Is OpenStack
still needed in 2023?

# Hello!

My name is Thierry Carrez

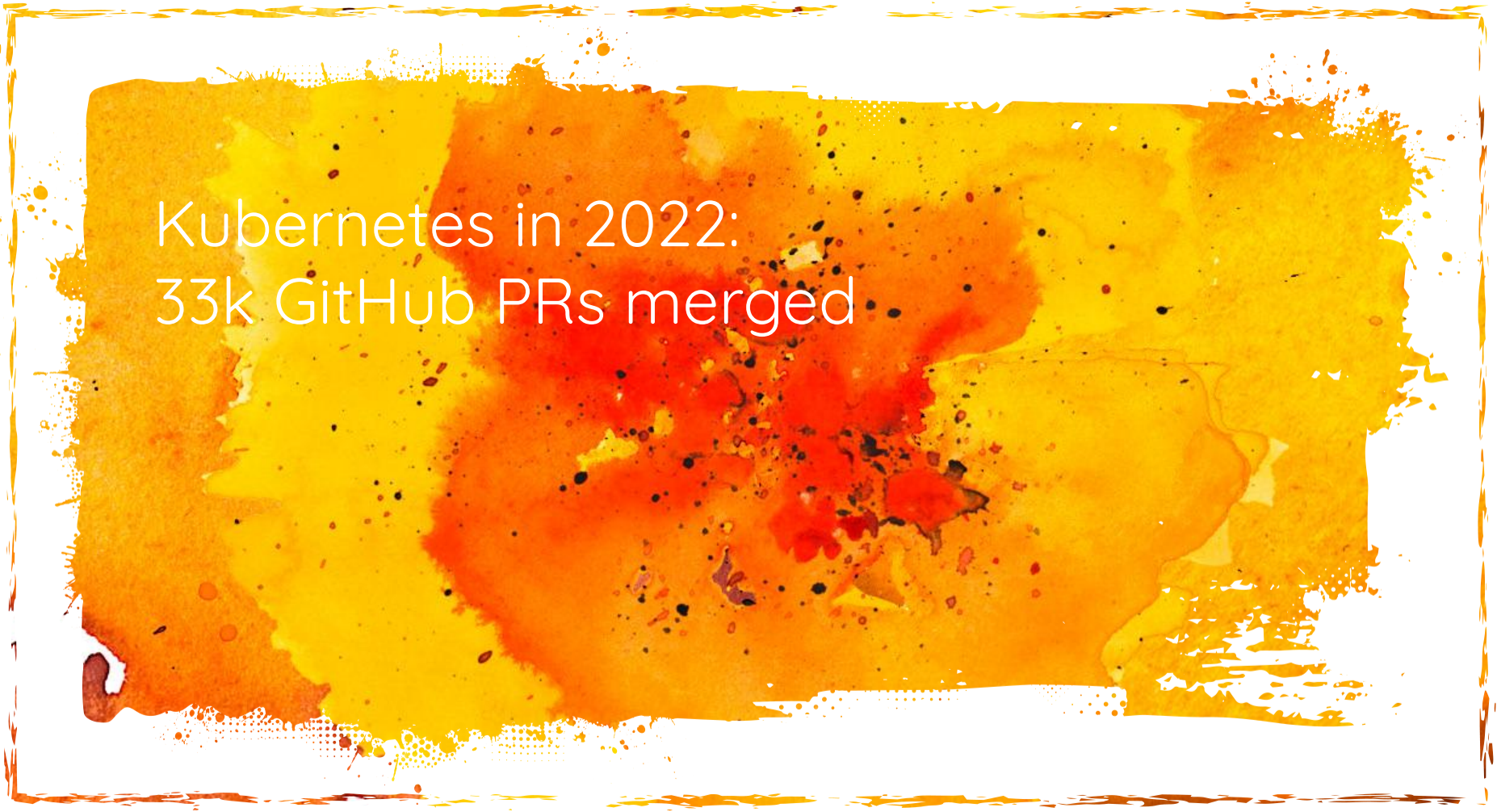
General Manager at the OpenInfra Foundation
Vice-chair at Open Source Initiative

