


KubeCon | CloudNativeCon

North America 2023

Navigating Open Source Project Hurdles to Achieve Community Empowerment

or how the heck do you get through graduation?

KubeCon | CloudNativeCon

North America 2023

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@mrbobbytables
OSS Program Manager @ Google

Aizhamal Nurmamat kyzy
@iamaijamal
Director of DevRel @ Sysdig

Enter Alpacka

Alpacka

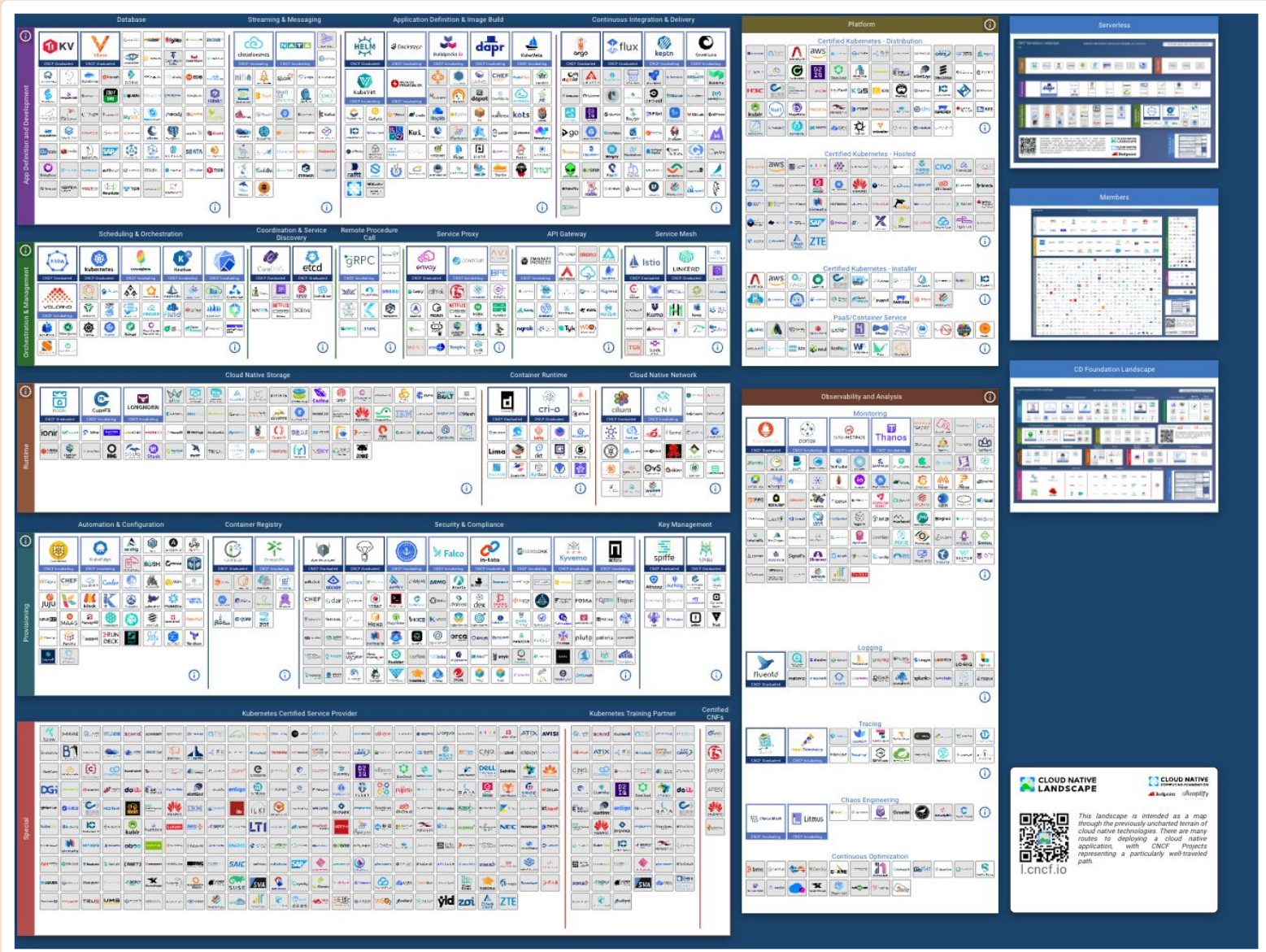
A new super efficient software packaging format with middle-out compression.

@emrayquaza

Join the CNCF!

CLOUD NATIVE
COMPUTING FOUNDATION

Join the CNCF?



Is my project right for CNCF?

“CNCF’s mission is to make cloud native computing ubiquitous.”

Is CNCF right for my project?

Or are there other Foundations that are better fit for my project?

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Or are there other Foundations that are better fit for my project?

LF AI & DATA

THE APACHE® SOFTWARE FOUNDATION ESTABLISHED 1999

Open Infrastructure FOUNDATION

What does CNCF give you?

Visibility

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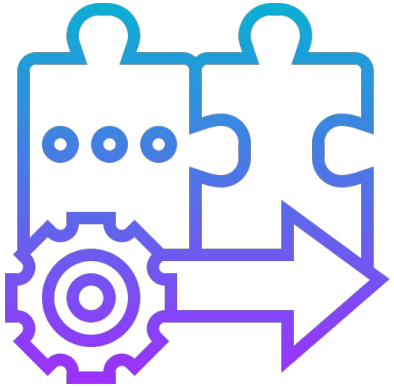
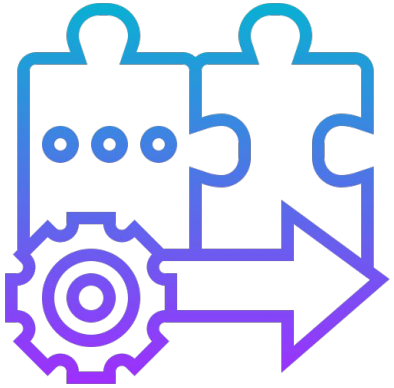
Visibility



Alignment

What does CNCF give you?

Visibility



Alignment

Legal framework

What does CNCF give you?

