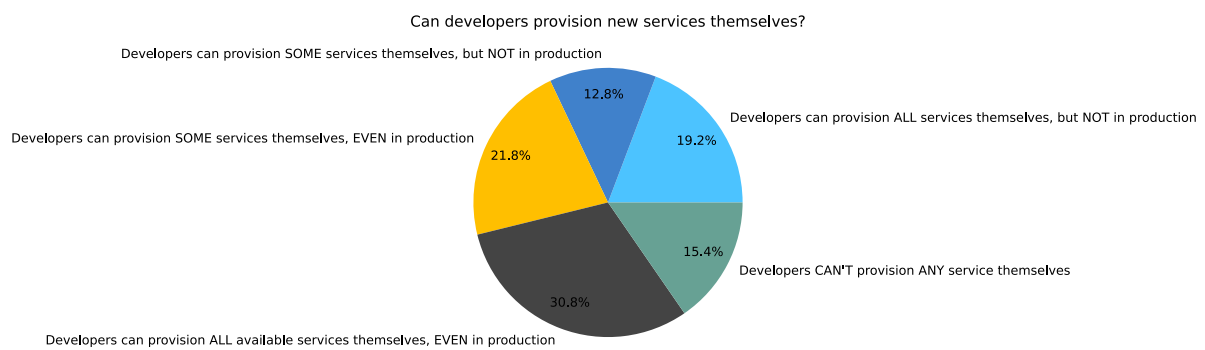


Figure 39. Provisioning of Services in 2023

However, there was also a slight increase in the number of respondents unable to provision any services independently compared to the previous year.

## Can developers provision new services themselves 2022?

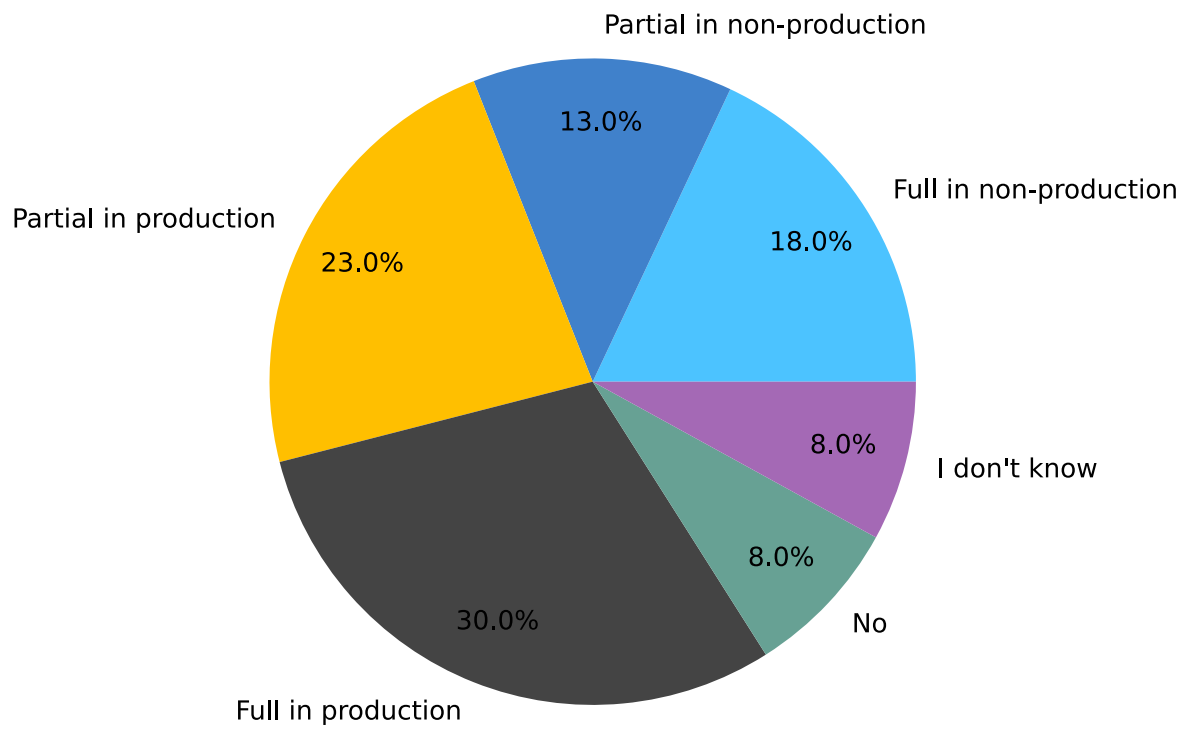


Figure 40. Provisioning of Services in 2022

## 6.5. Outsourcing

The trend in DevOps outsourcing has seen a shift this year. After a rise in outsourcing last year, with only 50% of organizations keeping everything in-house, we have returned to 66% in-house, matching the level seen in 2021.