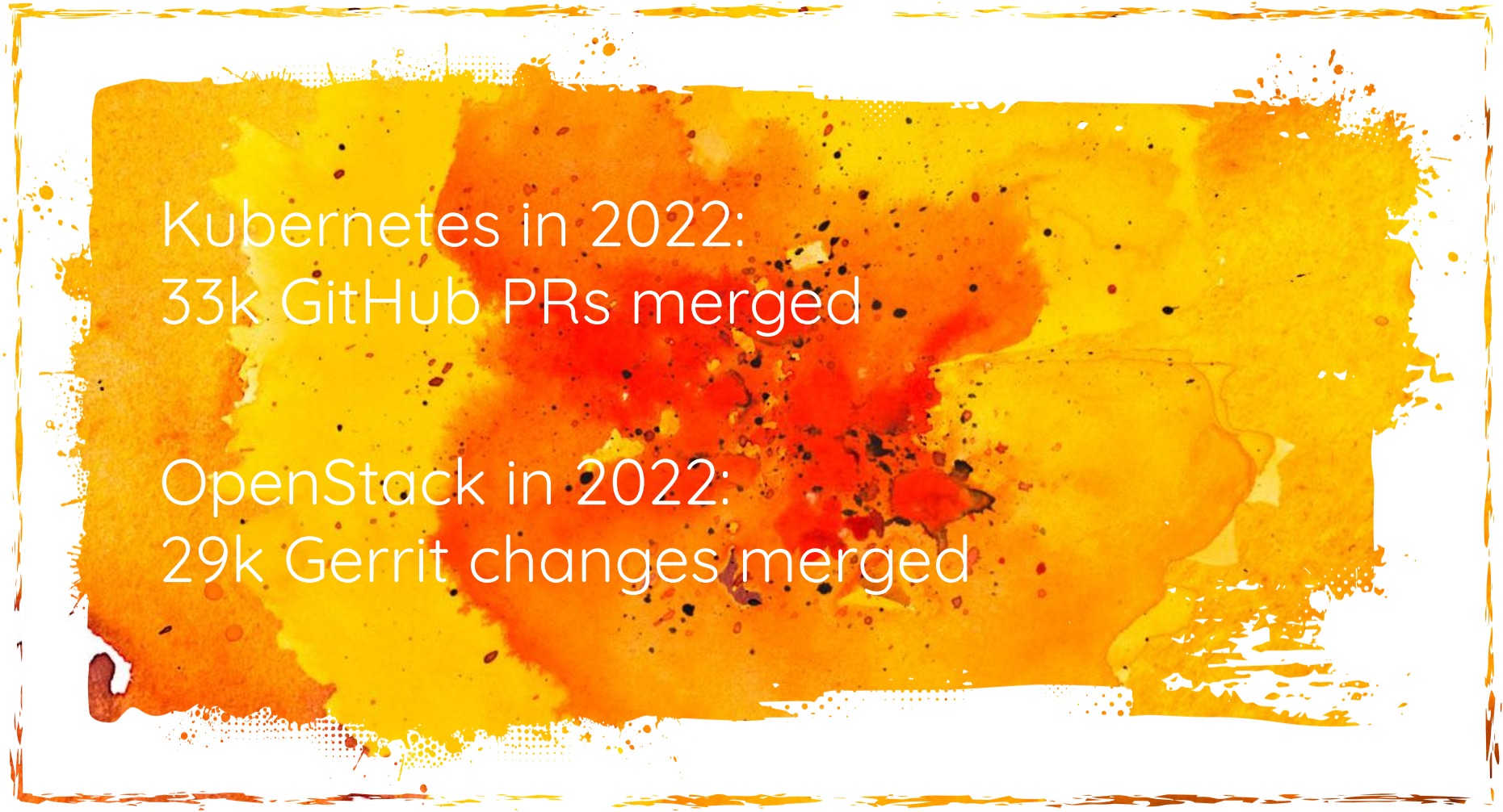
@tcarrez@fosstodon.org

# Is OpenStack dead?

# 40+ million CPU cores

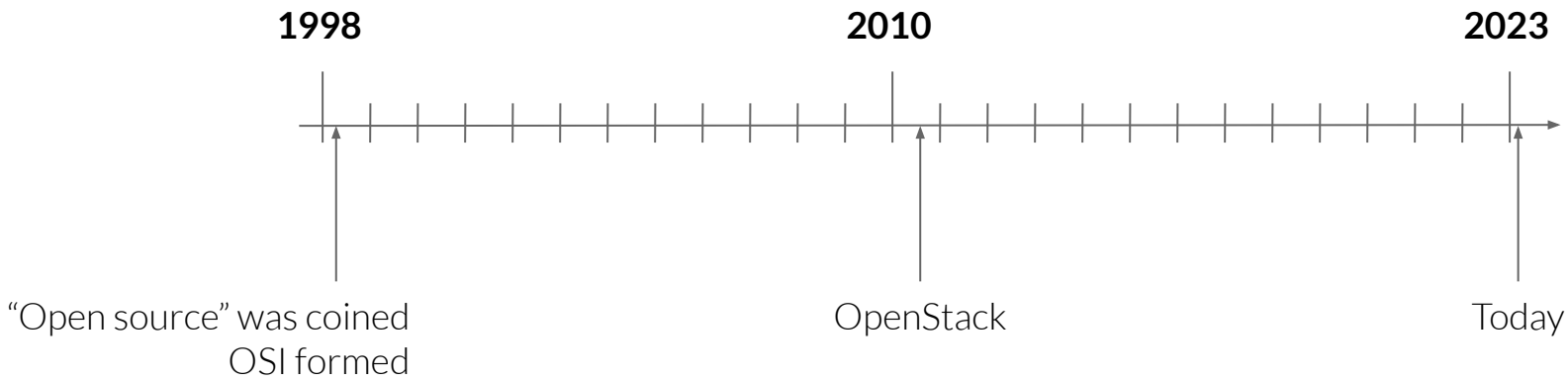
# Deployments > 1 M cores

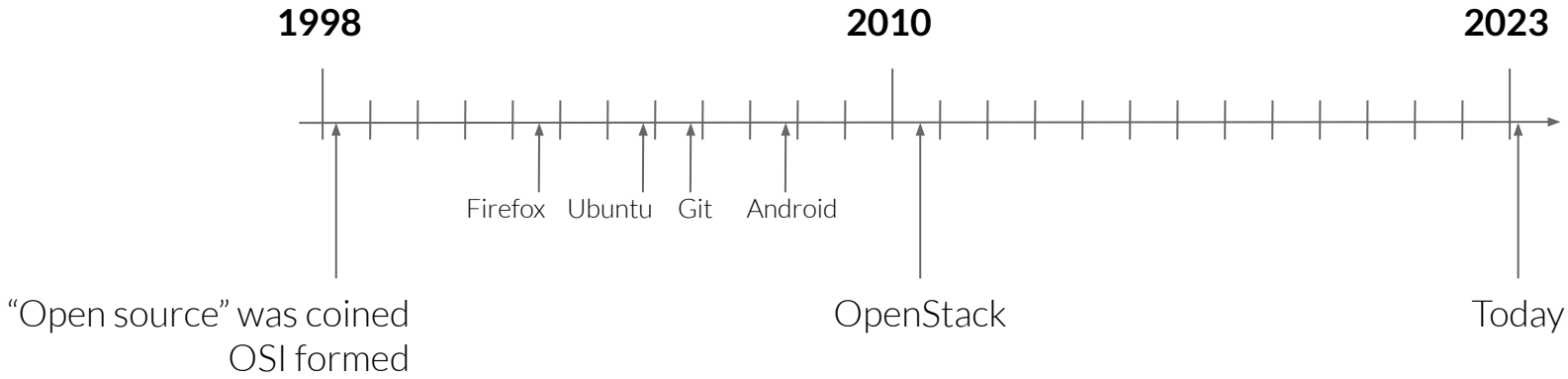

Kubernetes in 2022:
33k GitHub PRs merged


Kubernetes in 2022:
33k GitHub PRs merged
OpenStack in 2022:
29k Gerrit changes merged

# An OpenStack history

# Back in 2010...


1998
2010
2023
“Open source” was coined
OSI formed
OpenStack
Today


1998
2010
2023
Firefox
Ubuntu
Git
Android
“Open source” was coined
OSI formed
