



Microservices Orchestration Survey





Introduction

In July 2018, Camunda ran its first-ever microservices orchestration survey. As microservices architectures have become more common, we've seen an increasing number of Camunda users building orchestration solutions with our BPMN Workflow Engine. And this move toward microservices is a large part of the reason we're developing Zeebe, a next-generation workflow engine designed for high-throughput use cases such as microservices orchestration.

We organized this survey because we wanted to learn more about how companies are currently addressing the challenges that arise when end-to-end business processes span multiple microservices. We also wanted more insight into

why organizations are adopting microservices in the first place and how they're approaching these architectures – for many, a microservices architecture represents a significant change in how applications are built.

We're happy to say that more than 350 respondents shared their input with us. The result is a rich set of data that helps to answer how and why organizations of all sizes are adopting microservices architectures and the tools they're using to make it happen.

Thanks for taking a look at the results, and we hope you find these insights as helpful as we have.

Sincerely,
The Camunda Team

354 Respondents

90+ Companies

16 Industries



About Camunda

Camunda is a software company reinventing workflow automation. Hundreds of companies including 24 Hour Fitness, AT&T, Lufthansa Technik and Zalando trust Camunda to automate core business processes to the highest possible extent, allowing their businesses to scale and revenue to grow without proportionally increasing operating costs.

With its open source workflow automation and decision platform, Camunda provides detailed visibility into business operations across distributed systems, boosts system

resilience and enables enterprises to overcome “big workflow” challenges resulting from digital transformation. One of the fastest growing companies in EMEA as ranked by Deloitte, Camunda is based in Berlin with offices in San Francisco and Denver, USA.

[To learn more visit: camunda.com](https://camunda.com)





Key Findings

63% of respondents are using a microservices architecture in some or all of their applications.

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More than 60% of respondents cite *improved scalability of applications* and *faster time to market for new products and services* as key benefits of microservices.

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The two biggest challenges faced by respondents who use a microservices architecture are *lack of visibility into end-to-end processes that span multiple microservices* and *ambiguous error handling, leading to unaddressed errors at the boundaries between microservices*.

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More than one third of respondents say their organization doesn't have any uniform policies for monitoring microservices.

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88% of respondents are using REST APIs for communication between microservices, while fewer than half use Apache Kafka or other message queues.

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39% of respondents say their organization factors in the role of microservices in broader business processes yet does not explicitly model the business processes their microservices are a part of.

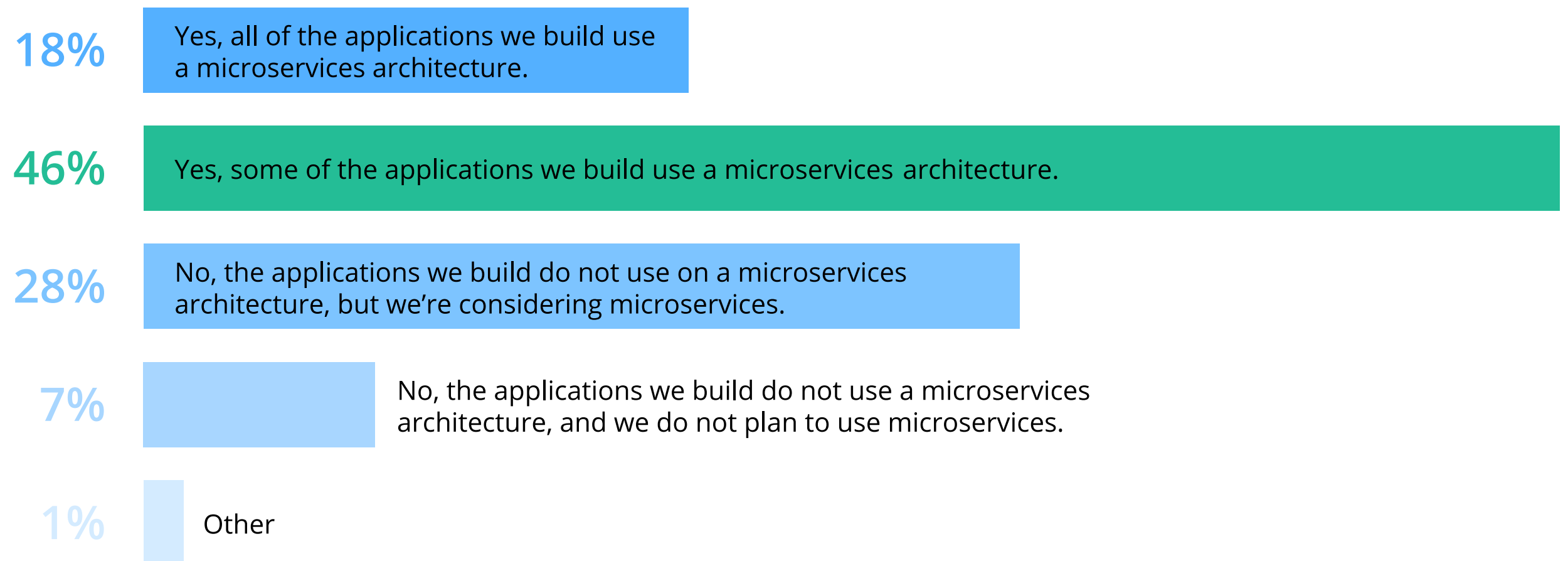
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64% of respondents say microservices are extremely important or very much important as a core enabling technology for digital transformation.

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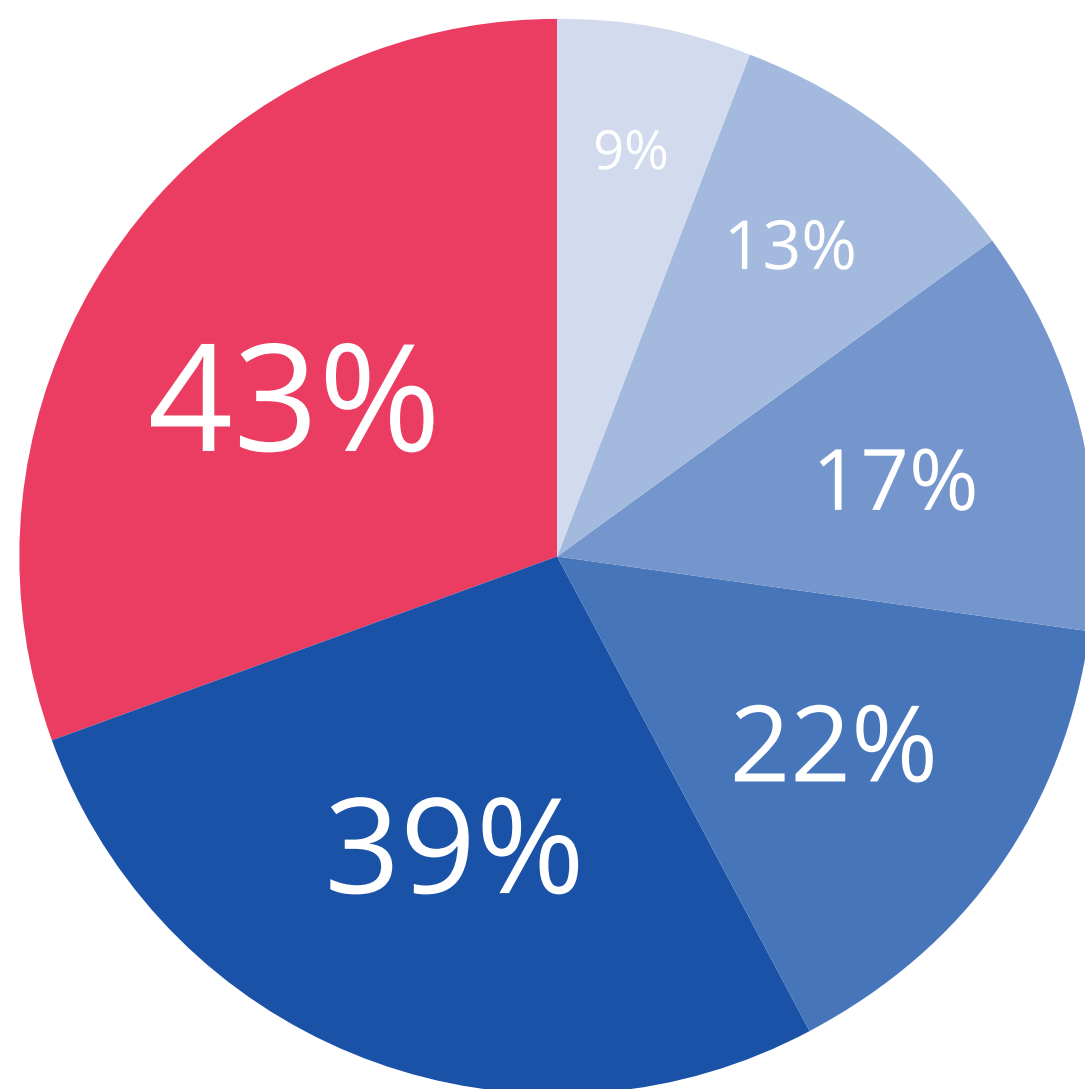
Is your organization currently using a microservices architecture?



Sample Size: 354 (All Respondents)



From respondents who will not use a microservices architecture: why has your organization decided not to adopt microservices?



A microservices architecture would introduce unnecessary complexity to our engineering org; the tradeoffs aren't worth it.

A microservices architecture isn't the right fit for our use cases.

We'd like to migrate to a microservices architecture, but given the size and complexity of our applications, it would be unrealistic to do so.

