







Building a Sustainable CNCF Project Contributor Base

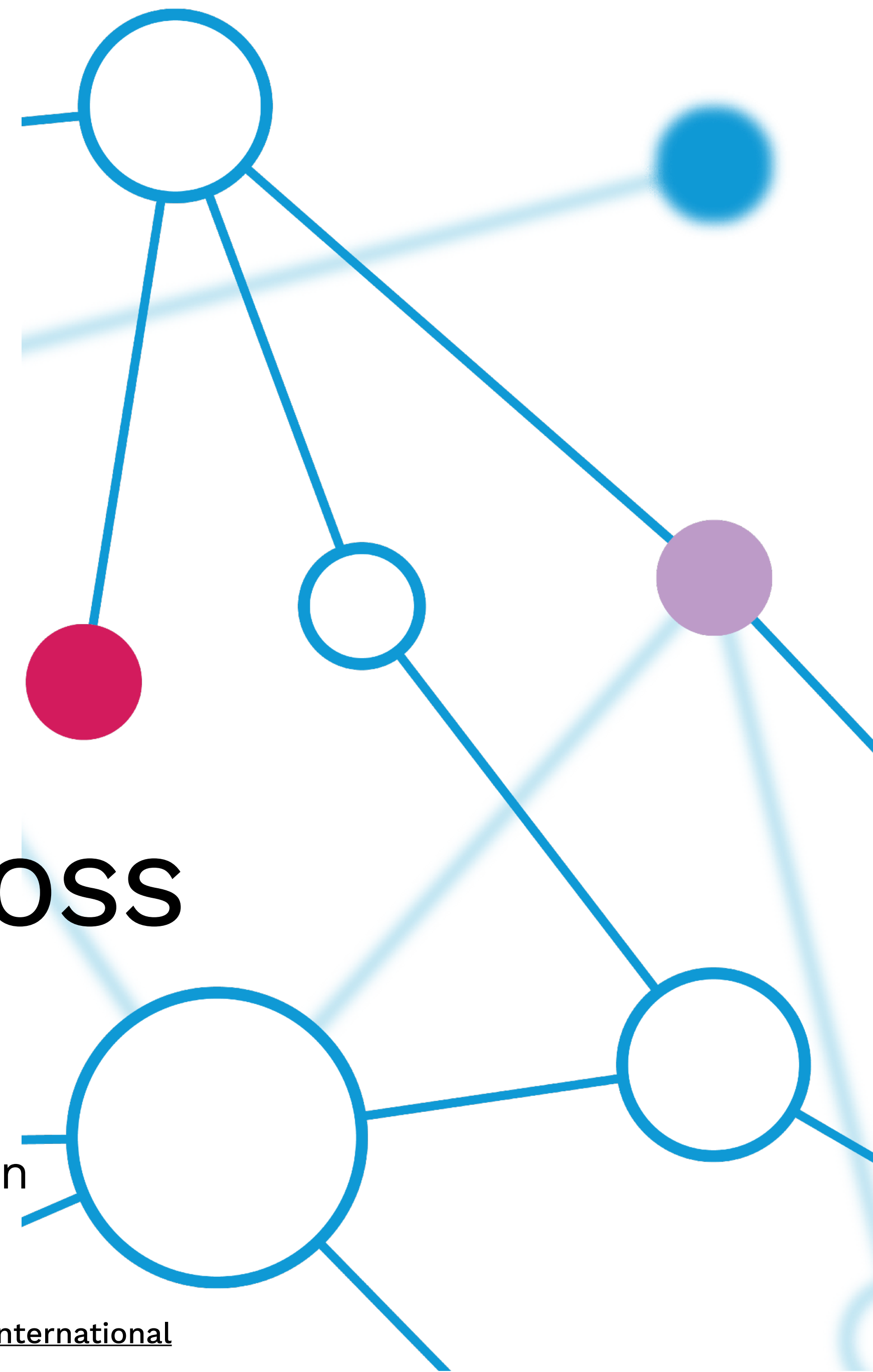
Cloud Native Rejekts NA 2023

Dr. Dawn M. Foster

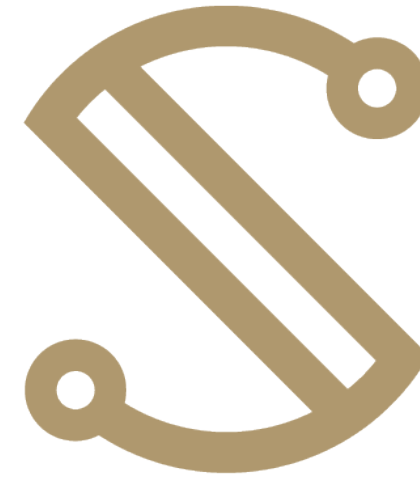
Director of Data Science for CHAOSS

 <https://chaoss.community/>
 <https://github.com/chaoss>
 @CHAOSSproj

 <https://fastwonderblog.com/>
 <https://github.com/geekygirldawn>
 @geekygirldawn



Thank You!



ALFRED P. SLOAN
FOUNDATION



FORD
FOUNDATION

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 from the University of Greenwich focused on Linux kernel collaboration

Photos by Mom, Josh Bancroft, Don Park

The Problem is Hard

Humans are squishy.
We have feelings
and bad days.

