





# CHAOSS Project Research and Metrics

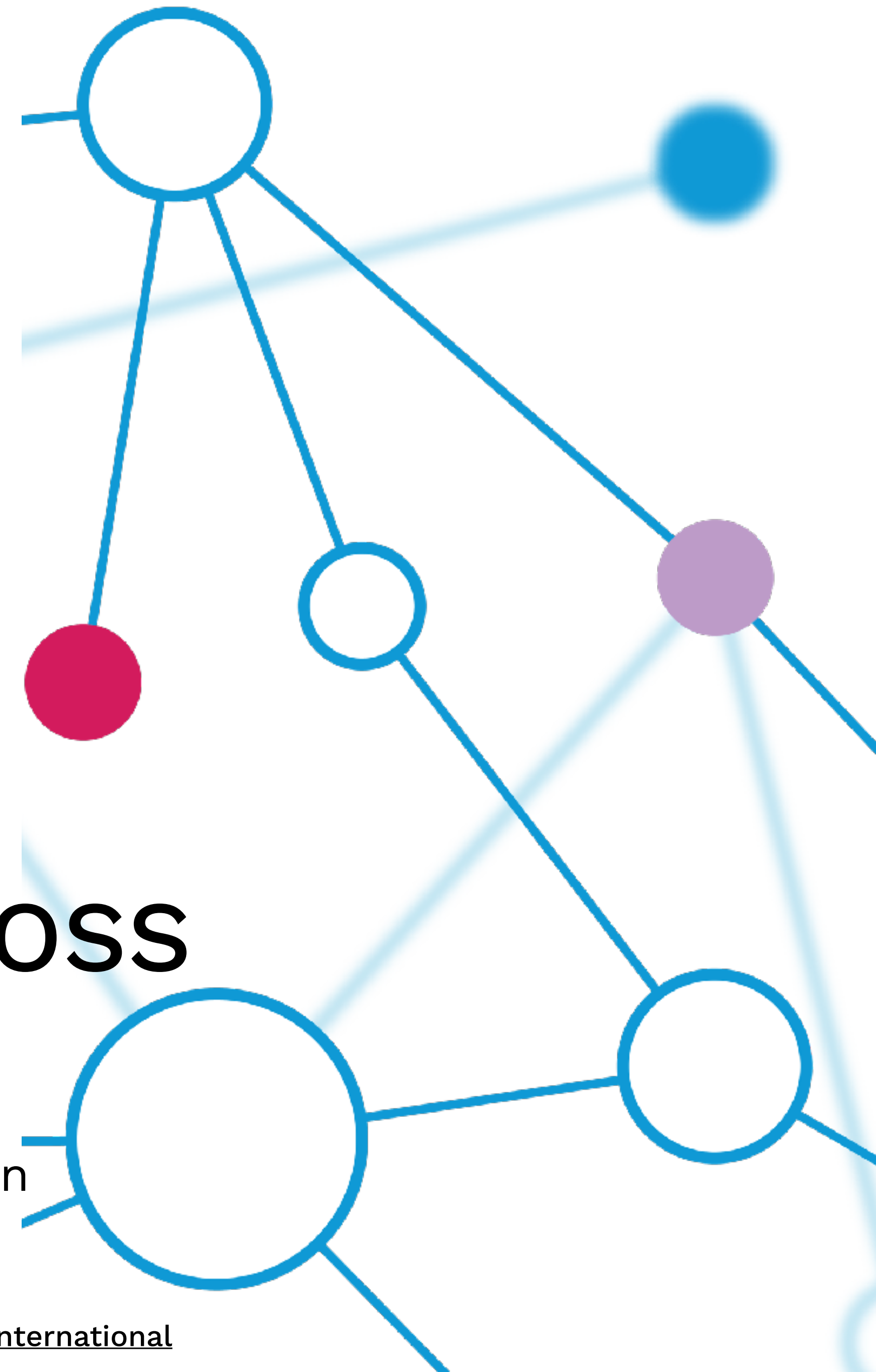
NatWest / FinOS June 2024

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# Whoami



- Geek, traveler, reader
- 20+ yr tech career focused on community & open source (VMware, Intel, Puppet, ...)
- OpenUK Board
- CHAOSS Board and Maintainer
- CNCF TAG Contrib Strategy co-chair
- PhD on Linux kernel collaboration

Photos by Mom, [Josh Bancroft](#), [Don Park](#)

# CHAOSS: Community Health Analytics for Open Source Software

## We are:

- An Open Source, Linux Foundation Project
- Globally distributed with 2000+ members in Slack
- A lovely place to spend your time

## We are NOT:

- Focused on public health (like vaccines)
- For-profit with any specific mandate
- Only focused on code contributions