Other

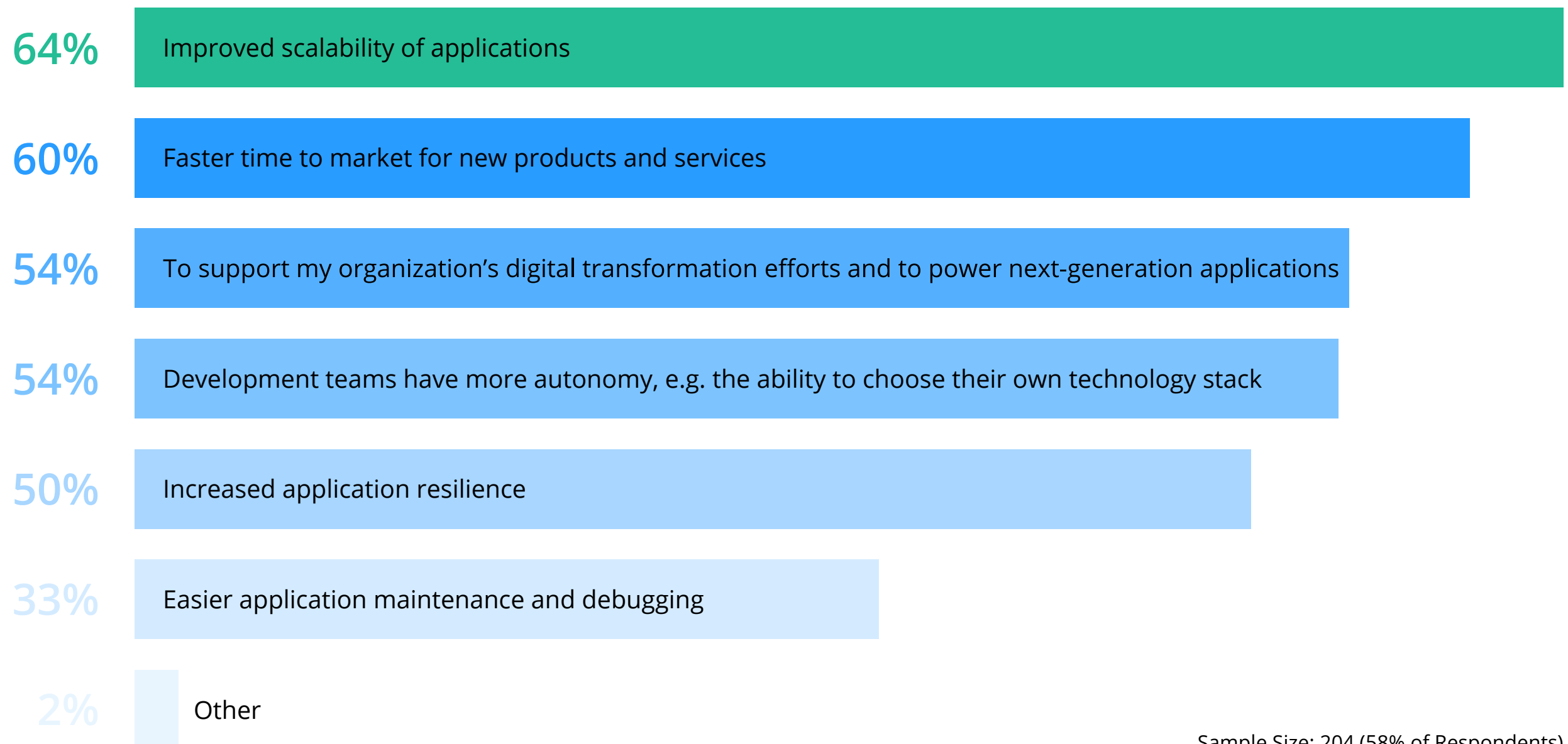
It's too difficult to hire developers with experience working in a microservices architecture.

Operations and monitoring are straightforward in our current architecture; we don't want to transition to a DevOps model.

Sample Size: 23 (6% of Respondents)



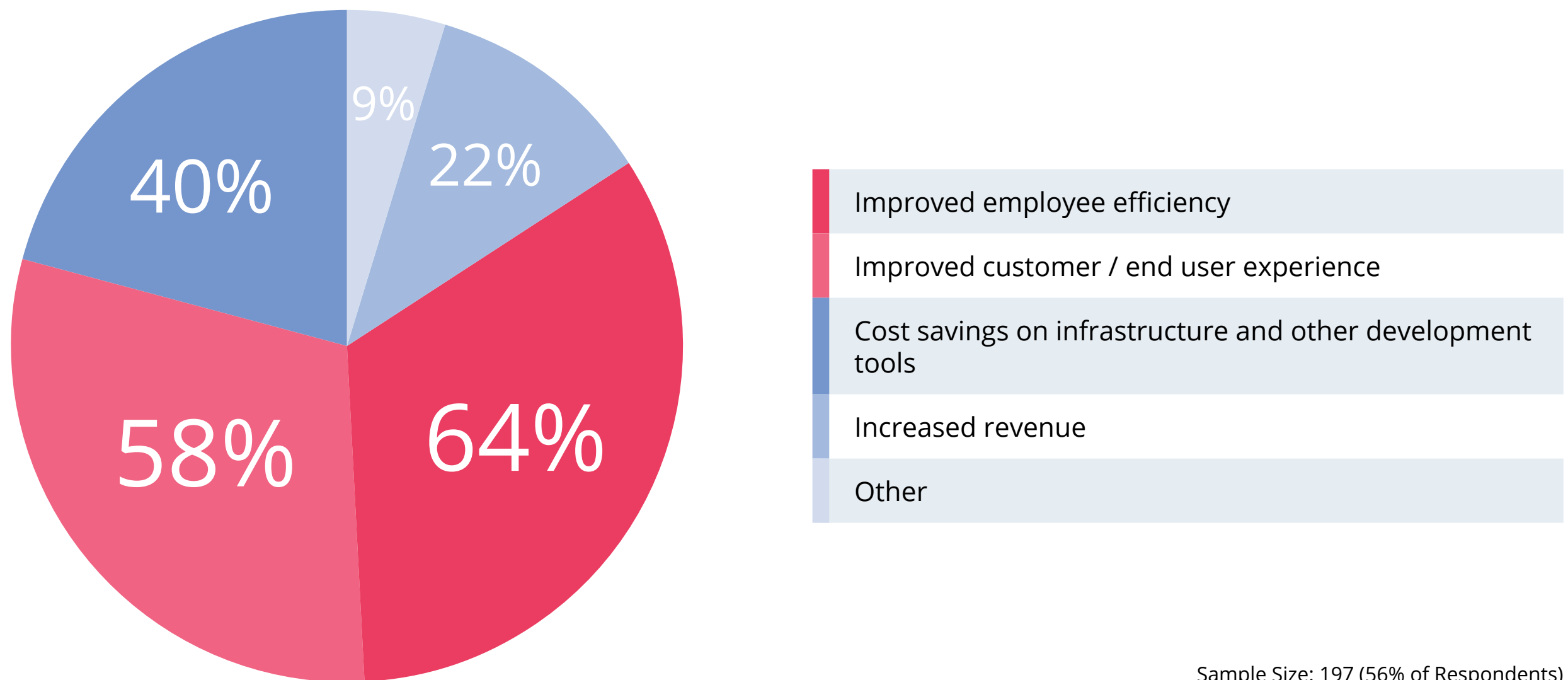
Why did your engineering organization adopt / is planning to adopt a microservices architecture?



Sample Size: 204 (58% of Respondents)



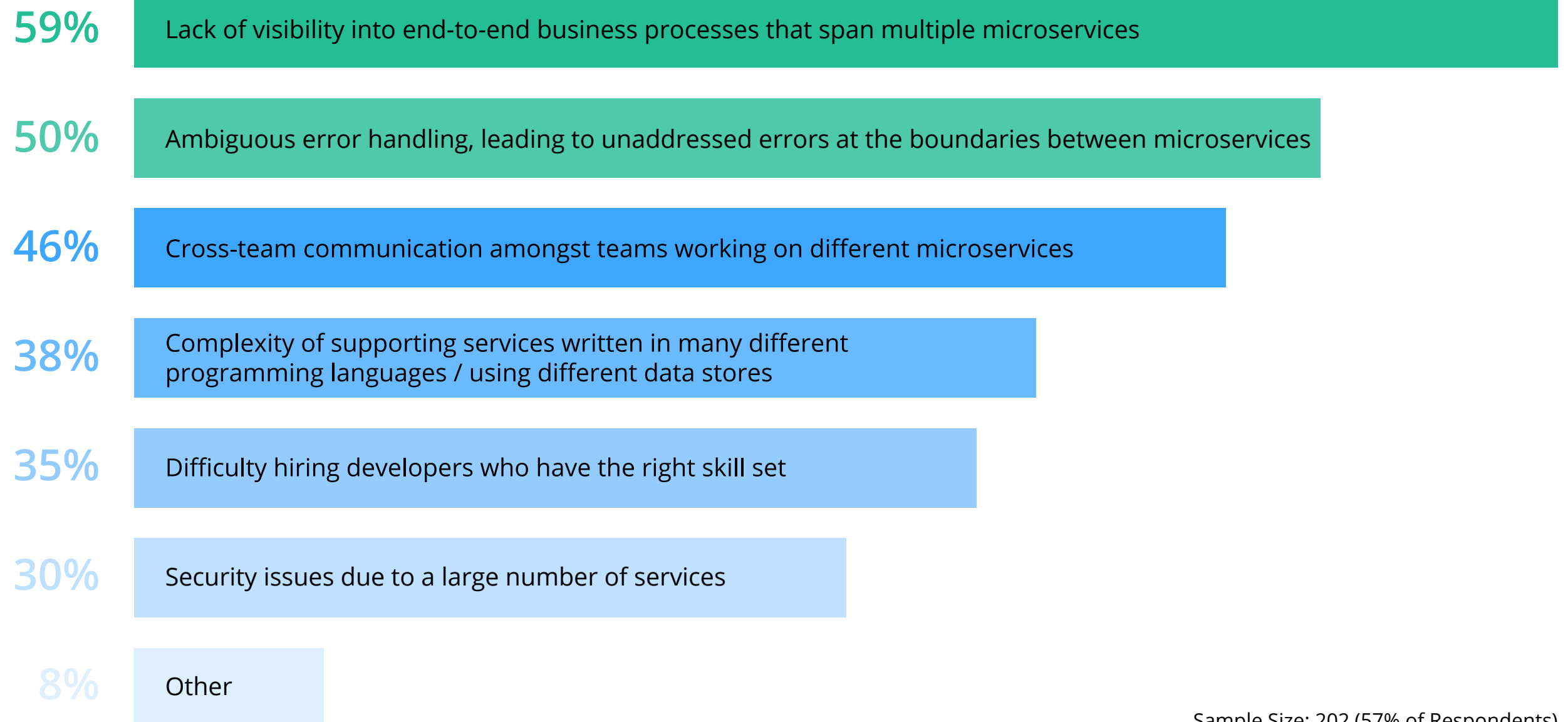
What business benefits does your organization see / expect to see as a result of adopting a microservices architecture?



