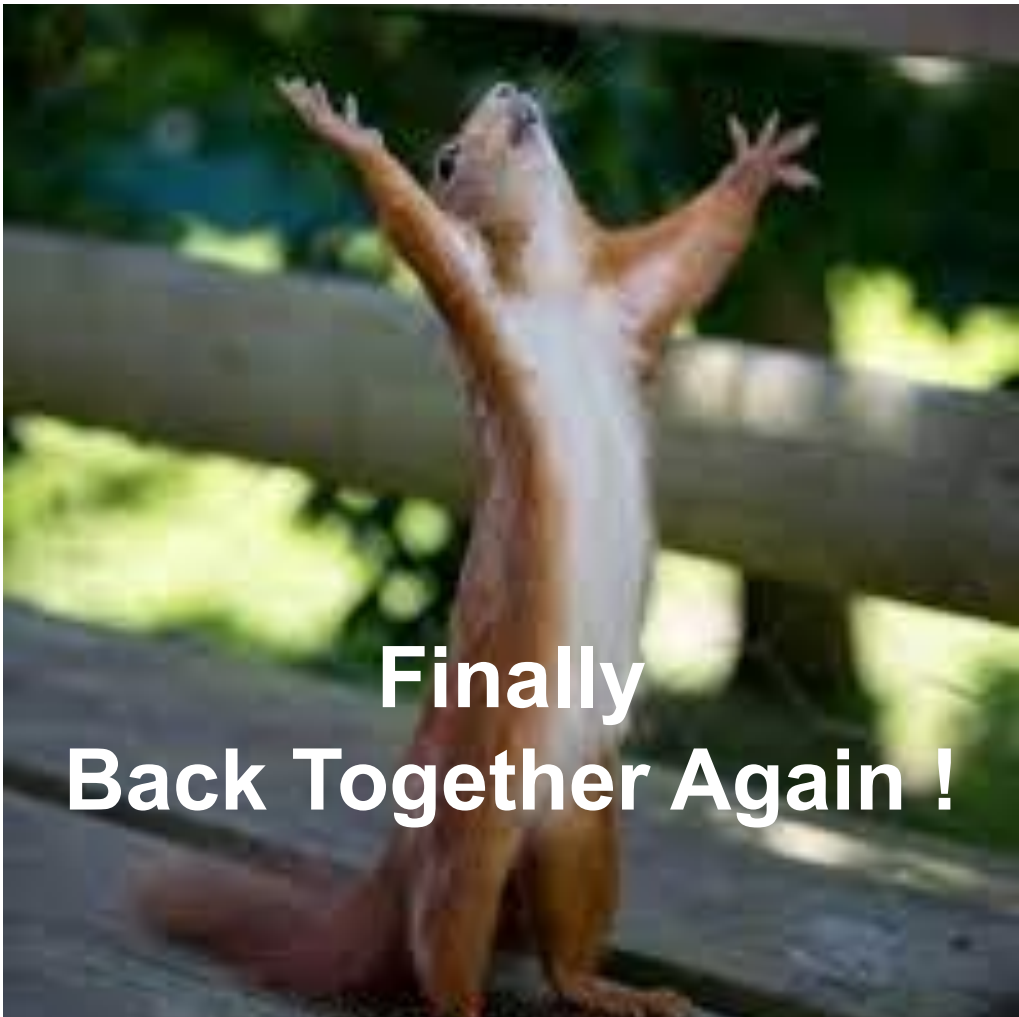




# ONF Update for Broadband Meetup Berlin, 5-19-22

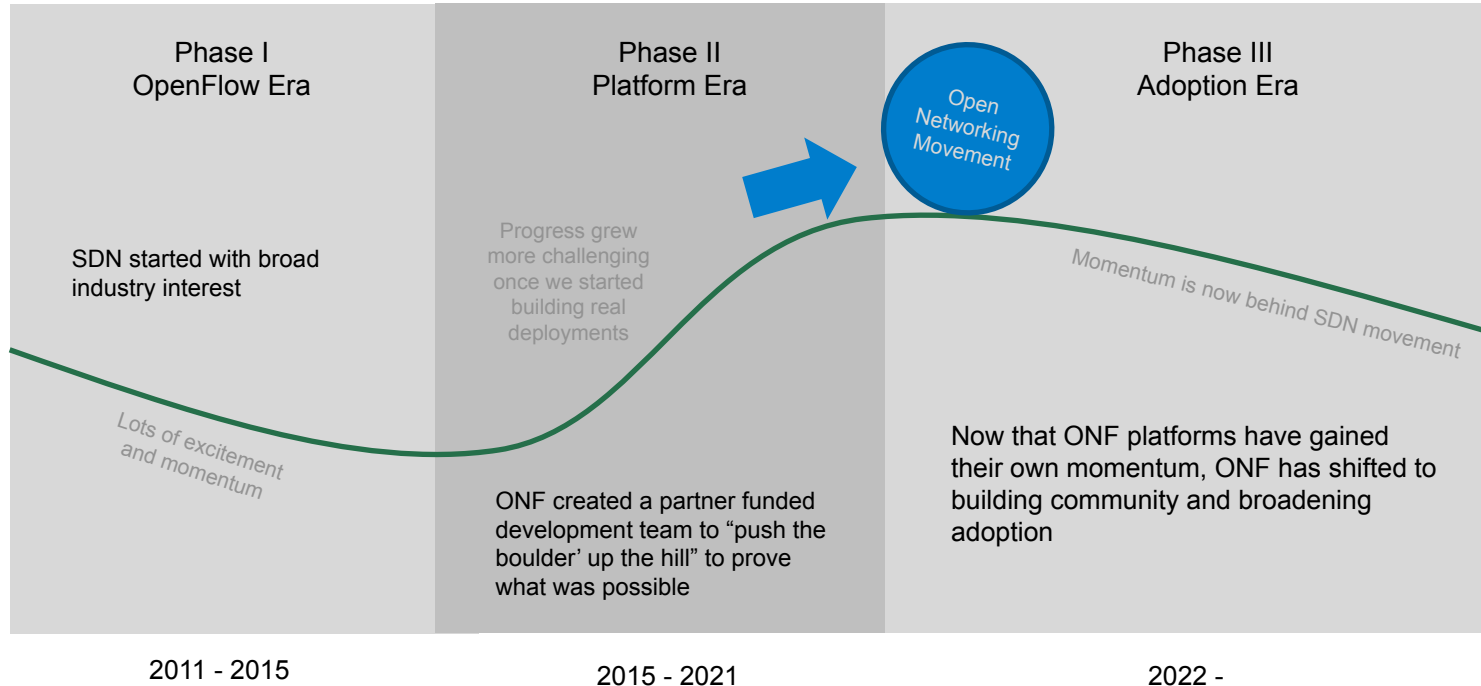
Timon Sloane  
General Manager, ONF



**Finally  
Back Together Again !**

# Open Networking is at an inflection point

ONF has crossed an inflection point and momentum is now with us