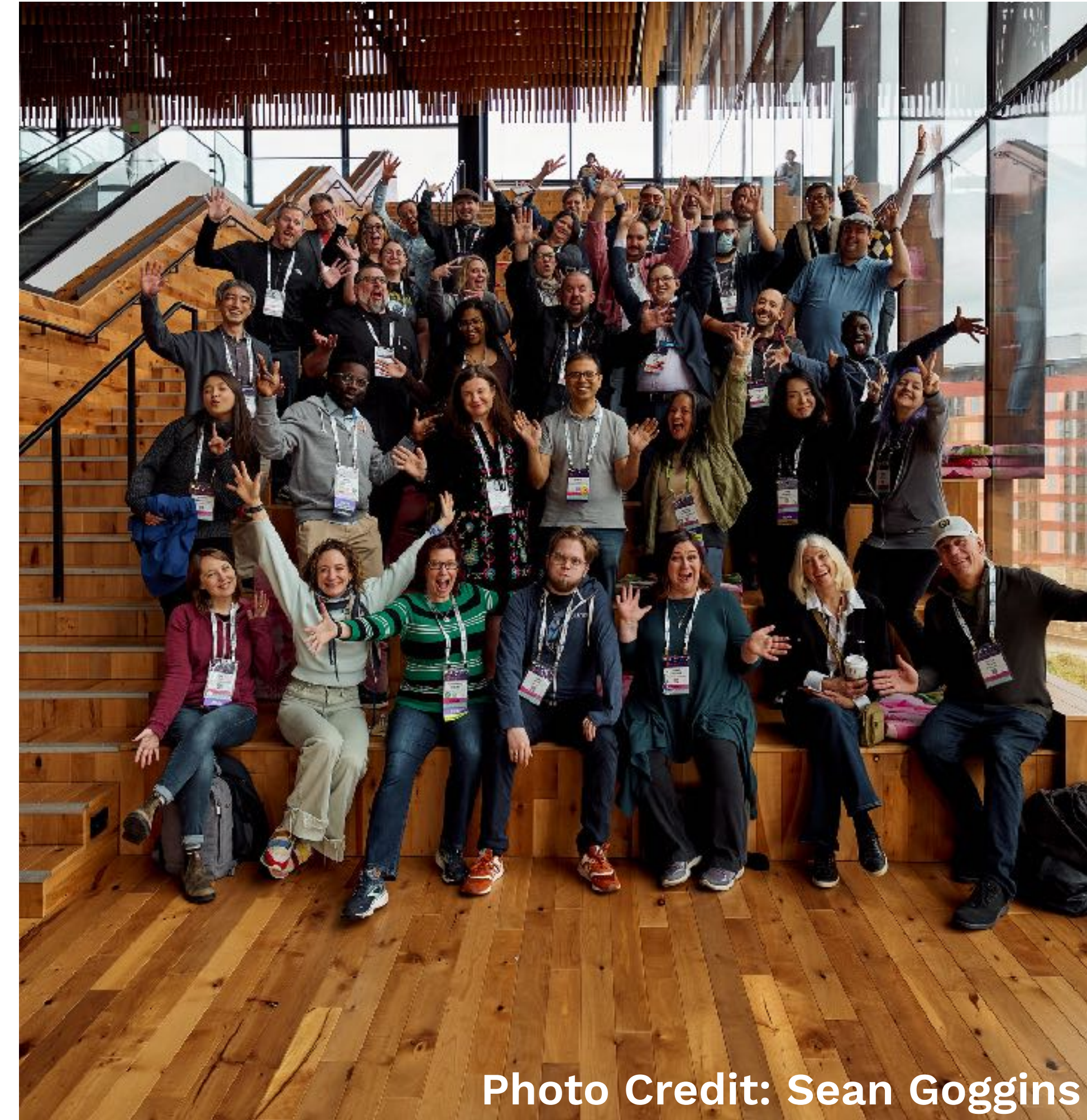


Photo Credit: Sean Goggins

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# We Love ALL Contributions

- Code / Code review
- Metric and Metric Model Development
- Community Management (like facilitating meetings or welcoming newcomers)
- Project Management
- Design and Accessibility
- Website
- Answering Questions
- Reviewing Badging Applications (Badgers)