Sample Size: 197 (56% of Respondents)



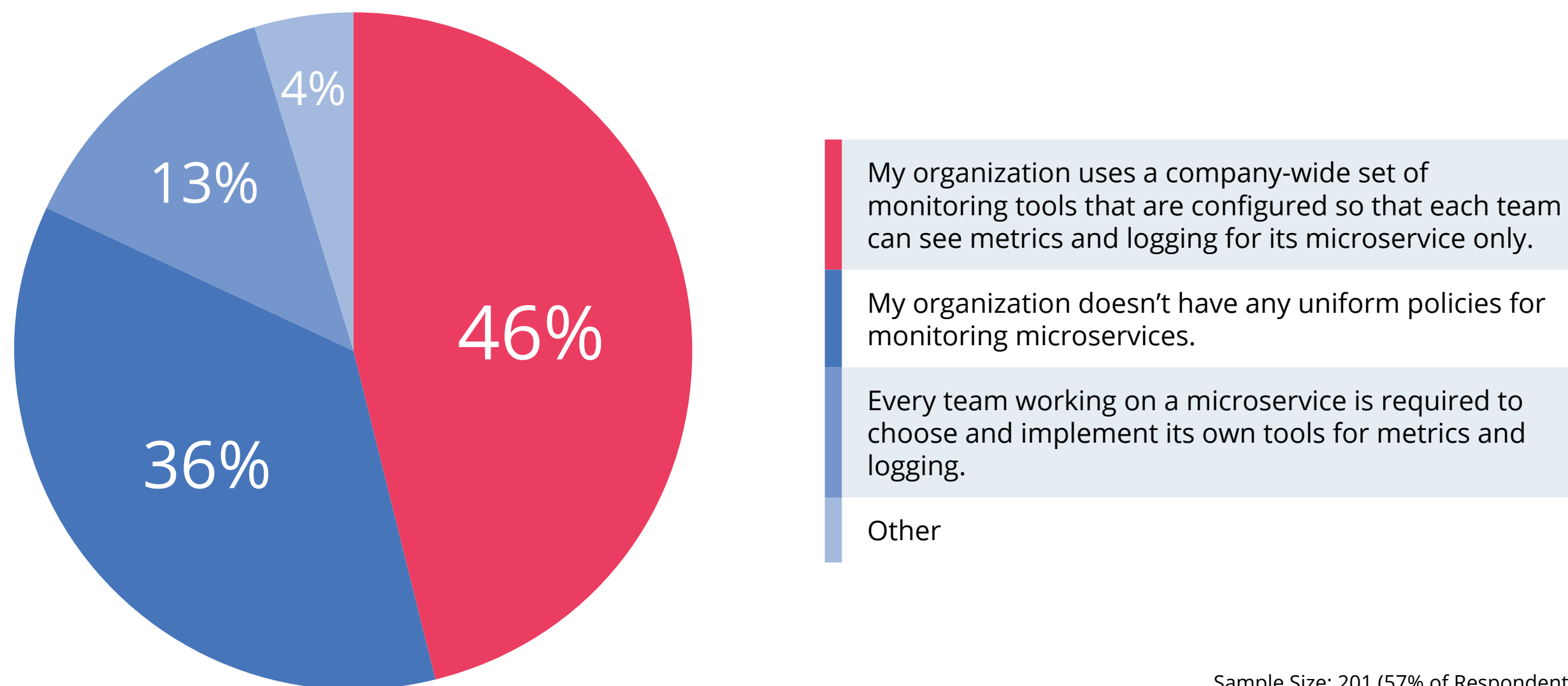
What challenges does your organization face / expect to face with a microservices architecture?



Sample Size: 202 (57% of Respondents)



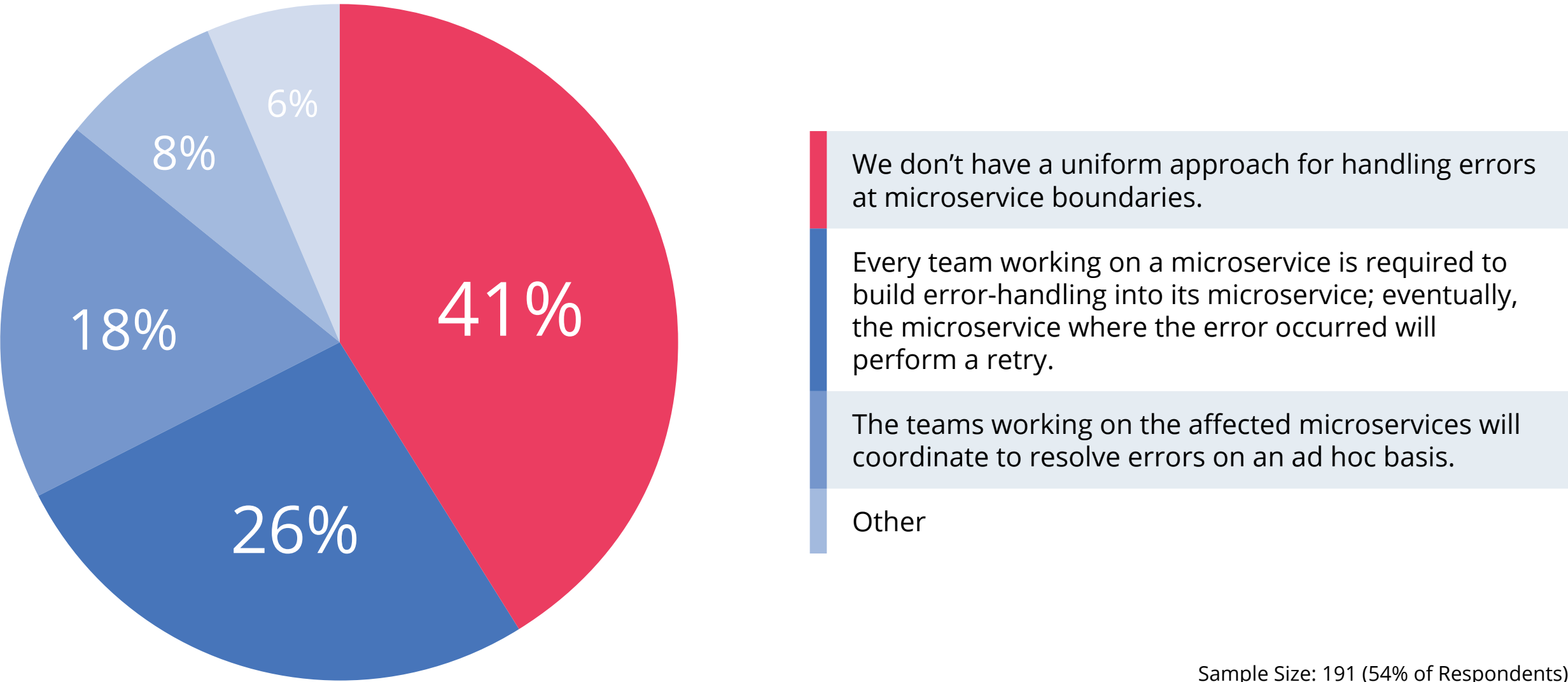
How does your organization handle monitoring for individual microservices?



Sample Size: 201 (57% of Respondents)



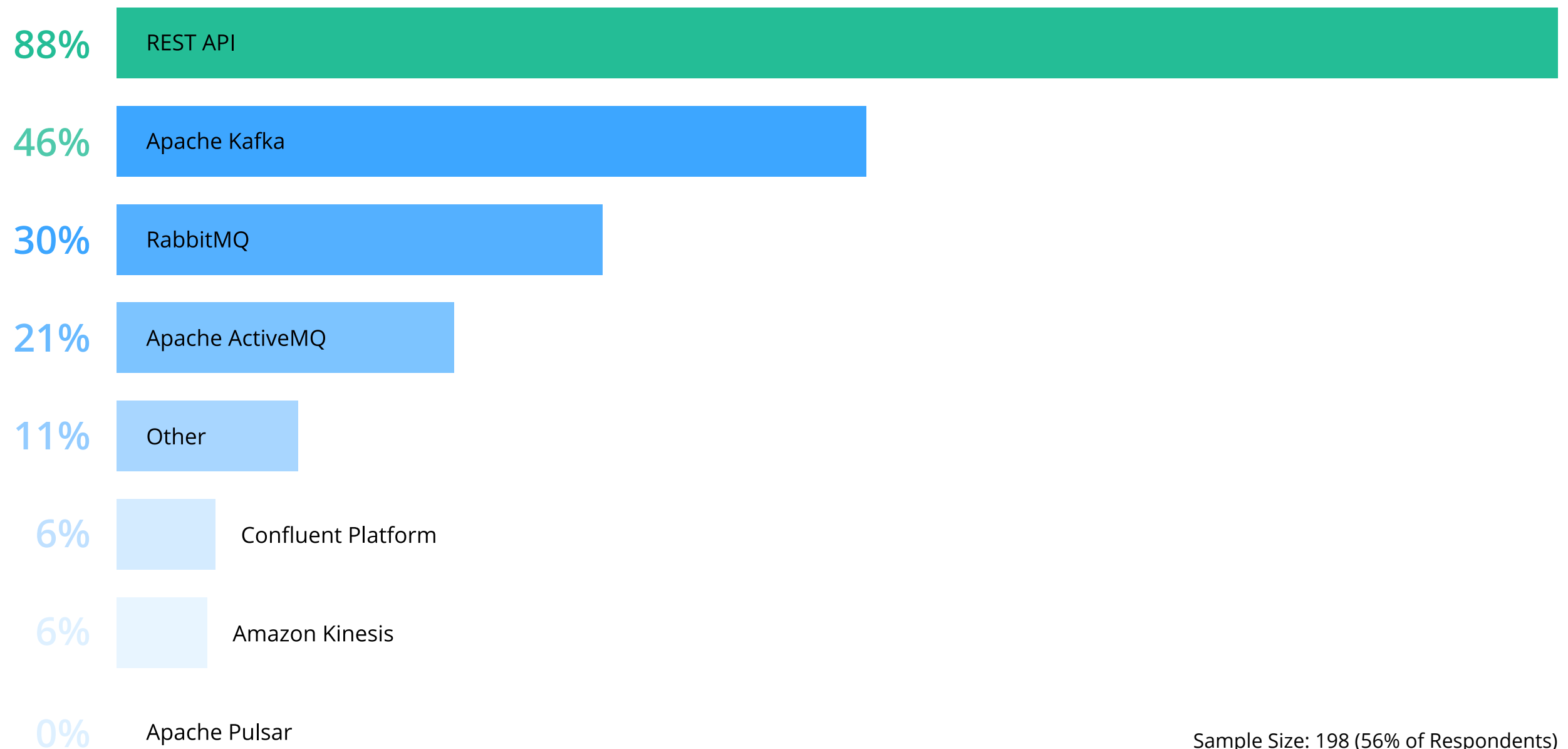
How does your organization handle errors within a business process that occur at the boundary of 2 or more microservices?