OpenStack
Today

# The first 6 years

- Nova + Swift

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- The Linux of the datacenter

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- Nova + Swift
- The Linux of the datacenter
- Startups everywhere!
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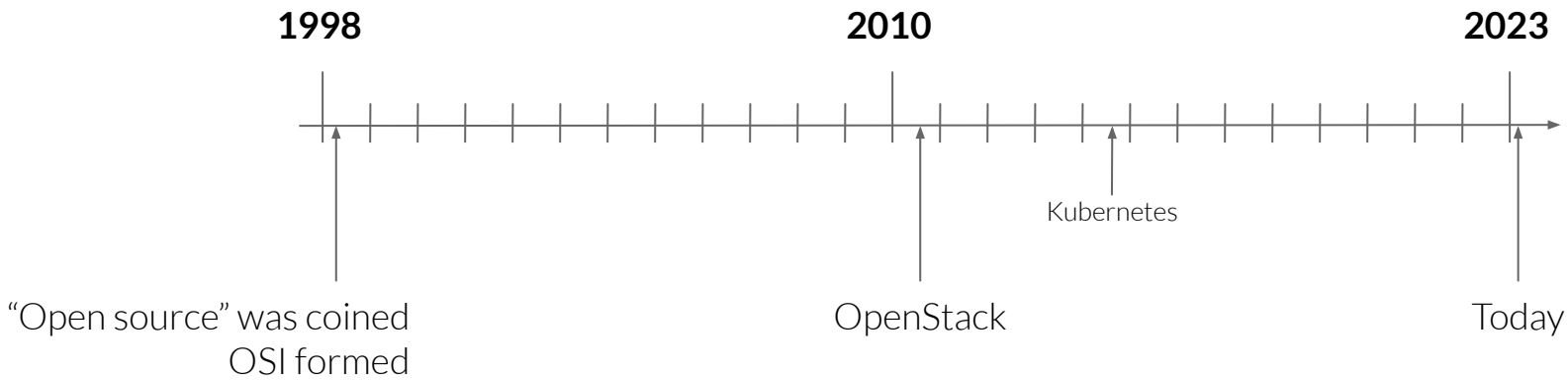
- Scope creep
- Who is the user?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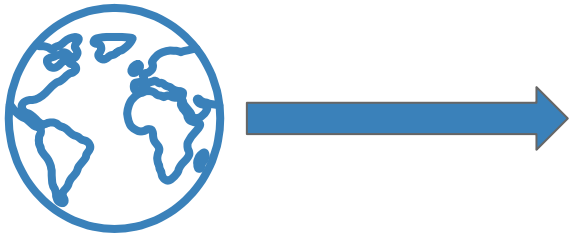
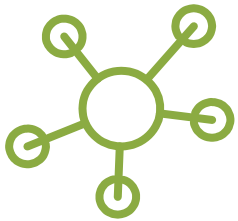
# A welcome clarification