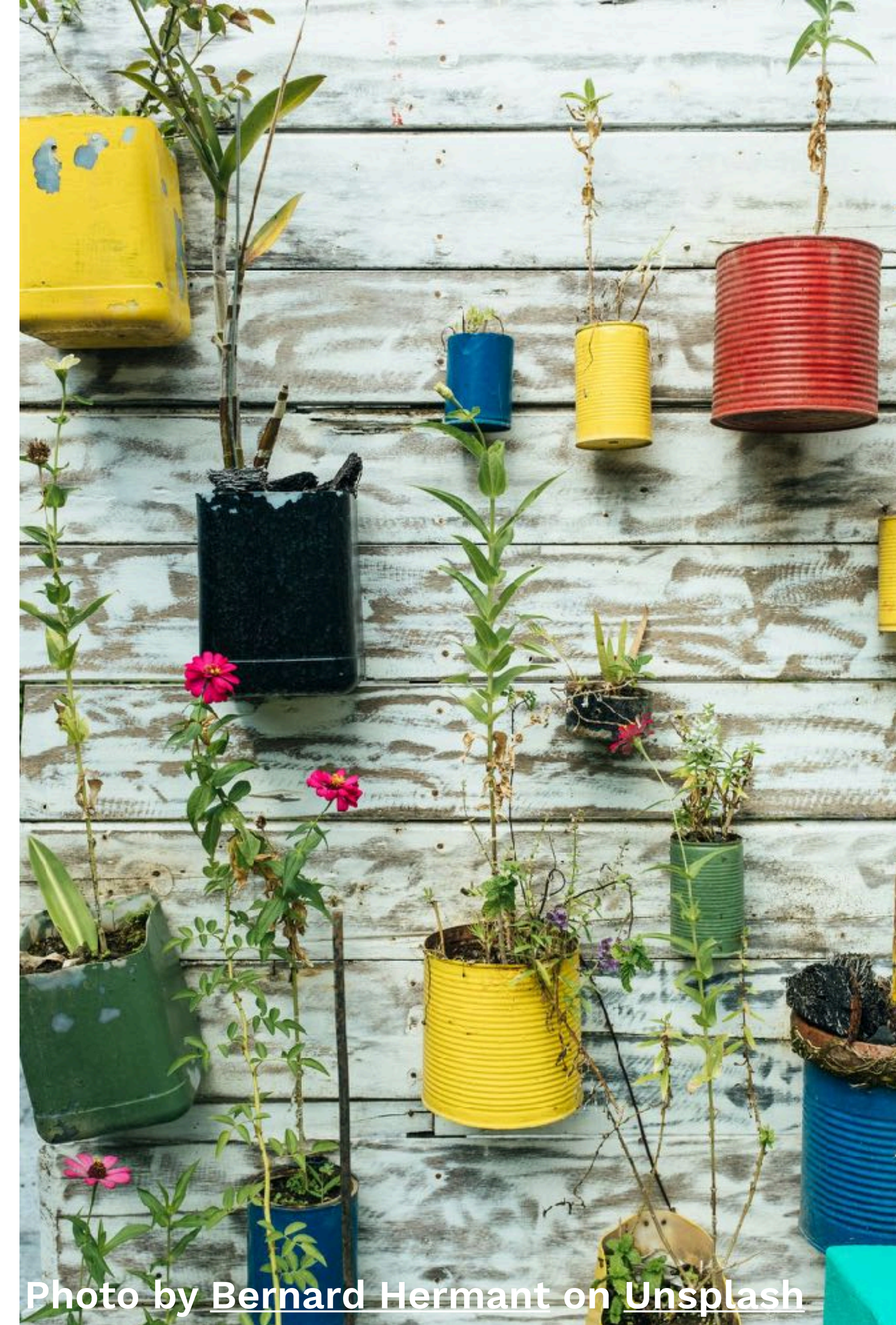


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# Join Us!