Sample Size: 191 (54% of Respondents)



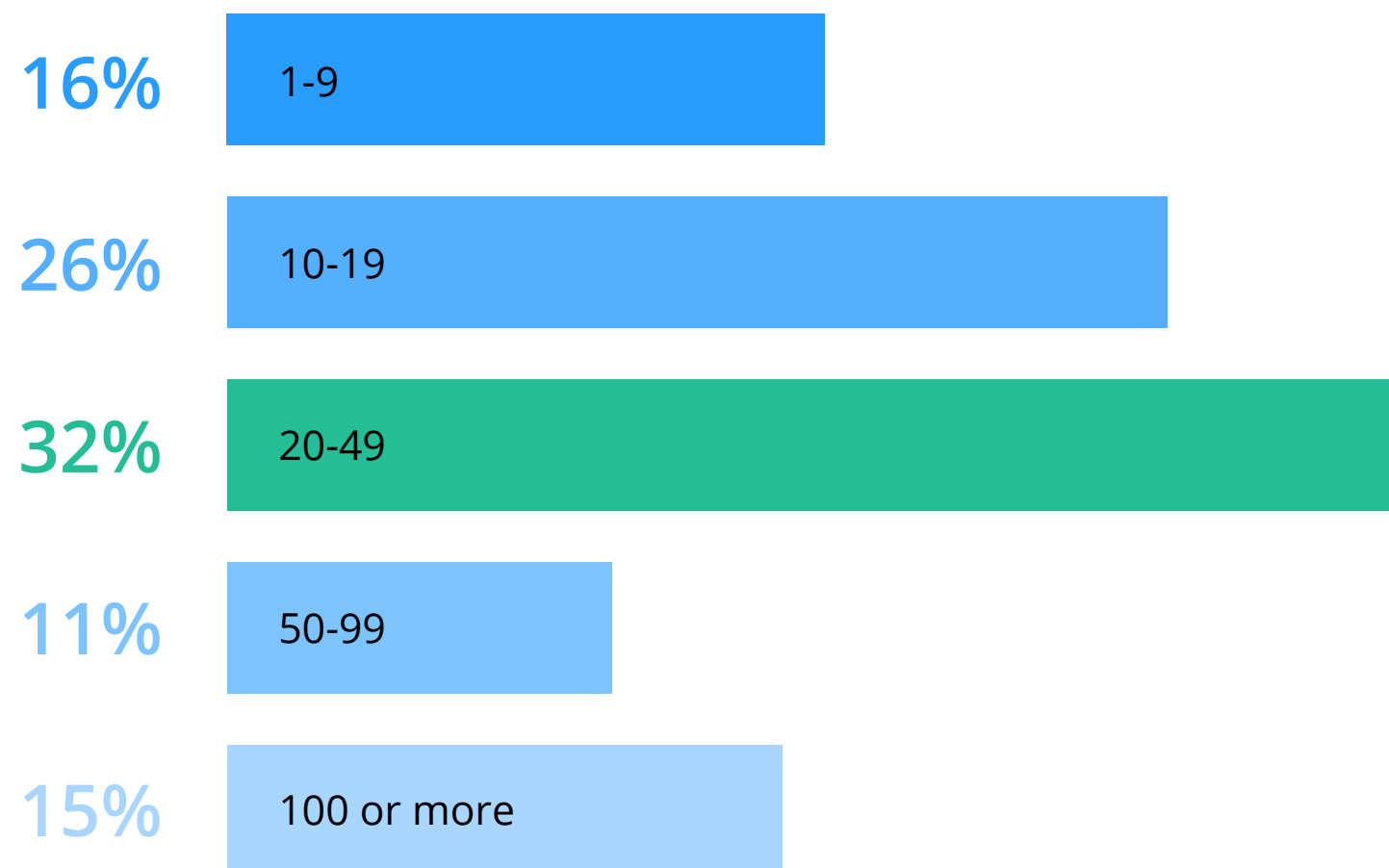
We use / plan to use the following tools for communication between microservices:



Sample Size: 198 (56% of Respondents)



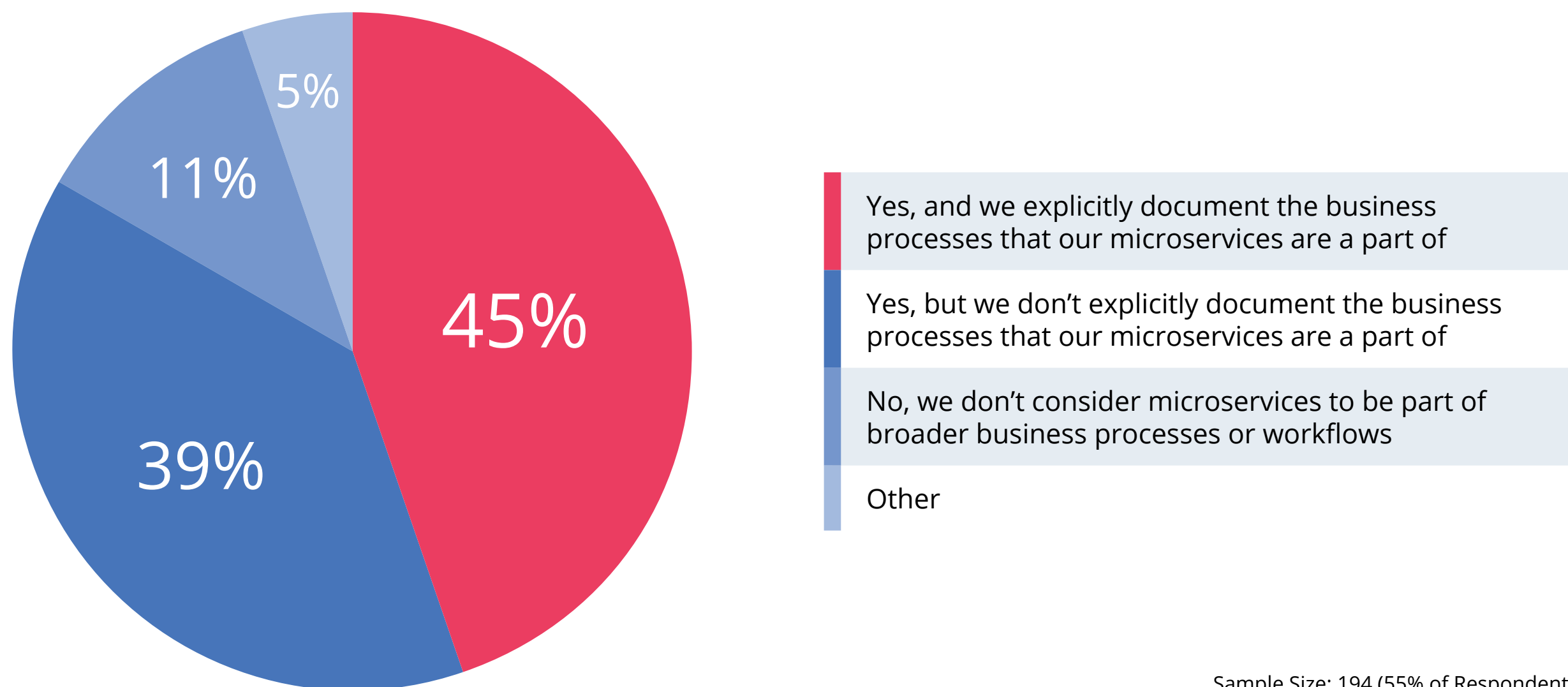
How many distinct microservices does your organization run in production / plan to run in production?