- The advent of Kubernetes



Users



Applications

Users

Physical hardware

Users

Application
developers
& deployers

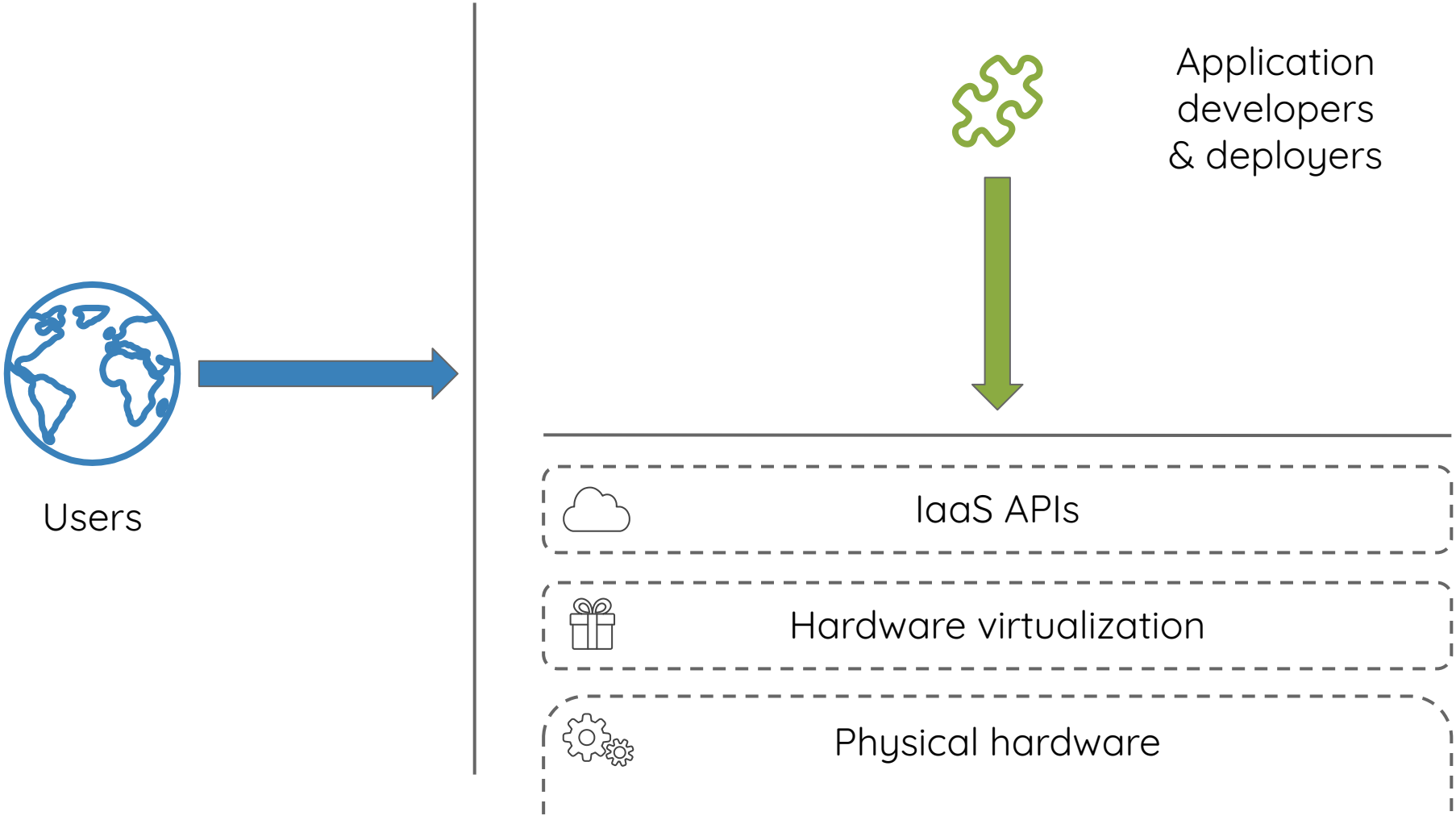
Physical hardware

Users

Application
developers
& deployers

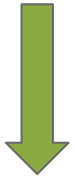
Hardware virtualization

Physical hardware


Application
developers
& deployers
Users
IaaS APIs
Hardware virtualization
Physical hardware