When you started your DevOps transformation, did your organization seek any external assistance?

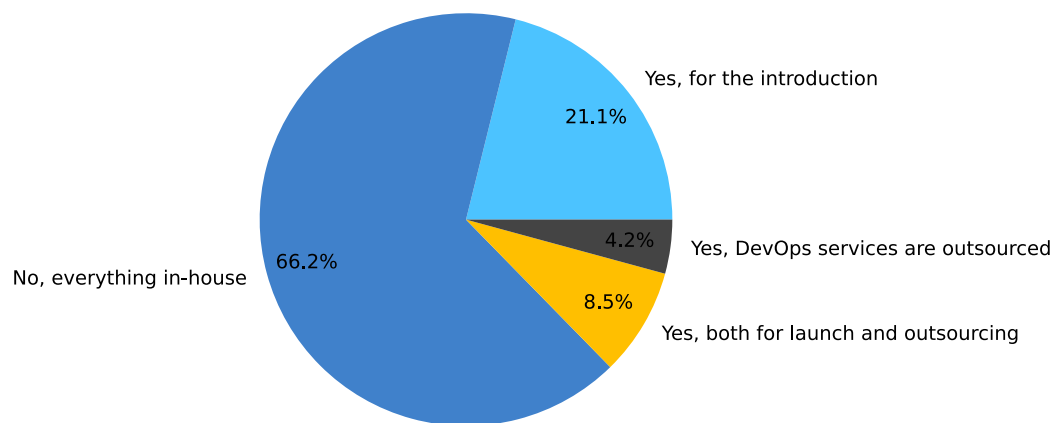


Figure 41. Outsourcing DevOps in 2023

When you started your DevOps transformation, did your organization seek any external assistance?

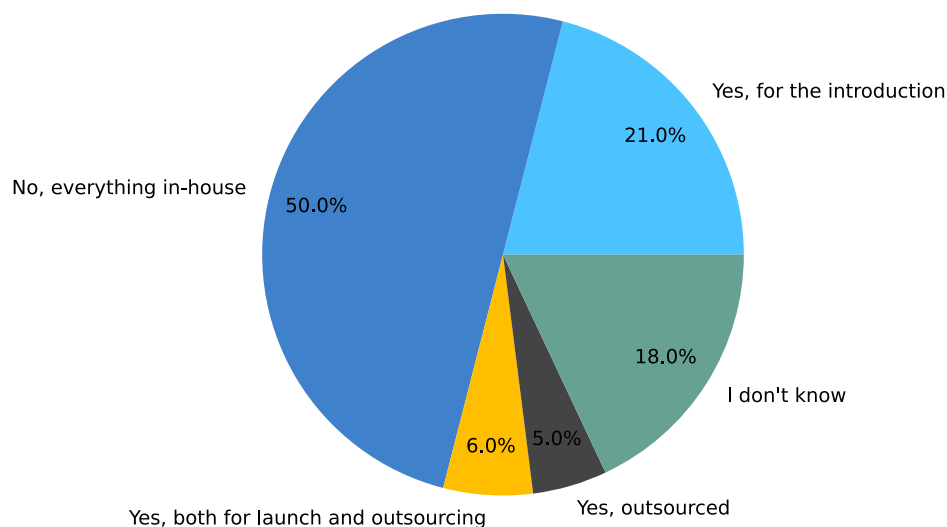


Figure 42. Outsourcing DevOps in 2022

## 6.6. Conclusion: Processes & Culture

The analysis of DevOps processes and culture in Switzerland underscores a pivotal transformation in the way teams operate. The marked increase in collaboration and autonomy has cultivated an environment conducive to more frequent and higher-quality software releases. While the perception of DevOps remains largely positive, the slight rise in negative sentiment highlights challenges that need addressing, such as implementation barriers and cultural resistance.

