

# Kubernetes: Putting the Focus on Upstream Usability with SIG Usability

*Tasha Drew, Gaby Moreno Cesar, Carl Pearson*



  <https://thenewstack.io/ux-is-kubernetes-biggest-short-term-challenge/> 

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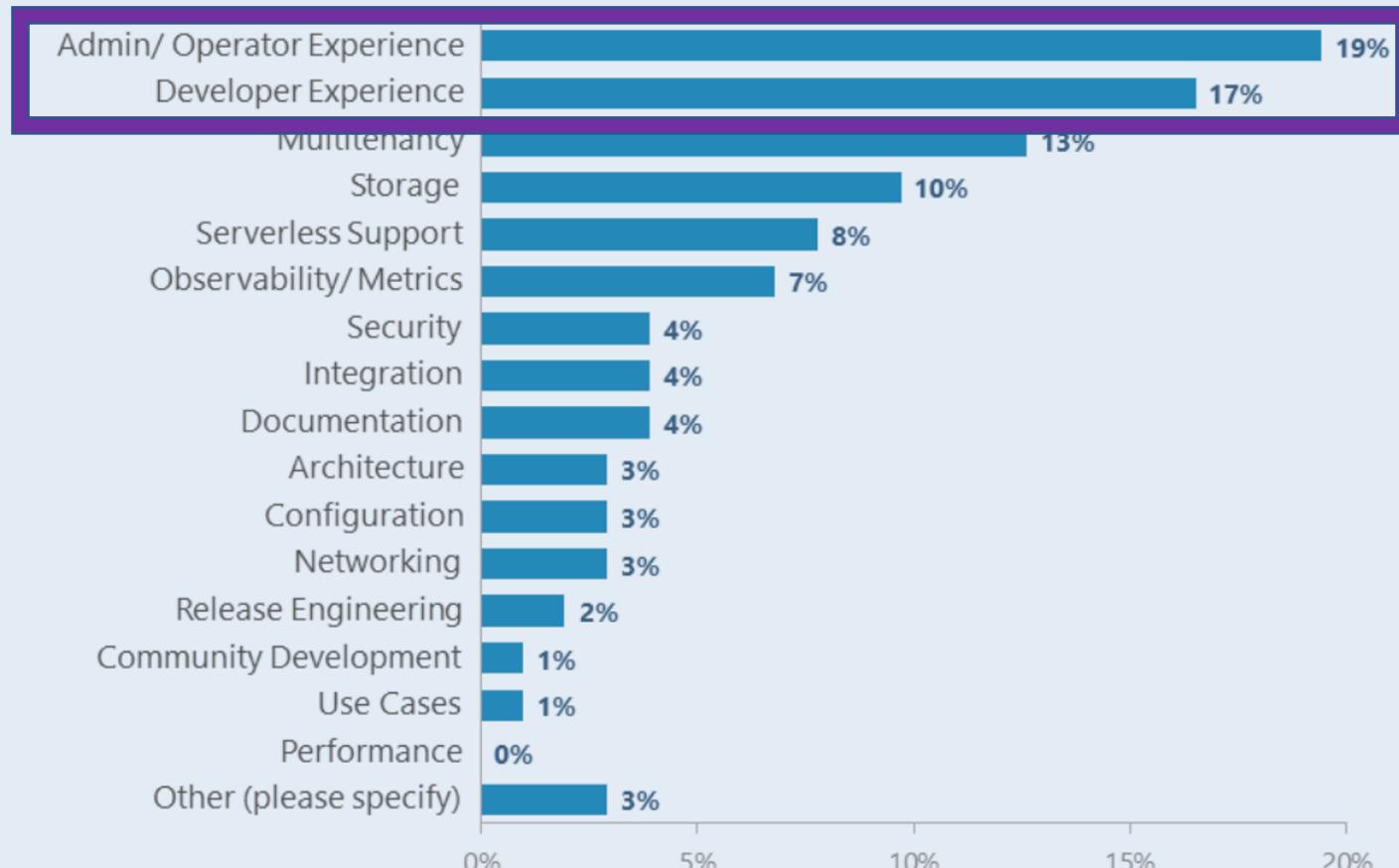
CONTAINERS / KUBERNETES

## UX Is Kubernetes' Biggest Short-Term Challenge

14 Nov 2019 3:00pm, by [Lawrence E Hecht](#)



# Top Areas the Core Kubernetes Project Needs to Address in 2020



Source: Online poll conducted between October 31 and November 12, 2019. What is the #1 area that the Kubernetes core project most needs to address next year? Most of the 103 respondents are The New Stack readers.

@ 2019 THE NEW STACK

# Where to find us



*Virtual*

- Chairs
  - @tasha
  - @gaby
  - @hpandey
- Home page: <https://github.com/kubernetes-sigs/sig-usability>
- <https://github.com/kubernetes-sigs/sig-usability>
- Meeting Notes / Agenda/ Video links  
[https://docs.google.com/document/d/1gJHgt8RpH4TvqPuC8NtR31-CMqtTYkHy\\_loxubHq8Ig/edit#heading=h.dxkqxxqfedyl](https://docs.google.com/document/d/1gJHgt8RpH4TvqPuC8NtR31-CMqtTYkHy_loxubHq8Ig/edit#heading=h.dxkqxxqfedyl)
- Slack channel: <https://kubernetes.slack.com/messages/sig-usability>
- Mailing List (join this for calendar invitations!):  
<https://groups.google.com/forum/#!forum/kubernetes-sig-usability>

# Jobs to Be Done Study



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## Overview

This study aims to go about clarifying who are the users of Kubernetes. Using a Jobs-to-Be-Done approach, it aims to define how Kubernetes fits into what they hope to achieve. By breaking this desired outcome into measurable steps, it then aims to provide statistically significant results on the areas of most opportunity to improve Kubernetes.