Sample Size: 171 (48% of Respondents)



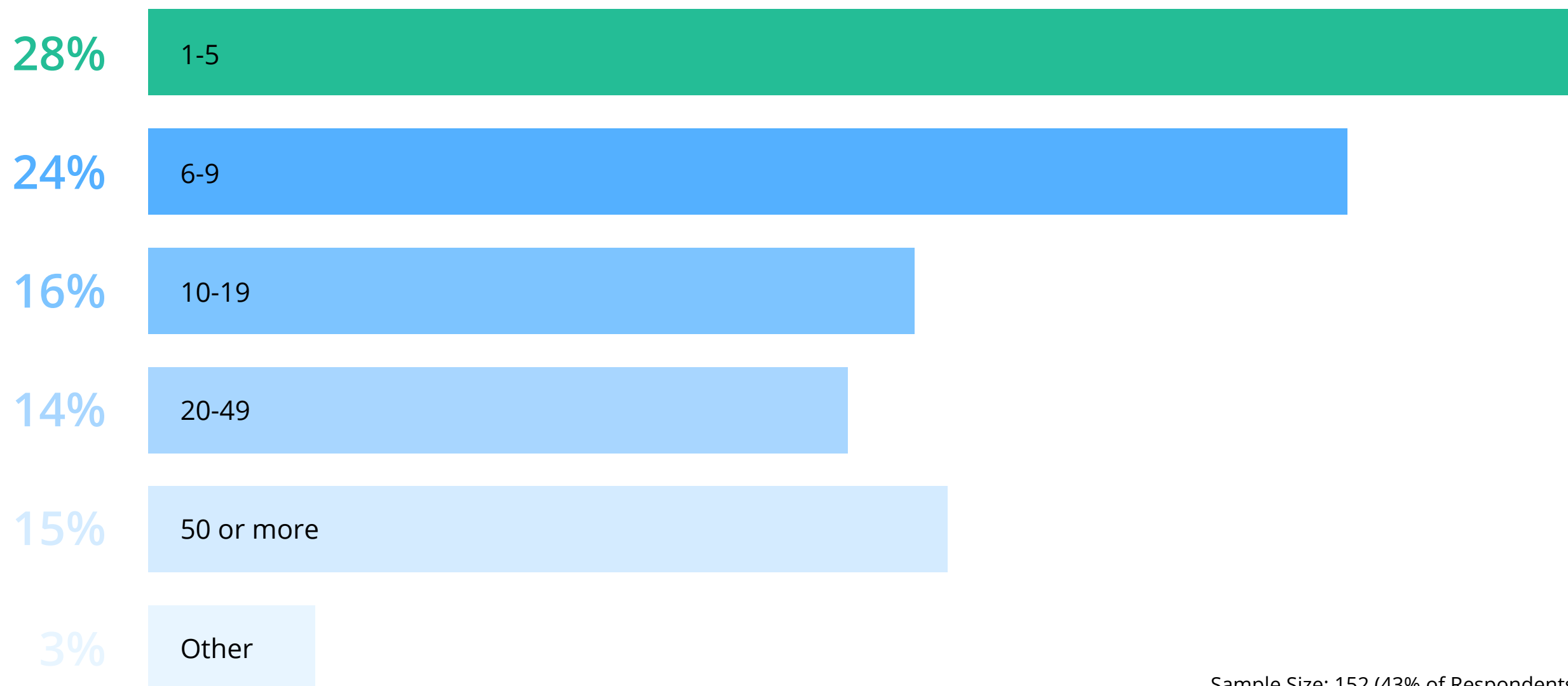
Does your organization factor in the role of microservices in broader business processes or workflows?



Sample Size: 194 (55% of Respondents)



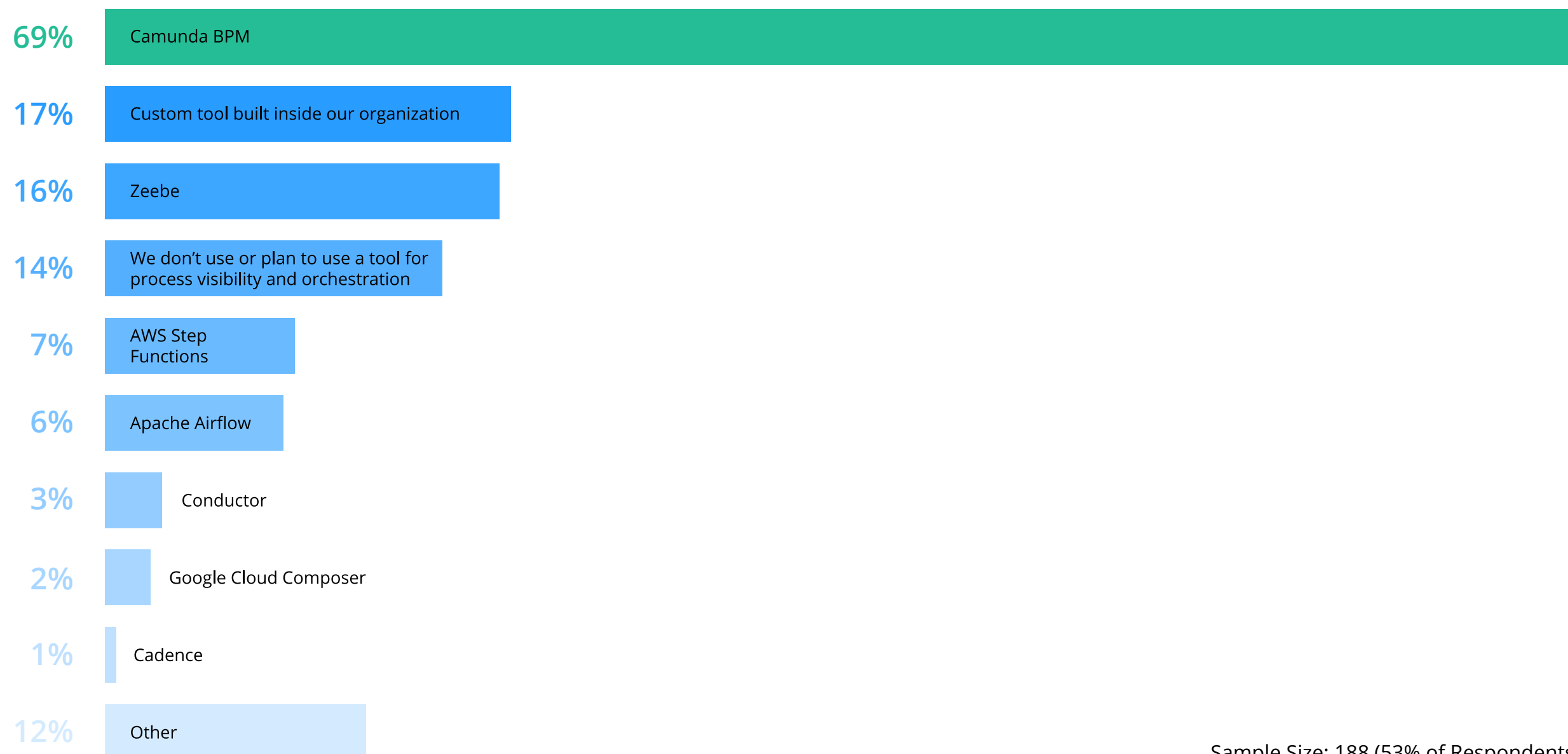
An end-to-end business process (for example, an e-commerce company fulfilling a customer order) will often span many different microservices. In your organization or team, how many different business processes rely on microservices to carry out tasks?



Sample Size: 152 (43% of Respondents)



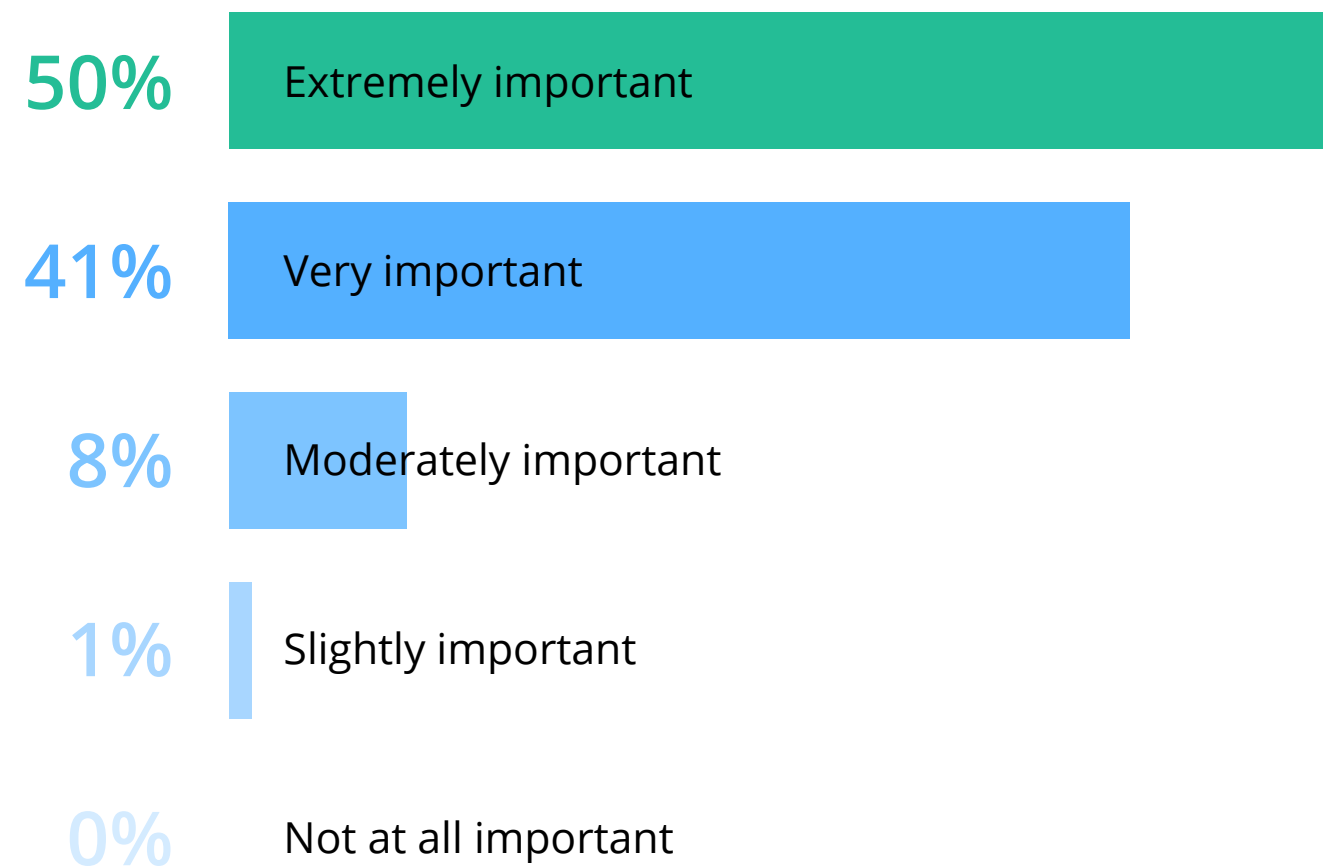
We use / plan to use the following for visibility into end-to-end business processes and microservices orchestration:



Sample Size: 188 (53% of Respondents)



