CHAOSS Overview and Updates

OpenUK Research May 2024
Dr. Dawn M. Foster
Director of Data Science for CHAOSS
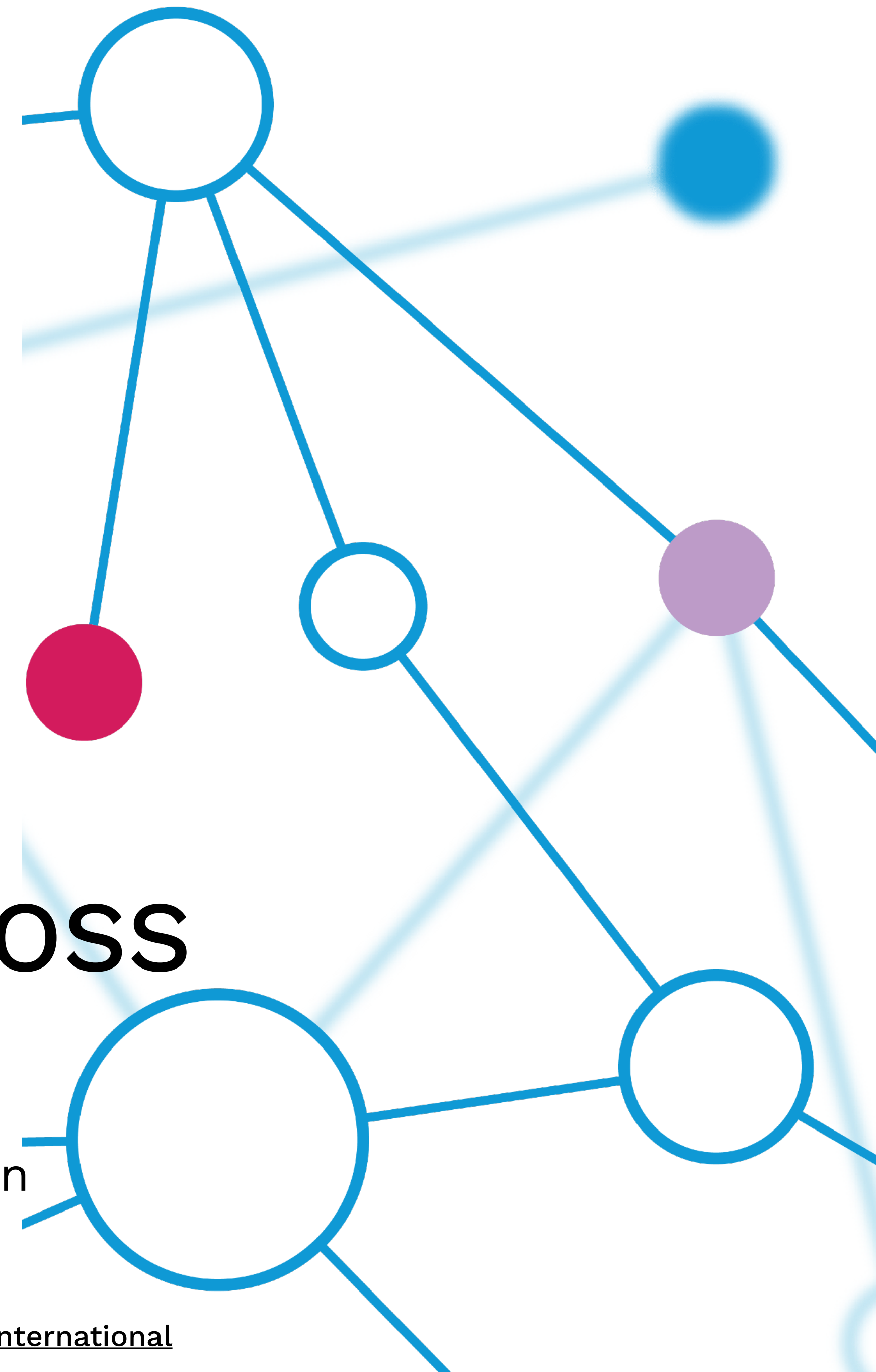
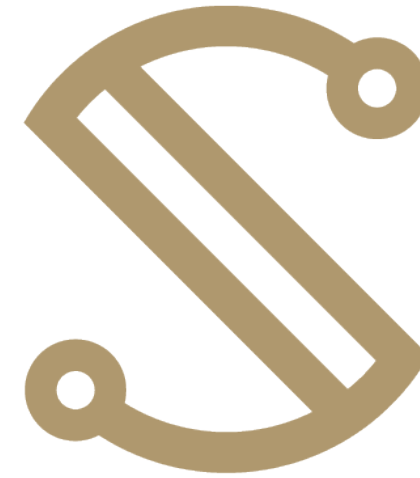https://chaoss.community/
https://github.com/chaoss
@chaoss@fosstodon.org