## Questions

- Who are the main users of Kubernetes?
- What are they trying to achieve and how does Kubernetes fit into it?
- How do they go about doing so?
- What are the top opportunities for improving Kubernetes?

## Led by

Gaby Moreno Cesar, IBM

Tasha Drew, VMware

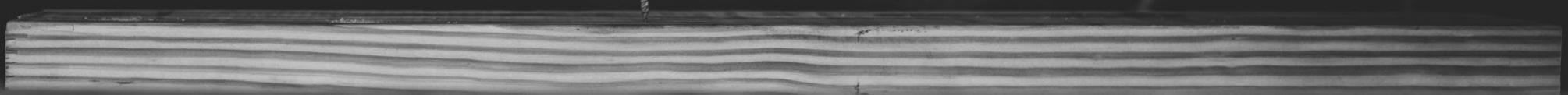
Carl Pearson, previously at Red Hat

Josephene Pynadath, Pivotal

Boaz Gurdin, VMware

“People don’t want a quarter-inch drill. They want a quarter-inch hole.”

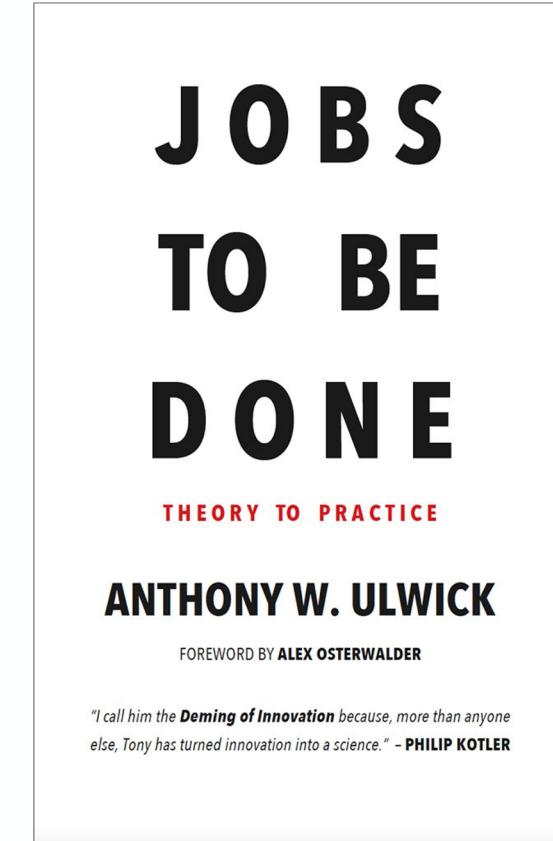
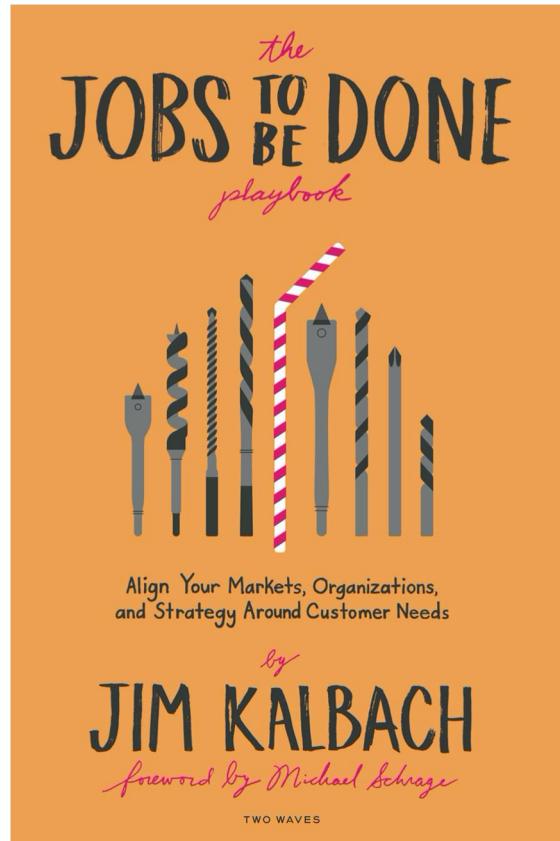
*Theodore Levitt - 1962*