## ONF Through Phase II

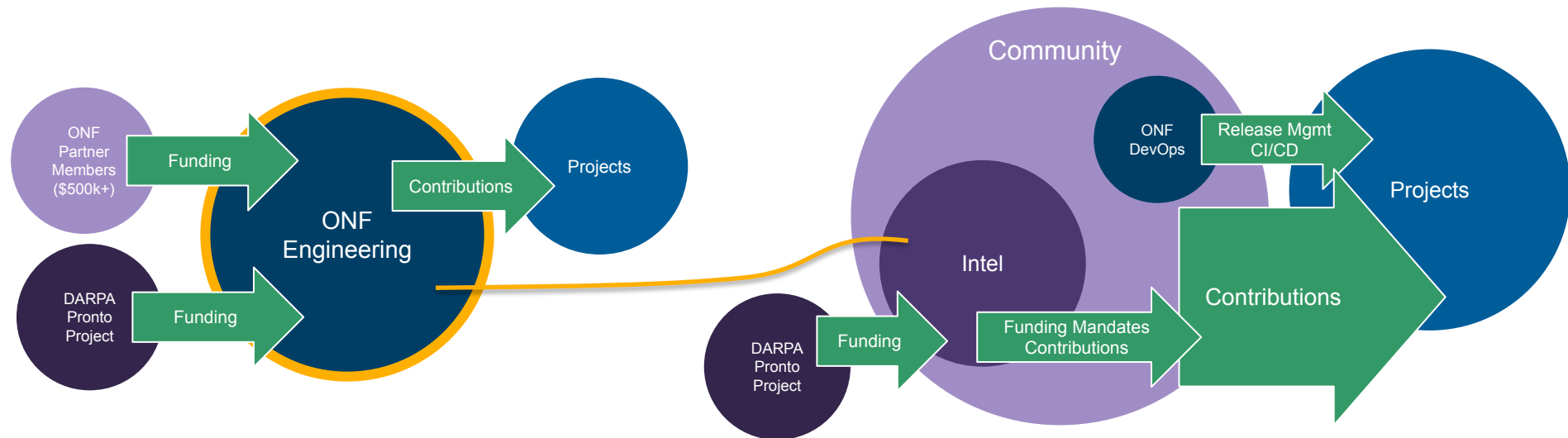
### Partner-Funded Engineering

- ONF owned & led OSS platform development
- 40+ developers funded by Partners
- Small outside dev community

## ONF in Phase III

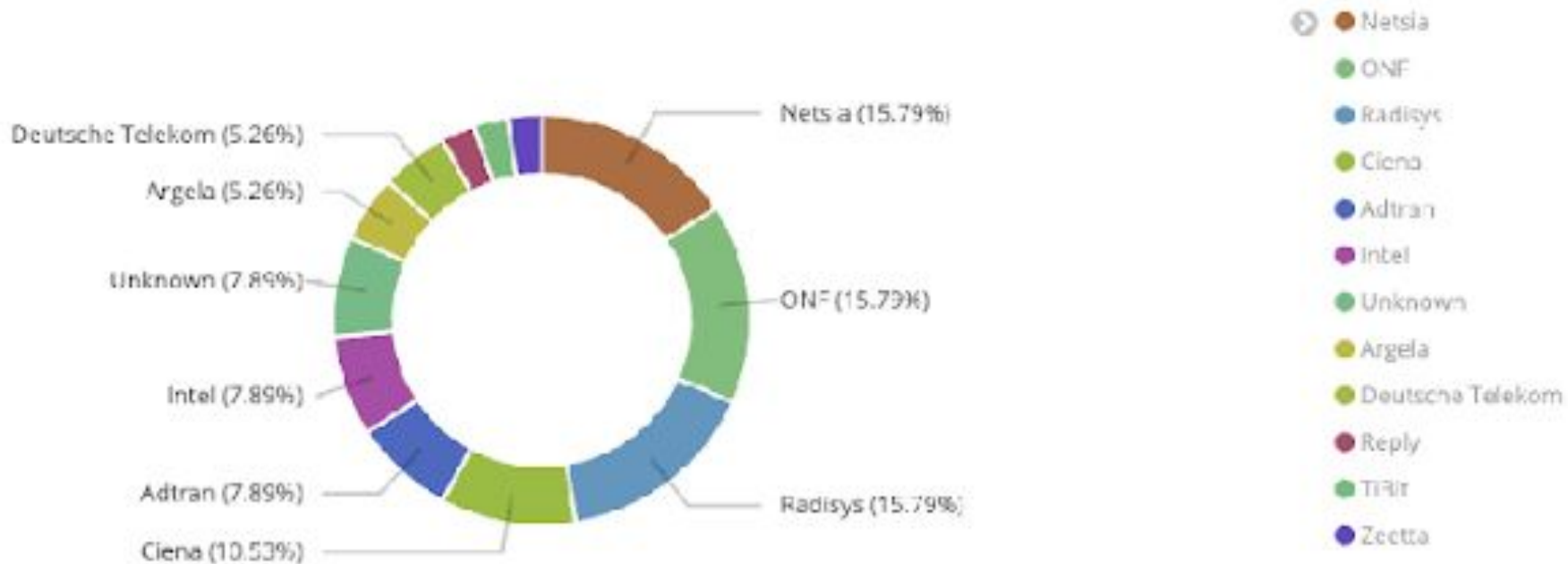
### Open Community-Based Approach

- ONF hosts platforms & nurtures developer community
  - Small engineering team for release mgmt & CI/CD
  - Much larger dev community making majority of contributions



- Intel becomes a stronger community member
  - Former ONF engineers remain engaged in ONF projects
  - DARPA funding continues to support dev team contributing to ONF projects

