

# Perspectives from the Open Source Developer

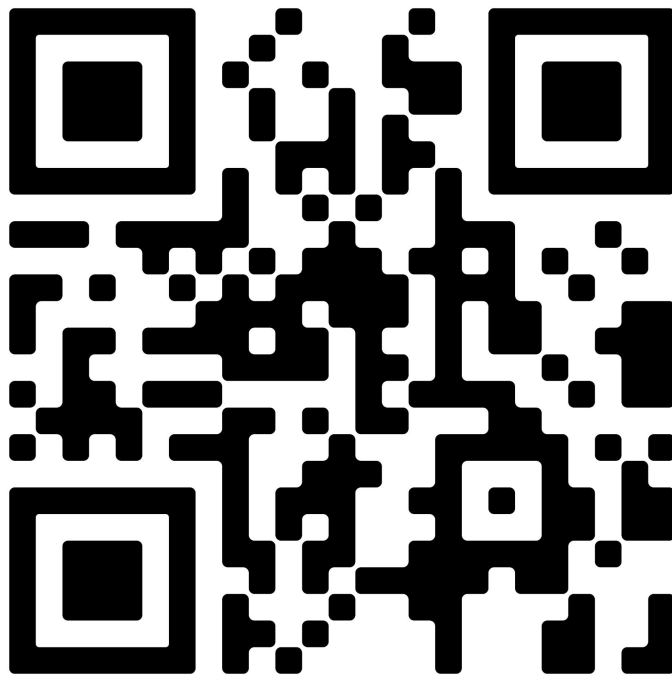
FOSDEM

3Feb2023, 18:00-18:50 p.m. CET



*We're investigating the impact of open source projects, technologies, and standards to solve the world's most pressing challenges.*

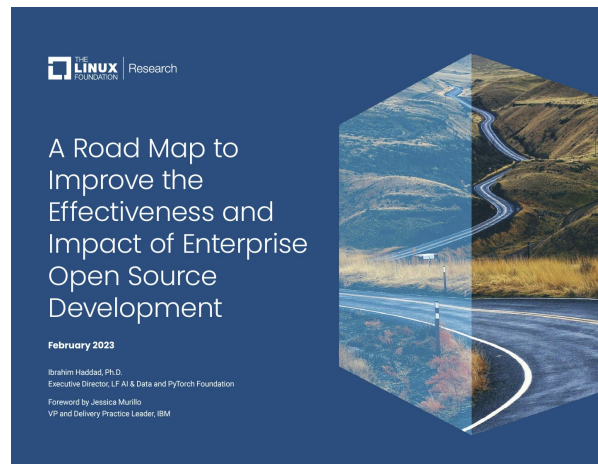
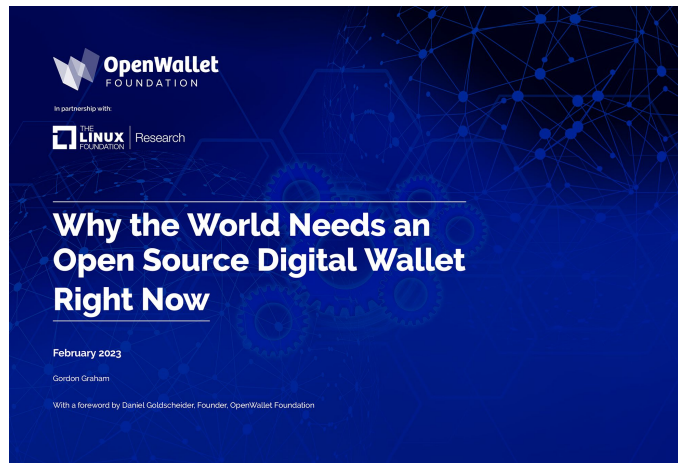
- Founded in 2021 on a strong tradition of research:
  - 2018 Linux Kernel History Report
  - 2020 FOSS Contributor Survey
- 26 reports published to date
  - Mentorship
  - Global Fragmentation
  - Europe Spotlight