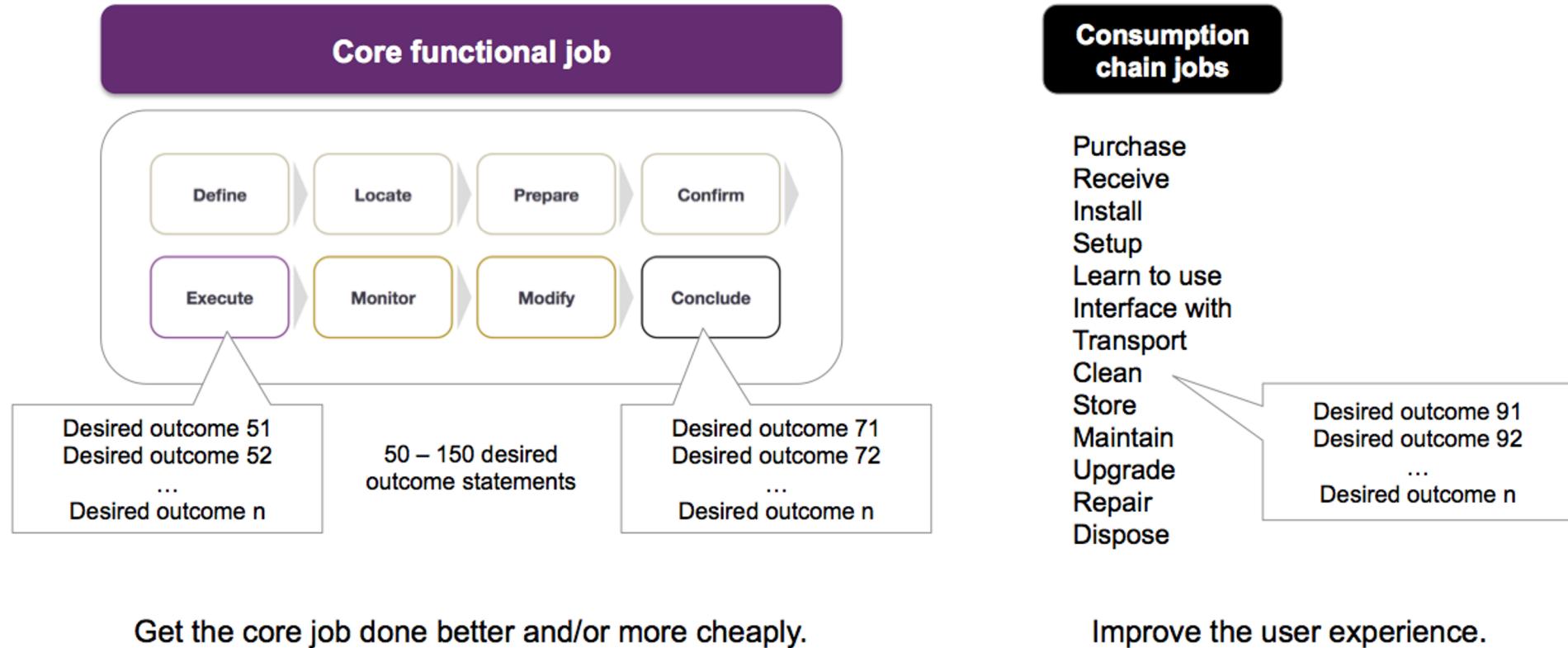


# Our sources



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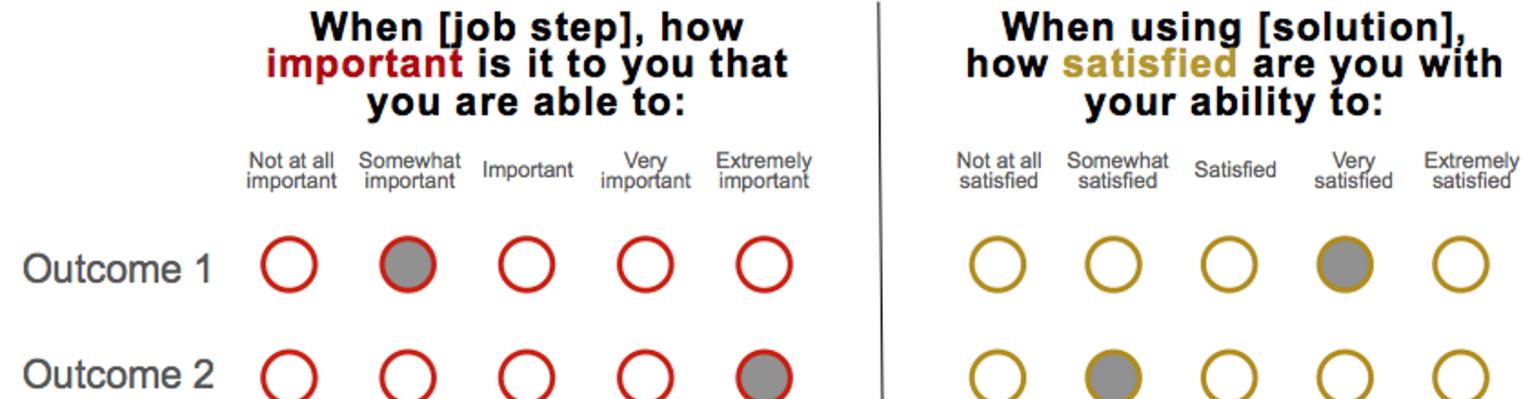




# Desired outcome



# Opportunity score



Minimize the time it takes to get the songs in the desired order for listening

# Opportunity landscape

Outcome	Importance					IMP	Satisfaction					Opp. Score
	1	2	3	4	5		1	2	3	4	5	
Minimize the time ...	5	5	9	47	34	8.1	12	28	30	17	13	3.0
	81%						30%					13.2



# Our process

Phase 1 Survey Share

File Edit View Insert Format Tools Add-ons Help Last edit was on March 6

100% Title Arial 26 Share

Screening Questions

**What is your geographic location?**  
Africa, Asia, Australia and Oceania, Europe, North America, South and Central America