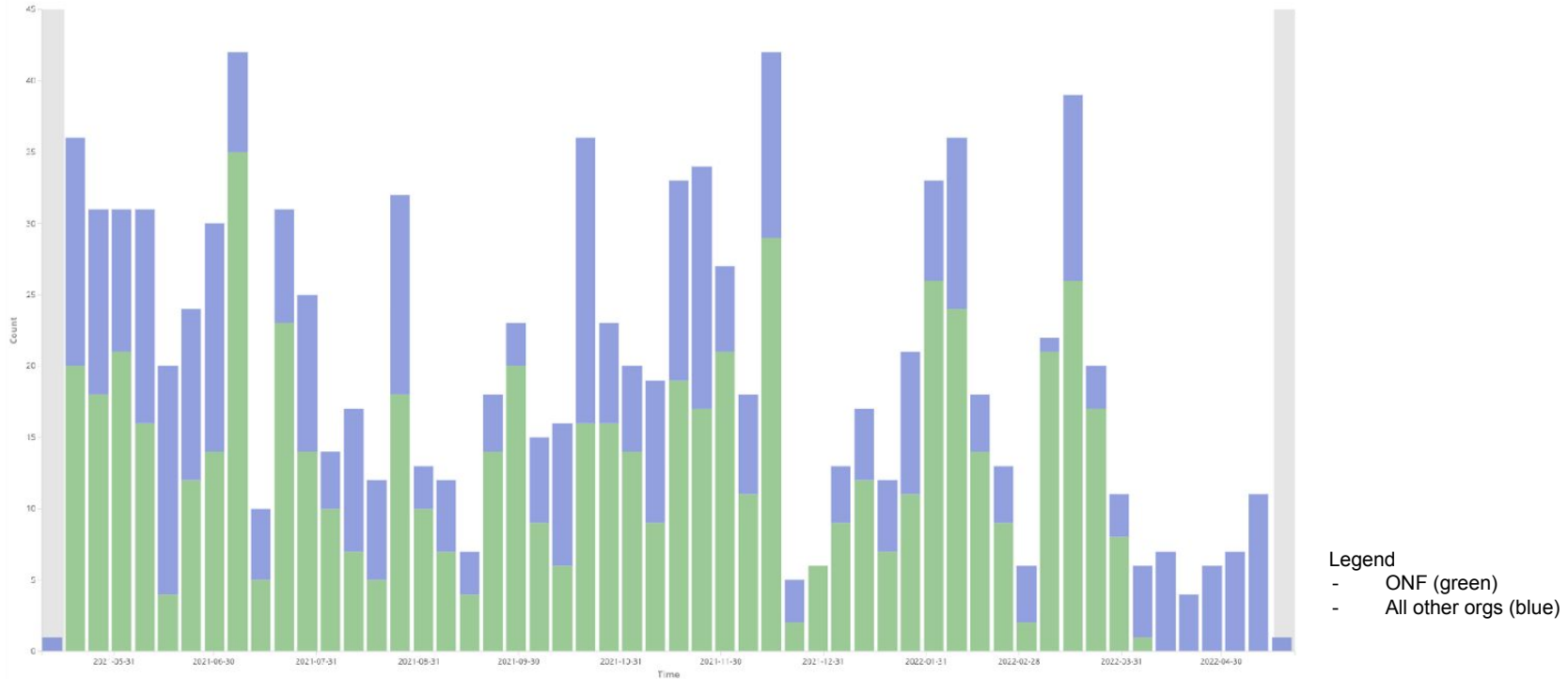
# VOLTHA Contributions Over Last 12-Months by Org