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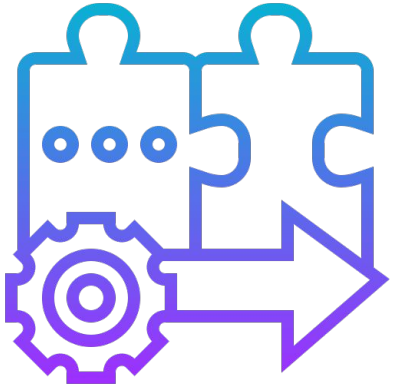
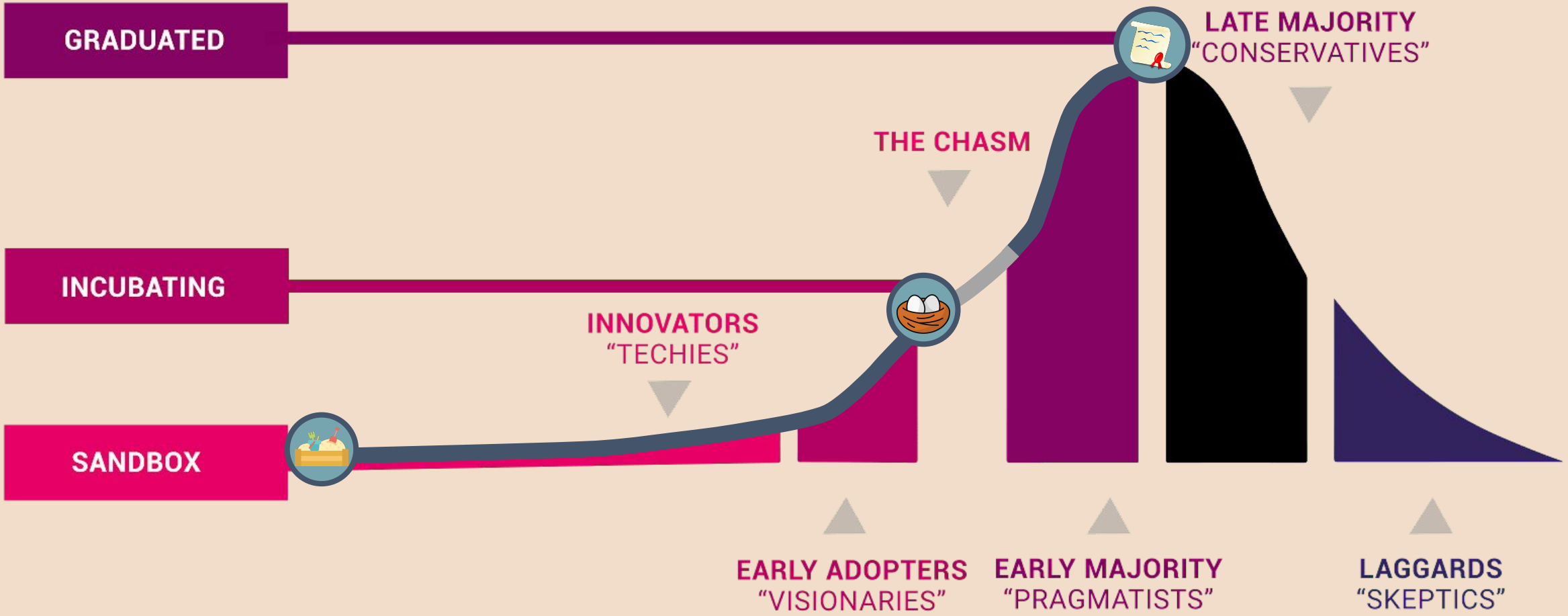


Alignment

Legal framework

A vendor-neutral home


GRADUATED
INCUBATING
SANDBOX
LATE MAJORITY
"CONSERVATIVES"
THE CHASM
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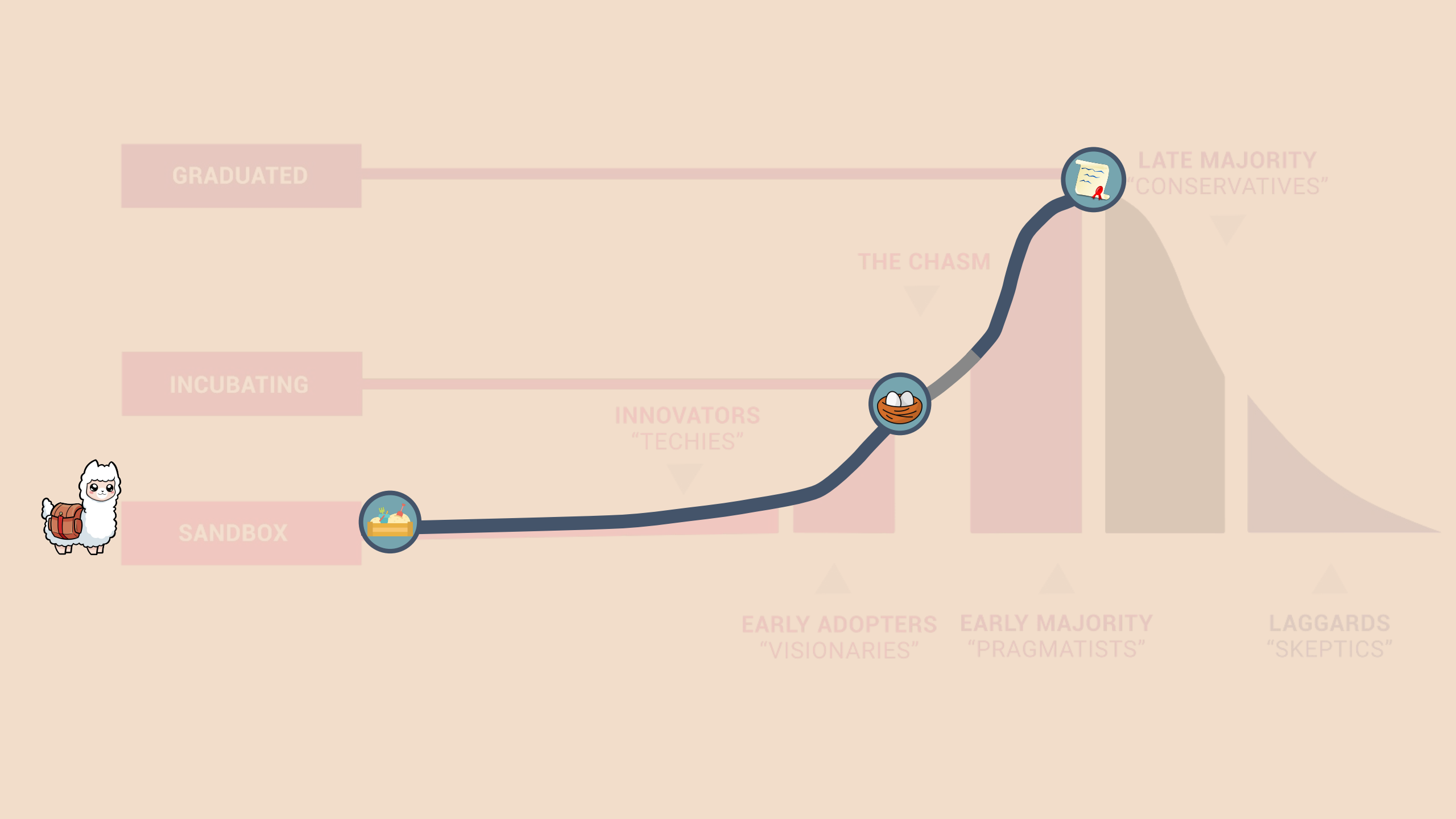
LAGGARDS
"SKEPTICS"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The Journey Begins