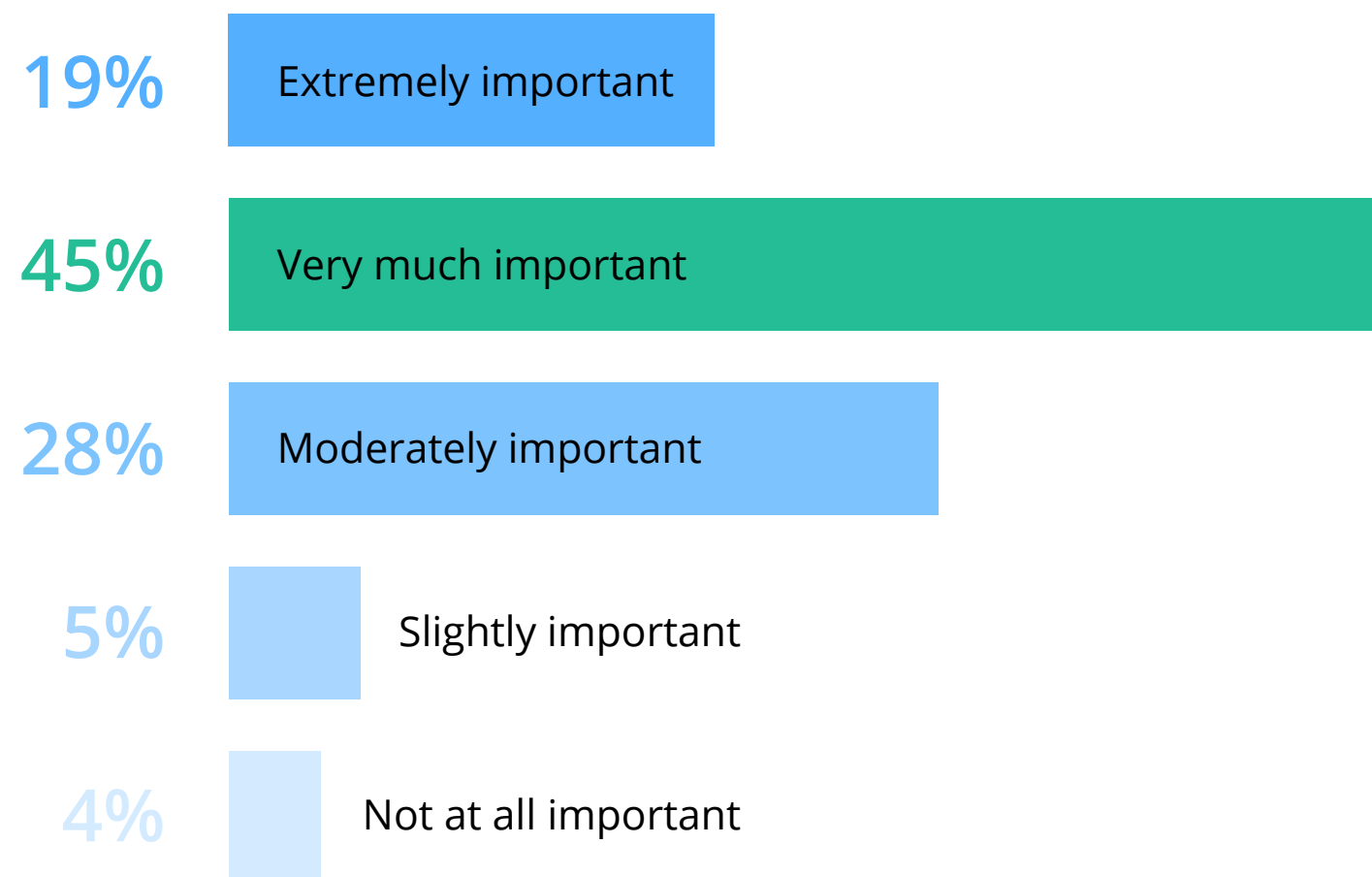
How important is digital transformation for long-term success in your industry?



Sample Size: 199 (56% of Respondents)



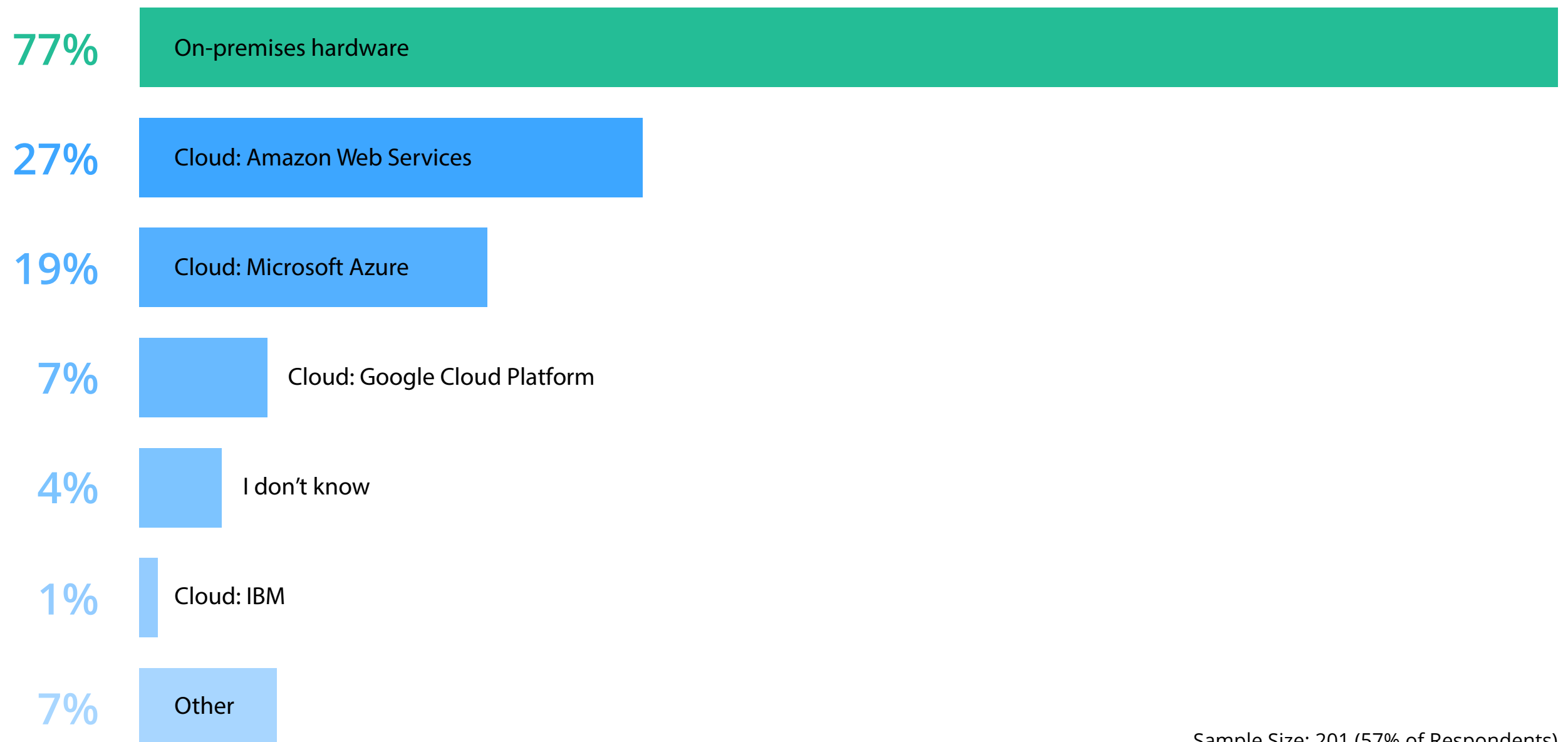
How important are microservices as a core enabling technology for digital transformation?



Sample Size: 196 (55% of Respondents)



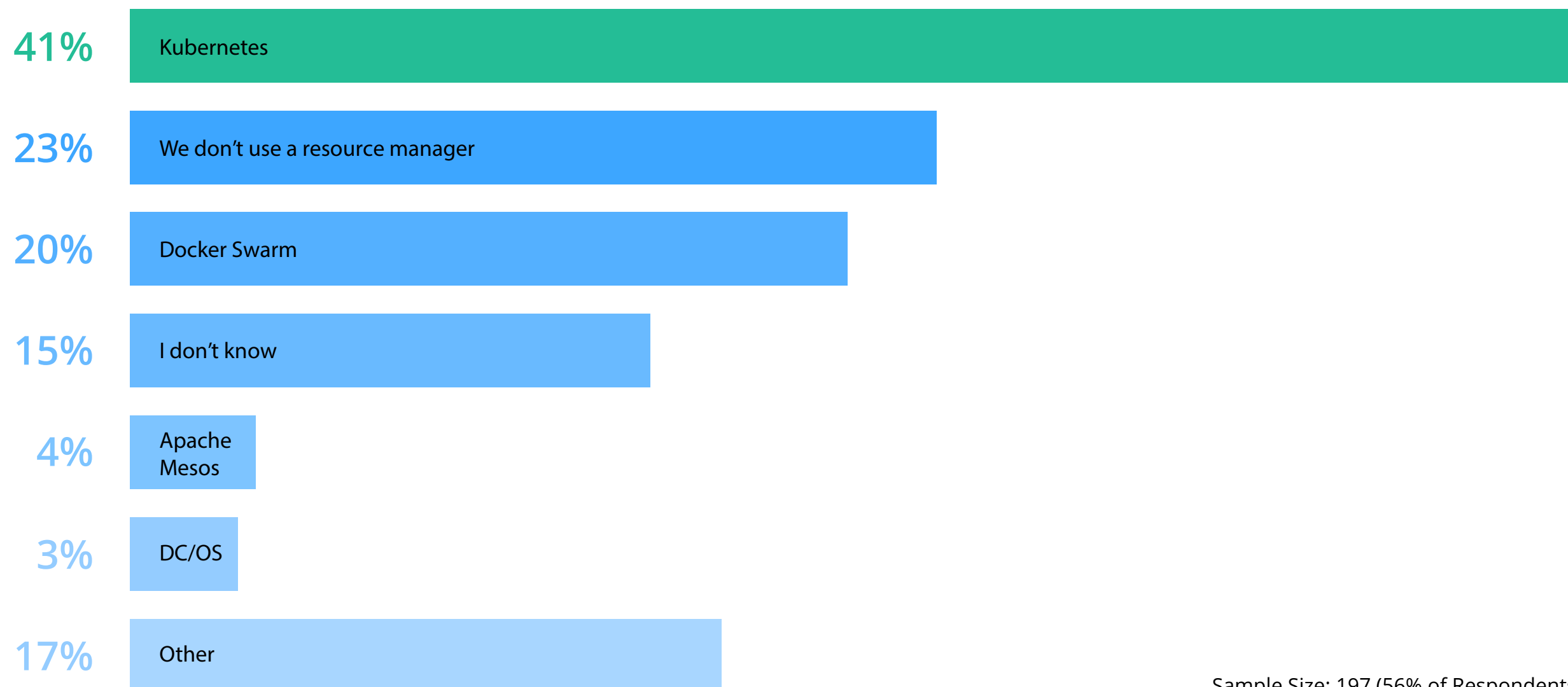
Where are your applications deployed at your organization?