**What type of organization do you work for?**  
Managed service provider, Consultant, In-house IT

**What is the size of your company/organization?**  
1-10, 10-49, 50-99, 100-499, 500-999, 1000-4999, 5000+

**What is your job title?**  
One line

**Which of these best describes your role?**  
Manager, Individual contributor, Student, Teacher, Other (fill in)

**What is your job function? Please select all that apply.**  
Software Architect, Security Engineer, Applications Developer, Mobile Developer, Back-End Developer, Front-End Developer, Full-Stack Developer, Game or Graphics Engineer, Quality Assurance Engineer, Development Manager, IT Manager/Operations, Software Development Management, DevOps Management, Product/Project Management, Release Management, Machine Learning Specialist, Data Scientist, Database Administrator, Training/Certification, Developer Relations, Sales, Marketing, Other (please specify)

**Please indicate your involvement with any of the below options.**

- Develop and debug software: not involved, somewhat involved, very involved
- Test software: ""
- Monitor and troubleshoot applications: ""
- Define code review processes: ""
- Architect software: ""
- Set up and maintain logging and monitoring: ""
- Define security processes: ""
- Define data processes: ""
- Work with AI and ML systems: ""
- Create and maintain infrastructure resources (e.g compute, networking, storage): ""
- Define deployment, scaling and capacity strategy: ""
- Cost management: ""

## Screening survey

- Background info
- Free form responses
- Net Promoter Score

# Our process

CNCF @CloudNativeFdn

#Kubernetes SIG Usability is doing a study to better understand what end-users are trying to achieve with #K8s. Interested in contributing? Take the survey and share your thoughts!

[SurveyMonkey](#)

Kubernetes Research Survey  
Take this survey powered by surveymonkey.com. Create your own surveys for free.  
[surveymonkey.com](http://surveymonkey.com)

8:08 AM · May 12, 2020

42 people are Tweeting about this

## Survey fielded

- April 3 to ~May 29<sup>th</sup> (8 weeks)
- 118 responses
- 41 (34%) of those agreed to be contacted