https://fastwonderblog.com/
https://github.com/geekygirldawn
@geekygirldawn@hachyderm.io

CHAOSS

Thank You!

@geekygirldawn

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

Agenda

- **CHAOSS Overview and Contributions**

- **Metrics are Important for both consumption & contribution of OSS**

- **Practitioner Guides to Improve Project Health:**

  - **responsiveness**

  - **contributor sustainability**

  - **organizational participation**

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)

Photo by Bernard Hermant on Unsplash

Join Us!

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

Metrics WGs: Metrics Development, Metrics Models, DEI

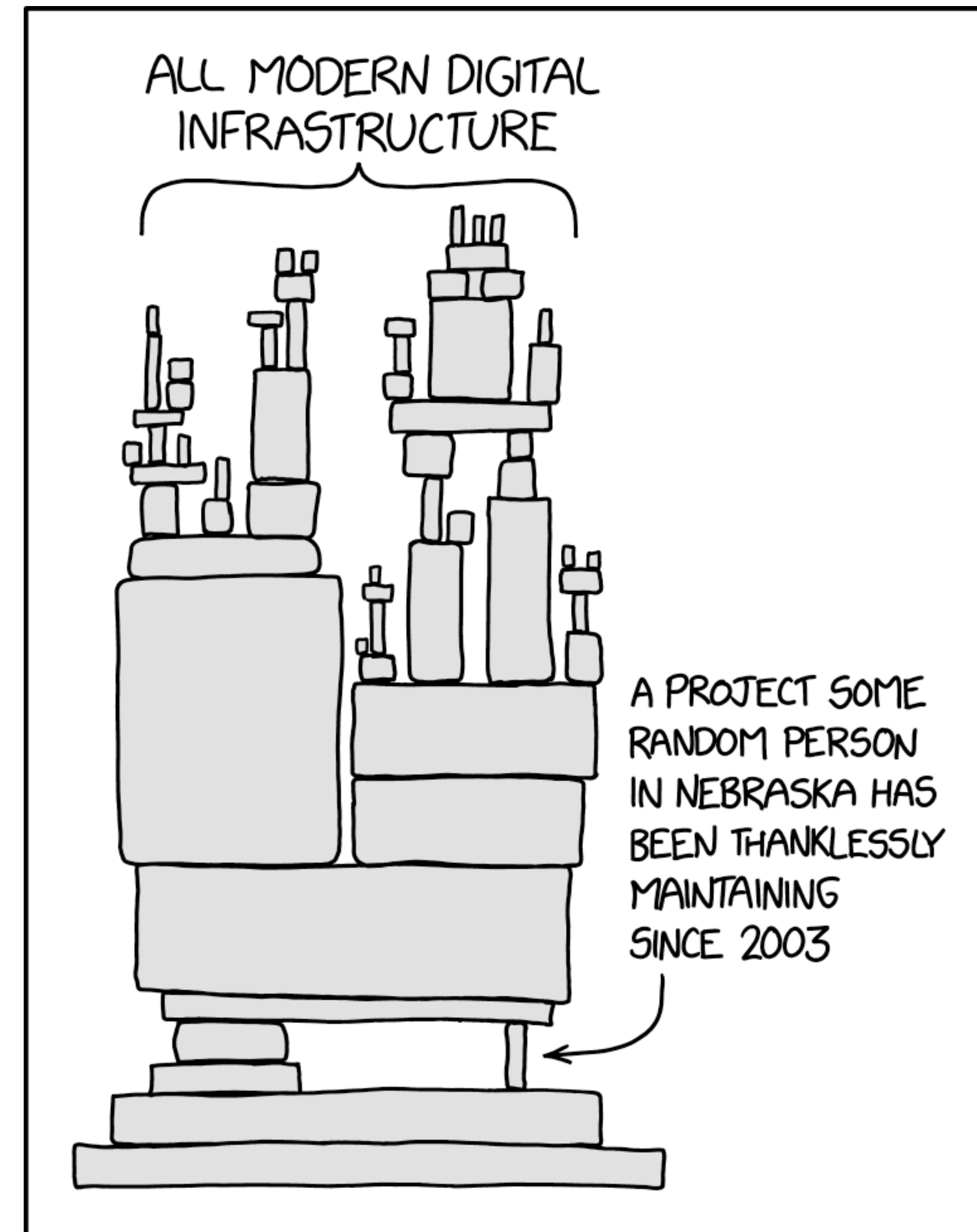**Chapters:** CHAOSS Africa, CHAOSS Asia, CHAOSS Latam, CHAOSS Balkans