Pre-Sandbox

@emrayquaza

IP

11. IP Policy

- (a) Any project that is added to the CNCF must have ownership of its trademark and logo assets transferred to the Linux Foundation.
- (b) Each project shall determine whether it will require use of an approved CNCF CLA. For projects that select to use a CLA, all code contributors will undertake the obligations set forth in the Apache contributor license agreement(s), altered only as necessary to identify CNCF as the recipient of the contributions, and which shall be approved by the Governance Board. See CNCF Contributor License Agreements available at https://github.com/cncf/cla. The process for managing contributions in accordance with this policy shall be subject to Governance Board approval.
- (c) All new inbound code contributions to the CNCF shall be (i) accompanied by a Developer Certificate of Origin sign-off (*https://developercertificate.org*) and (ii) made under the Apache License, Version 2.0 (available at *https://www.apache.org/licenses/LICENSE-2.0*), such license to be in addition to, and shall not supersede, obligations undertaken under the contribution license agreement(s) provided for in (b) above.
- (d) All outbound code will be made available under the Apache License, Version 2.0.
- (e) All projects evaluated for inclusion in the CNCF shall be completely licensed under an OSI-approved open source license. If the license for a project included in CNCF is not Apache License, Version 2.0, approval of the Governing Board shall be required.
- (f) All documentation will be received and made available by the CNCF under the Creative Commons Attribution 4.0 International License.
- (g) If an alternative inbound or outbound license is required for compliance with the license for a leveraged open source project or is otherwise required to achieve the CNCF's mission, the Governing Board may approve the use of an alternative license for inbound or outbound contributions on an exception basis.

Governance Requirements

- Adopt CNCF Code of Conduct
- Discoverable and simple project governance

- Sandbox
- Incubating
- Graduated

Governance Requirements

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- Discoverable and simple project governance
- Light "how to contribute" documentation
- All project metadata and resources are vendor-neutral
- Discoverable communication channel

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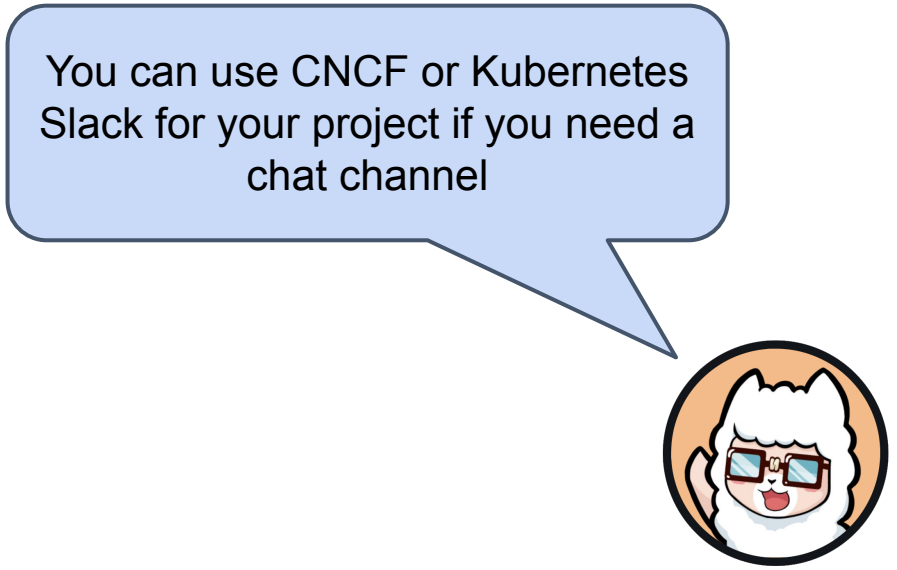

Technical Documentation (Messaging)

- Project goals, objectives and its differentiation in the Cloud Native landscape with supporting use cases. (identity)

- Sandbox
- Incubating
- Graduated

Technical Documentation

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Security Requirements

- Document and enforce access control rules
  - 2fa / passkey
  - GitHub / Google Workspace permissions
  - Who has access to CI infra