Sample Size: 201 (57% of Respondents)



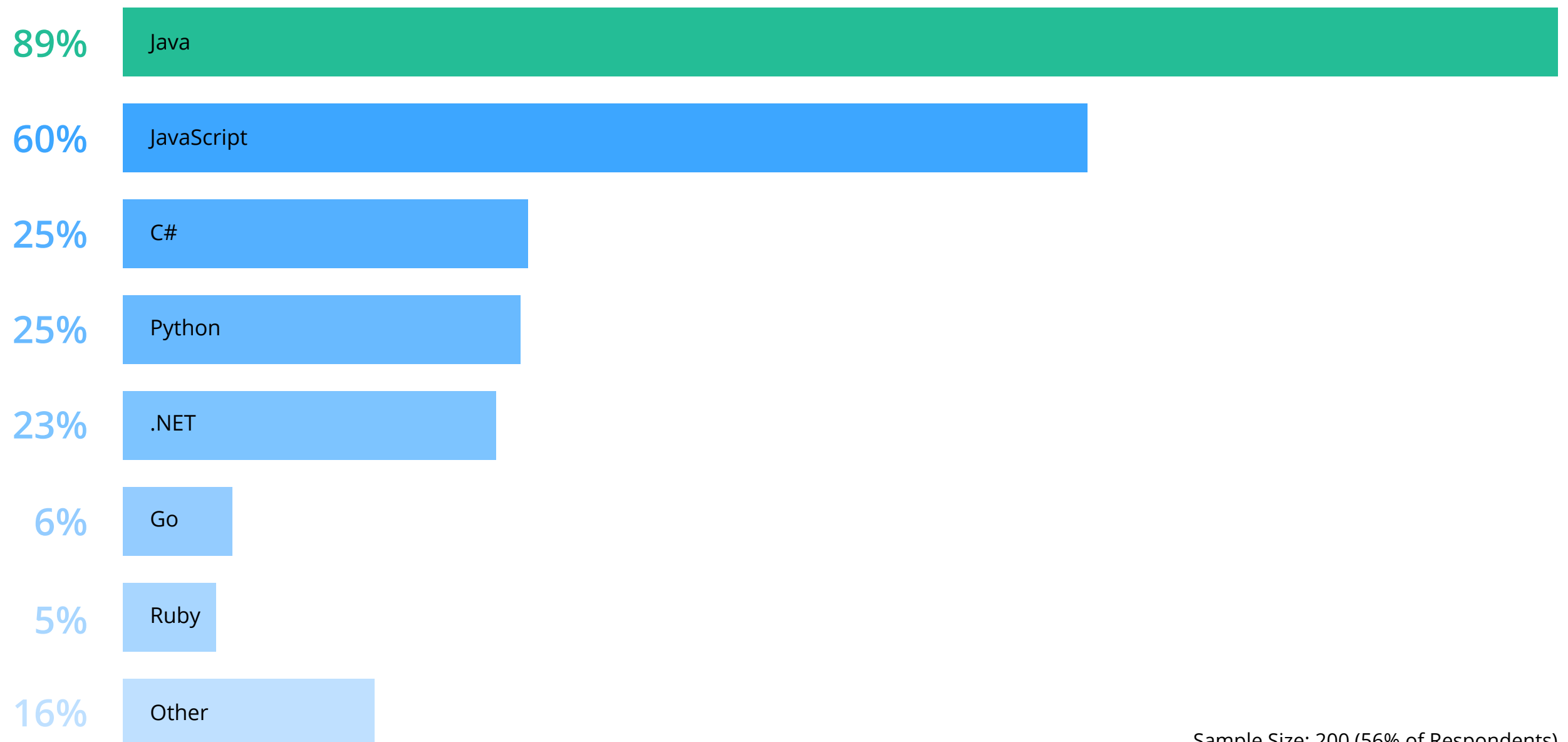
My organization uses the following resource managers or container orchestrators in the cluster where our applications are deployed:



Sample Size: 197 (56% of Respondents)



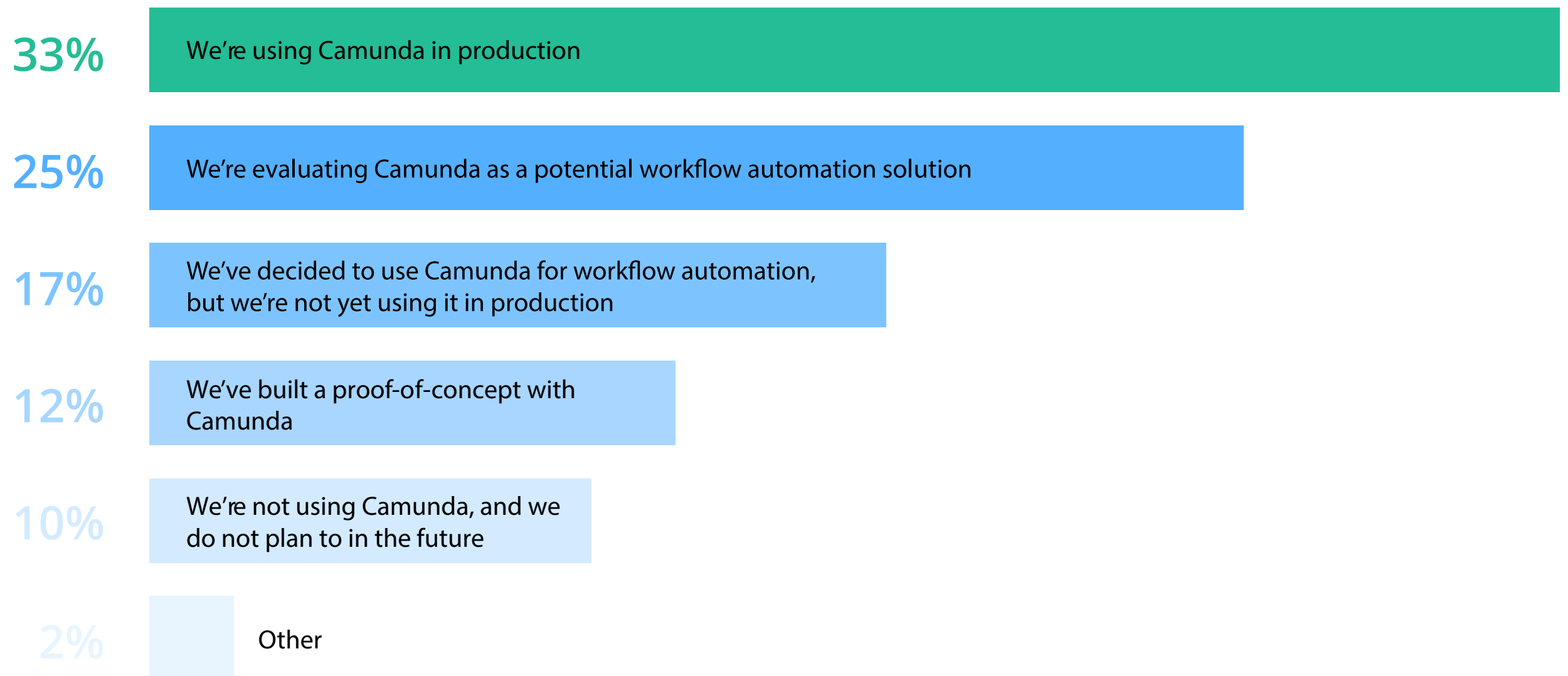
In which programming languages does your organization build its applications?



Sample Size: 200 (56% of Respondents)