Programs: DEI Event Badging and Project Badging

Software: Augur and GrimoireLab

And More!

Photo by Davit Margaryan on Unsplash

https://chaoss.community/kb-getting-started/

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Why Should You Care about Metrics?

Use metrics to understand

the open source projects

you care about

to avoid business disruptions

and reputation damage

ALL MODERN DIGITAL INFRASTRUCTURE

A PROJECT SOME RANDOM PERSON IN NEBRASKA HAS BEEN THANKLESSLY MAINTAINING SINCE 2003

https://xkcd.com/2347/

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

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IMPROVE

What is This?

An ongoing process using additional metrics to find more ways to 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.

MONITOR

What is This?

An ongoing process of monitoring metrics to see if imrovements are effective

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

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https://chaoss.community/kbtopic/all-metrics-models/

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NEW! CHAOSS Practitioner Guides

- **Responsiveness**

- **Contributor Sustainability**

- **Organizational Participation**

- **More coming soon!**

Photo by Martin Wilner on Unsplash

https://chaoss.community/about-chaoss-practitioner-guides/

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Metrics Strategy

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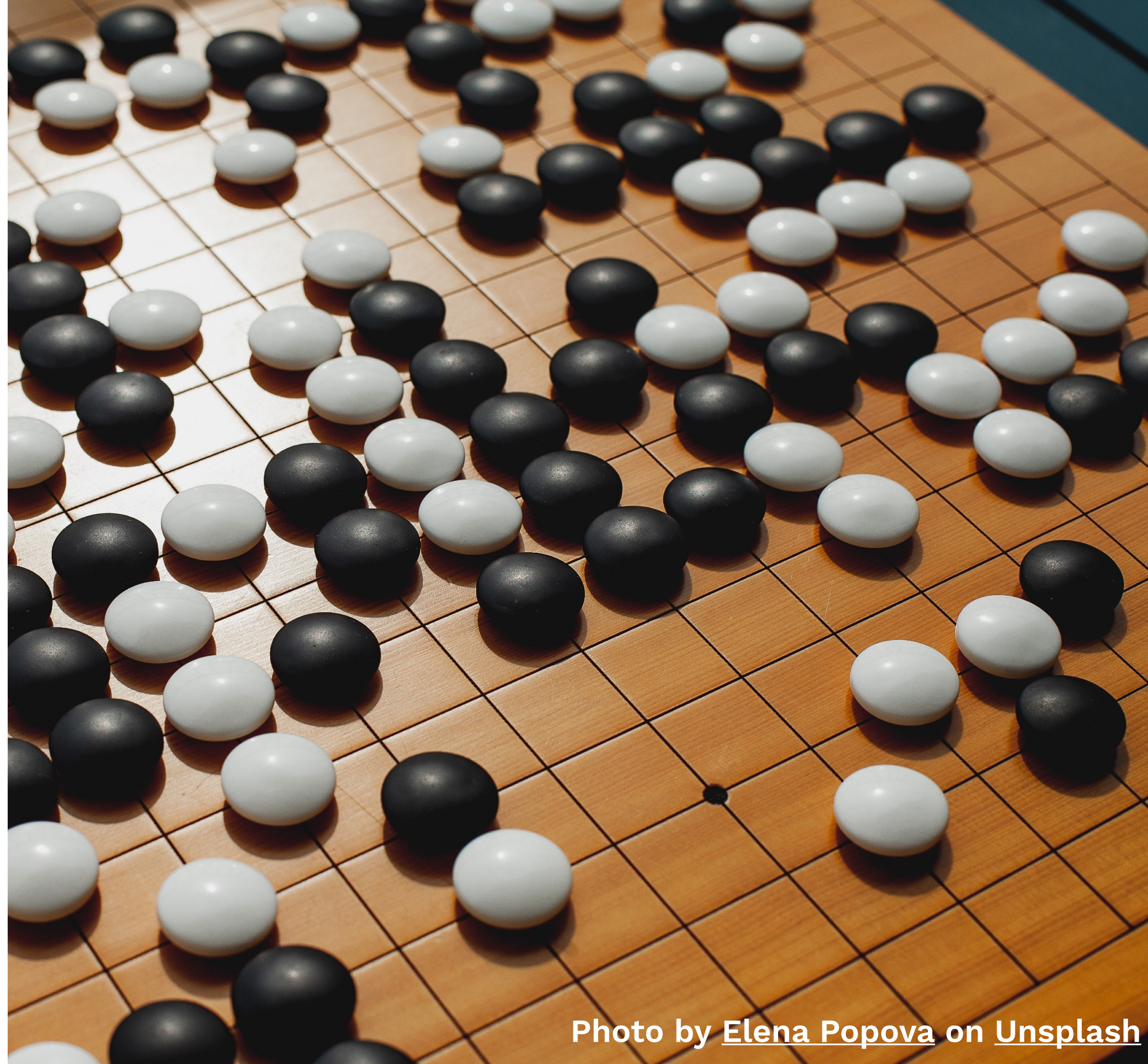customize your metrics, and
talk to your contributors.**