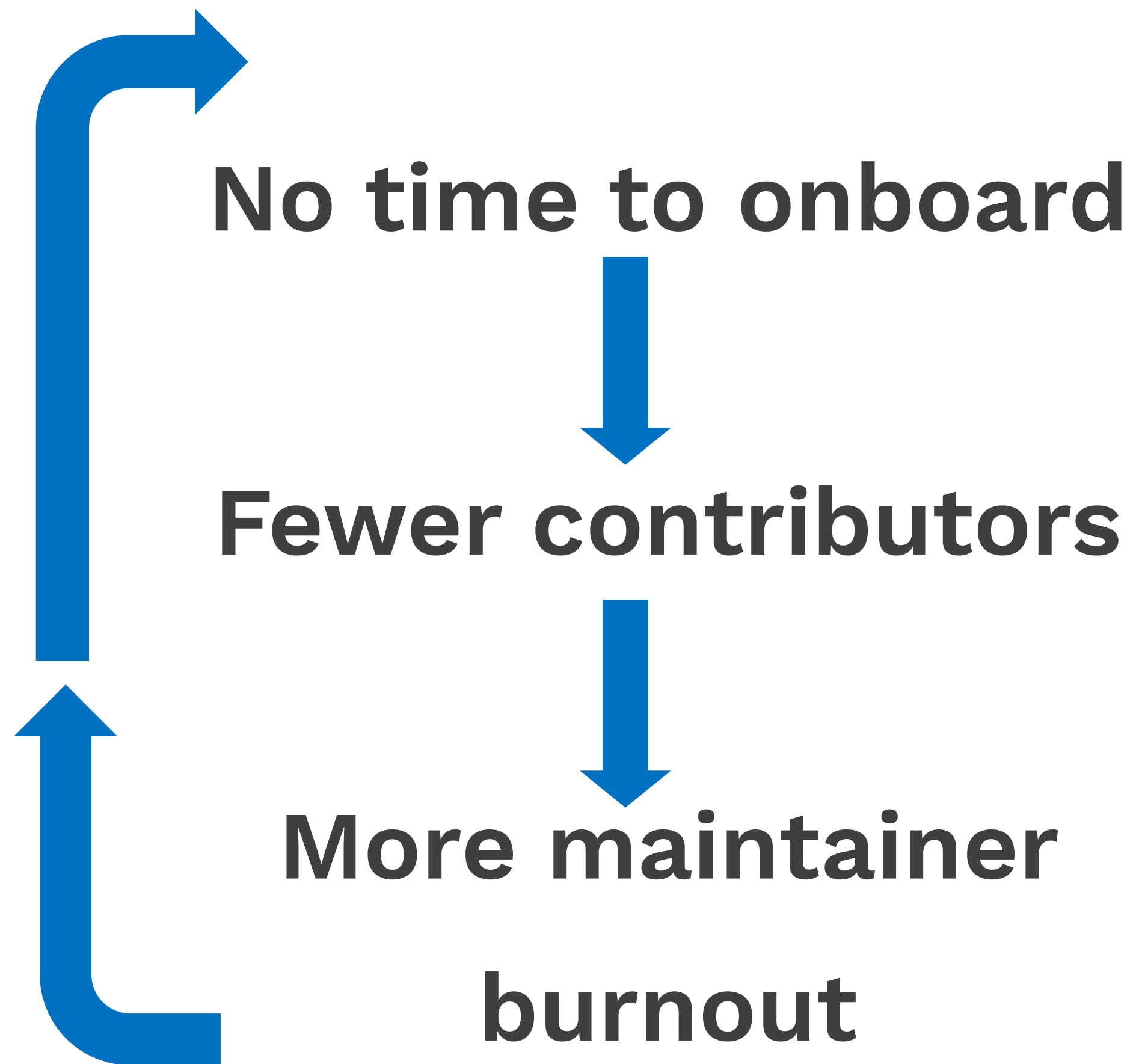


The Problem is Hard

**Action: Be proactive
and encourage people
to participate.**



Vicious Cycle



Agenda

- **Factors that Impact Contributor Growth**
- **Contributor Growth Strategies**
- **Contributor Ladders and Leadership**
- **Metrics for Measuring Project Sustainability**
- **Resources and Final Thoughts**

Photo by Marco Verch - CC BY 2.0



Developing and Executing on Contributor Growth Strategies

Motivation

**Squishy humans have
complex motivations.
We want to feel useful
and appreciated.**



 contribute.cncf.io/maintainers/community/contributor-growth-framework/motivation

Motivation

**Action: Be proactive
and ask specific people
for help on
individual tasks.**



contribute.cncf.io/maintainers/community/contributor-growth-framework/motivation

Governance is all about the Humans

Set expectations for how people collaborate & make decisions

👉 contribute.cncf.io/maintainers/templates/governance-intro

Image by the [CNCF](#) CC BY-NC 2.0



Governance is all about the Humans

Action: Clearly document project governance (templates avail)

👉 contribute.cncf.io/maintainers/templates/governance-intro

Image by the [CNCF](#) CC BY-NC 2.0



Be Explicit

Explicit, documented governance makes it easier for the humans to contribute.



Photo by Andrew Watson - CC BY 2.0

Onboarding Docs

**Good docs for
onboarding new
contributors is step #1
toward scaling maintainers.**



contribute.cncf.io/maintainers/templates/contributing/



Onboarding Docs

Action: Make sure to include dev env setup, running tests, and other requirements (template available).



contribute.cncf.io/maintainers/templates/contributing/

Diversity, Equity and Inclusion

Build a welcoming
and
inclusive community.