**Context WGs:** OSPOs, Academic / Uni, Scientific, App Ecosystem, Data Science

**Metrics WGs:** Metrics Development, Metrics Models, DEI

**Chapters:** CHAOSS Africa, CHAOSS Asia, CHAOSS Latam, CHAOSS Balkans

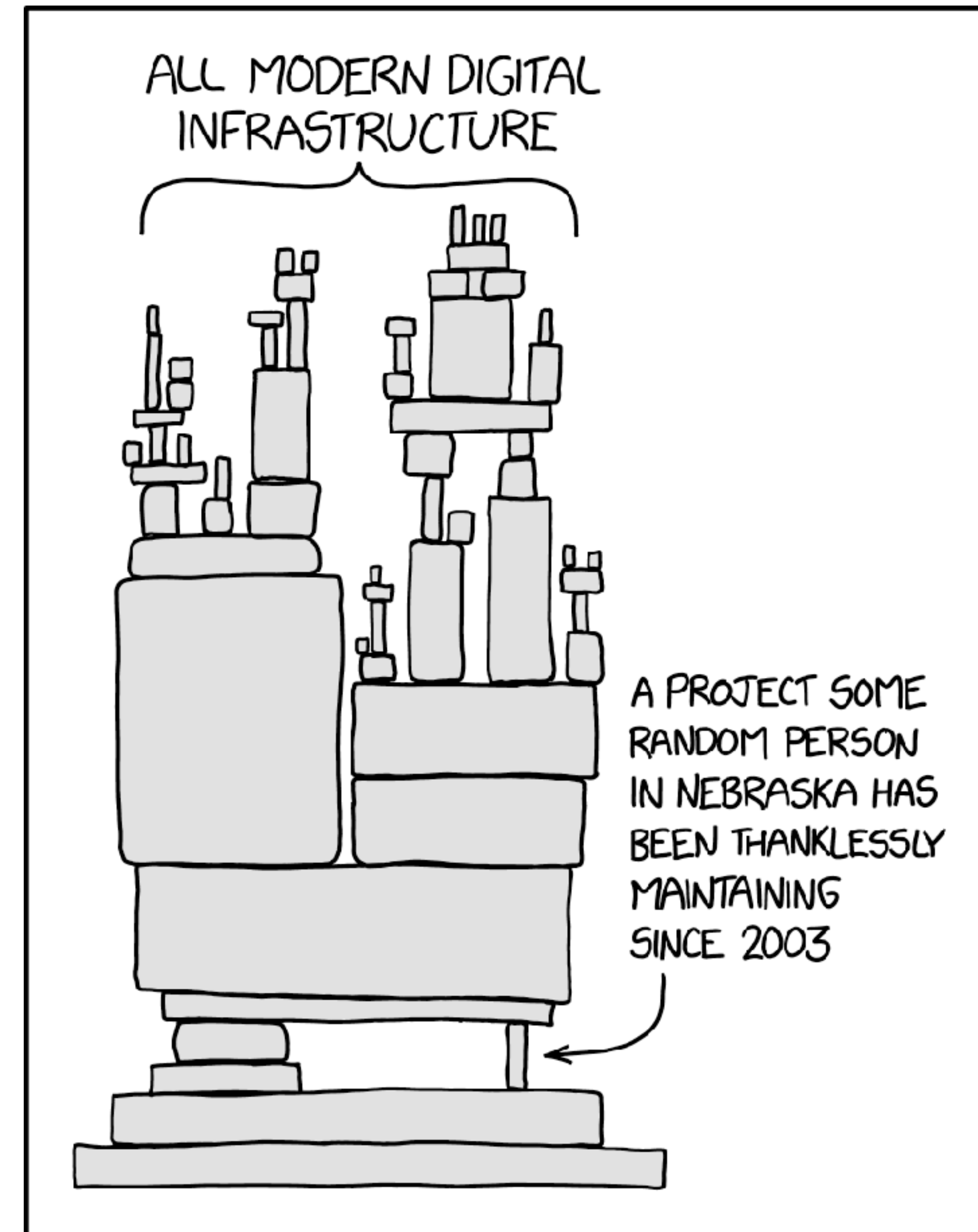
**Programs:** DEI Event Badging and Project Badging

**Software:** Augur and GrimoireLab

**And More!**

# Why Should You Care about Metrics?

Use metrics to understand  
the open source projects  
you care about  
to avoid business disruptions  
and reputation damage



<https://xkcd.com/2347/>

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# Metrics Models

## Approaches for measuring consumption and contribution

**What is This?**  
Metrics related to outbound / upstream contributions to open source projects whether developed by your org or a 3rd party (e.g., development culture, collaboration, and DEI).

**Metric Model: Starter Project Health**

- Time to First Response
- Change Request Closure Ratio
- Bus Factor
- Release Frequency

**CONTRIBUTION**



**What is This?**  
An ongoing process using additional metrics to find more ways to improve

**IMPROVE**

This figure is intended to help organizations quickly and easily consider key open source community health related issues. The figure has two key areas of contribute and consume, and ways that you can improve and sustain these two areas.

**What is This?**  
An ongoing process of monitoring metrics to see if improvements are effective

**MONITOR**

**CONSUMPTION**

**What is This?**  
Metrics related to inbound / downstream consumption of open source software within an organization's products, services, and infrastructure (e.g., compliance, procurement, and viability).

**Metric Models: Viability**

- Governance
- Community
- Compliance & Security
- Strategy

# NEW! CHAOSS Practitioner Guides

- Responsiveness
- Contributor Sustainability
- Organizational Participation
- More coming soon!



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# Metrics Strategy

Think strategically  
about what you  
want to accomplish,  
customize your metrics, and  
talk to your contributors.