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Responsiveness

Projects that can keep up

with contributions will

be more viable

Image by Joe Penniston CC BY-NC-ND 2.0

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Responsiveness

Time to First Response
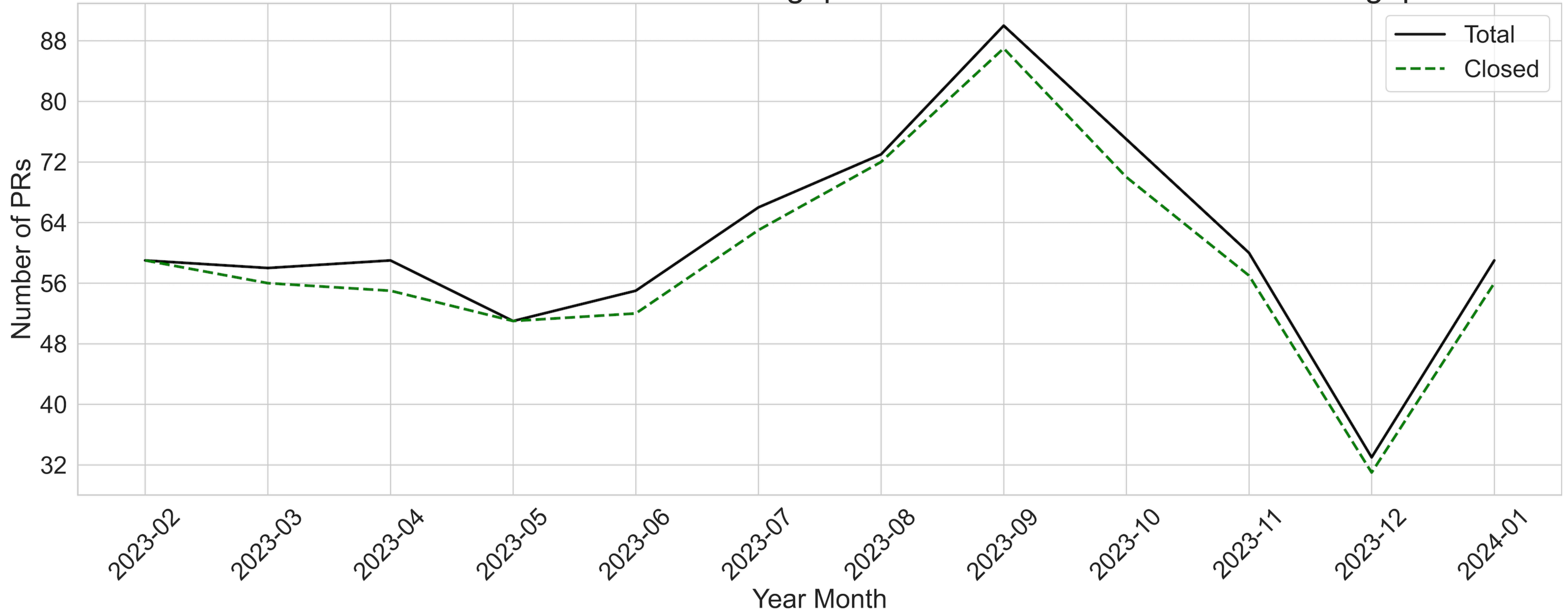Trend: Positive - the 2023-11 - 2024-01 gap is smaller than the 2023-08 - 2023-10 gap.