# Recently published reports

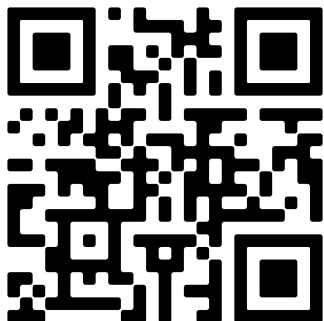


# Upcoming research publications



# Deliverables:

- Written report
- Infographic
- Survey Results Deck
- Blog
- Webinar / Panel
- Open Data link:



Share this research




## An OSPO maturity model featuring case studies from Bloomberg, Comcast, and Porsche


Produced in partnership with the TODO Group, this report provides rich insight, direction, and tools to help implement an OSPO (Open Source Program Office) or an open source initiative within corporate, academic, or public sector environments. Readers will come away with an understanding of OSPO Stages and Archetypes (or personas), which drive differentiation in OSPO behavior, all as a means to contextualize their unique path in the open source journey.

Drawing from the experiences of Bloomberg, Comcast, and Porsche, this report provides a model for end-user organizations across industries, and in different jurisdictions, to better understand the value of the OSPO, and where to get started.

**Author:** Chris Aniszczyk, Chief Technology Officer, Linux Foundation & Co-Founder, TODO Group

With a foreword by Jim Zemlin, Executive Director, The Linux Foundation

 Download Survey Results

 Link to Open Data

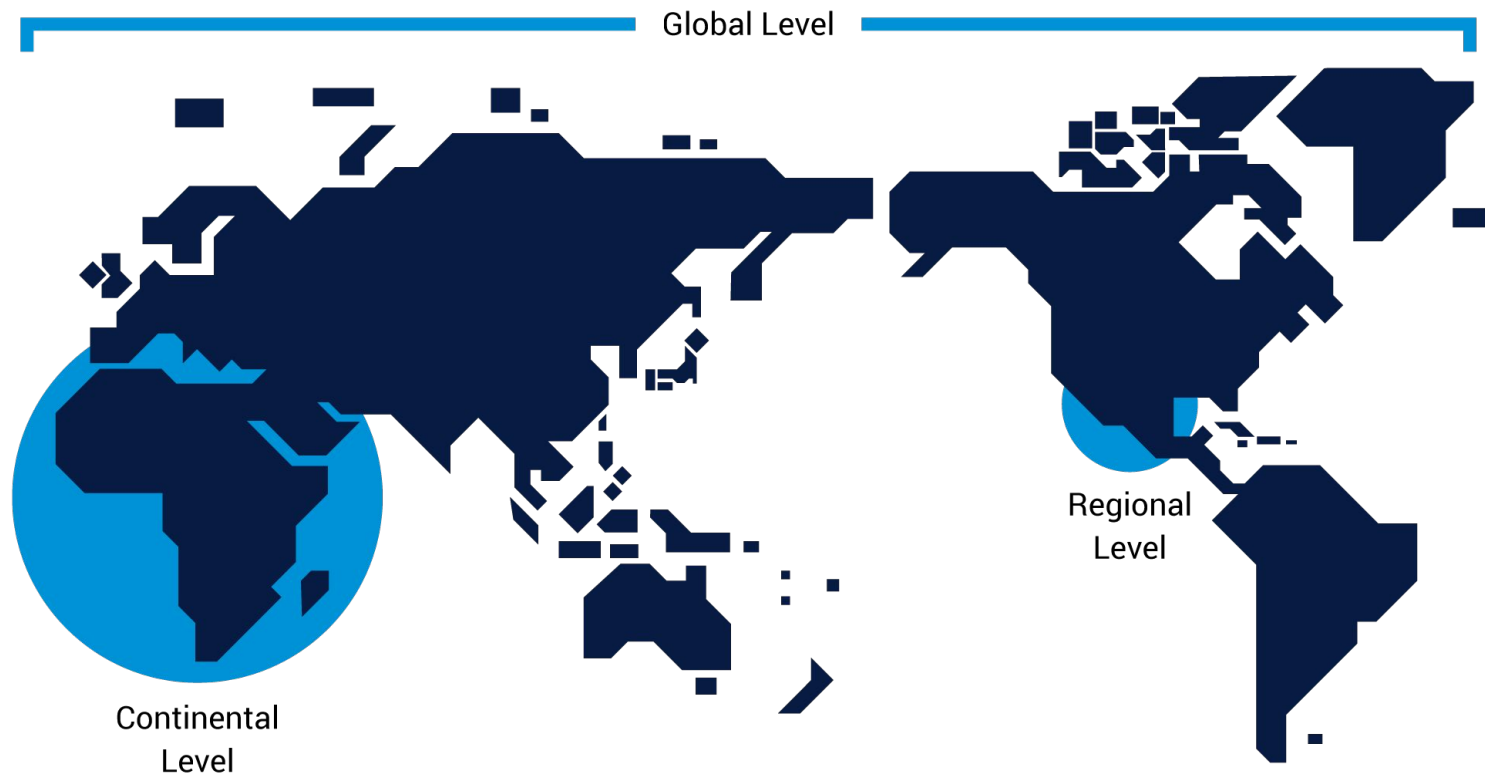


 Download the Report



 Download Infographic

# Framework 1: Geographic





# Europe Spotlight 2022

Exploring the State of European Open Source  
Innovation, Opportunities, and Challenges

September 2022

By Colin Eberhardt, Graham Odds, Matthew Dunderdale, Scott Logic

Foreword by Gabriele Columbro, General Manager, Linux Foundation Europe

In partnership with:

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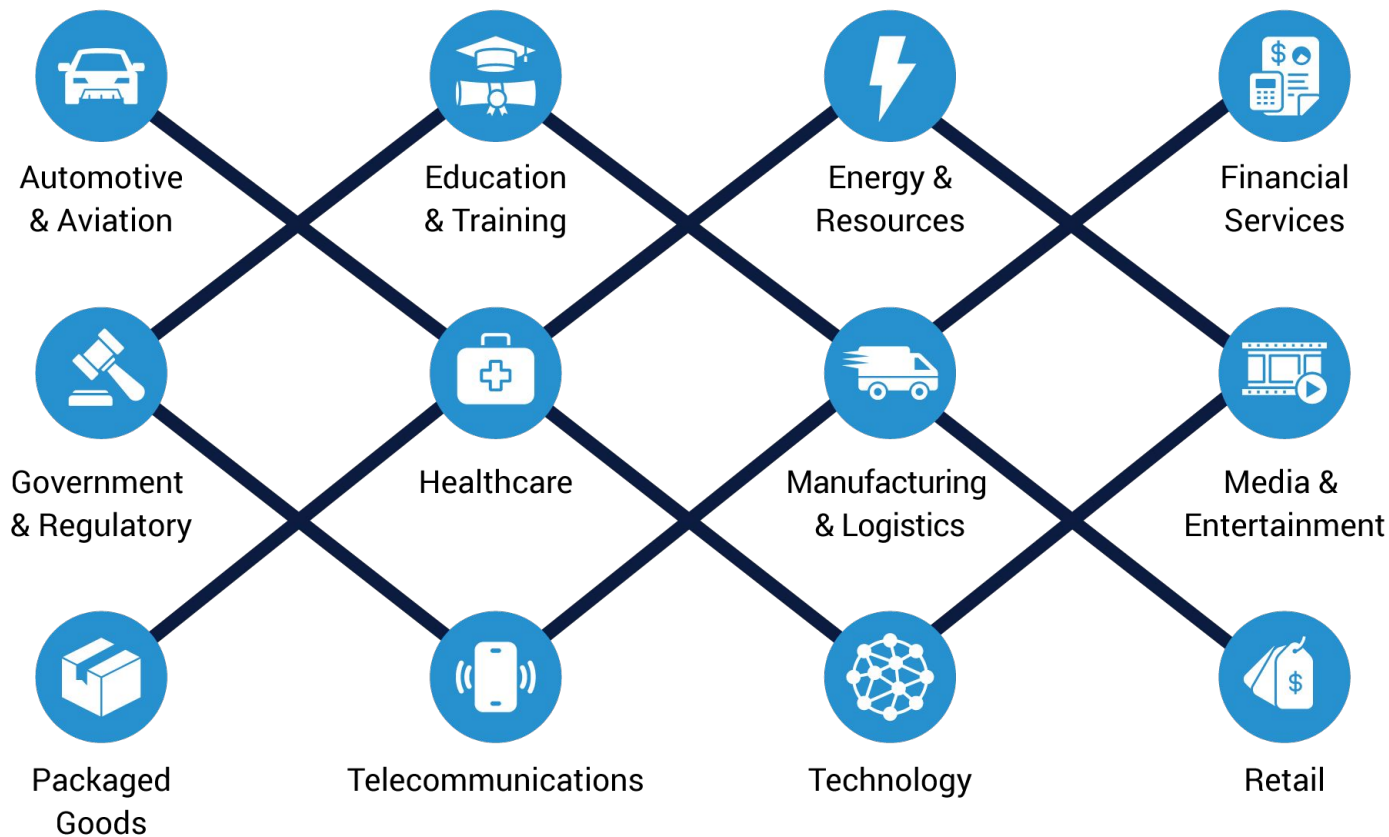
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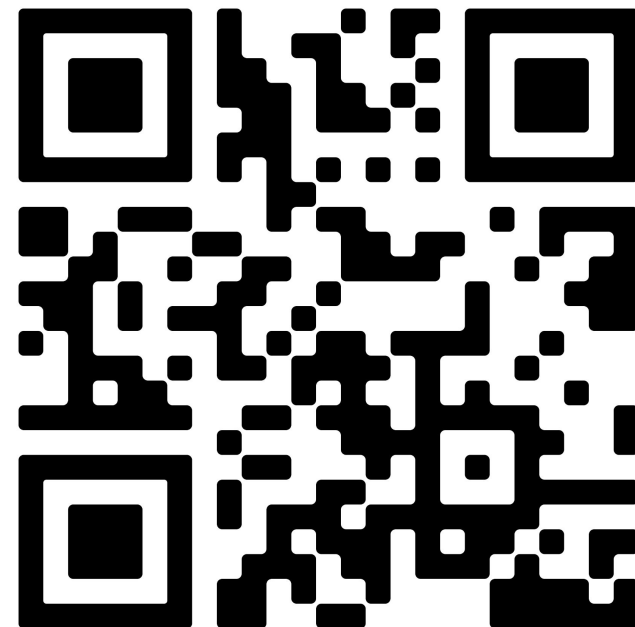
SCOTT LOGIC  
AUTOMOTIVE INNOVATION