# Geographic data

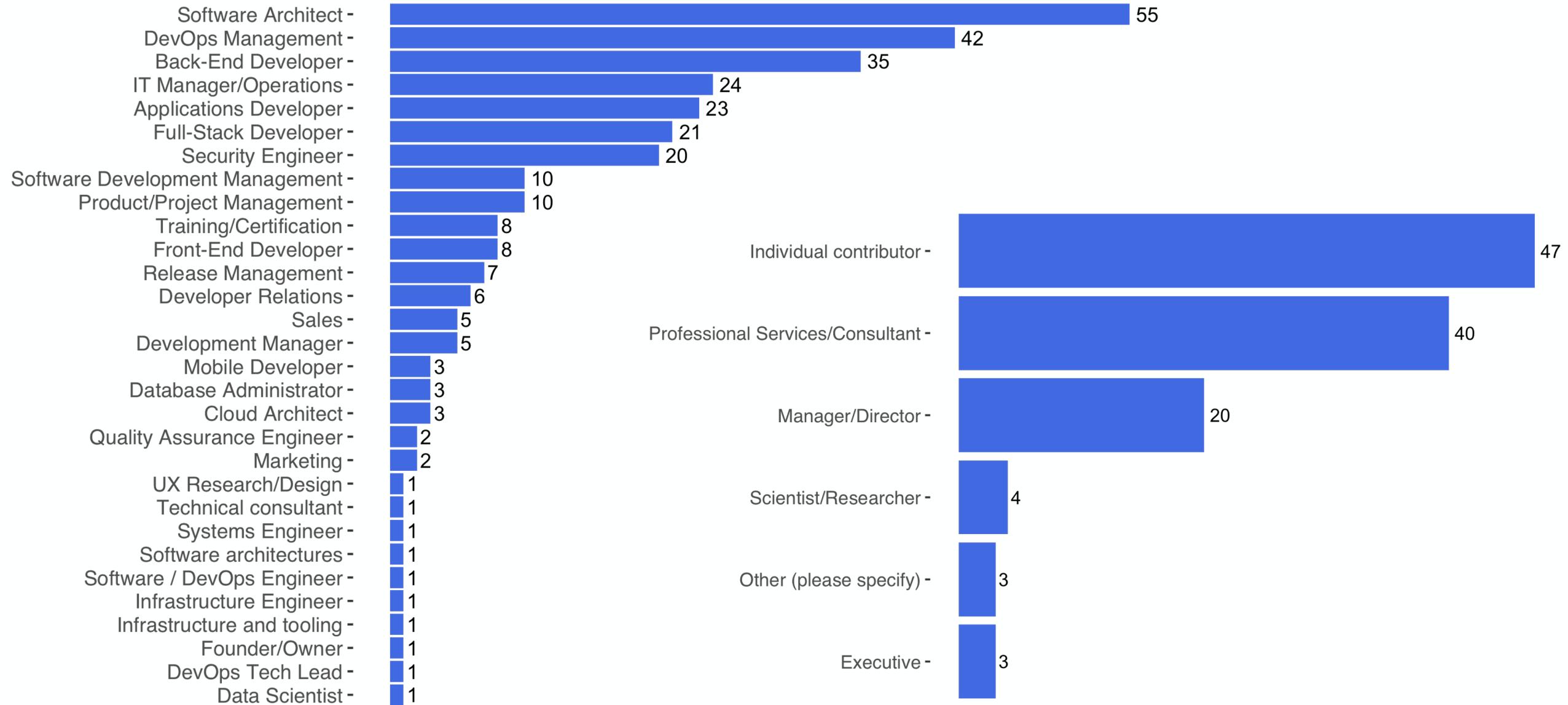
## Respondent locations

Asia	Australia	Europe	North America	South & Central America
10	3	53	49	4

## Organization Type

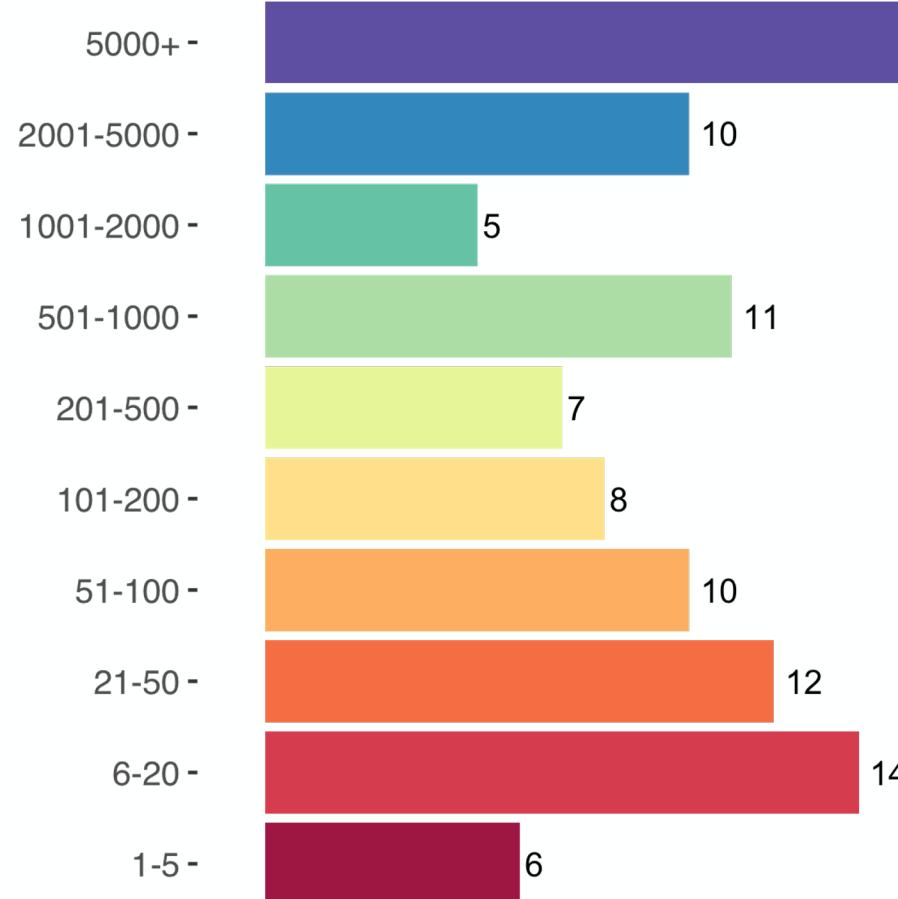
Consultant	Managed Service Provider	Other
16	31	72