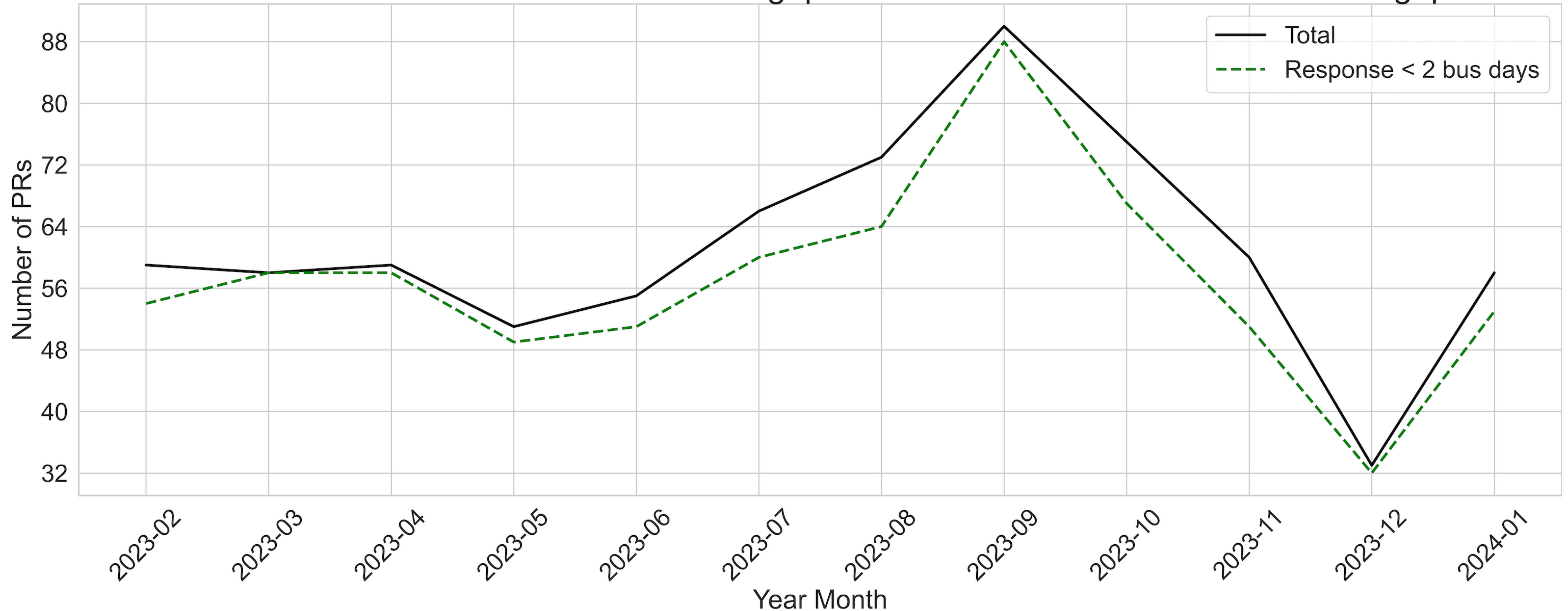
Interpretation: Healthy projects will have little or no gap. A large or increasing gap requires attention.

https://chaoss.community/practitioner-guide-responsiveness/

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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.