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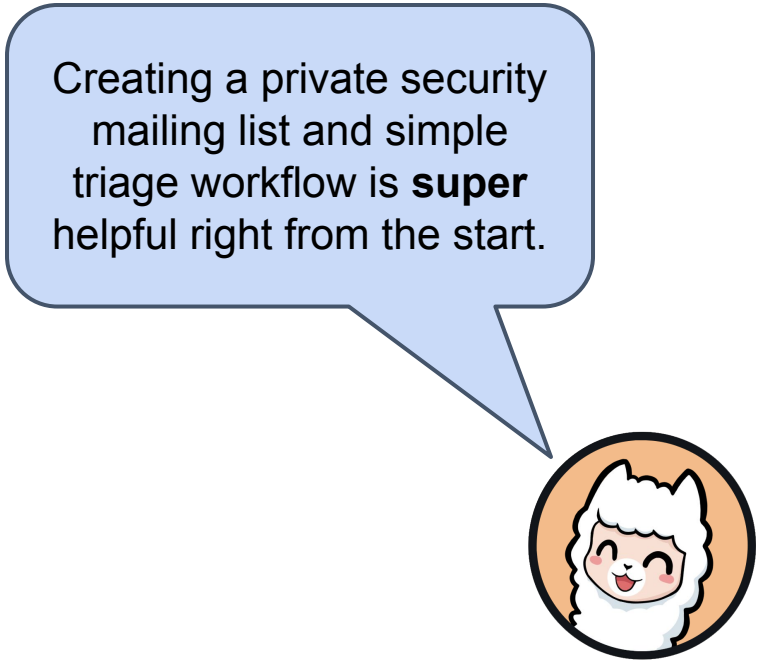

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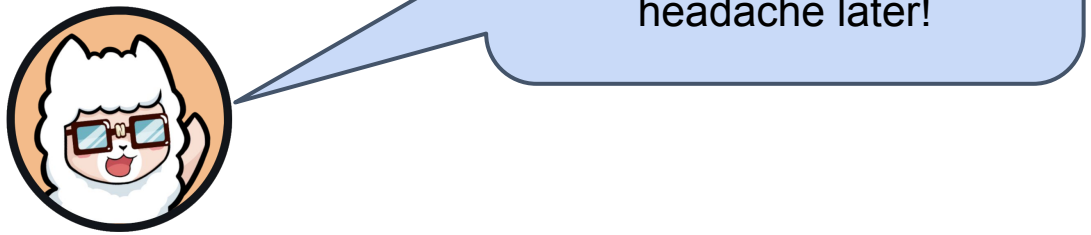
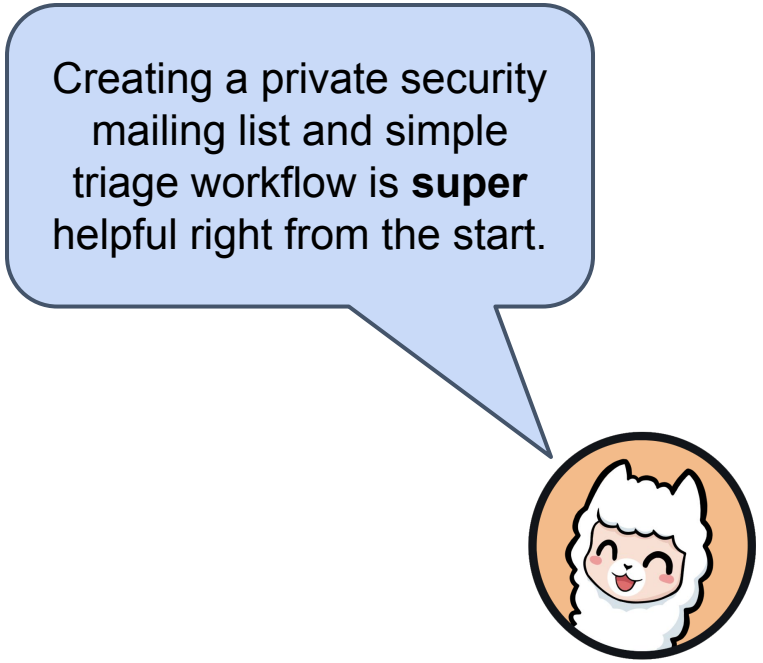
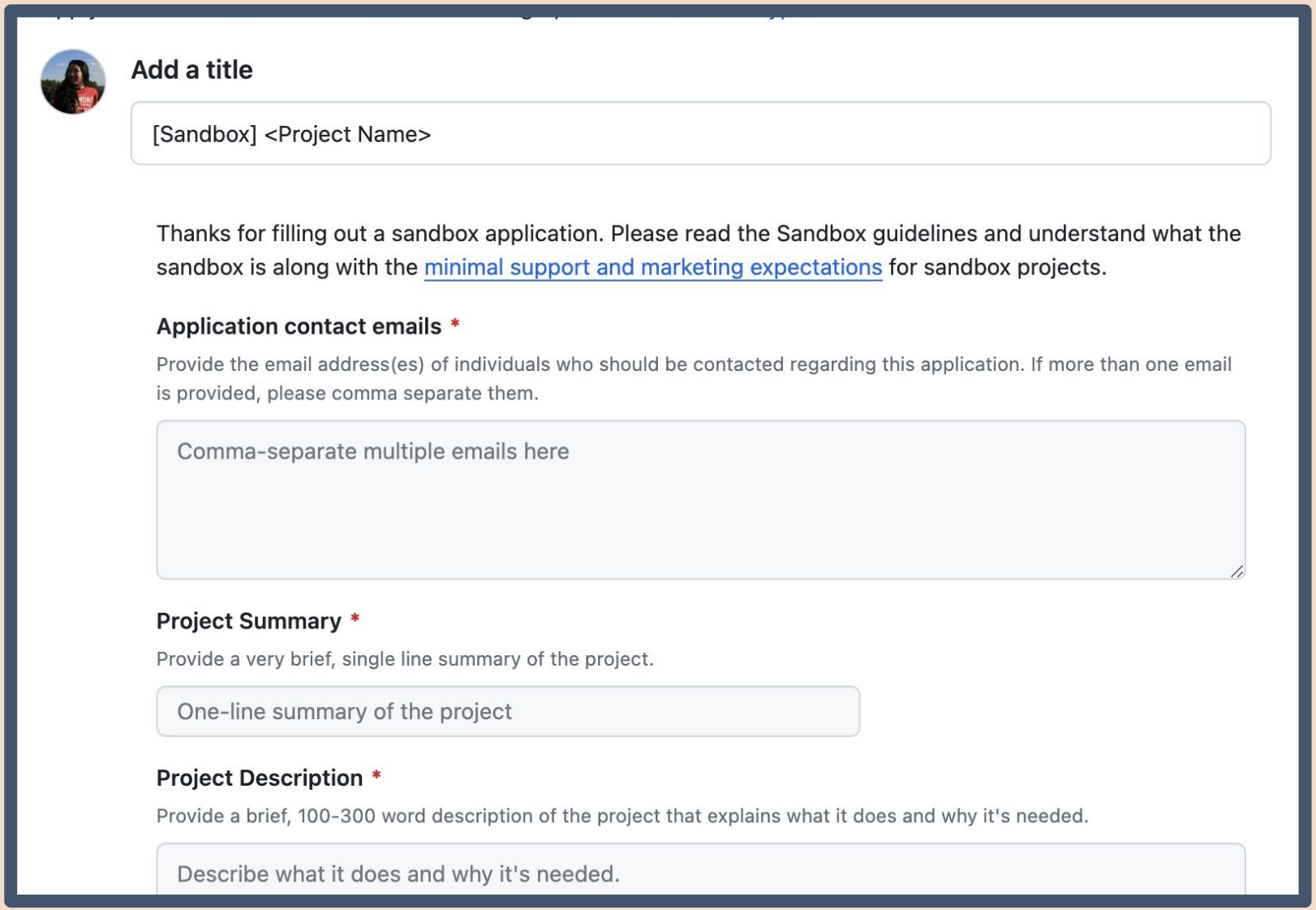