# Job function and role

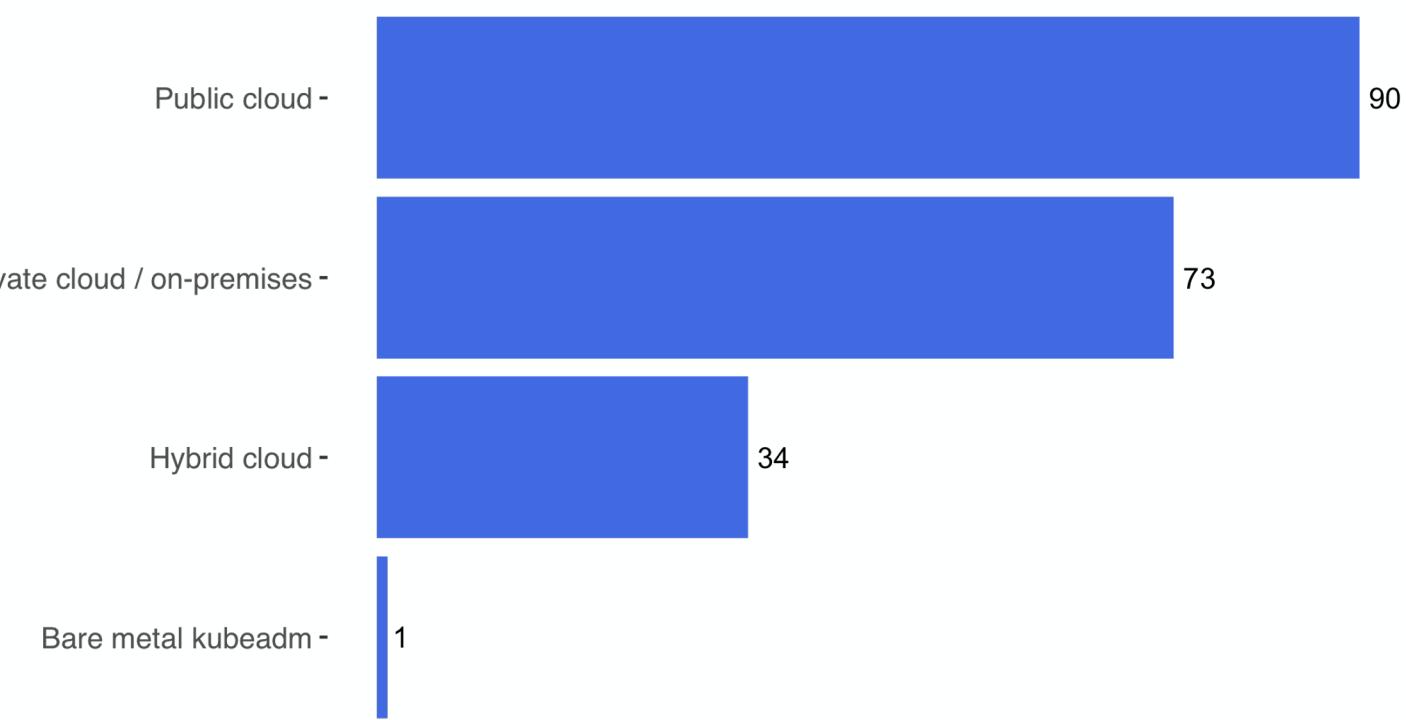


# Kubernetes environments

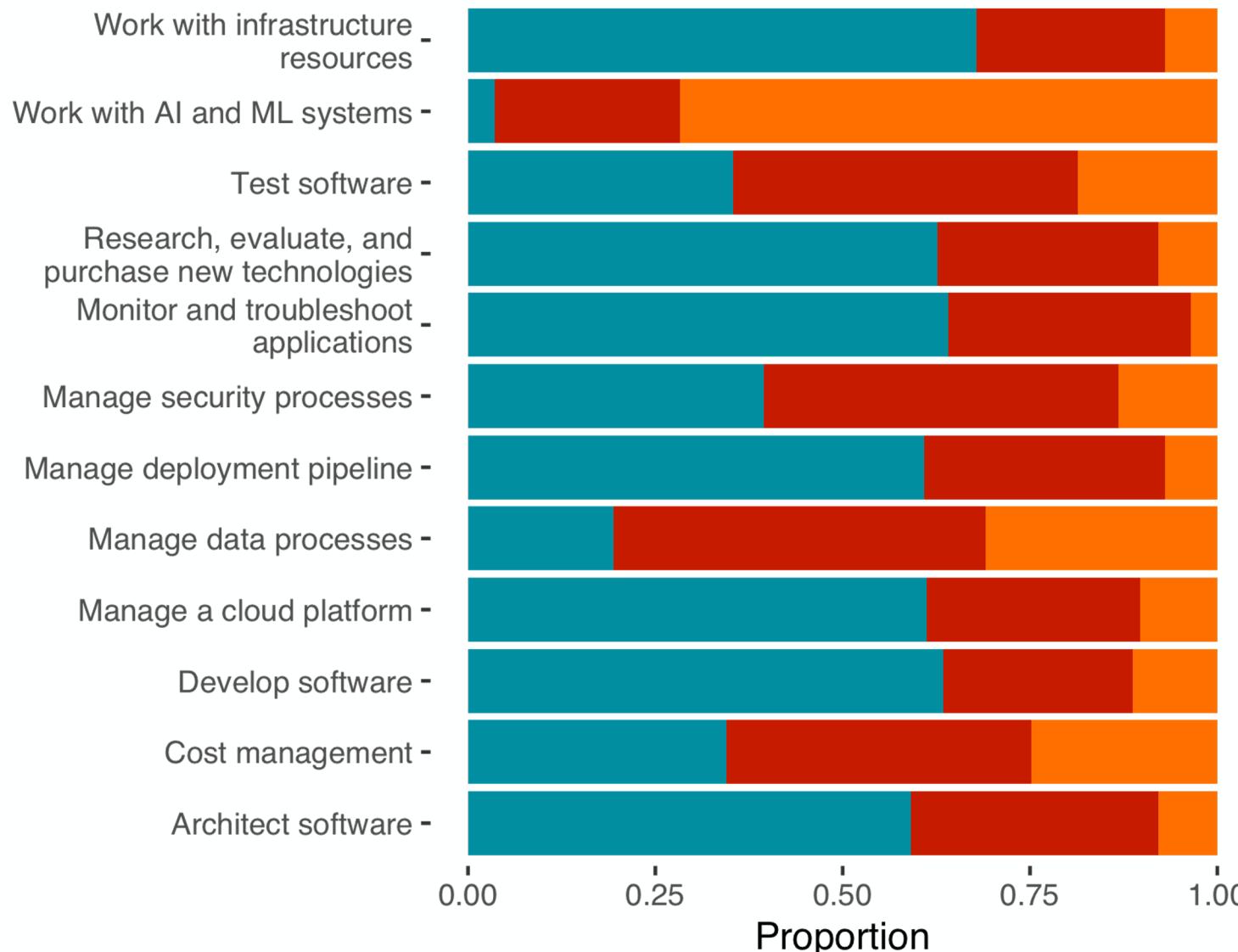
**Number of machines**



**Datacenter types**



# Kubernetes activities



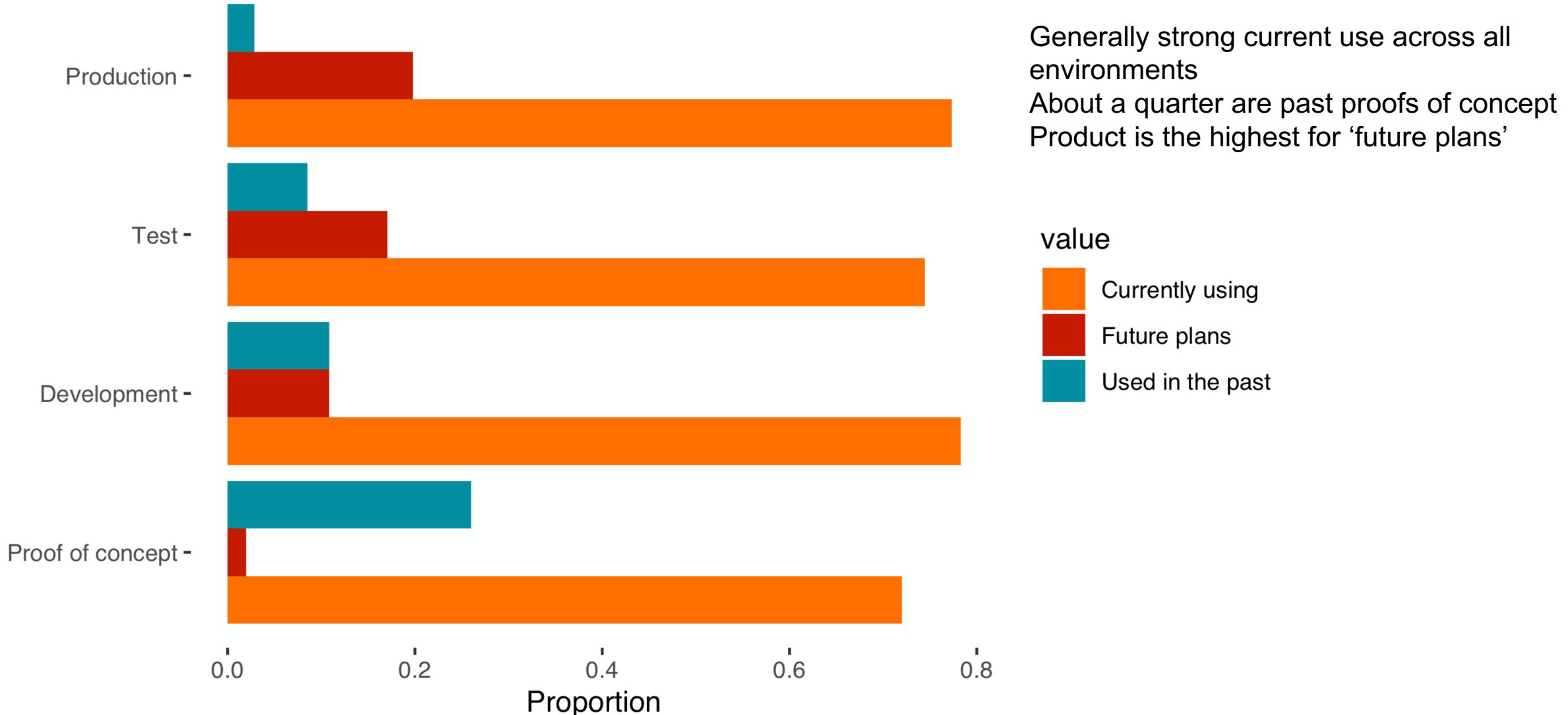
## Highest involvement

- Work with infra resources
- Research, evaluate purchase new tech
- Monitor and troubleshoot applications
- Management deployment pipeline
- Manage cloud platform
- Develop software
- Architect software