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https://chaoss.community/practitioner-guide-responsiveness/

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Contributor Sustainability

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

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https://chaoss.community/practitioner-guide-contributor-sustainability/

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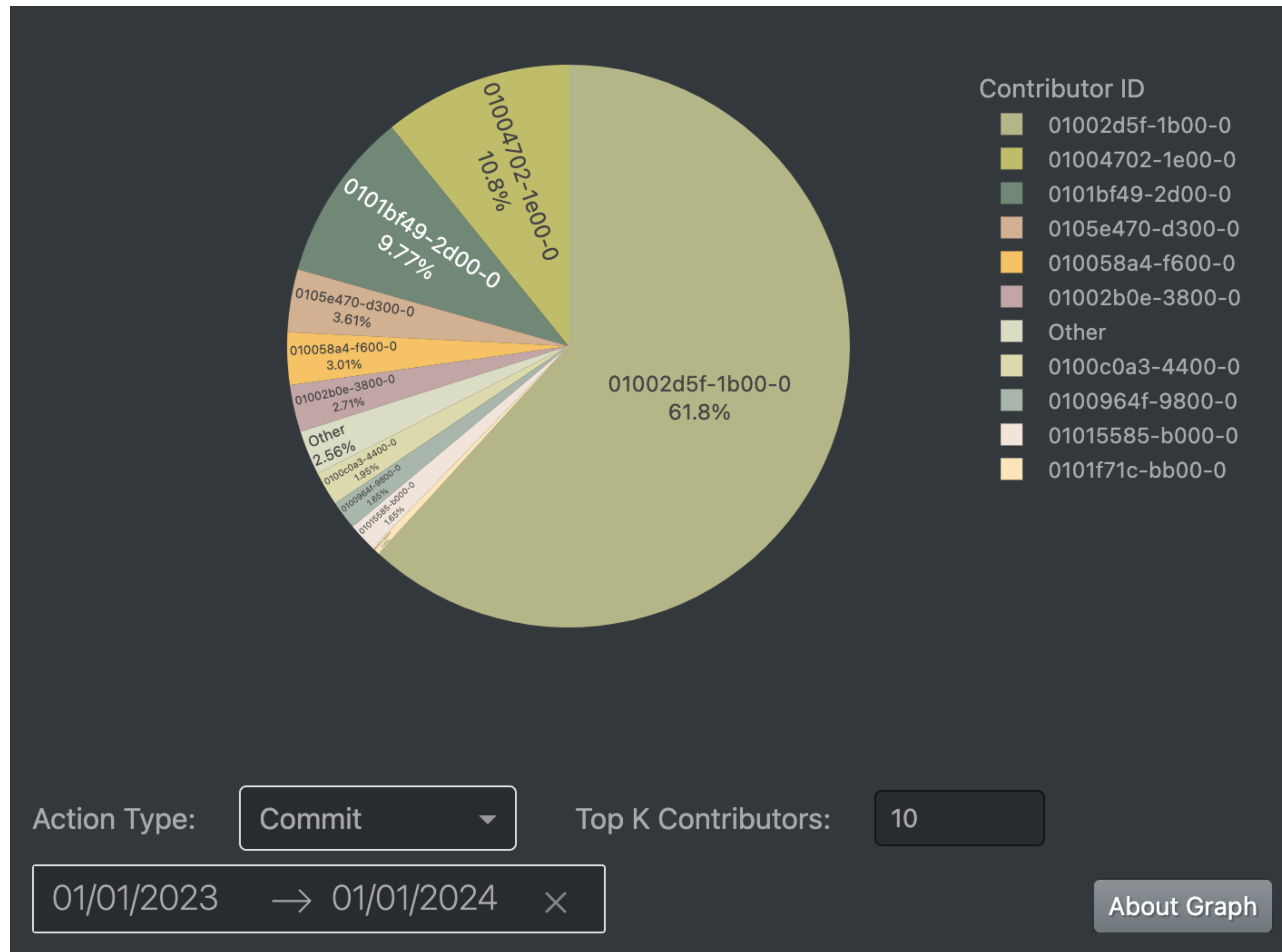
Organizational Participation

Projects dominated

by a single organization

are high risk.

https://chaoss.community/practitioner-guide-organizational-participation/

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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.