Adoption rates have remained steady, signaling a robust commitment to DevOps practices across the Swiss IT landscape. The ROI data clearly demonstrates substantial benefits, with notable improvements in team cooperation, work quality, and organizational change.

The trend towards greater team autonomy, evidenced by increased self-provisioning capabilities, suggests a maturation of DevOps practices. However, the slight uptick in outsourcing seen last year has reverted, indicating a renewed preference for in-house operations.

In summary, while there are areas that require attention, the overall trajectory of DevOps in Switzerland is one of progress and positive impact, with a strong foundation in processes and culture that supports continuous improvement.

---

# Chapter 7. Conclusion

As we conclude this comprehensive exploration of the State of DevOps in Switzerland for 2024, it's clear that the journey toward DevOps maturity is both challenging and rewarding. Swiss organizations, regardless of size or industry, are increasingly recognizing the critical role DevOps plays in driving operational excellence and innovation. The trends highlighted in this report demonstrate not only the widespread adoption of DevOps practices but also the deep cultural shifts that are necessary to sustain them.

An emerging trend that warrants particular attention is the rise of platform engineering. As DevOps practices mature, the need for standardized, scalable, and self-service platforms has become increasingly apparent. Platform engineering is rapidly becoming a cornerstone of modern DevOps strategies, providing development teams with the tools and environments they need to build, deploy, and manage applications with greater efficiency and consistency. By creating these internal platforms, organizations can reduce operational friction, accelerate development cycles, and maintain higher levels of security and compliance.

The integration of platform engineering into DevOps reflects a natural evolution towards more structured and scalable practices. It addresses the challenges of complexity and scalability, particularly in larger organizations, by streamlining the development process and enabling teams to focus on delivering value rather than managing infrastructure.

From the rise of Kubernetes and Infrastructure as Code to the strategic importance of observability, FinOps, and now platform engineering, the Swiss DevOps landscape is marked by both innovation and complexity. The insights gathered here reflect a collective commitment to refining processes, enhancing collaboration, and embracing new technologies that drive continuous improvement.

However, the path forward is not without its challenges. Scaling DevOps practices in larger organizations, navigating economic uncertainties, and ensuring that the cultural integration of DevOps principles permeates

---



every level of the organization will require focused leadership and a willingness to adapt.

As we look to the future, the key to success lies in leveraging the lessons learned, fostering a culture of collaboration and experimentation, and maintaining a strategic focus on aligning technology with business goals. DevOps is not just a set of tools or processes; it is a holistic approach that empowers organizations to deliver better products, faster, and with greater reliability.

In closing, this report serves as a guide for Swiss organizations to assess their current DevOps practices, identify areas for improvement, and craft strategies that will ensure their continued success in a rapidly evolving digital landscape. The future of DevOps in Switzerland is bright, with platform engineering and other emerging practices poised to drive innovation and growth across the industry.



Figure 43. Conclusion

## Chapter 8. VSHN

VSHN (pronounced 'vizn like "vision") is "The DevOps Company," Switzerland's leading DevOps, Docker, Kubernetes, OpenShift and 24/7 cloud operations partner.



Figure 44. VSHN Logo

VSHN was founded to fundamentally shake up the hosting market. We focus on operating IT platforms through automation, agility and a continuous improvement process. Completely location-independent and without our hardware, we operate extensive applications according to the DevOps principle agilely and 24/7 on every infrastructure, so that software developers can concentrate on their business and IT operations are relieved.

### **VSHN is the link between business, software development and IT operations**

VSHN supports software developers in making applications automatically testable, deployable and scalable and operating them on any infrastructure. In addition to close and agile cooperation and consulting, we also take over responsibility for the stability of our services, including 24/7 support.

## **APPUiO**

With APPUiO - which we've recently took over from Puzzle ITC -, we created the expert hosting for expert software engineers based on Red Hat OpenShift. APPUiO is the leading Kubernetes-based container hosting platform for the design, development and operation of applications. Try

APPUIO now for free and improve the collaboration between software development and operations organization according to the DevOps approach. Register using the Voucher Code DevOps2024.