# VOLTHA Code Contributions Over Time

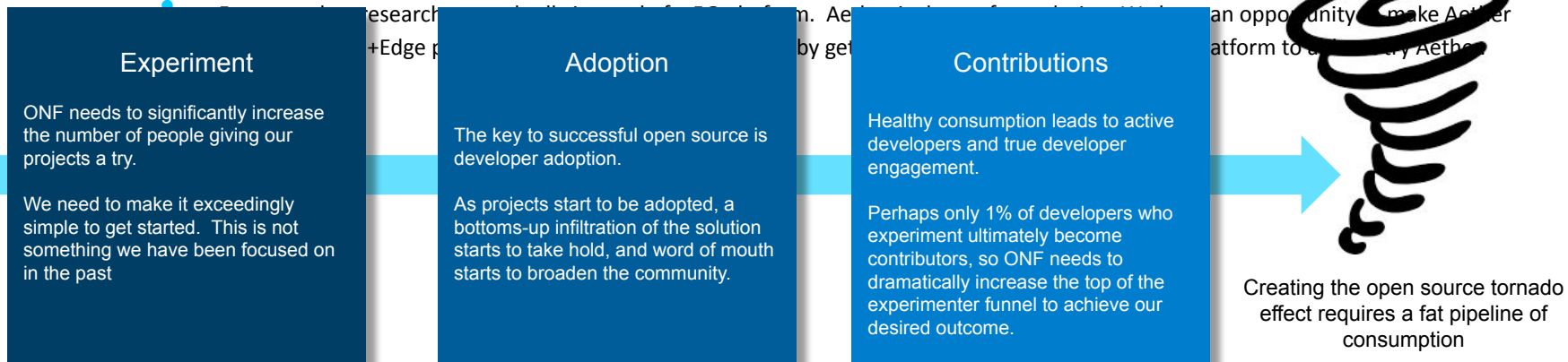
## by Month Over Past 12-Months

Code Contributions Over Time

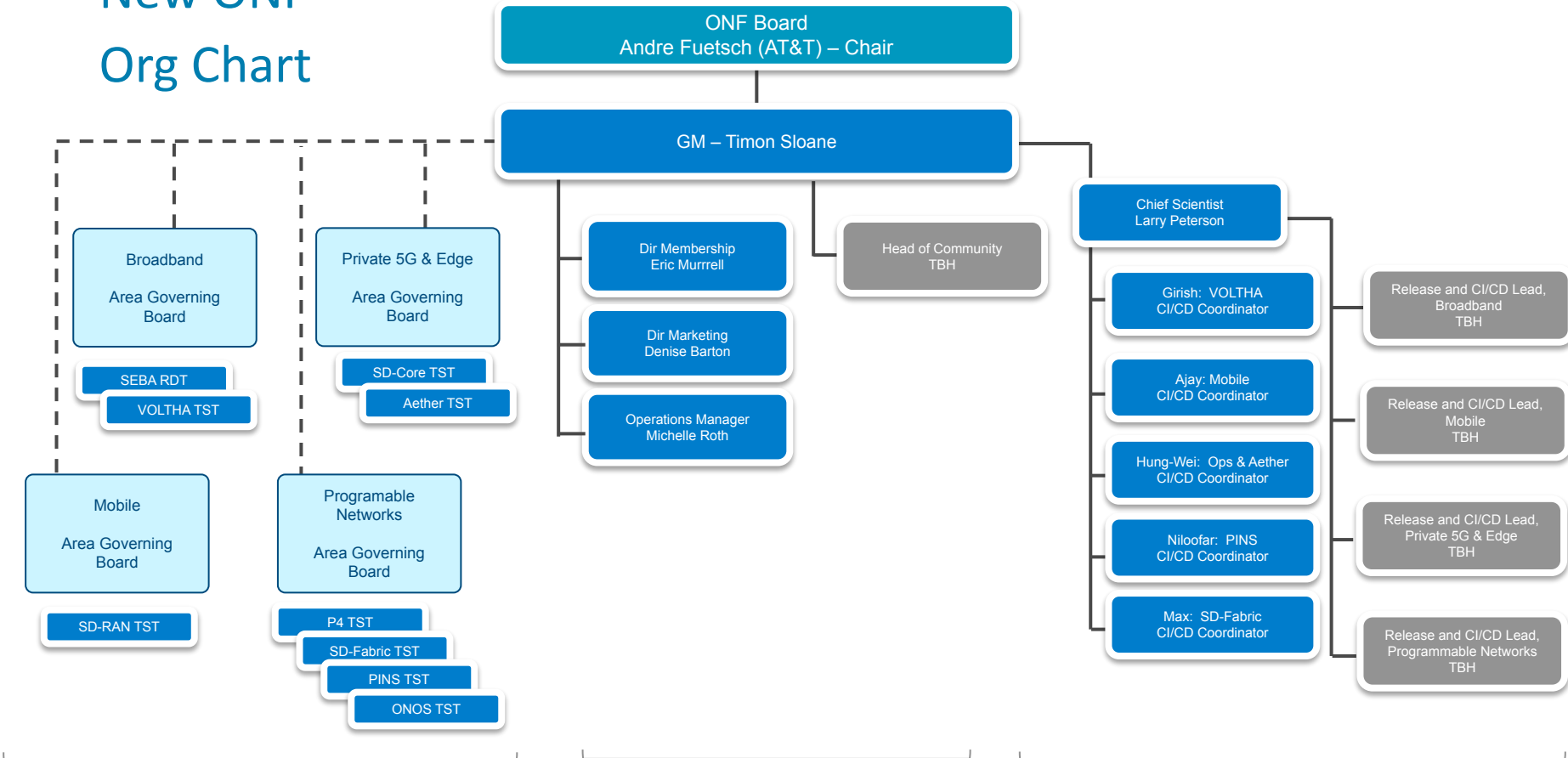


# Consumption First to Activate the Dev Community

- ONF became reliant on our own engineers
  - We didn't take time to activate the community. We tended to just want to move fast to build things.
  - This served its purpose at the time, but we now need to dramatically alter our approach to build an active community
- We need to change our DNA and put concerted effort into making consumption easy for our projects
  - It all starts with getting more people experimenting with our amazing platforms



# New ONF Org Chart



Community and Project leadership