Commit Activity by Domain

google.com 55%
gmail.com 10.4%
daocloud.io 7.65%
users.noreply.github.com 7.07%
us.ibm.com 5.31%
Other 2.09%
solo.io 2.07%
ca.ibm.com 1.87%
est.tech 1.65%
volunteers.acasi.info 1.36%
outlook.com 1.29%

Legend:
- google.com
- gmail.com
- daocloud.io
- users.noreply.github.com
- us.ibm.com
- Other
- solo.io
- ca.ibm.com
- est.tech
- volunteers.acasi.info
- outlook.com
- 163.com
- 126.com
- intel.com
- qq.com
- redhat.com

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.

https://chaoss.community/about-chaoss-practitioner-guides/

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THANK YOU!
Any Questions?
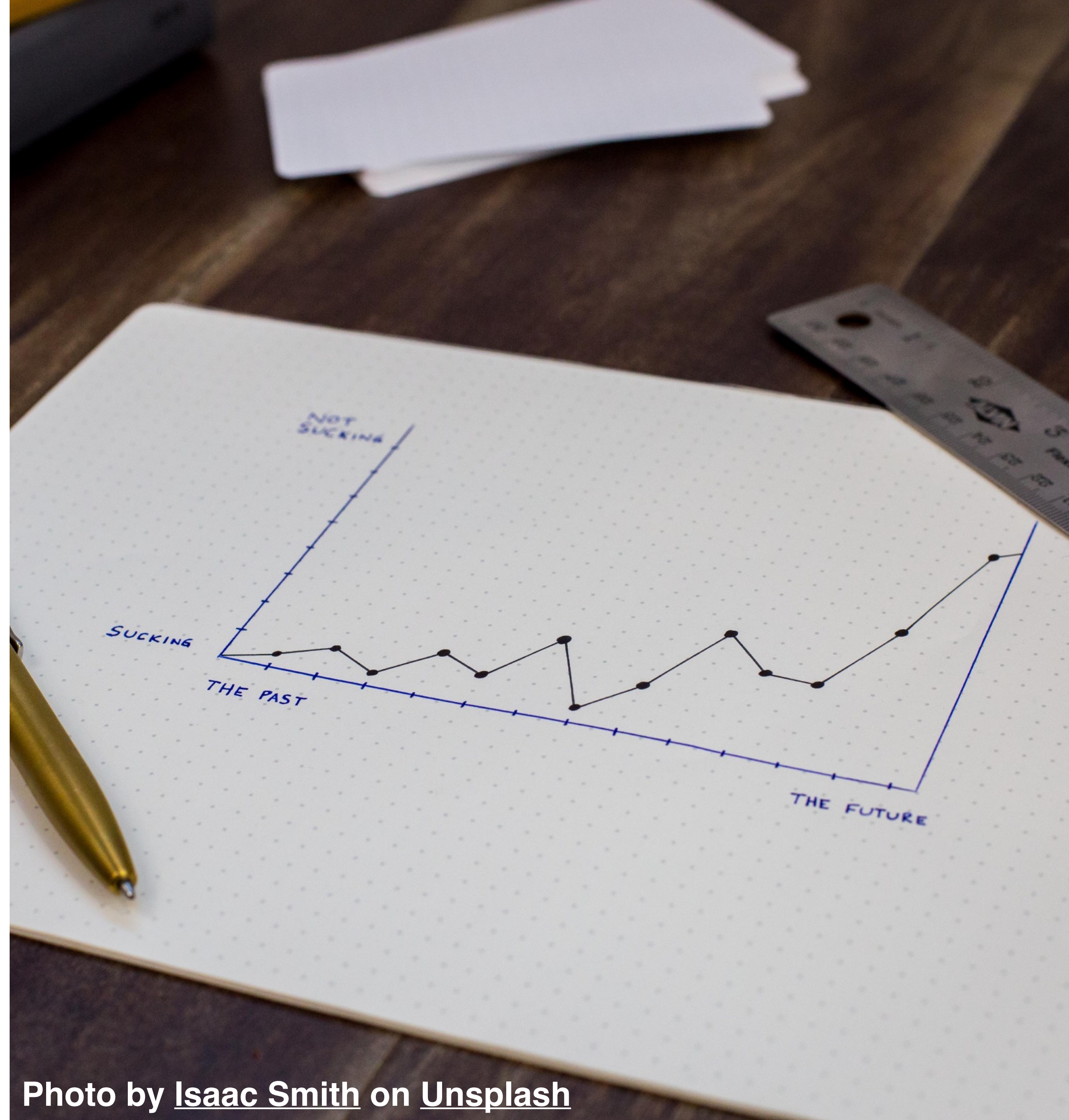
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