---

## The Team

Our employees (also known as "VSHNeers") near Zurich Central Station are the most experienced specialists in development and operations, experts in innovative container technology, Kubernetes, and Red Hat OpenShift.

## Open Source

We believe in openness and sharing know-how, experience and code (Open Source). We use open source software wherever possible, but also give our own developments back to the community. Have a look at our Github profile: [github.com/vshn](https://github.com/vshn) or K8up, our Kubernetes Backup Operator, now a Cloud Native Computing Foundation (CNCF) sandbox project.

We also released Project Syn, the next-generation Open Source managed services framework for DevOps and application operations on any infrastructure based on Kubernetes.

## Engagement and Memberships

We actively support organizations such as the Linux Foundation and Cloud Native Computing Foundation.

## About the Company

VSHN was founded in 2014, and as a privately owned company, we're exclusively committed to our customers. The shares are 100% owned by VSHNeers.

---

# Awards & Recognition

VSHN won Gold at the Digital Economy Award 2019. We're one of the Fastest growing ICT companies in Switzerland for the fourth time in a row. We're the first Kubernetes Certified Service Provider (KCSP) in Switzerland and we're the first Swiss Red Hat Premier CCSP Partner. We were awarded Rising Star Switzerland 2019 in the ISG Provider Lens. We're ISO 27001 certified, work according to the strict FINMA guidelines and are ISAE 3402 Report Type 2 audited.



## Jobs

Do you also want to become a VSHNeer and be at the forefront of IT? Then have a look at our job site, we're always looking for good people.

## Stay up to date

Subscribe to our YouTube channel, follow us on Mastodon or Twitter (@vshn\_ch and @APPUiO), on LinkedIn, and on Facebook, to keep up with our latest news.

# Chapter 9. Zühlke

Zühlke is a global innovation service provider. We empower ideas and create new business models by developing services and products based on new technologies – from initial vision through development, deployment, production, and beyond.

We specialise in strategy and business innovation, digital solutions and applications, and device and systems engineering. Our solutions provide unique business value and a reliable foundation for ongoing success.

**Innovation and technology can be a positive force for good in business and society. We empower our clients to envision and create a sustainable future.**

Zühlke was founded in Switzerland in 1968 and is owned by its partners. Our 1,900 employees are based in Austria, Bulgaria, Germany, Hong Kong, Portugal, Serbia, Singapore, Switzerland, the United Kingdom, and Vietnam, serving clients from a wide range of industries. Meanwhile, our venture capital arm Zühlke Ventures provides start-up financing in the high-tech sector.

## Our Platform

Together with LGT, we developed the PlatformPlane.ch, a floating platform that integrates all underlying tools and technologies necessary for creating and operating digital products with DevSecOps at scale.

## Jobs

Your career with Zühlke. Do work that matters – from ideation to implementation and beyond. Have a look at our careers site, we're always looking for amazing people.

---

## Stay up to date

Subscribe to our YouTube, follow us on LinkedIn, on X, and on Facebook, to keep up with our latest news.



Figure 45. Zühlke Logo

# Chapter 10. Authors

## 10.1. Aarno Aukia

Co-Founder & Board Member & Partner at VSHN AG

My professional passion is keeping web applications running so that both visitors and software developers are happy. My vision is to automate all aspects of software operations for uptime, availability, scalability, and developer ease of use.

Connect with Aarno:

- [LinkedIn](#)
- [X](#)
- [Webpage](#)
- [GitHub](#)



Figure 46. Aarno Aukia



## 10.2. Markus Speth

Marketing, People, Strategy & Partner at VSHN AG

I'm passionate about digitalization and IT, thriving as the bridge between technology and people by making complex concepts easy to understand. I'm also committed to showcasing the value of DevOps in fostering collaboration and driving real benefits for teams and organizations. With a strong focus on marketing, branding, and strategy, I aim to create user-centric solutions that resonate with everyone.

Connect with Markus:

- [LinkedIn](#)
- [X](#)



Figure 47. Markus Speth

## 10.3. Romano Roth

Global Chief of DevOps & Partner at Zühlke

Romano Roth is a pioneering thought leader in DevOps and platform engineering, with over two decades of experience in the technology sector. As the Global Chief of DevOps at Zühlke, Romano is responsible for shaping the global strategy and service portfolio for DevOps, platform engineering, and cloud solutions. His visionary approach has revolutionized software development across various industries, including finance, insurance, cybersecurity, electricity, healthcare, and aerospace.

