



DEVOPSDAY - RALEIGH 2024

Standardization vs. Autonomy the Platform Engineering Balance



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Standardization vs. Autonomy: The Platform Engineering Balance



Teams



Applications



Infrastructure



Amazon EKS



Amazon EC2



Amazon S3



Amazon EBS



ELB



Amazon Route 53



Amazon Redshift



Amazon EMR



Amazon RDS



ElastiCache

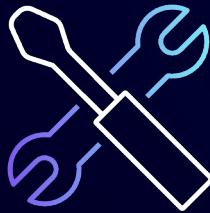


Amazon Aurora



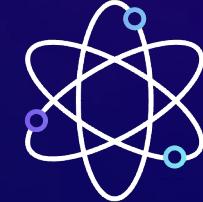
Amazon SNS

Infrastructure management spectrum



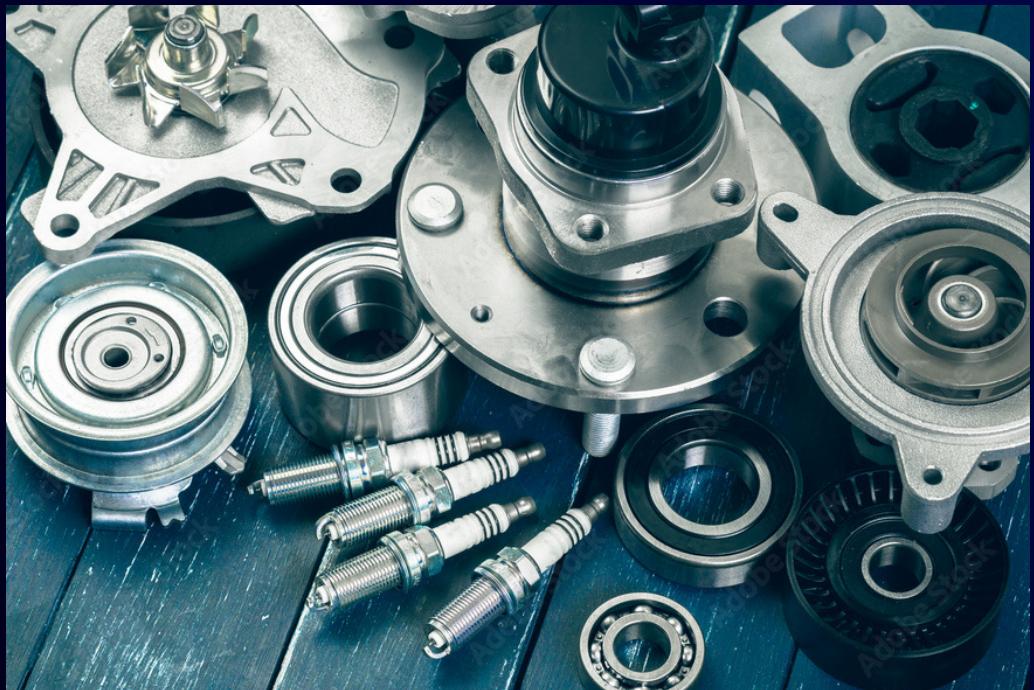
Decentralized

Application teams deploy and maintain their own infrastructure

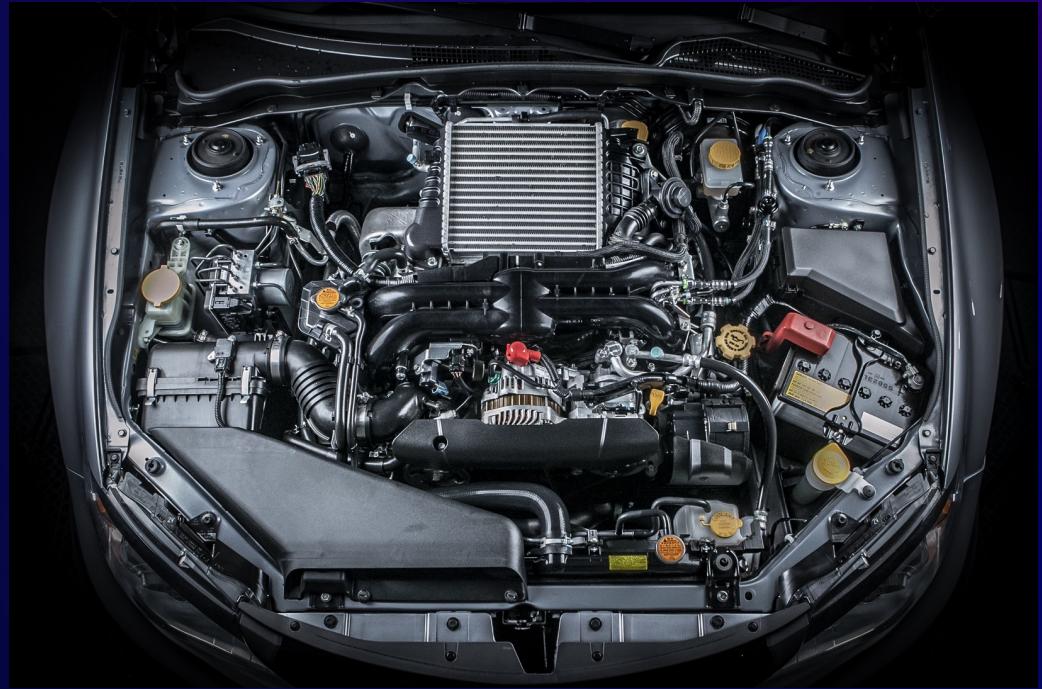


Centralized

Infrastructure is completely managed on behalf of application teams



VS.



Customer examples on EKS



The New York Times

The New York Times Has Over 10 Million Subscribers