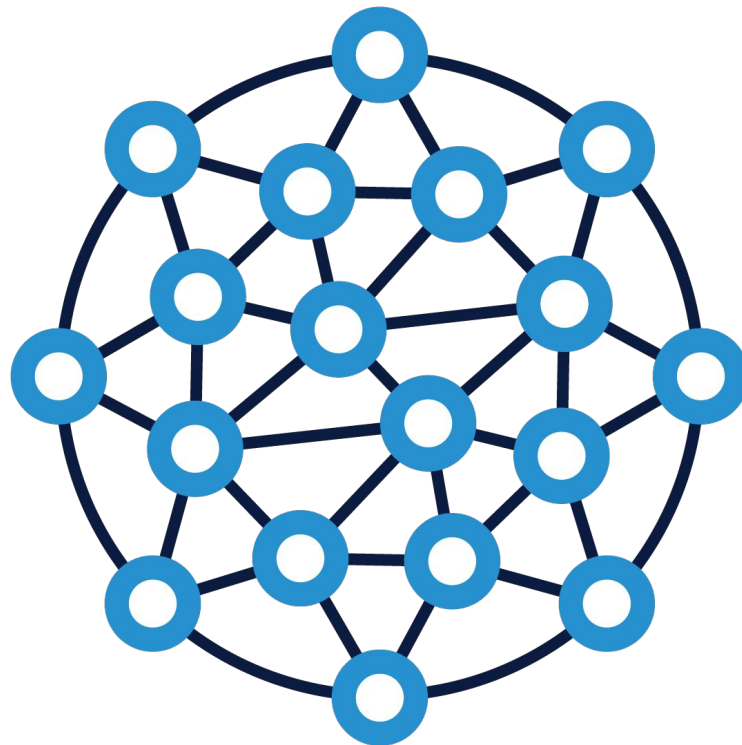
# Framework II: Industry





# Framework III: Technology

- AI, ML, Data & Analytics
- Additive Manufacturing
- Augmented / Virtual Reality
- Blockchain
- Cloud
- IoT & Embedded
- Linux Kernel
- Metaverse & 3D
- Networking & Edge
- Open Hardware
- Storage
- Web & Application Development