https://github.com/cncf/sandbox/

Apply



Sandbox

APPROVED

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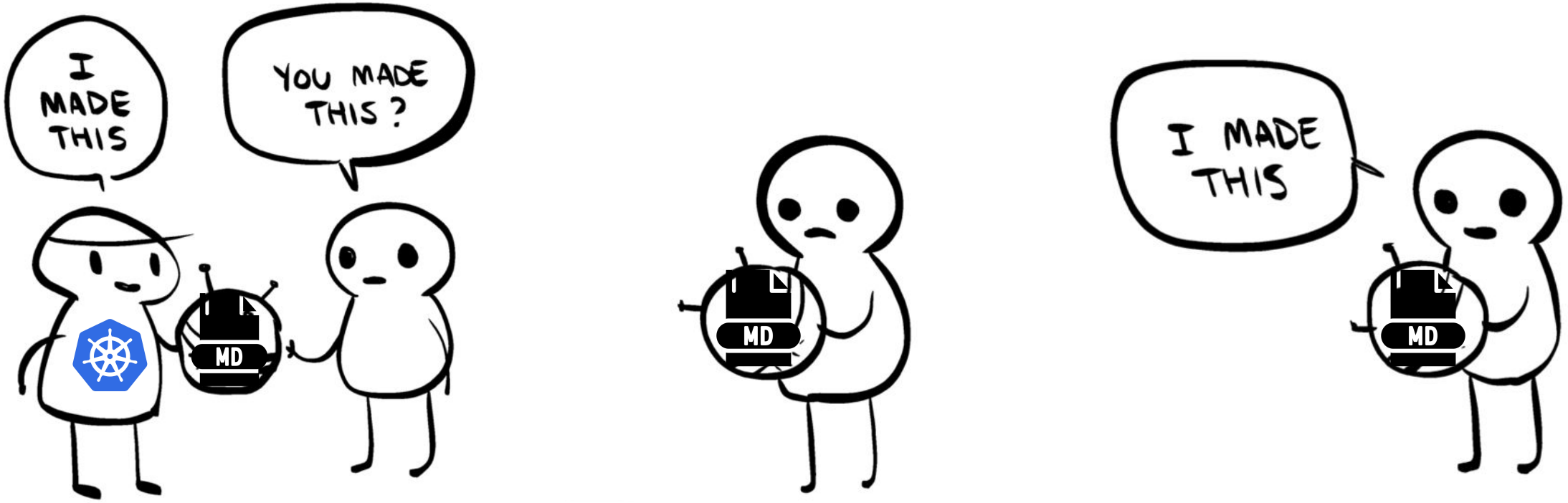
Don’t just copy Kubernetes



Sandbox Priorities

Build Identity  Use cases and advocacy

Sandbox Priorities

Build Identity → Use cases and advocacy

First users → Communication and Feedback

Sandbox Priorities

Build Identity → Use cases and advocacy

First users → Communication and Feedback

Features and Velocity → Simple dev process and good testing

Experiment!

CNCF Service and Marketing Benefits

CNCF Service Desk

- CI/CD
- Legal and Foundation Services
- Tools (Zoom, Slack, etc)
- Website and Design
- Technical Documentation
- Certification and Training Services
- Case Studies
- Community Surveys
- and more