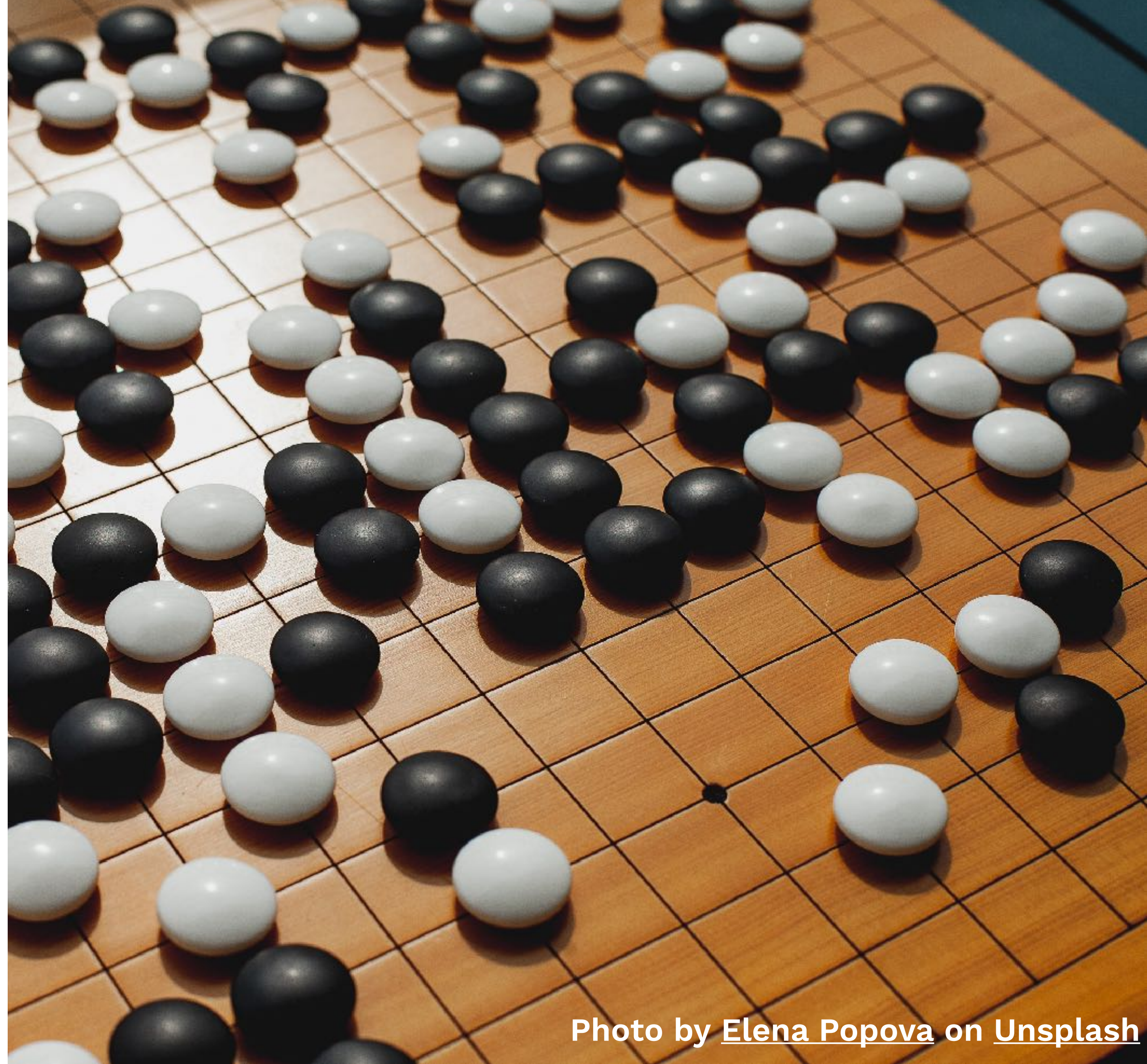


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# Final Thoughts



The sustainability of your OSS efforts benefit from thinking about consumption and contribution together while working to improve the projects you care most about.