Users

Application
developers
& deployers

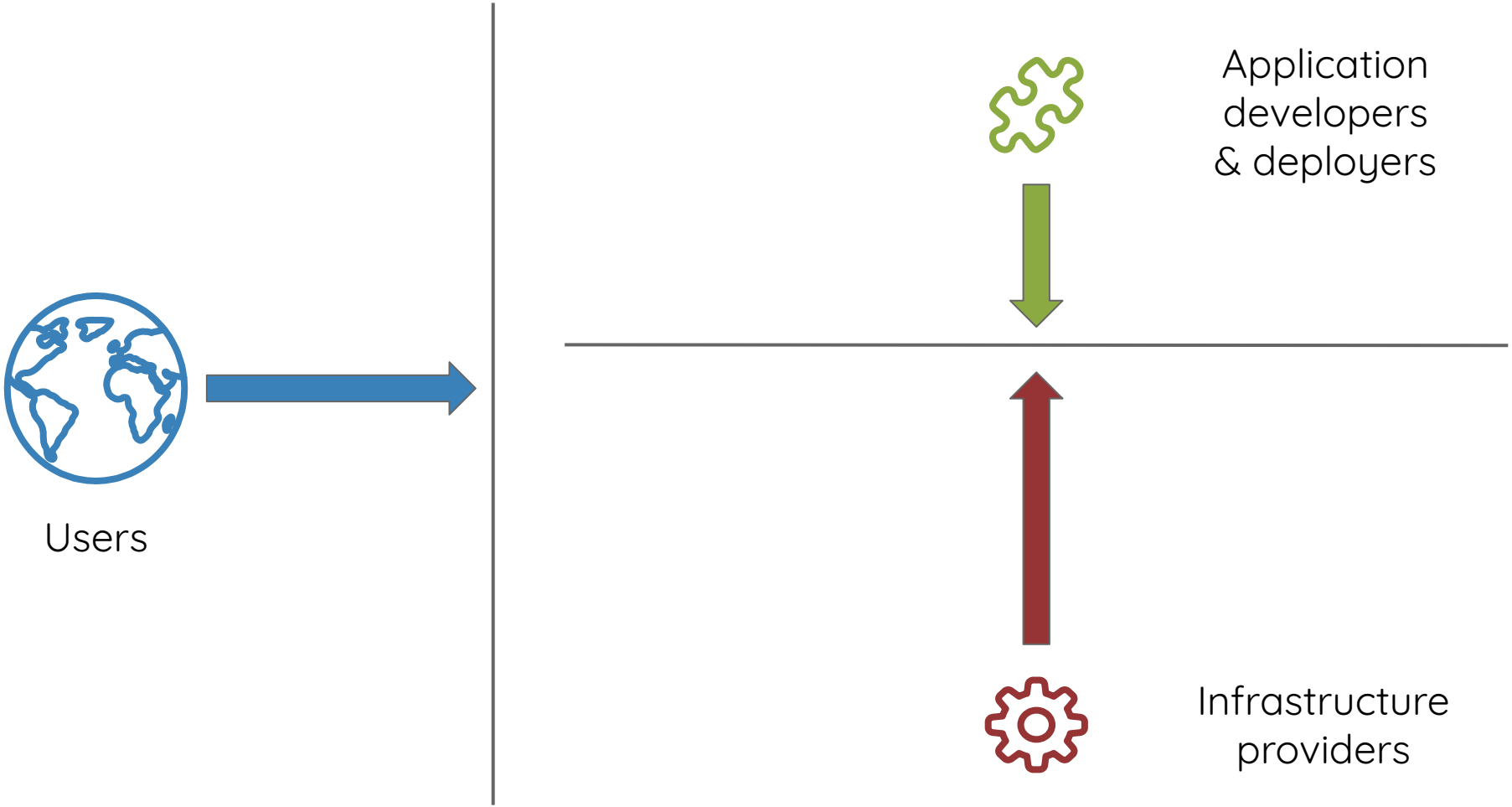


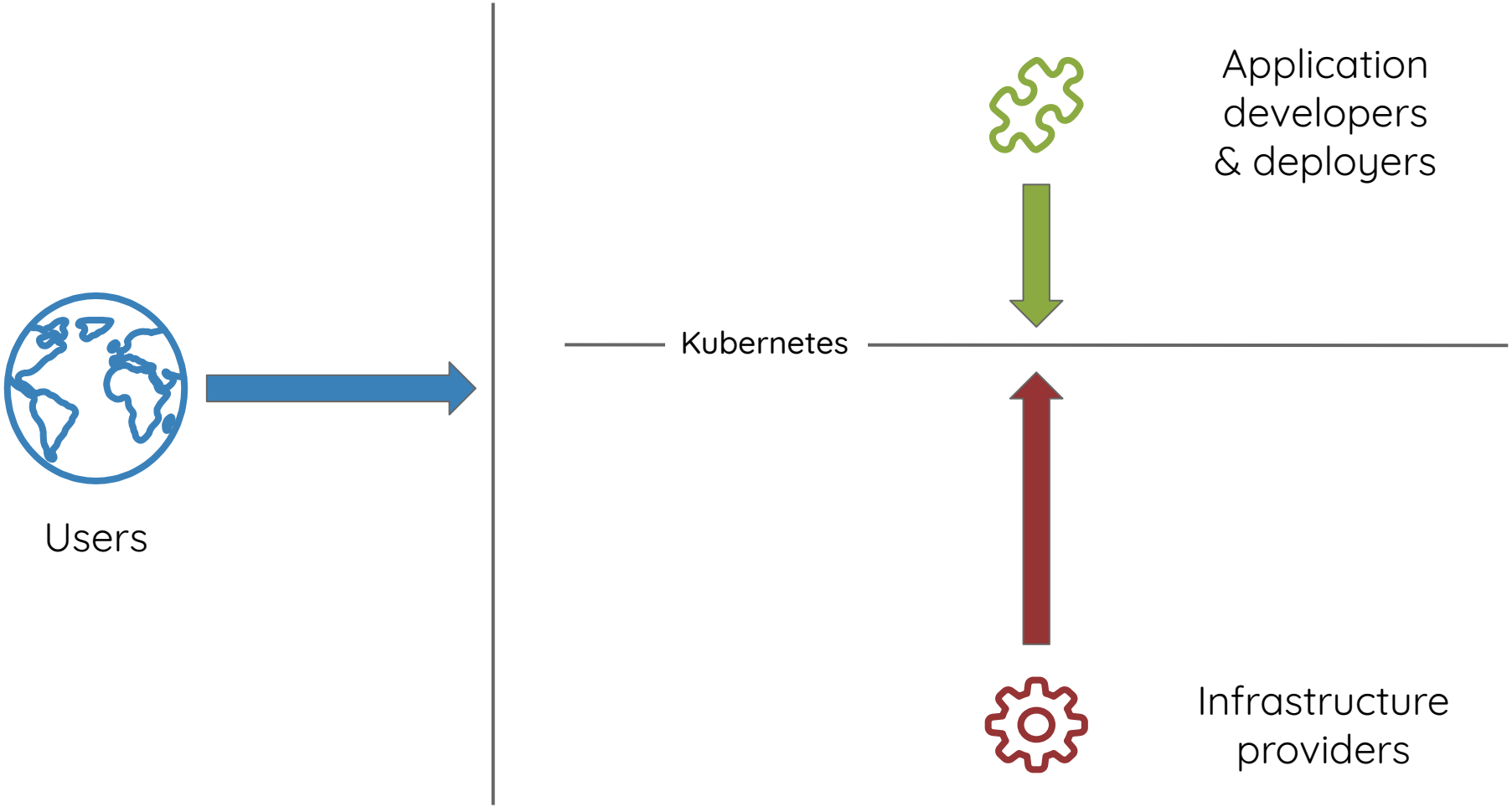
Application deployment APIs

IaaS APIs

Hardware virtualization

Physical hardware


Users
Application
developers
& deployers
Infrastructure
providers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Kubernetes
Application
developers
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Infrastructure
providers

# A welcome clarification

- The advent of Kubernetes

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- The advent of Kubernetes
- Infrastructure is a given

# A welcome clarification

- The advent of Kubernetes
- Infrastructure is a given
- OpenStack is dead… to me