Ops team in place to support  
Marketing/Events/Membership

Developers will focus on easing consumption  
and ability for community to contribute to the projects  
(rather than contributing code)



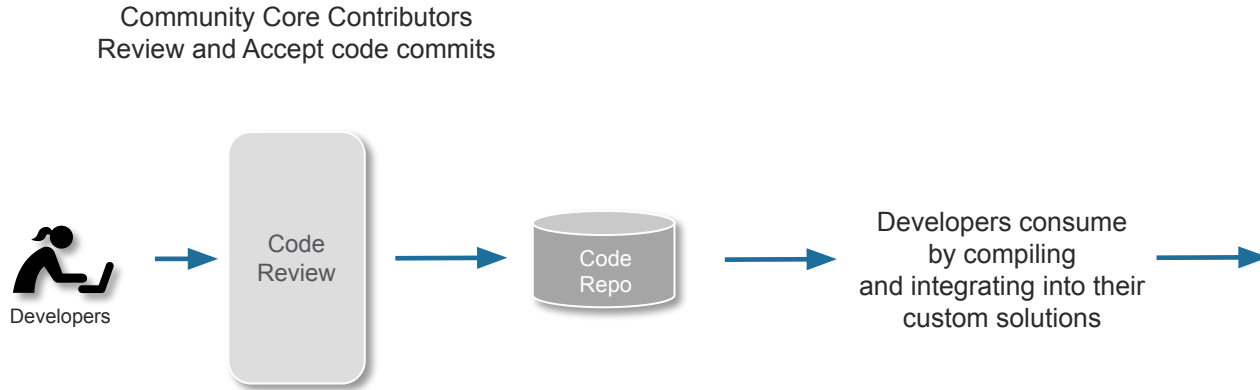


Open Source

+

Open CI/CD

# Traditional Open Source



## CHALLENGES:

Future Contributions can break past commits, and these conflicts can be hard to catch and identify

Upgrading to latest release require careful/manual verification and often selectively pulling individual patches

Very common to lag and fall behind the most current release. Gap can grow insurmountable over time.

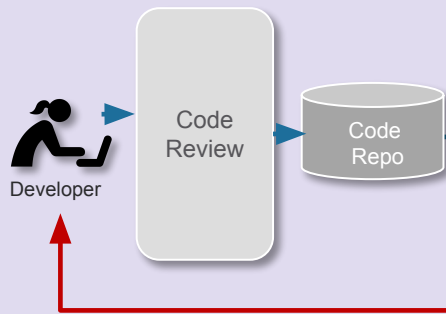
# How best can we help bring CI/CD to the ecosystem?