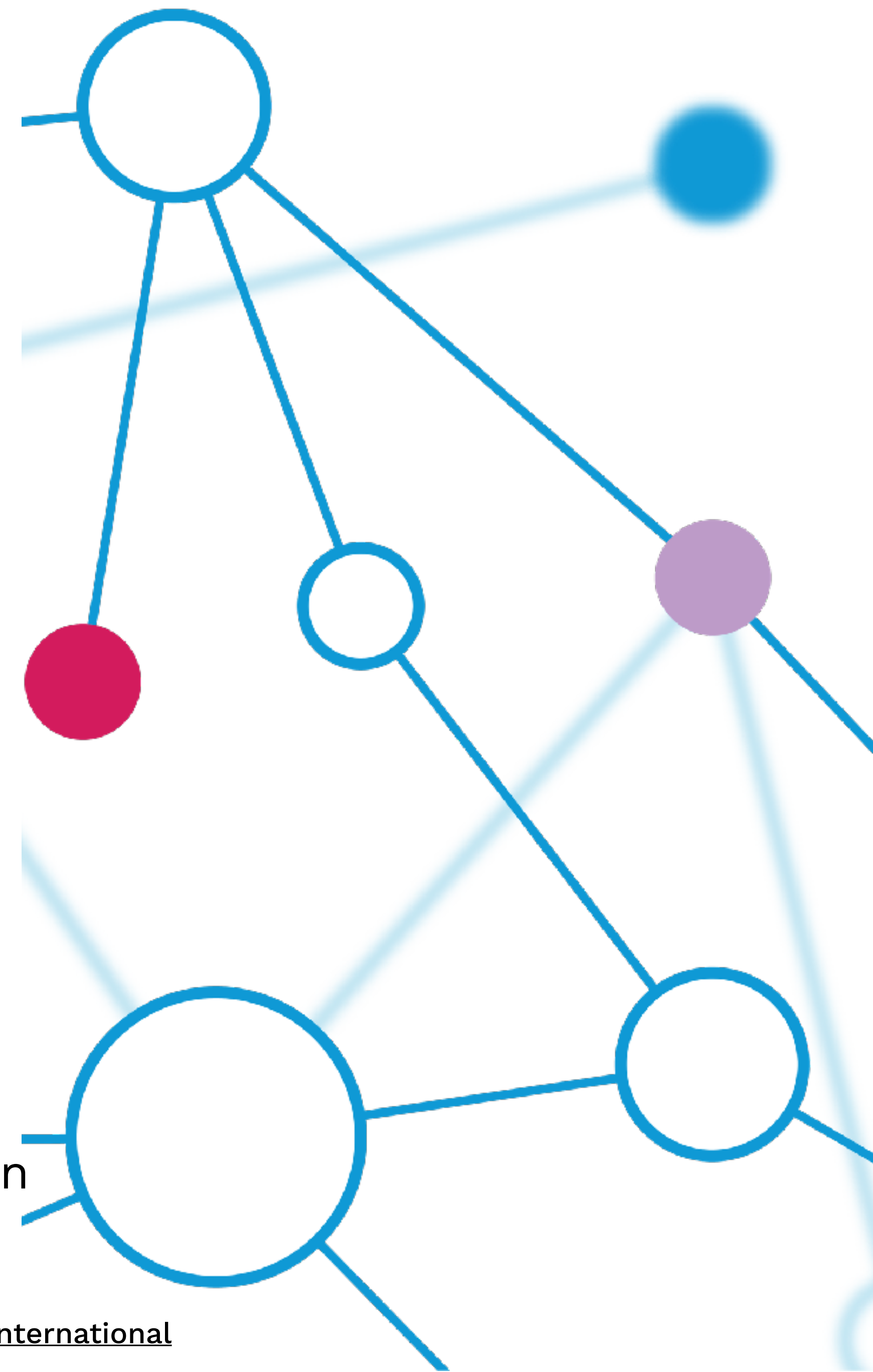
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# THANK YOU!

## Any Questions?

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# Backup Slides

# Responsiveness

Projects that can keep up  
with contributions will  
be more viable



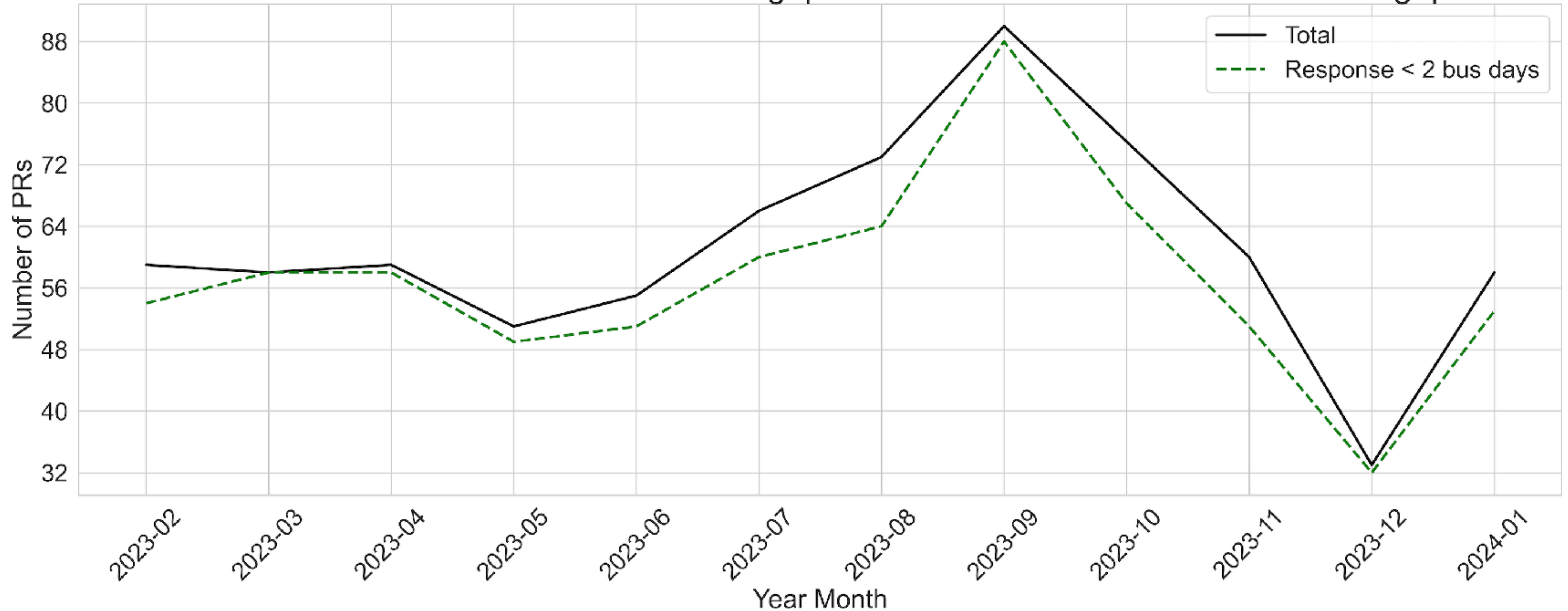
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# Responsiveness