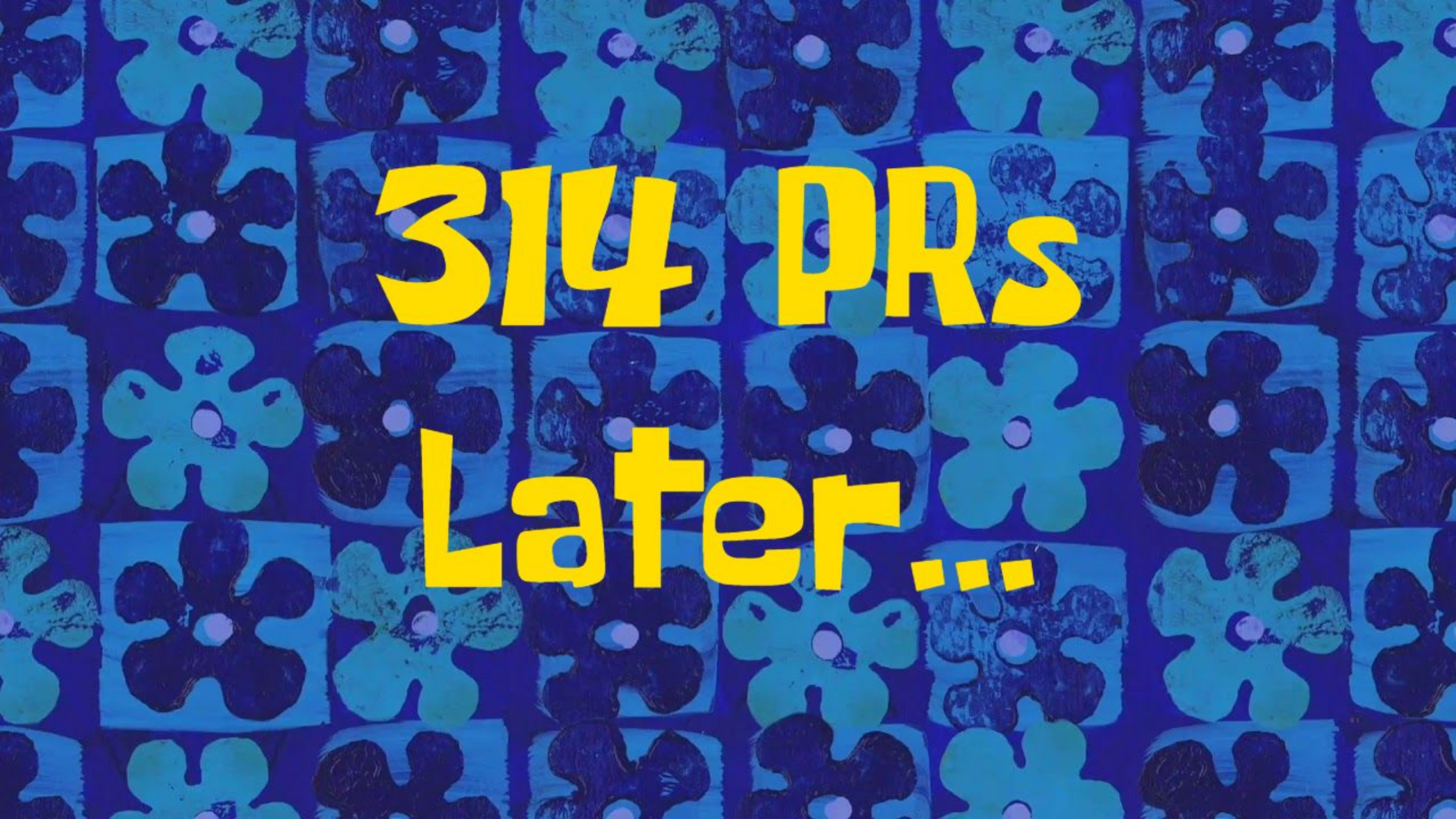
Marketing & Event Support:

- Virtual Only Events
- In-Person Kiosk @ KubeCon

- Sandbox
- Incubating
- Graduated

https://github.com/cncf/servicedesk


This is going really well!


314 PRs
Later...


This is going really well!
Next milestone?

Going for Incubation

@emrayquaza

Sandbox Priorities

Build Identity → Use cases and advocacy

First users → Communication and Feedback

Features and Velocity → Simple dev process and good testing

Graduating from Sandbox

Solidify Identity → Production case studies

Graduating from Sandbox

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Graduating from Sandbox

Solidify Identity → Production case studies

Strong case studies are the pride of your project!

A good idea is to set up an ADOPTERS.md file!

Graduating from Sandbox

Solidify Identity → Production case studies

Contributor growth → Contributor docs and processes

Graduating from Sandbox

Solidify Identity → Production case studies

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Graduating from Sandbox

Solidify Identity → Production case studies

Contributor growth → Contributor docs and processes

Features → Little more stability and Roadmap

Enter DD

Some example questions that will ideally need clear answers

Most of these should be covered in the project proposal document. The due diligence exercise involves validating any claims made there, verifying adequate coverage of the topics, and possibly summarizing the detail where necessary.

Technical

- An architectural, design, and feature overview should be available. (example, example)
- What are the primary target cloud native use cases? Which of those:
  - Can be accomplished now.
  - Can be accomplished with reasonable additional effort (and are ideally already on the project road map).
  - Are in-scope but beyond the current road map.
  - Are out of scope.
- What are the current performance, scalability, and resource consumption bounds of the software? Have these been explicitly tested? Are they appropriate given the intended usage (e.g. agent-per-node or agent-per-container need to be lightweight, etc)?
- What exactly are the failure modes? Are they well understood? Have they been tested? Do they form part of continuous integration testing? Are they appropriate given the intended usage (e.g. cluster-wide shared services need to fail gracefully etc)?
- What trade-offs have been made regarding performance, scalability, complexity, reliability, security etc? Are these trade-offs explicit or implicit? Why? Are they appropriate given the intended usage? Are they user-tunable?
- What are the most important holes? No high availability? No flow control? Inadequate

Governance Requirements

- Public documented communication channel
- Up-to-date meeting schedule
- Documented maintainer list
- Enumerate & document subprojects
- Demonstrate Contributor Growth / Pipeline

- Sandbox
- Incubating
- Graduated

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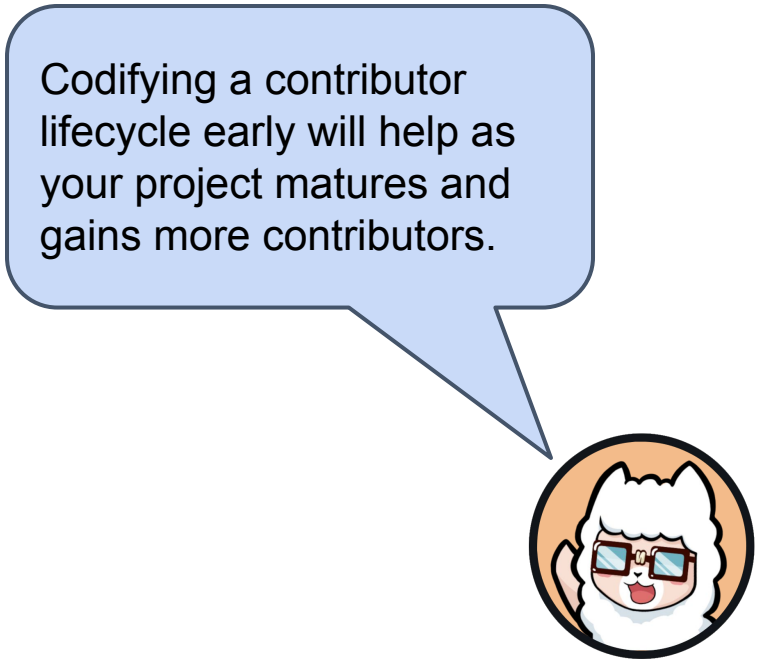

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A contributor ladder adds growth opportunities and can help you grow future maintainers & leaders.