Romano began his journey at Zühlke 22 years ago, evolving from an expert software engineer and software architect to a distinguished consultant, and eventually to his current role. Throughout his career, he has been driven by a singular passion: continuously delivering value while ensuring quality and automation. This passion naturally led him to the DevOps movement, where he has become a significant influencer.

Romano is the organizer of the monthly DevOps Meetup in Zürich and the president of DevOps Days Zürich, an annual conference that is part of the global DevOps movement. He also shares his expertise through his YouTube channel, which features over 200 videos on DevOps, architecture, and leadership. Additionally, Romano has authored more than 30 blog posts on these topics on his website.

His commitment to education and thought leadership extends to his role as a lecturer in DevOps leadership and agile methodologies at the Lucerne University of Applied Sciences and Arts. Romano's work emphasizes the transformative power of DevOps in modern enterprises, harmonizing people, processes, and technologies to continuously create value and foster innovation.

---

Connect with Romano:

- LinkedIn
- X
- YouTube
- Mastodon
- Webpage
- GitHub
- Leanpub



Figure 48. Romano Roth

# THANKS FOR READING



**VSHN**

# Index

## A

adopt, 44  
Amazon AWS, 33  
Ansible, 37  
ArgoCD, 36  
AWS Cost Explorer, 31  
AWS EKS, 39  
AWS SageMaker, 27  
Azure AKS, 39  
Azure Cost Management, 31  
Azure DevOps, 36

## C

C#, 23  
CI/CD, 36  
Cloud Native, 21, 22

## D

DevOps, 6  
Docker Desktop, 39

## E

ElasticSearch, 25

## F

FinOps, 25, 31, 31, 31

## G

GitHub, 36  
GitLab, 36  
Go, 23  
Google Cloud, 33  
Grafana, 29

## H

HashiCorp's Terraform, 37  
Hybrid Cloud, 34

## I

Infrastructure as Code, 36, 37

## J

Java, 23  
JavaScript, 23, 23  
Jenkins, 36  
Jupyter, 27

## K

Kafka, 25  
Kubeflow, 27  
Kubernetes, 21, 39, 39

## L

Linux, 22, 22

## M

Microsoft Azure, 33  
ML, 27, 27  
MLOps, 25, 27, 27  
MongoDB, 26  
Multi-Cloud, 34  
MySQL, 26

## N

NGINX, 25

## O

Observability, 25, 29

---

OpenTofu, 37  
outsourcing, 50

## *P*

perception, 43  
PHP, 23  
PostgreSQL, 26  
Prometheus, 29  
Public Cloud, 34  
Python, 23

## *R*

Red Hat OpenShift, 39  
return on investment, 45  
Ruby, 23  
Rust, 23

## *S*

SUSE Rancher, 39

## *T*

team autonomy, 48

## *V*

VSHN, 54

---

# Colophon

## **VSHN AG**

Neugasse 10  
8005 Zürich  
Switzerland  
[www.vshn.ch](http://www.vshn.ch)  
[info@vshn.ch](mailto:info@vshn.ch)  
+41 44 545 53 00

## **Zühlke**

Zürcherstrasse 39j  
8952 Schlieren (Zürich)  
Switzerland  
[www.zuehlke.com](http://www.zuehlke.com)  
[info@zuehlke.com](mailto:info@zuehlke.com)  
+41 43 216 6611

Copyright © 2014-2024 VSHN AG. All Rights Reserved. All trademarks are the property of their respective owners.

Published in Zürich, Switzerland on 2024-09-09. Created with AsciiDoctor.

This report is provided by the copyright holders and contributors "as is" and any express or implied warranties, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose are disclaimed. Information and views expressed in this document, including URLs and other Internet Website references, may change without notice. In no event shall VSHN or contributors be liable for any direct, indirect, incidental, special, exemplary, or consequential damages (including, but not limited to, procurement of substitute goods or services; loss of use, data, or profits; or business interruption) however caused and on any theory of liability, whether in contract, strict liability, or tort (including negligence or otherwise) arising in any way out of the use of this information, even if advised of the possibility of such damage. You may copy and use this document for your internal, reference purposes.

---