## Time to First Response

Trend: Positive - the 2023-11 - 2024-01 gap is smaller than the 2023-08 - 2023-10 gap.

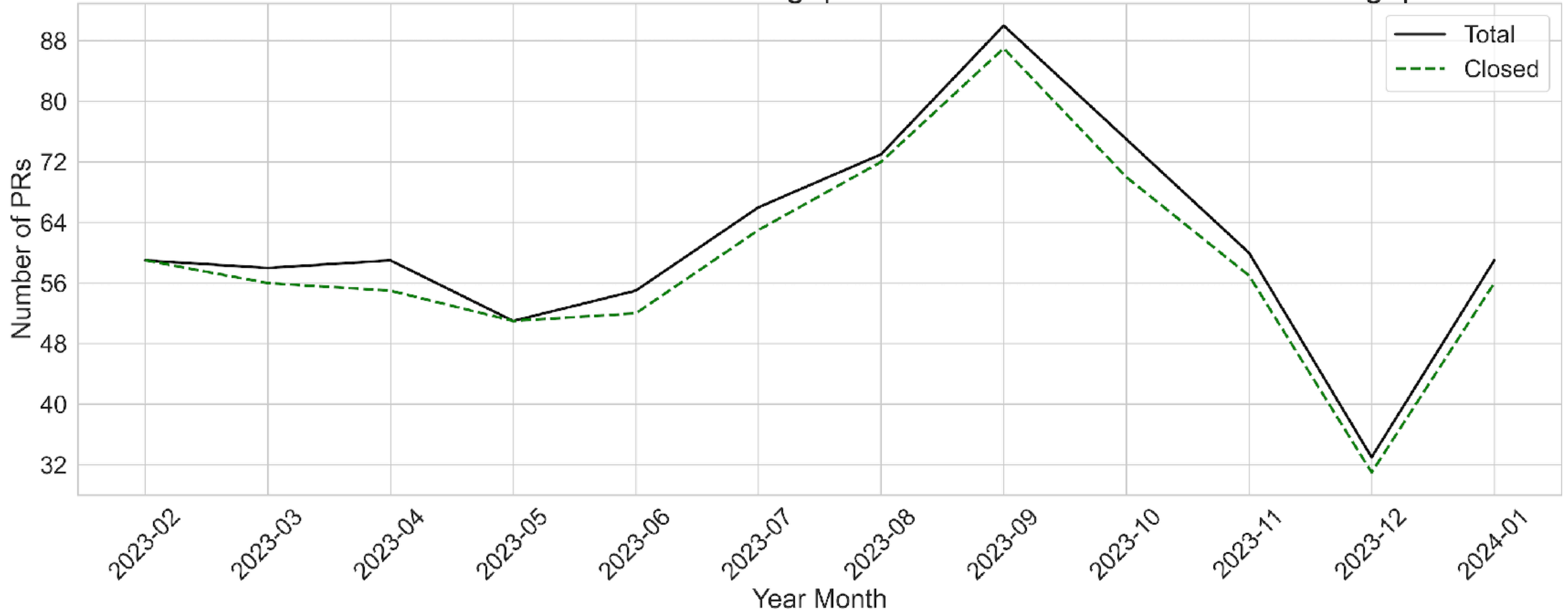


Interpretation: Healthy projects will have little or no gap. A large or increasing gap requires attention.