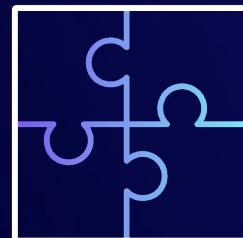


Customer benefits from building an **internal platform**



Velocity

Reduce the time it takes to get new applications in front of customers



Governance

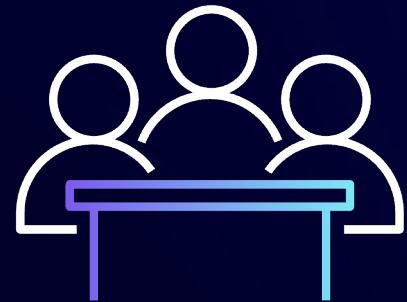
Ensure application teams operate safely and securely in the cloud



Efficiency

Optimize spend via efficient resource utilization and specialization

Let the battle begin !!!!



Platform
builders



App developers &
data scientists

Standards

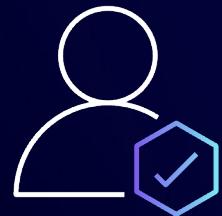


Autonomy

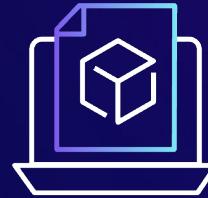
Autonomy and standards



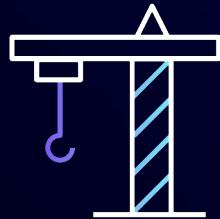
Challenge areas



Ownership



Level of abstraction



Adoption



Troubleshooting

Example: I want my app to run in isolation

What do you mean
by **isolation**?



- Account
- Region
- Availability
- Network segmentation
- Clusters
- Compute
- Namespace
- Virtual clusters