- ONF has CI pipeline for VOLTHA
  - Artifacts get used in more conventional release
- ONF developed a complete CI/CD pipeline for deploying, maintaining and operationalizing Aether
  - Allowed ONF to develop CI/CD infrastructure and expertise
  - Gave ONF operational experience
  - Ensured all the sites stayed in sync
- But
  - This pipeline required ONF to manage/deploy the network
  - ONF's active involvement in all operations limited our ability to scale number of Aether edge sites
    - Other orgs could only host an edge
    - They could not run their own network
  - Limited Aether deployments to the monolithic model supported by the CD pipeline
- Vision going forward
  - Break CI and CD apart, and allow each user to own and customized their own CD pipeline fed by a common open CI pipeline

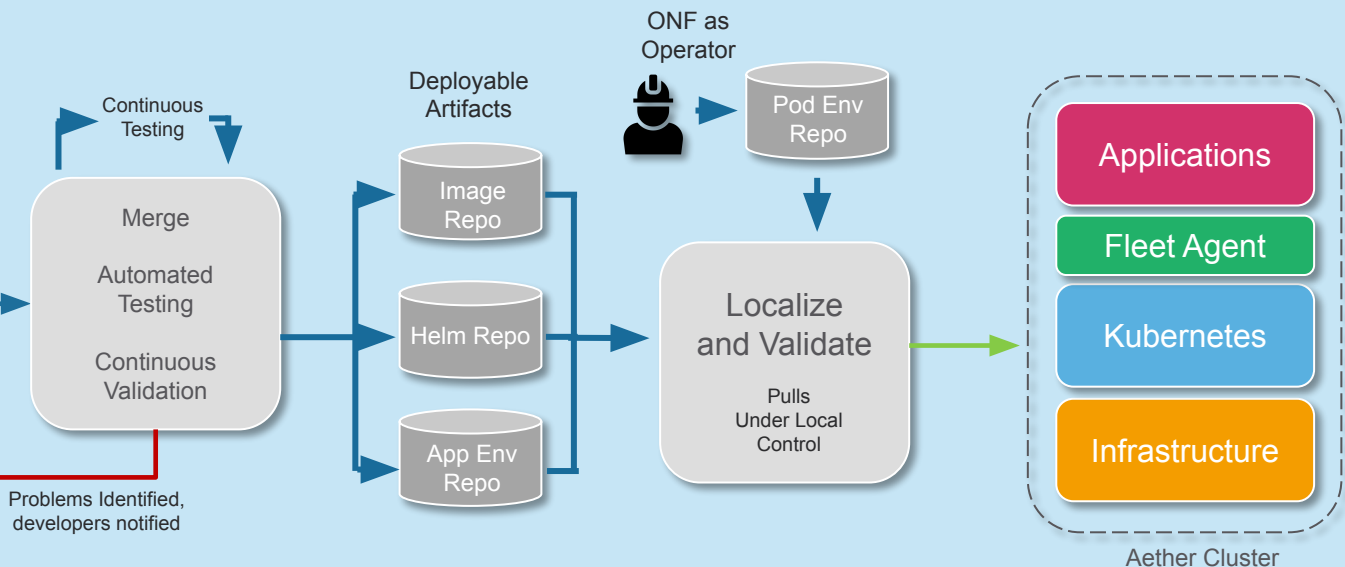
# Existing Aether Deployment Model

## CI/CD Pipeline optimized for ONF-managed network deployed on GCP

### Open Source



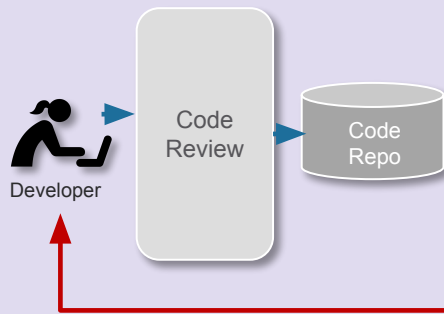
### Continuous Integration and Continuous Deployment