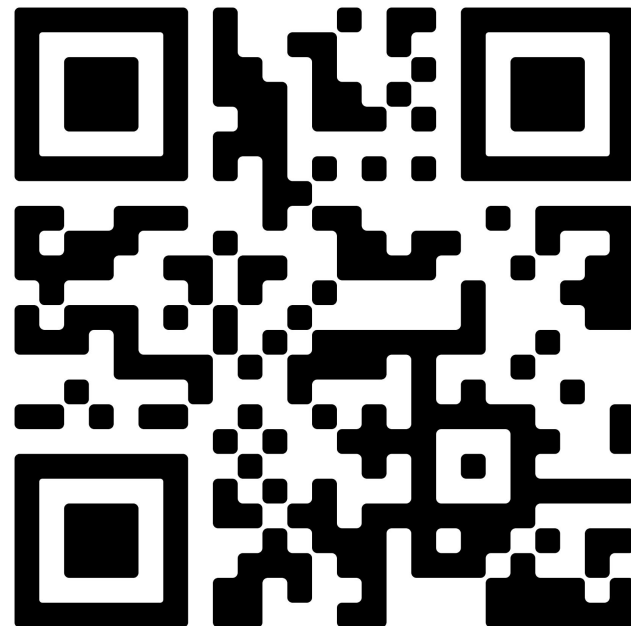


Research

# CTO SUMMIT REPORT EU 2022

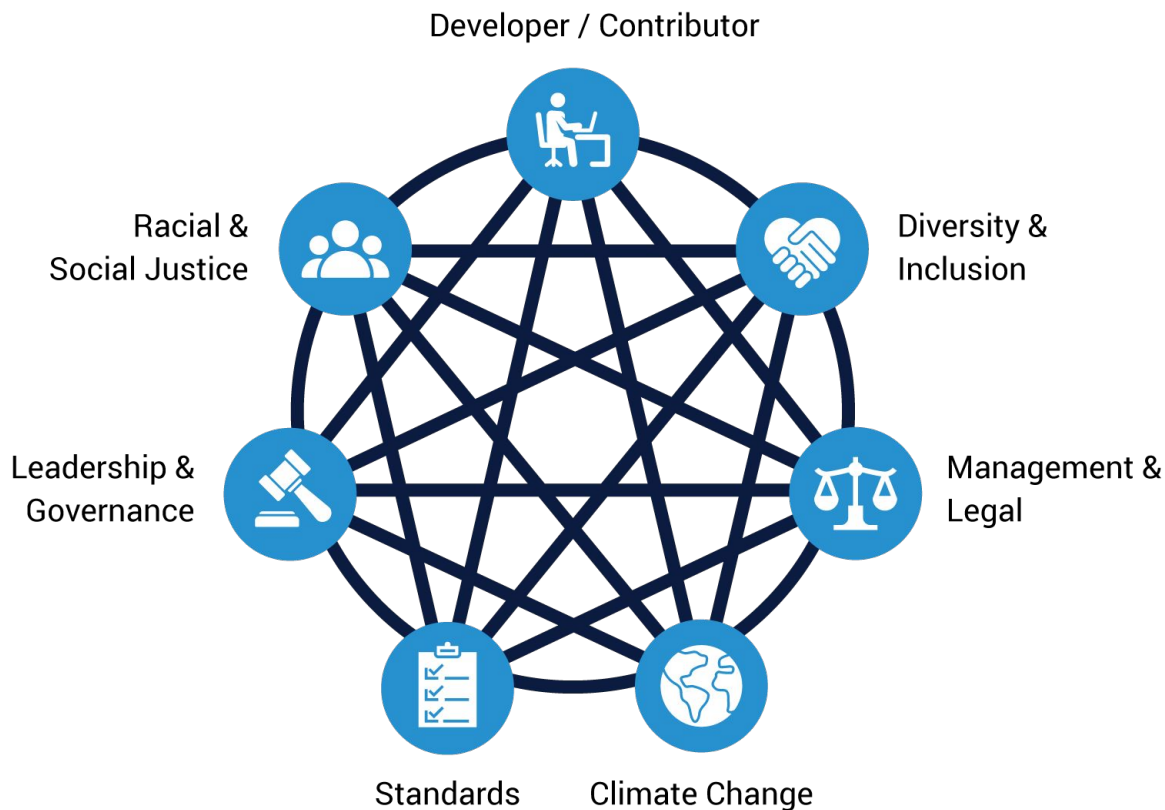
## RESILIENCY IN MULTI-CLOUD

August 2022



Europe

# Framework IV: Ecosystem



# Diversity, Equity, and Inclusion in Open Source

Exploring the challenges and opportunities to create