# Providing infrastructure

OpenInfra

FOUNDATION

# OpenInfra FOUNDATION

Programmable infrastructure for VMs, containers and bare metal.

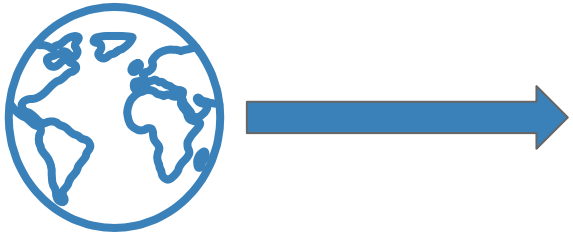
Secure, lightweight CRI compatible virtualized containers.

Connecting open source projects to production

Edge cloud computing infrastructure for high performance, ultra-low latency applications.

CI/CD platform for gating changes across multiple systems/repos.

# OpenStack relevance in the next decade



Users

Application
developers
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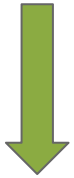

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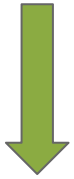
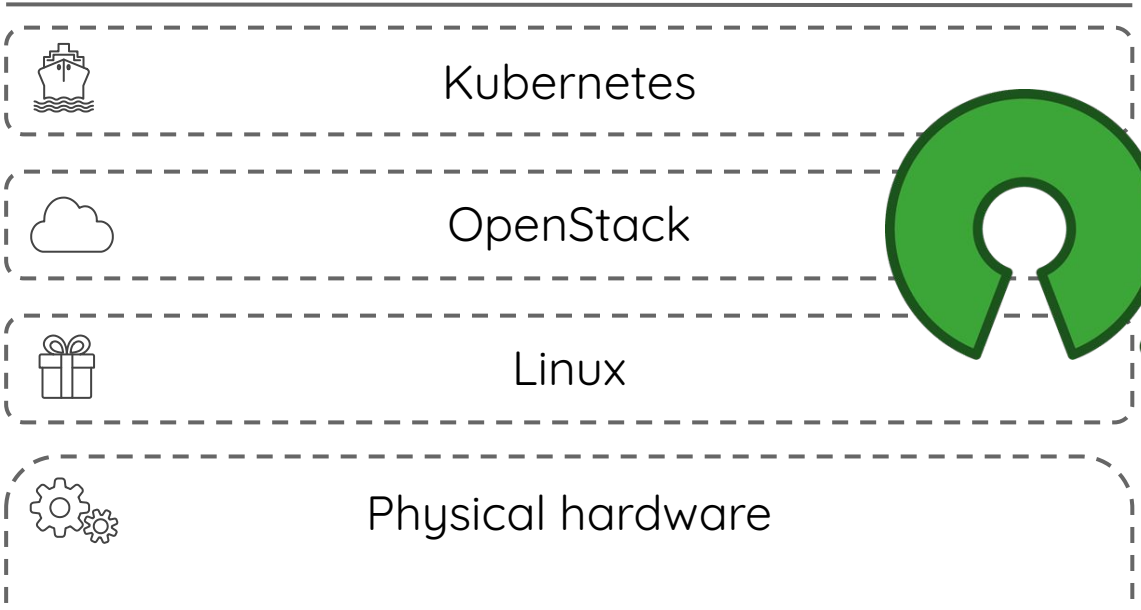