Codifying a contributor lifecycle early will help as your project matures and gains more contributors.

Technical Docs & Processes

- Project Goals & Cloud Native Fit (identify)
- What does the project do and why?
- Overview of project architecture & software design (extended identity)
- Maintain roadmap or some forward looking docs / tracking mechanism
- Project release process

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Regularly scan or implement CI check to prevent importing dependencies with an incompatible license!

Security Requirements

- Document and enforce access control rules
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  - Who has access to CI infra
- Security vulnerability report / triage process
- Achieve a passing score of the Open Source Security Foundation “Best Practices” badge
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https://github.com/cncf/tag-security

Incubating

APPROVED

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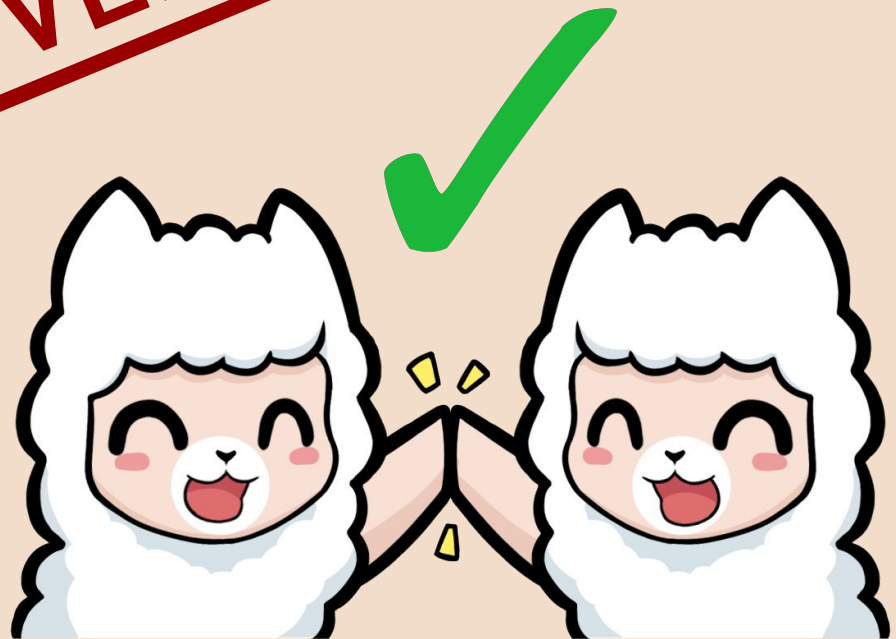
Incubating



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Incubation Priorities

Experiments → Stability and communication

Incubation Priorities

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Contributor growth → Contributor ladder, roles

Incubation Priorities

Experiments → Stability and communication

Contributor growth → Contributor ladder, roles

Revise Governance → Formalized decision making

CNCF Marketing Benefits

KubeCon CloudNativeCon North America 2023

- Sandbox
- Incubating
- Graduated

Events

- Virtual Only Events
- CNCF-hosted colo events

KubeCon Project Opportunities

- In-Person Kiosk
- In-Person Project Meeting
- PR Support
- Maintainer Session
- Project Video Updates (keynote)

Marketing

- CNCF Online Programs
- CNCF Blog
- Case Studies
- Surveys

Marketing Release Support

Major: Incubating, Graduated

- Project webinar (2/year)
- CNCF Blog
- Media engagement
- Twitter Support

https://github.com/cncf/servicedesk

Incubating

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Incubating

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Going for Graduation

@emrayguaza

From Incubation to Graduation

Vendor-neutrality → Committer and vendor diversity

Solid Governance → Full Committer lifecycle, emeritus members

More DD

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Why DD?

2. Role of the CNCF.

The CNCF will serve a role in the open source community responsible for:

- (a) Stewardship of the projects
  - i. Ensuring that the technologies are available to the community and free of partisan influence
  - ii. Ensure that the technologies' brand (trademark and logo) is being cared for and used appropriately members of the community, with a specific emphasis on uniform user experience and high levels of application compatibility
- (b) Fostering the growth and evolution of the ecosystem
  - i. Evaluating which additional technologies should be added to meet the vision of cloud native applicat and working to encourage the community to deliver them, and integrate them if and only if they advan the general agenda
  - ii. Providing a way to foster common technical standards across the various pieces
- (c) Promotion of the underlying technologies, and approach to application definition and management, including: events and conferences, marketing (SEM, direct marketing), training courses and developer certification
- (d) Serve the community by making the technology accessible and reliable.
  - i. The foundation seeks to offer up a fully integrated and qualified build of each of the constituent piec on a well-defined cadence across the reference architecture.

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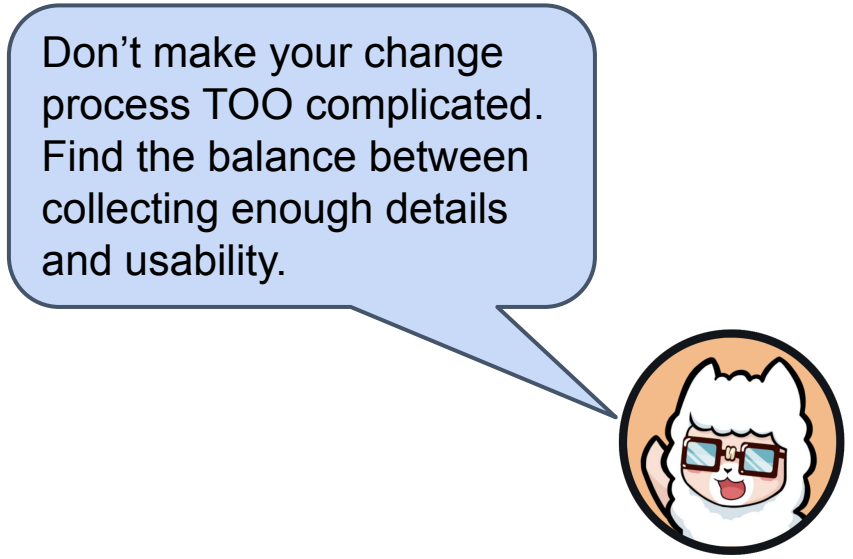