equity and agency across open source ecosystems

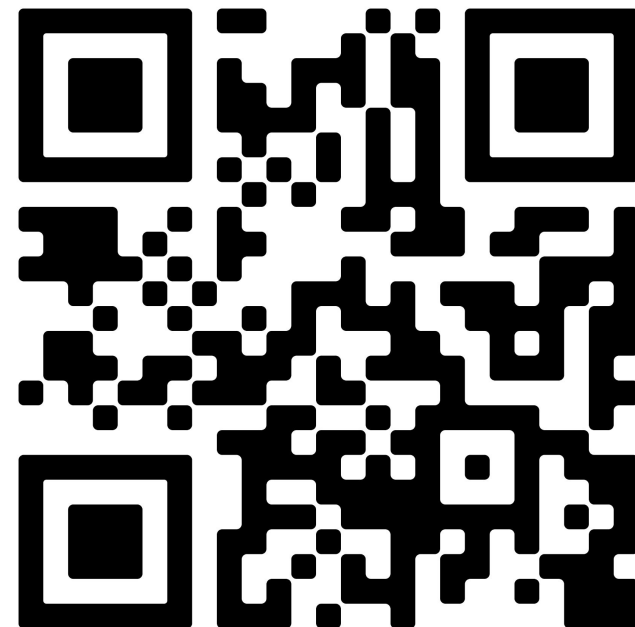
December 2021

Hilary Carter, *VP Research, The Linux Foundation*

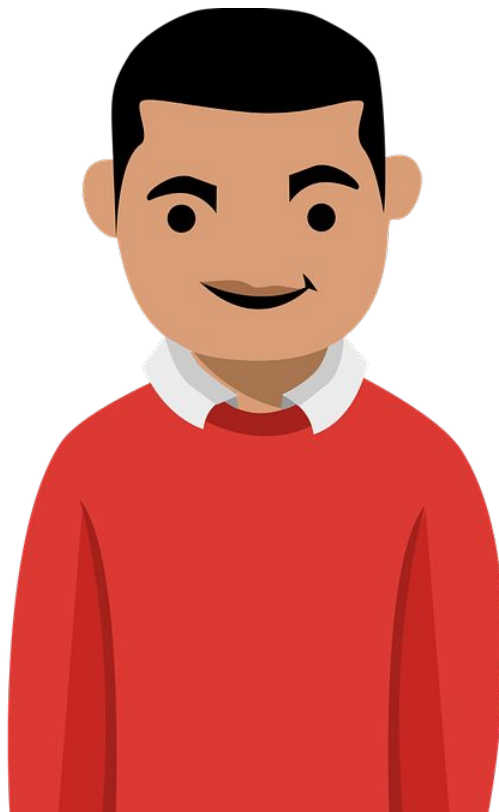
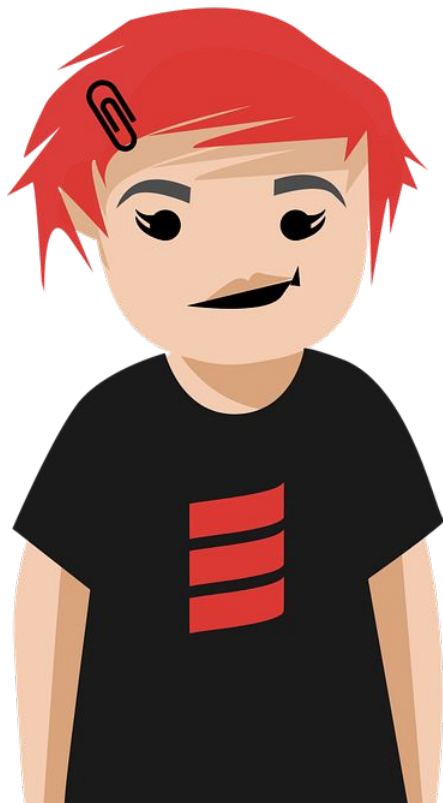
Jessica Groopman, *Industry Analyst and Founder, Kaleido Insights*