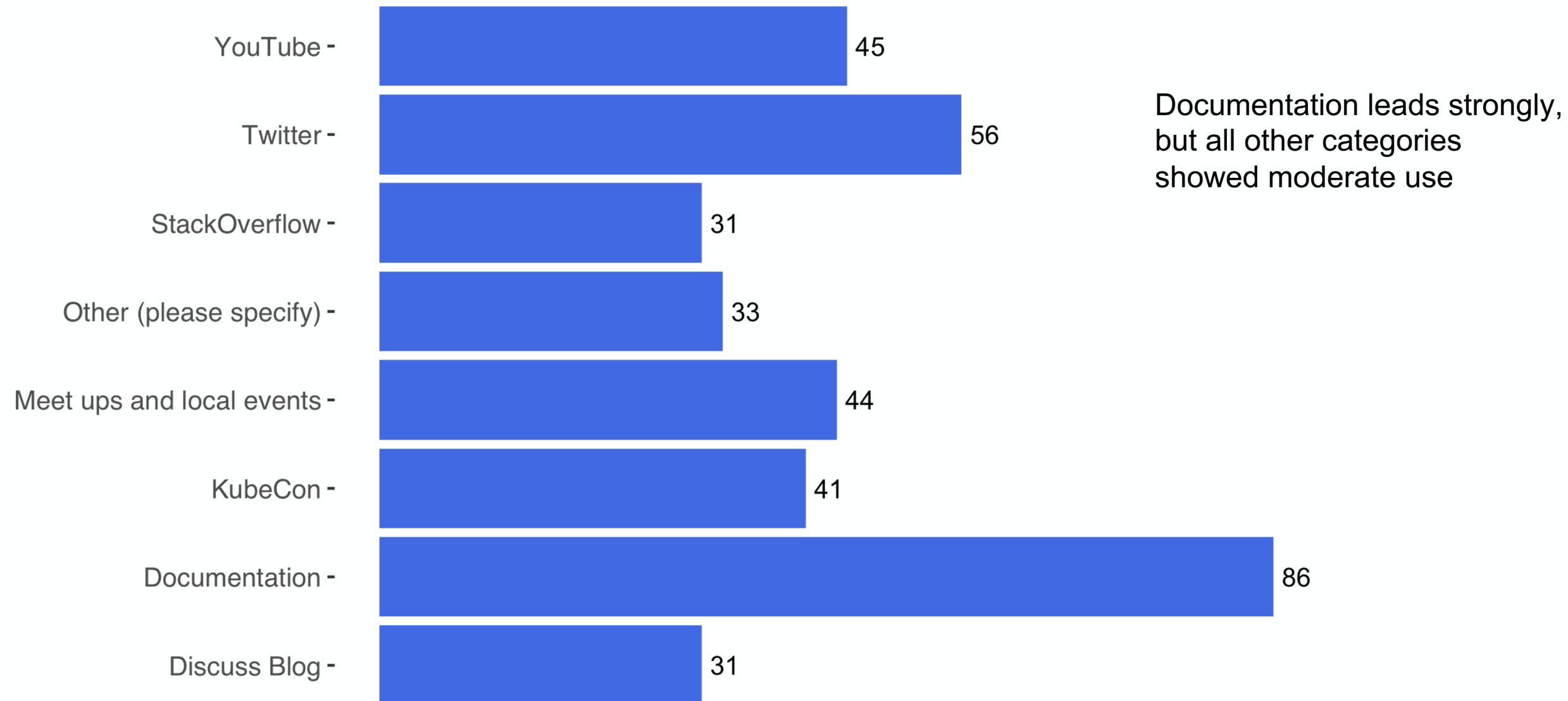
value

- Not involved
- Somewhat involved
- Very involved

# Kubernetes use



# Kubernetes resources



# Net Promoter Score (NPS)



"How likely are you to recommend  
\_\_\_\_\_ to a colleague or friend?"

0 - 10 scale response

Promoter (9, 10)

Passive (7, 8)

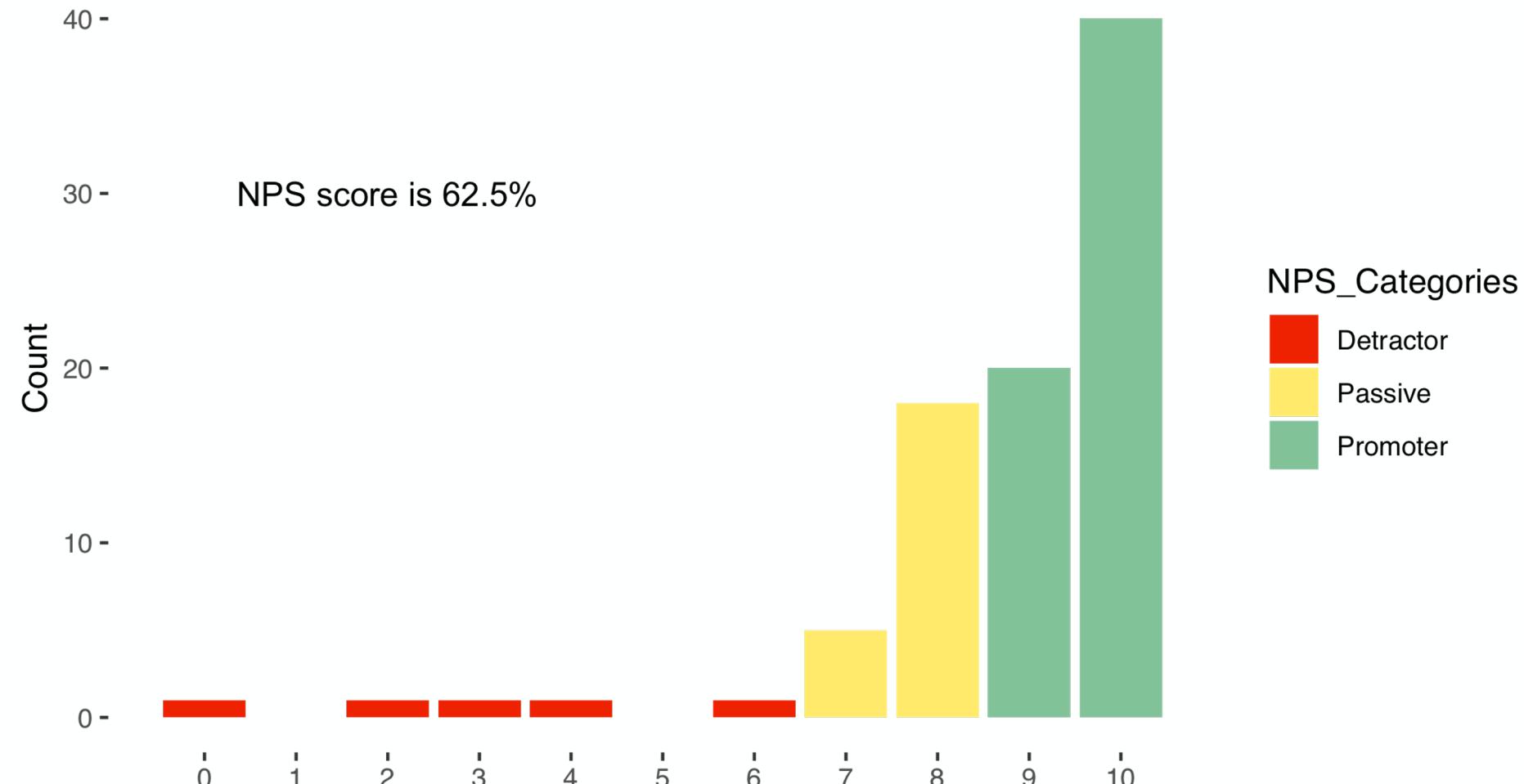
Detractor (0-6)

NPS = % promoters - % detractors

One of the most common metrics  
in customer experience to gauge  
sentiment towards  
product/company

Average cross industry NPS - 32%

**Extremely high score but little  
data to compare to other open  
source projects**



# Next steps

- User interviews
- Analysis
  - Job map
  - Desired outcome statements
- Survey
- Analysis
  - Opportunity landscape