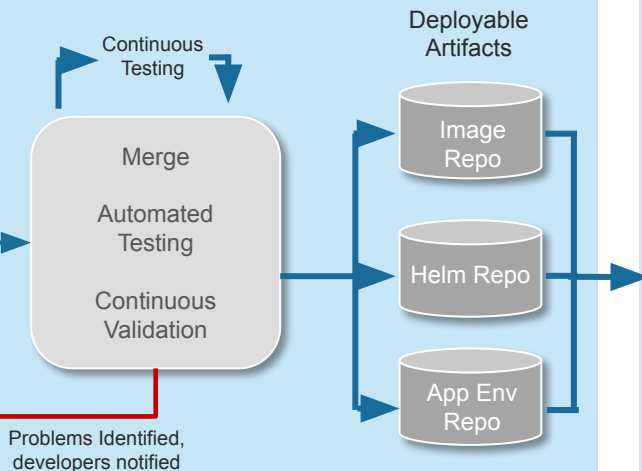
# ONF Vision

## Open Source + Open CI + Multiple CD Options

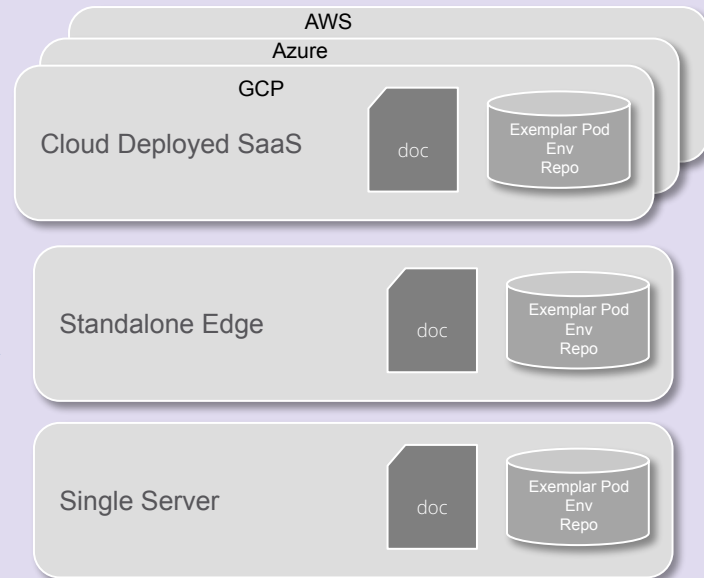
### Open Source



### Continuous Integration



### Exemplar CD Packages



Users Pick a Package to Start,  
and then Customize for their Deployment Scenario



# Broadband Area Update

# 2022 - Project Area Goals

## Broadband

**VOLTHA** community under solid community leadership, with adoption growing and community supporting the product deployments.

Recruit additional operators to publicly share that they are consuming and supporting VOLTHA.

Additional PON vendors certified with the project

Align with BBF for VOLTHA to fit in with a CloudCO/BAA architecture

## Mobile

**SD-RAN** recognized as the leading open RIC platform.

DT trial to have deployed another RAN CU/DU vendor, demonstrating dual source for all RAN components.

Align SD-RAN with standardized O-RAN service models

New use case demonstrated (power management?) with multiple interoperable xApps.

## Private 5G & Edge

**Aether** becomes de facto open platform for 5G/Edge research (for both academia and commercial)

**Aether** adopted for at least 1 commercial SaaS product offering

**SD-Core** adopted by at least one provider building a private 5G solutions

## Programmable Networks

**DPU/IPU** support integrated into SD-Fabric

**P4 UPF implemented on DPU/IPU** and integrated into Aether

**PINS** demonstrating compelling ONOS-controlled SDN use case on top of conventionally routed network

# Broadband Area Board – Seeding Stage

NOTE – this is all preliminary, formation is still underway

## Mantra #1

**“Running code leads to rough consensus”**

## Mantra #2:

Board Participation Criteria:

**“Ongoing active participation and contributions towards advancing in one or more projects within the Area”**



# Broadband Area Board – Seeding Stage

**NOTE – this is all preliminary, formation is still underway**

- Broadband Area Board Role:
  - Drive strategic direction, goals, roadmap - in alignment with project TSTs (who own technical roadmaps) and other organizations/SDOs
  - Foster market adoption
    - Promote adoption of the project/platform within each board member's own company
    - Participate in community building and recruiting other organizations to join the projects
  - Promote market awareness of the Area's work
- Creating the Board
  - Criteria for any company to have a representative on the board:
    - **“Ongoing active participation and contributions towards advancing in one or more projects within the Area”**
  - Self Propagating Board
    - Board members invite others meeting the criteria
    - If member no longer meets criteria, they are asked to leave
  - Board will ensure at least 50% of the seats are held by operators (to avoid vendors coopting the agenda)

# Special Thanks



Andrea Campanella



Manuel Paul

... and to DT for hosting us today