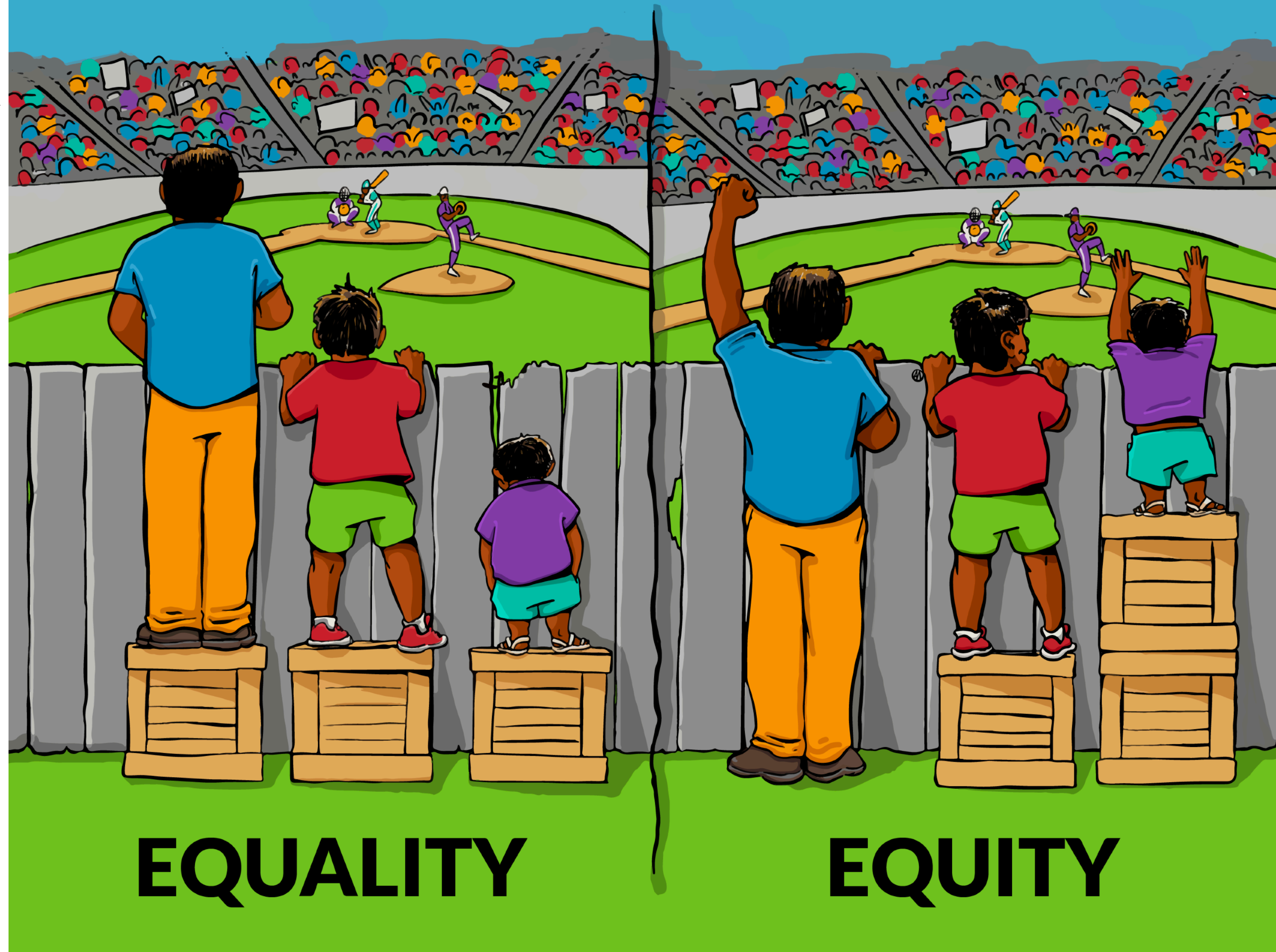


Image courtesy of the [Interaction Institute for Social Change](#) | Artist: [Angus Maguire](#).

Diversity, Equity and Inclusion

Action: Be proactive about including people and moving them into leadership roles.