With a foreword by Jim Zemlin, *Executive Director, The Linux Foundation*

In partnership with:



# Insights from the OSS Developer



# OSS development is FUN!

**53%** of survey respondents  
**contribute to  
open source  
because  
"it's fun."**





# Fun is a leading motivation in Europe



Research



Across Europe,  
personal contributions are  
**MOTIVATED BY LEARNING  
AND FUN** rather than by a  
desire to further career  
advancement.

**WORLD OF OPEN SOURCE: EUROPE**

# OSS is empowering

## **OPEN SOURCE IS THE APOLITICAL KEY**

to fostering a digital commons while enabling European nations to plot their own courses in the digital world.



**WORLD OF OPEN SOURCE: EUROPE**

Developers take personal interest in their work.



**63%** of respondents  
contribute to open  
source because

**“it’s a project  
they have a  
personal  
interest in.”**

# Training is vital.



**2/3** of developers  
**need more  
training to do  
their jobs**

And companies are paying for it.

## TRAINING & CERTIFICATION



**90%**  
of hiring  
managers are  
willing to pay for  
certifications.

# Demand exceeds supply!



**92%** of hiring managers  
**report difficulty  
finding open  
source talent**

# Policy barriers are real.



**45%** of respondents reported that their employers **heavily restrict or prohibit contributions to FOSS projects**, whether private or work-related

# SBOM adoption will add value.

When *producing* SBOMs...

**#1 BENEFIT:**  
**developers better**  
**understand**  
**dependencies.**



**SBOM 2021 SURVEY**



# Devs are great ambassadors.



**“You feel a sense of  
community and  
responsibility** to  
shepherd this work  
and make it the best  
it can be.”

— CAROL PAYNE, *NETFLIX*

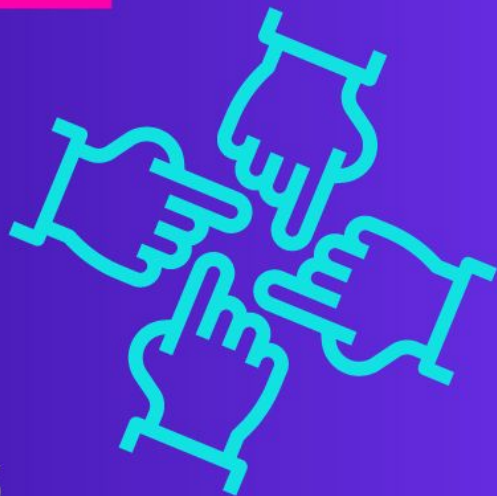
There's benefit to being open source devs...



Research

## OPEN SOURCE OPPORTUNITIES

**THROUGH OPEN SOURCE PARTICIPATION**, enterprise developers can build on the work of others, experiment with new features, and focus more of their efforts on differentiation.



# OSS devs mitigate risk.



## **Release control.**

By accepting external viewpoints that come through open collaboration, the risk of taking the wrong path is reduced.

# Devs can further mitigate risk!



**Individual developer account security is increasingly important.**

The OpenSSF encourages the use of MFA tokens to achieve greater account security.