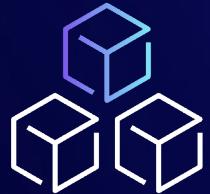
Platform design patterns



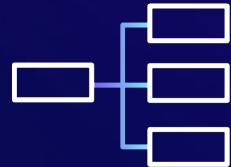
**Account
as a Service**



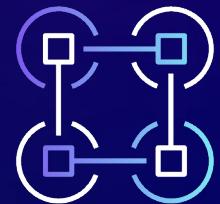
**Template
as a Service**



**Cluster
as a Service**

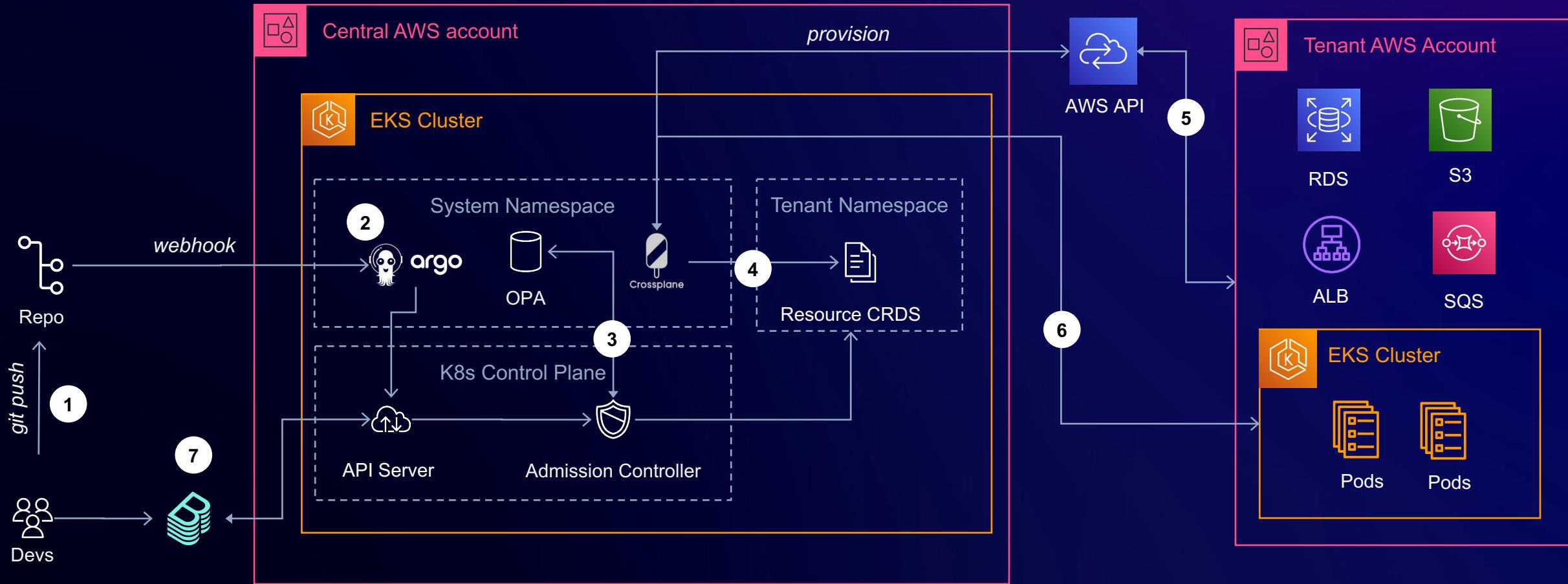


**Namespace
as a Service**



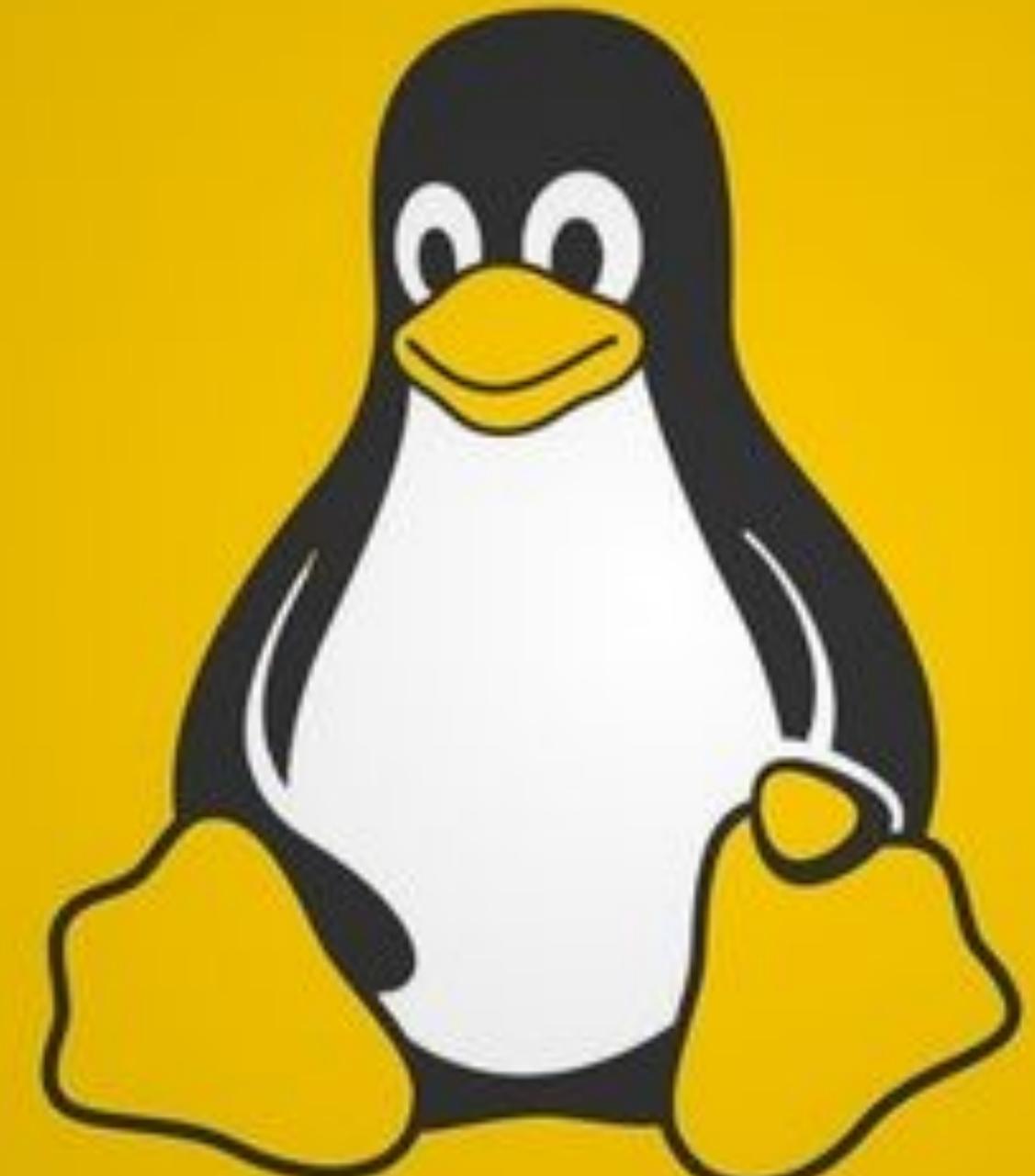
**Platform
as a Service**

Building a platform with Kubernetes in practice



A **Linux distro**

is an operating system
made from a software
collection that is based
upon **the Linux kernel**
and, often, a package
management system.



An IDP Distribution

is a developer platform made from a software collection that is based upon *Kubernetes*, as well as a package management system.



**CNOE is an
internal developer platform (IDP) *distribution*
built in the open
in collaboration with the user community
powered by CNCF technologies**



Accelerate building your IDP



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Developer Portal Best Practices

- Backstage plugins
- Developer practices

<https://cnoe.io/blog/optimizing-data-quality-in-dev-portals>

Optimizing for Data Quality in your Developer Portal

November 6, 2023 · 9 min read



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Software Engineer, Imagine Learning