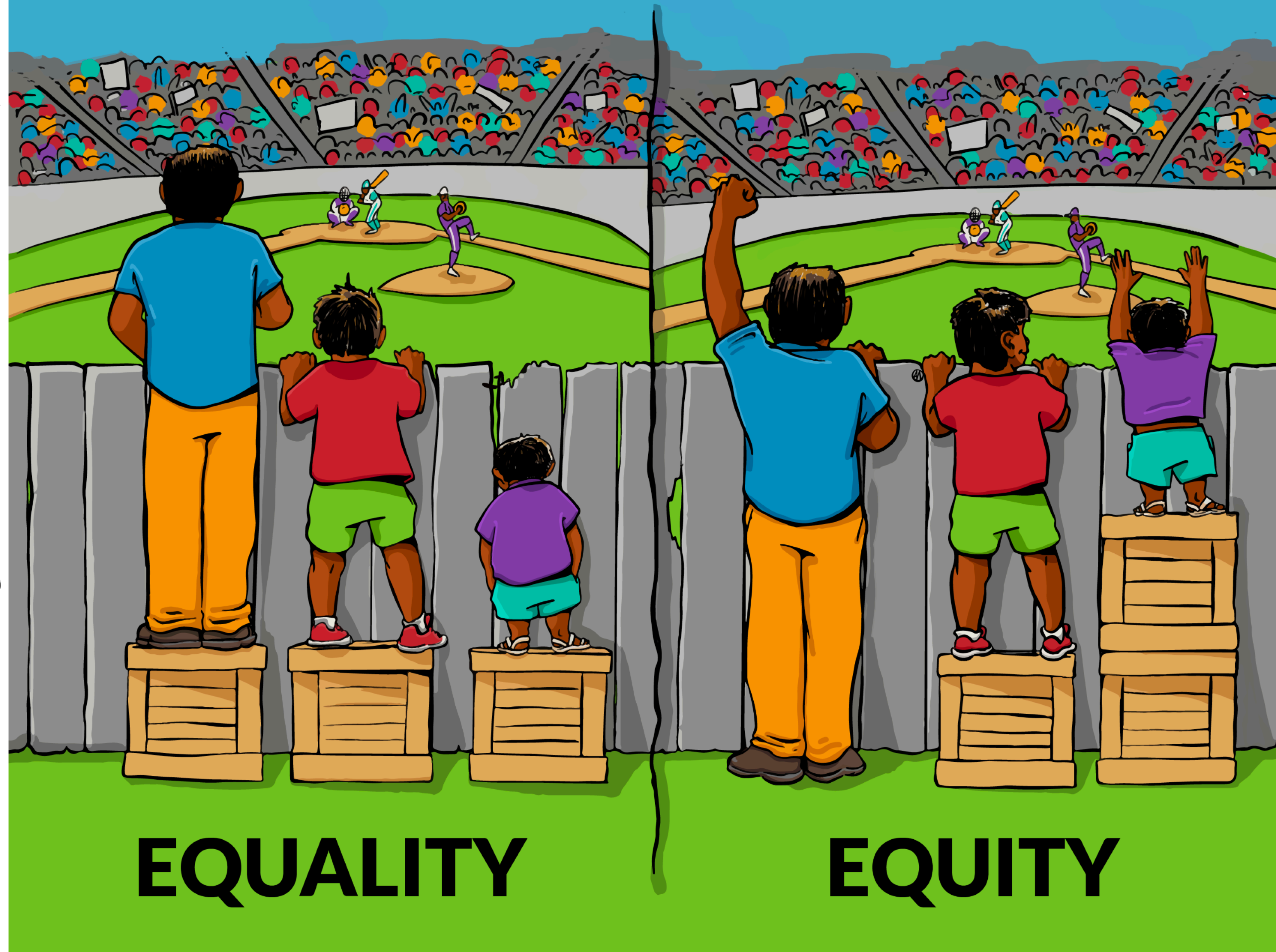


Image courtesy of the [Interaction Institute for Social Change](#) | Artist: [Angus Maguire](#).

Contributor Ladders and Leadership



Contributor Ladders

Defining a ladder of leadership roles
helps recruit new humans
to reduce maintainer workload.

👉 github.com/cncf/project-template/blob/main/CONTRIBUTOR_LADDER.md



Contributor Ladders

Action: proactively recruit new humans to move up the ladder into leadership roles (template available).

👉 github.com/cncf/project-template/blob/main/CONTRIBUTOR_LADDER.md

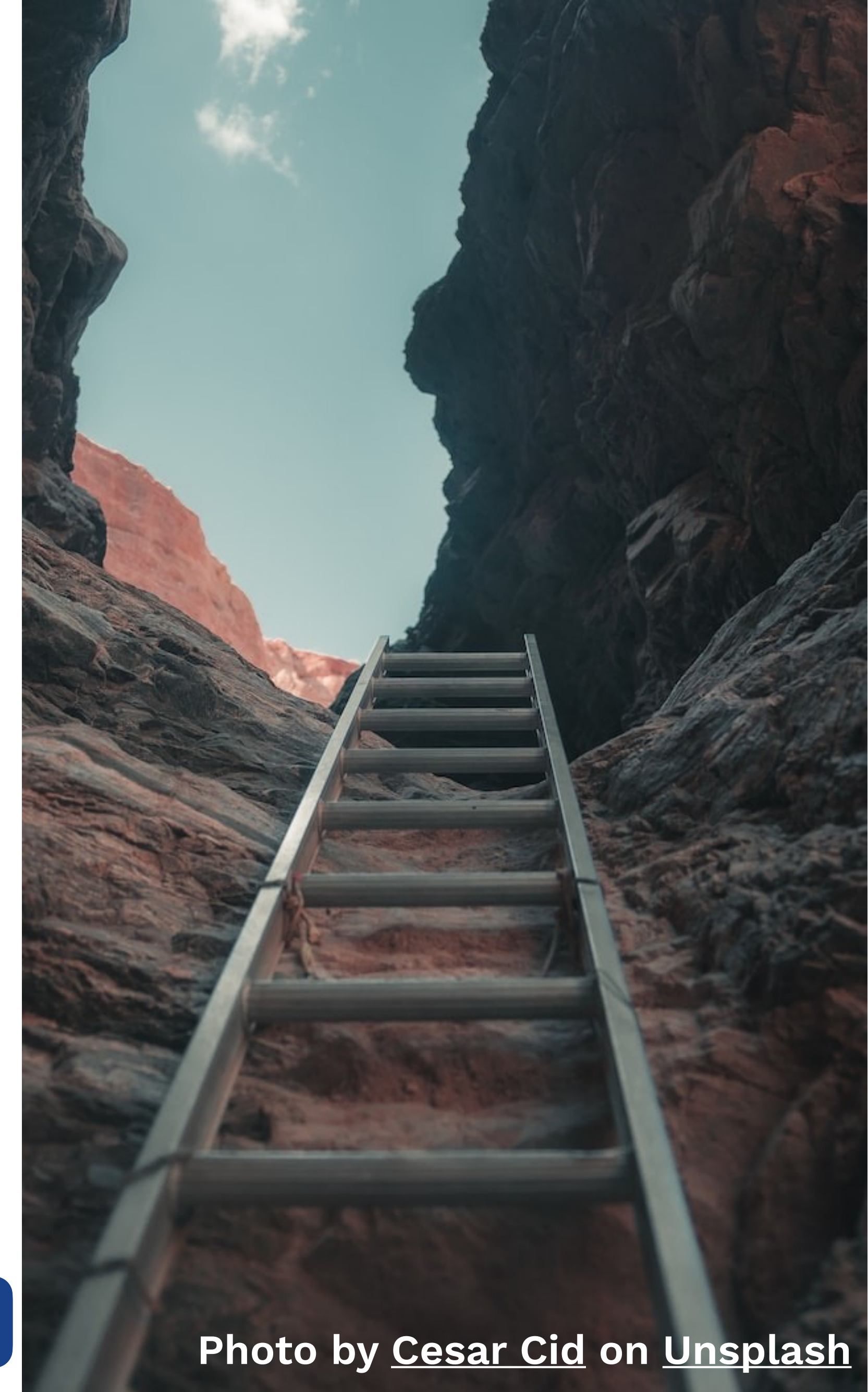


Photo by [Cesar Cid](#) on [Unsplash](#)