# Responsiveness

Closure Ratio - Sustains and Keeps up with Contributions

Trend: Neutral - the 2023-11 - 2024-01 gap is similar to the 2023-08 - 2023-10 gap.



Interpretation: Healthy projects will have little or no gap. A large or increasing gap requires attention.



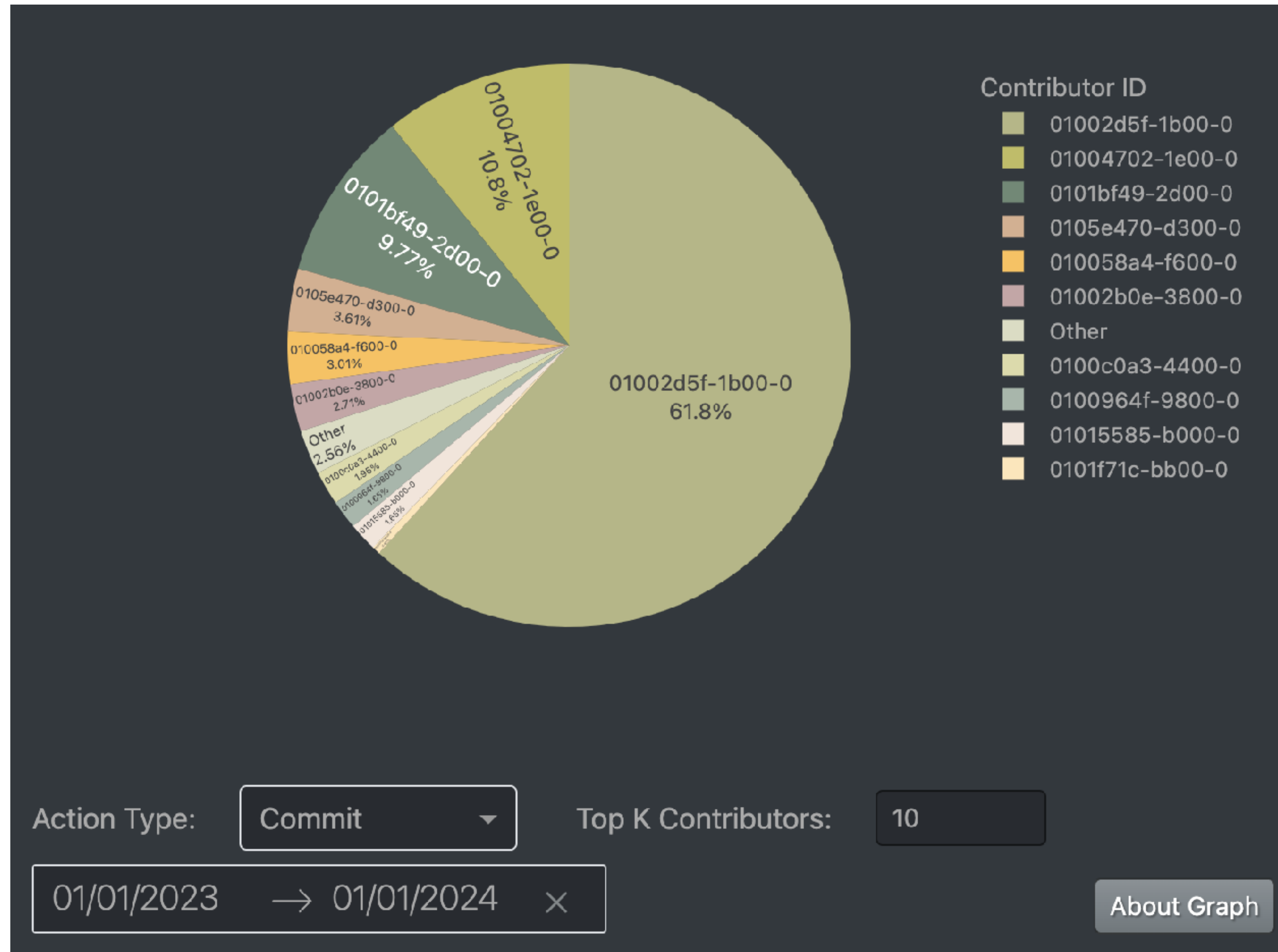
# Contributor Sustainability

Projects without enough contributors to sustain them are at risk of failure.



# Contributor Sustainability

Are there enough contributors to sustain the project if a key person left?



# Organizational Participation

Projects dominated by a single organization are high risk.



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# Organizational Participation

Getting clean organizational affiliation data can be a challenge, but it might be good enough to understand the dominant players.