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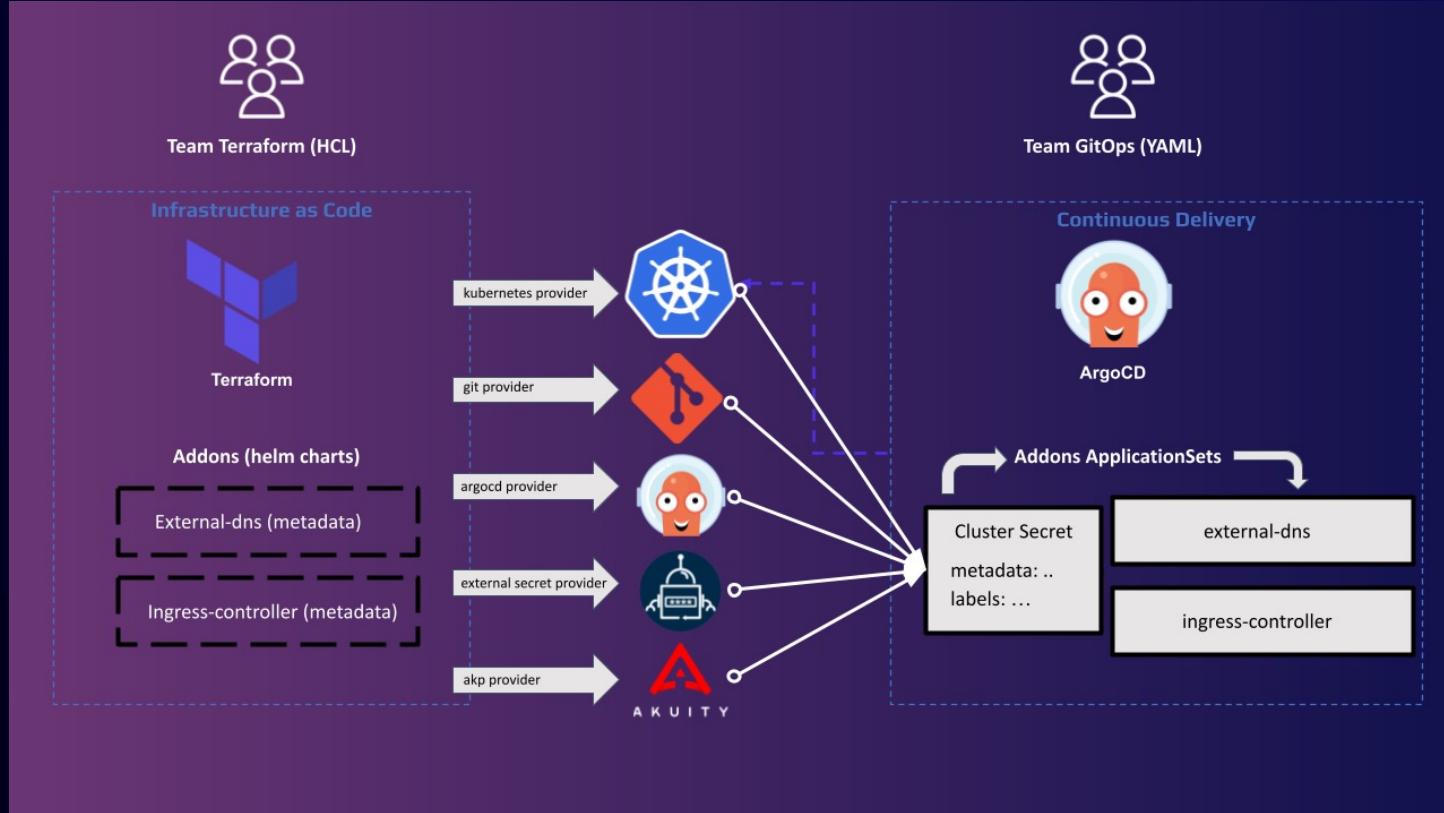


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SWA_fatidika
portunes assas
INSIV6 EMIN



GitOps Bridge



<https://github.com/gitops-bridge-dev>



idpBuilder

github.com/cnoe-io/idpbuilder

Platform best practices / guidance

A photograph of a man and a woman standing in front of a dark chalkboard. The man, on the left, has a beard and is wearing a blue and white plaid shirt, gesturing with his hands as if speaking. The woman, on the right, has long brown hair and is wearing a yellow cable-knit sweater, also gesturing with her hands. Between them is a large, empty speech bubble drawn with white chalk on the chalkboard.

Build with your customers



Documentation and education are key

A wide-angle photograph of a volcanic eruption at sunset. In the foreground, dark silhouettes of lava flows and rocky terrain are visible along the right side. A massive column of dark smoke and ash rises from the left side of the frame, billowing upwards and across the sky. The sky is a vibrant orange and yellow, with wispy clouds reflecting the setting sun. The ocean is visible in the lower-left, its surface calm.

Don't boil the ocean



Provide escape hatches



One size doesn't fit all workloads

Thank You!

Survey



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<https://forms.gle/yvNCmf4SCR4HE9xV9>