@geekygirl dawn

Leadership

Humans can
climb the ladder into
leadership to reduce
maintainer burden.



 contribute.cncf.io/maintainers/governance/leadership-selection

Leadership

**Action: Define
a fair and transparent
process for how new
leaders are selected.**



[👉 contribute.cncf.io/maintainers/governance/leadership-selection](https://contribute.cncf.io/maintainers/governance/leadership-selection)

Mentoring

Help the humans
become more
productive
contributors.

 github.com/cncf/mentoring

CHA^{CO}SS



Image by the [CNCF](#) CC BY-NC 2.0

@geekygirl dawn

Mentoring

Action: Carve out time for mentoring, shadowing or 1:1 time with another human.

 github.com/cncf/mentoring

CHA@SS



Image by the [CNCF](#) CC BY-NC 2.0

@geekygirl dawn

Emeritus as a Goal

**Set your project
up for success after
maintainers move on.**



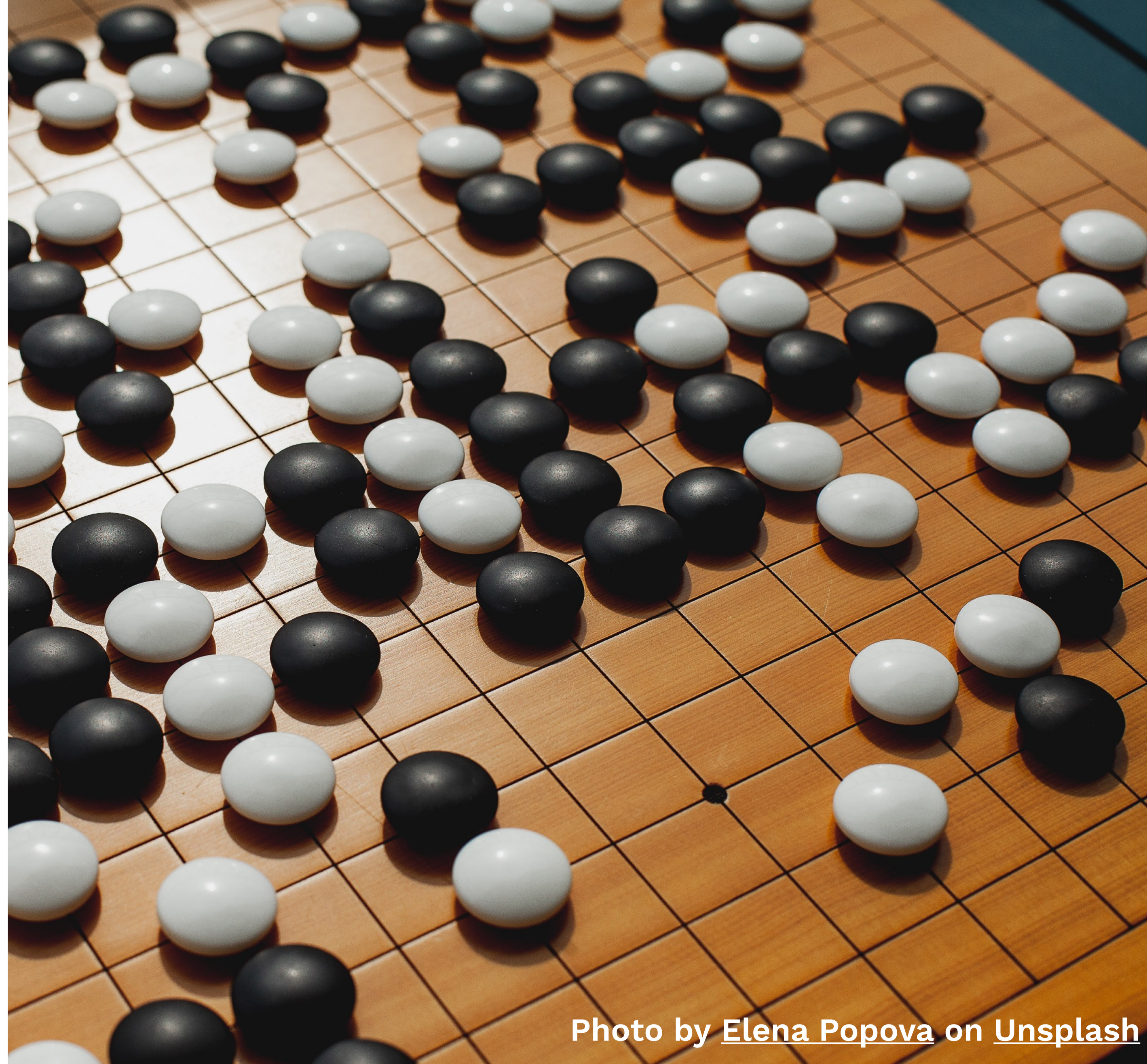
Emeritus as a Goal

Action: Be proactive about promoting new humans so that maintainers can move into emeritus roles.



Be Strategic

Think about where you can
best spend your time to
grow your contributor base.