# LINUX

Open source **operating system** standard

# OPENSTACK

Open source **cloud** standard

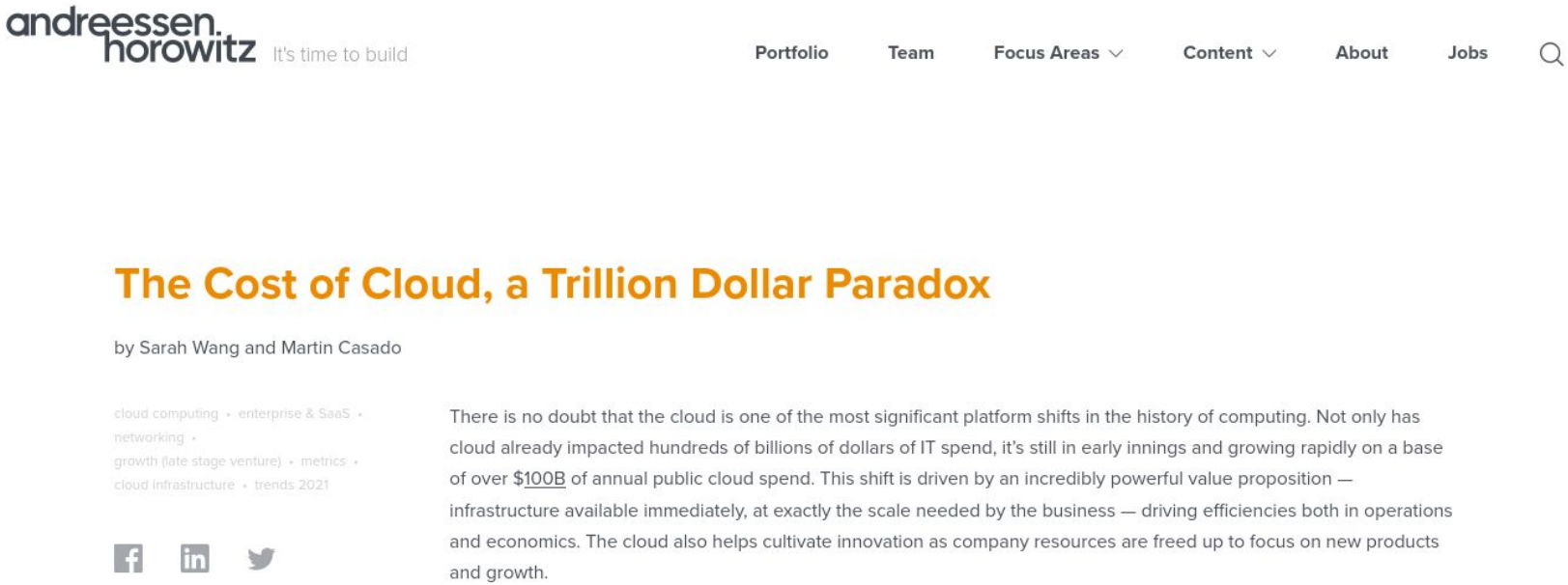
# KUBERNETES

Open source **container orchestration** standard

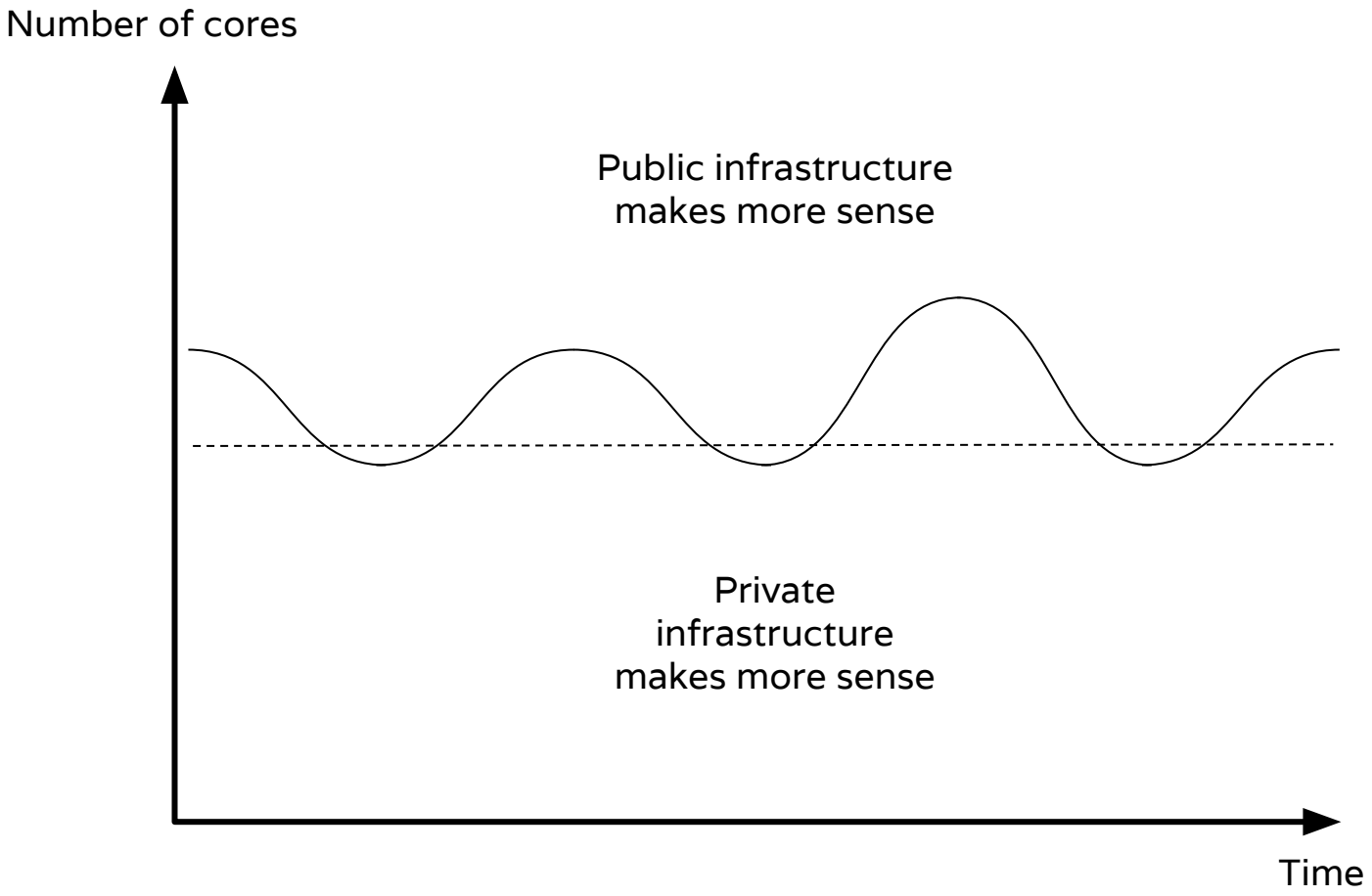
# INFRASTRUCTURE

# Value proposition

- Cost
- Compliance
- Capabilities




*"Repatriation results in one-half to one-third the cost of running equivalent workloads in the cloud"*


Number of cores
Public infrastructure
makes more sense
Private
infrastructure
makes more sense
Time

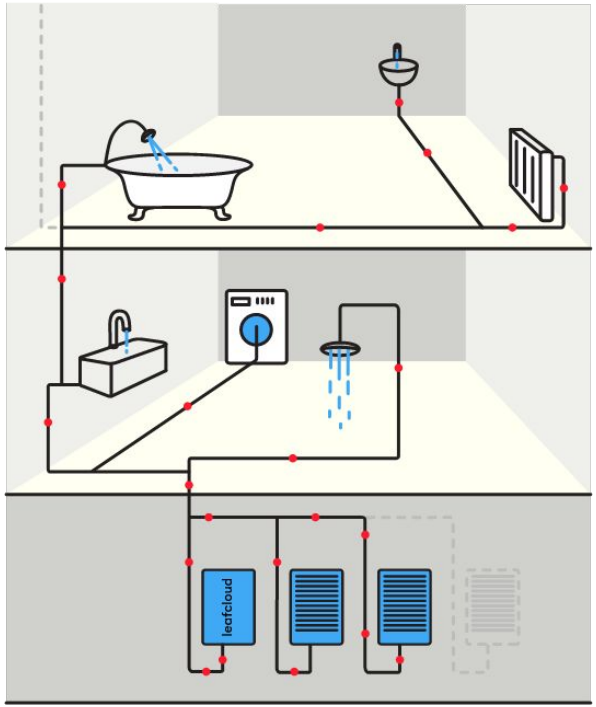
# Digital Sovereignty

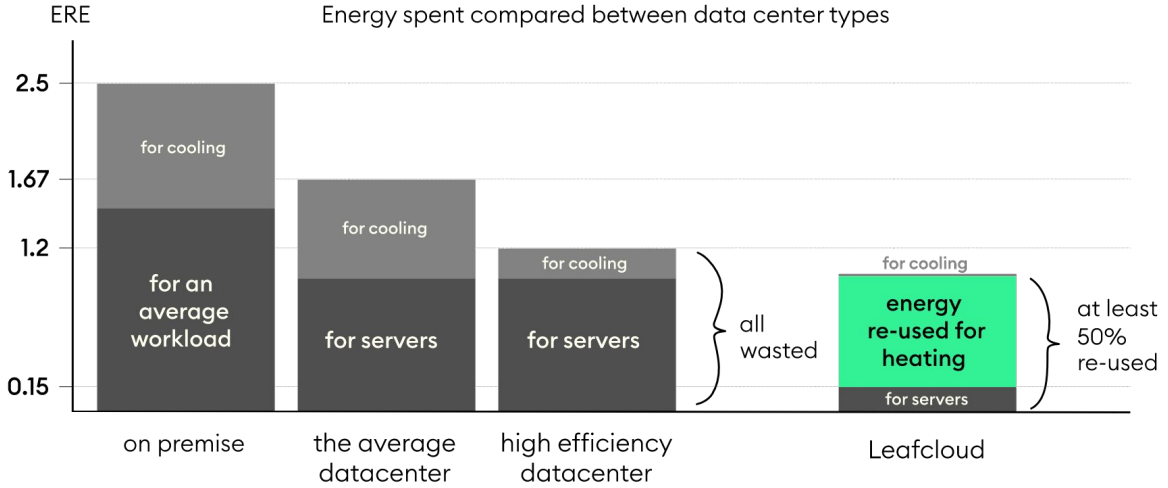
# Innovation

OneQode
Russia
60 milliseconds
South Korea
40 milliseconds
Japan
27 milliseconds
China
46 milliseconds
Hong Kong
36 milliseconds
USA
109 milliseconds
Singapore
61 milliseconds
Philippines
40 milliseconds
Australia
63 milliseconds

exaion
GROUPE EDF

leafcloud


leafcloud


ERE
Energy spent compared between data center types
2.5
1.67
1.2
0.15
for cooling
for an average workload
for cooling
for servers
for cooling
for servers
all wasted
for cooling
energy re-used for heating
for servers
at least 50% re-used
on premise
the average datacenter
high efficiency datacenter
Leafcloud

# In conclusion

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- It might be irrelevant to you, though

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- × It will not replace hyperscalers

# In conclusion

- × OpenStack is not dead
- × It might be irrelevant to you, though

- × It will not replace hyperscalers
- × It is a necessary complement, though

# Thanks!

You can find me at:

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thierry@openinfra.dev

Credits

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