CENSUS II: LESSON LEARNED

Devs shoulder a lot of responsibility.

## **The most widely used FOSS is developed by only a handful of contributors.**

Results in one dataset show that 136 developers were responsible for more than 80% of the lines of code added to the top 50 packages.



**CENSUS II: LESSON LEARNED**

# Toxicity is real.

**1 in 5** professionals  
have been  
**discriminated  
against or felt  
unwelcome**





# Minority groups struggle.



People who do not  
feel welcome in open  
source are from  
**disproportionately  
underrepresented  
groups.**

**DEI IN 2021**

# Diversity creates better tech.

"When we have  
multiple people with  
**varied backgrounds  
and opinions**, we get  
better software."

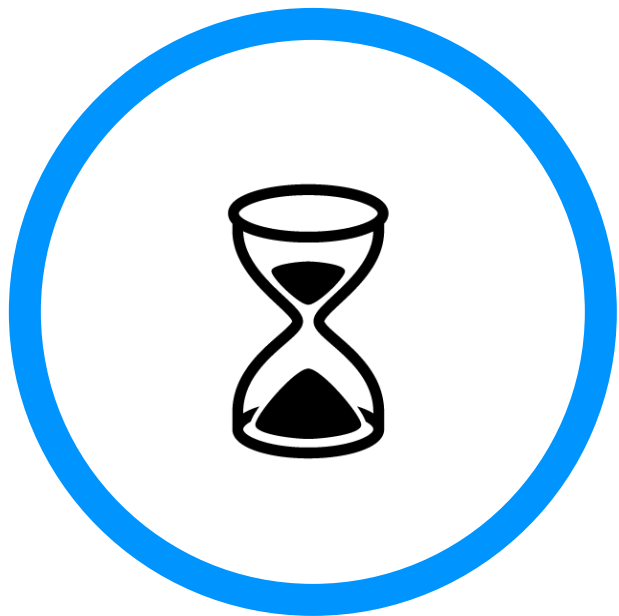
– RACHEL ROSE, *ILM*





# UPCOMING maintainer-centric research

# What do maintainers need? Time.



“Open source  
**maintainership can fill  
an infinite amount of  
time** if you let it.”

# What do maintainers need? Tools, Hacks, Infra.

Maintainers are looking for efficiency hacks and tooling to automate workflows.

**44%** of developers **want their employers to establish a sandbox for developing OSS projects using the same tools they are already familiar with.\*\***



# Money is a lower motivating factor.



Maintainers listed more funding only as the **4th most commonly cited approach** for the IT industry to improve security in OSS development.

Maintainership a (usually) a job, not a hobby, with a focus on features.

“To date, open source sustainability has focused on maintainer sustenance. But [what about having a security team? What about having an operations team](#) to maintain build and distribution infrastructure? Then open source starts to look like a company when you think about all the things that you need to have to effectively support a software project to operate properly.”

“Really, [we're getting paid to add features](#). People only donate because they want to add something new.”

— Maintainers of the most widely used software package repositories

Get involved!

# Research = a different kind of OSS contribution

**109** badges issued

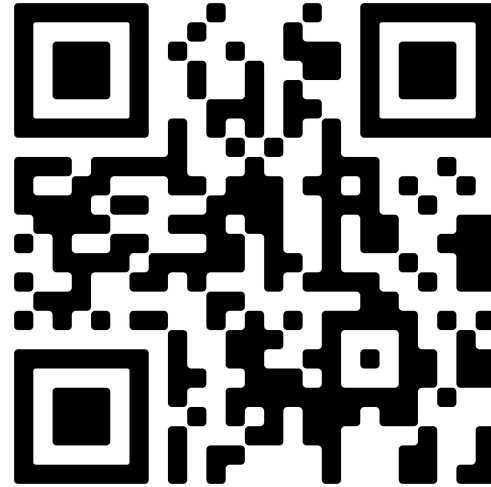
**65** Research Contributors

**26** Localization Partners

**18** Advisory Board Members



Please sign up for news!





Let's keep a good thing going!

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[hcarter@linuxfoundation.org](mailto:hcarter@linuxfoundation.org)

#TeamSport #ThankYou