Be Strategic

**Action: Find people to help
with documentation,
marketing, community,
and similar activities.**

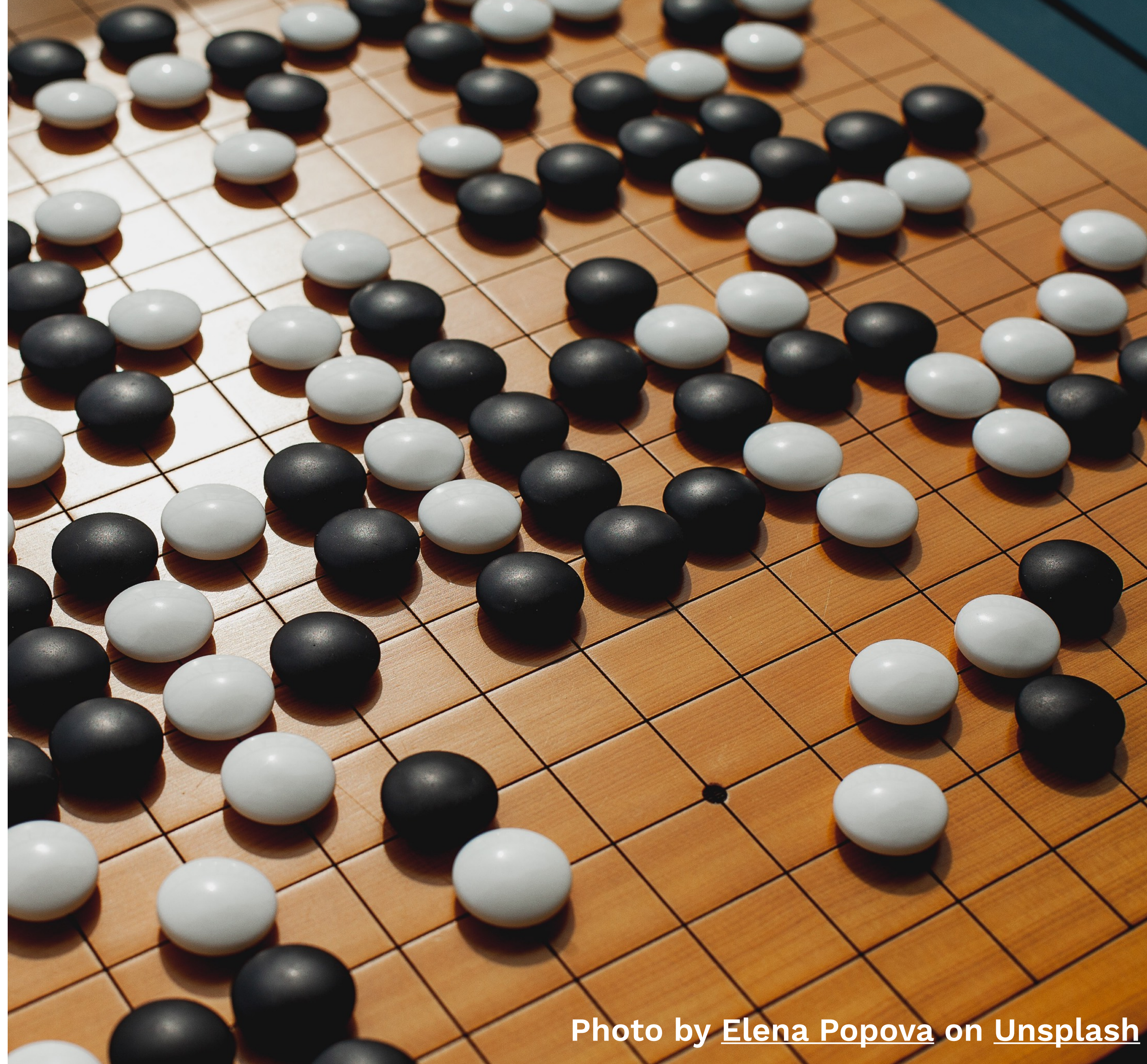
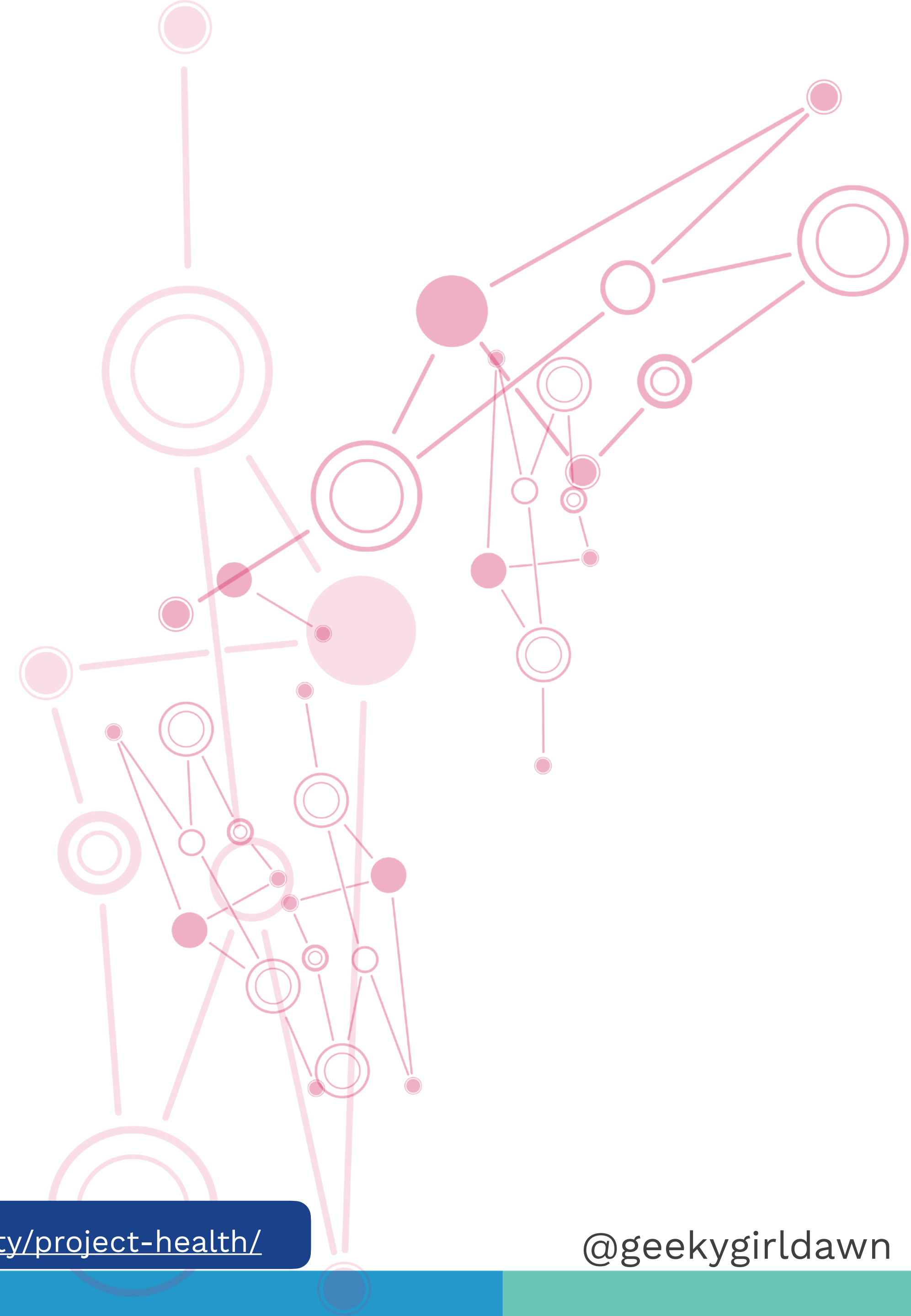
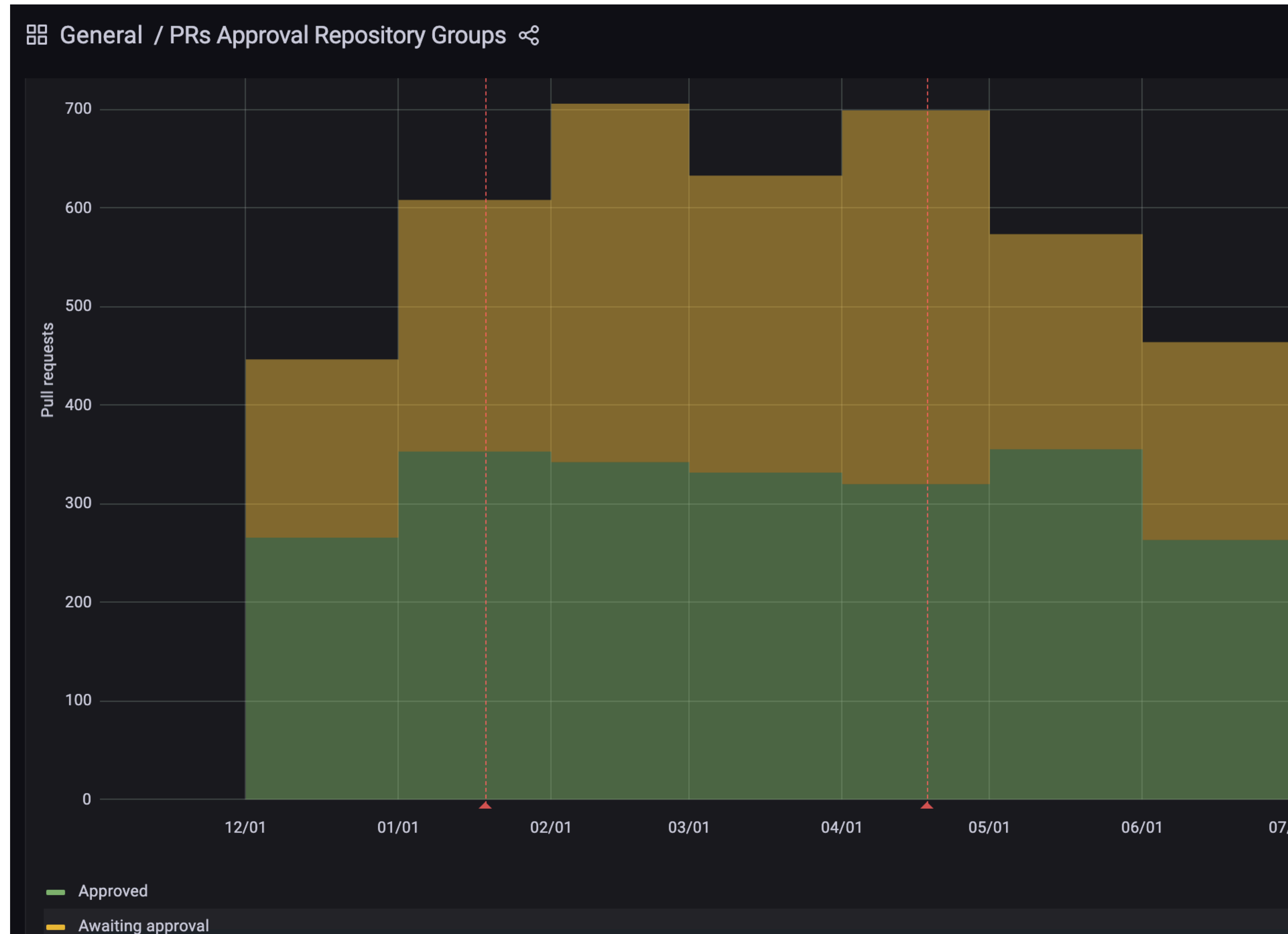