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- Security vulnerability report / triage process
- Achieve a passing score of the Open Source Security Foundation “Best Practices” badge
- Perform and document a Security Self Assessment
- Third Party Security Audit
- Resolve all High & Critical Flaws Discovered in Security Audit

- Sandbox
- Incubating
- Graduated

Graduated

APPROVED

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Marketing Benefits

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- CNCF Online Programs
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- Case Studies
- Surveys
- Project Media Velocity Reports

Marketing Release Support

Major: Incubating, Graduated
Minor: Graduated

- Project webinar (2/year)
- CNCF Blog
- Media engagement
- Twitter Support

https://github.com/cncf/servicedesk

So serious

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...Now What?

Evolution of Priorities

Feature Velocity  Stability

Evolution of Priorities

Feature Velocity  ~~Stability~~ "Boring"

Evolution of Priorities

Feature Velocity → ~~Stability~~ "Boring"

Contributor Growth → Maintainer Health

Maintainer Health

- Find the balance between prioritizing bringing in new contributors and focusing on your maintainers.
- Invest the time to identify areas of the project at risk and what you can watch for in the future.
- Work to turn active contributors into maintainers (Ladder, Mentoring).
- Automate or streamline what you can to reduce maintainer toil.

Maintainer Health

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INCLUDING GOVERNANCE!

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INCLUDING GOVERNANCE!

Evolution of Priorities

Feature Velocity → ~~Stability~~ "Boring"

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Documentation → Communication & Transparency

Communication & Transparency

- Develop process to surface both **achievements** and **risks**.
  - Published achievements and reports help maintainers justify their commitment.
  - Everyone will assume things are fine, unless risks are highly visible.
- Write ***everything*** as if addressing someone brand new to the project with minimal knowledge of the space.
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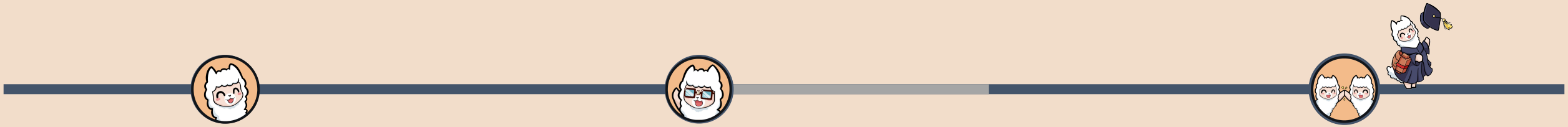
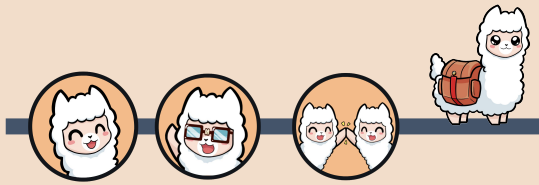
BE TRANSPARENT!

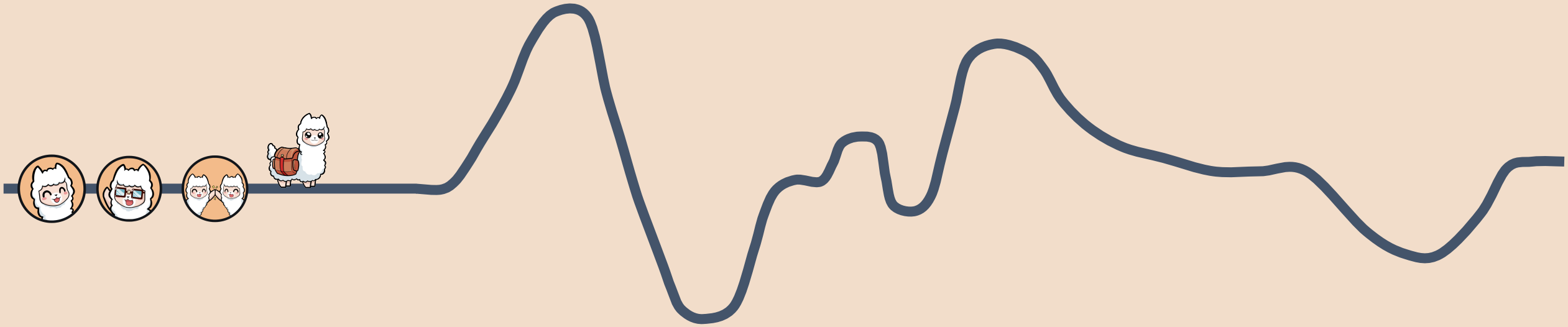
Are we done?



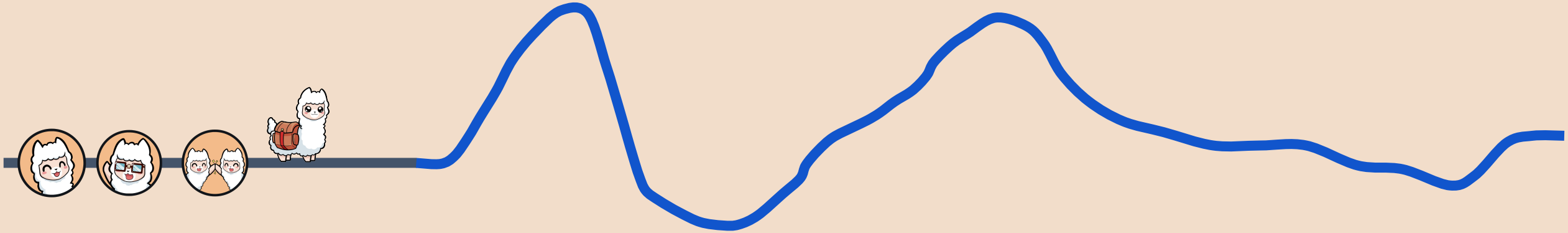
...the journey is just beginning



...and it'll be bumpy



a journey worth taking.



...but that's how we learn to build things

Thank You!