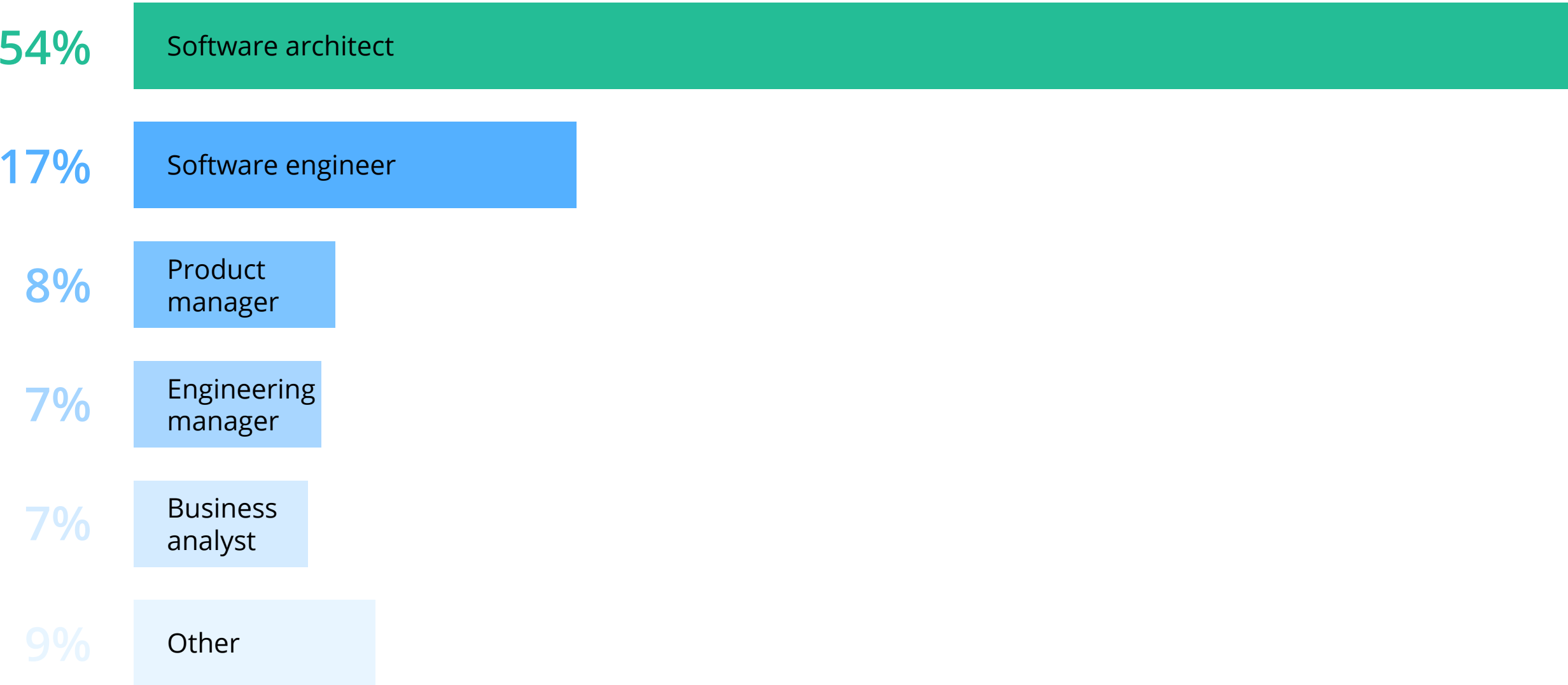
What best describes Camunda at your organization?



Sample Size: 204 (58% of Respondents)

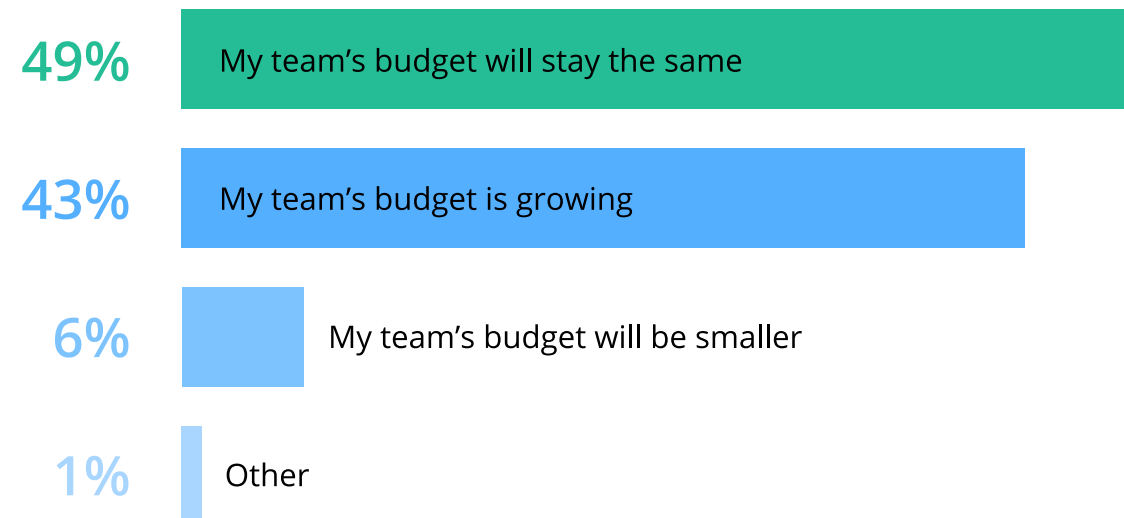


I would describe my role as:

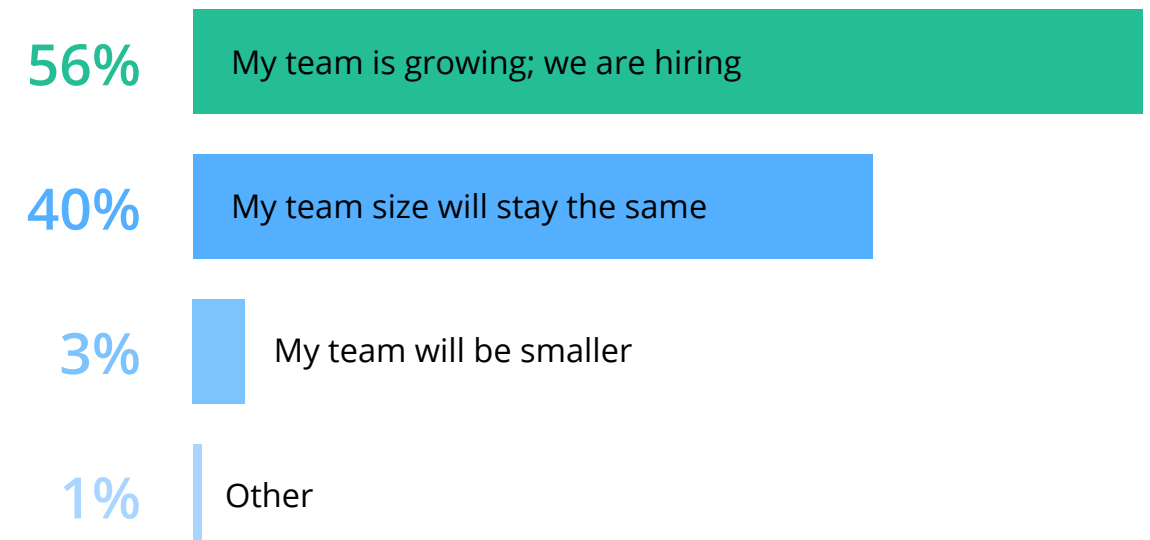




How do you expect your team's budget to change in the coming year?



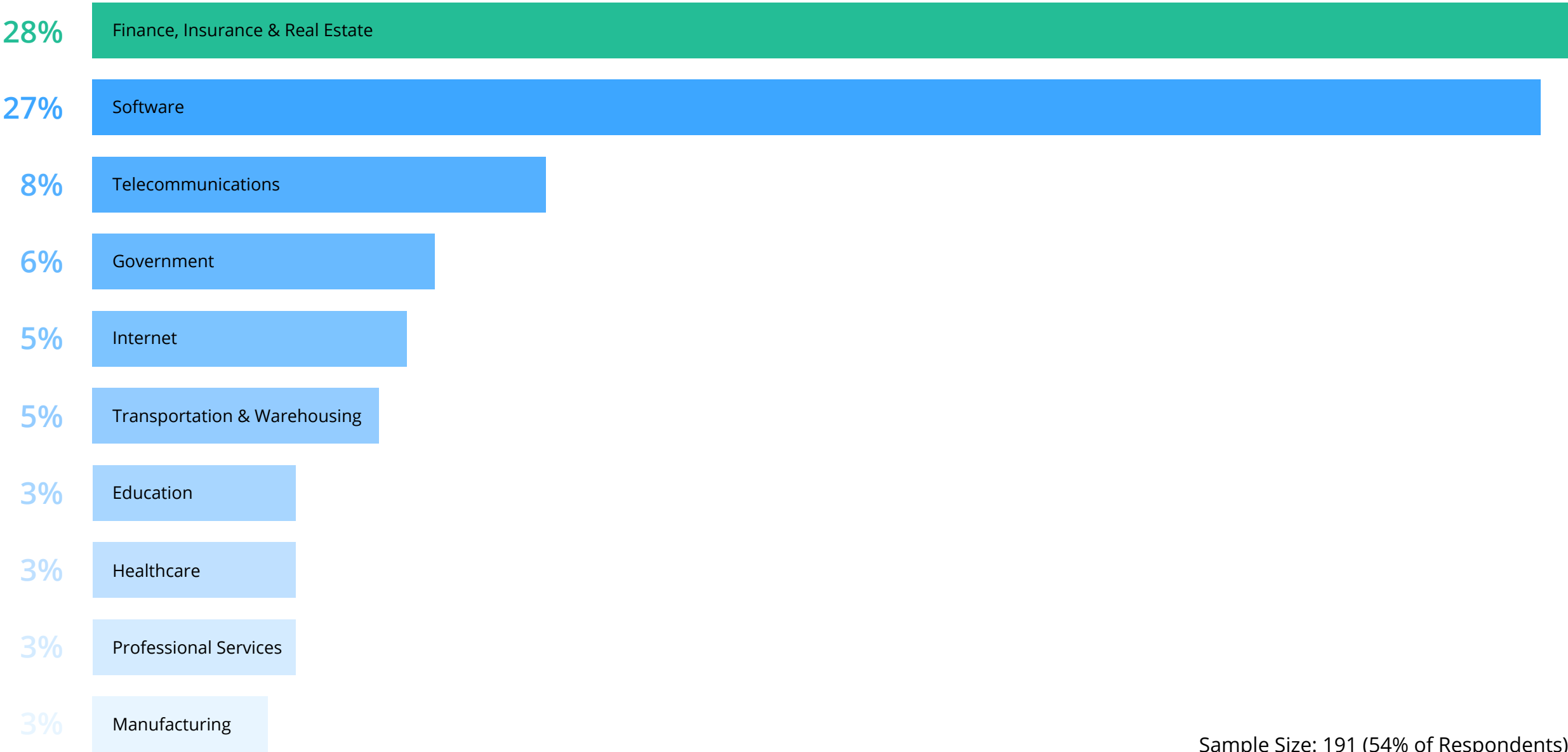
How do you expect your team's size to change in the coming year?



Sample Size: 191 (54% of Respondents)



Which of the following categories best describes your organization's industry? – Top 10



Sample Size: 191 (54% of Respondents)



Approximately how many employees work at your organization (all locations)?



Sample Size: 193 (55% of Respondents)