Photo by [Elena Popova](#) on [Unsplash](#)

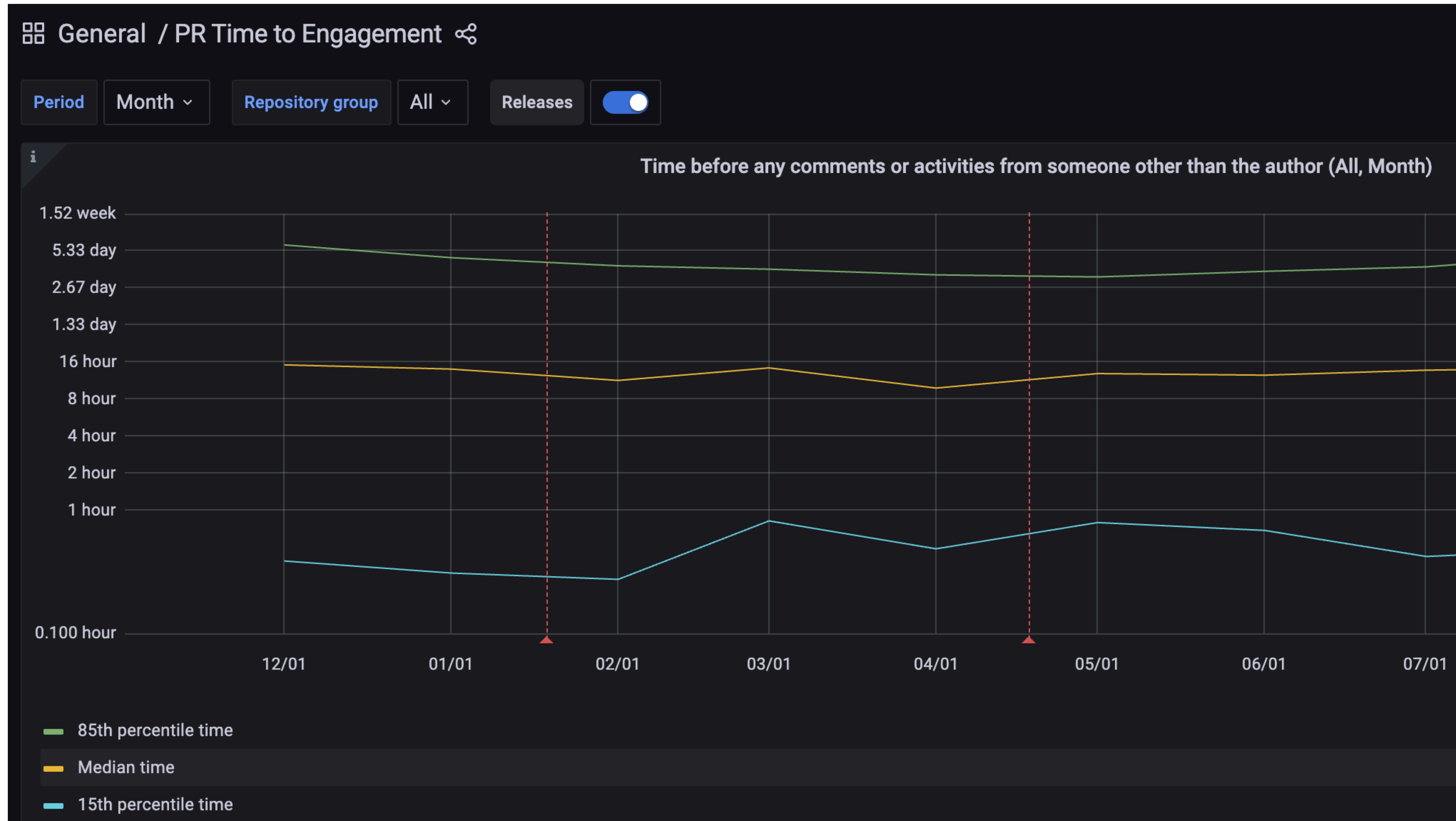
Measuring Project Sustainability



Responsiveness



Responsiveness



Responsiveness

General / Elephant/Bus Factor in Repository Groups

Range

Last year ▾

Metric

PRs ▾

Type

Users ▾

i

All CNCF Users PRs Last year Elephant/Bus Factor stats

Project/Repository Group ↑

BF

BF%

Bus/Elephant Factor Users

Cilium

19

50.77

julianwiedmann, sayboras, tklauser, michi-covalent, pchaigno, kkourt, giorio94, brb, ...

Cloud Custodian

10

50.13

kapilt, ajkerrigan, evhenyshaliov, kentnsw, thisisshi, timmygrable, PratMis, dmytro-af...

Cloud Deployment Kit for Kubernetes

2

63.04

iliapolo, vinayak-kukreja

CloudEvents

5

50.80

duglin, jskeet, yanmxa, alexec, lholmquist

Clusternet

2

50.77

dixudx, lmxia

Clusterpedia

2

50.41

Iceber, cleverhu



Resources

CNCF Contributor Strategy TAG Docs & Templates

contribute.cncf.io/maintainers/

contribute.cncf.io/maintainers/community/contributor-growth-framework/

github.com/cncf/project-template

The Open Source Way Guidebook

github.com/theopensourceway/guidebook/

CHAOSS Metrics

<https://chaoss.community/>

CNCF TAG Contributor Strategy Needs more Humans

Join our **Slack channel**

#tag-contributor-strategy (CNCF Slack)

Sign up for our **mailing list** lists.cncf.io/g/cncf-tag-contributor-strategy

Drop in to our **meetings**

Go to cncf.io/calendar/ and search for contributor strategy!

Learn about the TAG and how to participate:

cncf.io/contributor-strategy. 



Final Thoughts

Humans can be difficult
and growing your
contributor base is hard.

It takes time now,
but it is worth it later.






Action Item




**Carve out 1 hour a week to
improve contributor
documentation or help
someone learn something new.**



THANK YOU!

Any Questions?

 <https://chaoss.community/>
 <https://github.com/chaoss>
 @CHAOSSproj

 <https://fastwonderblog.com/>
 <https://github.com/geekygirldawn>
 @geekygirldawn

