What **developers** and **data scientists** should know about **Kubernetes**

Christian Barra

PyBerlin

@christianbarra

A bit about myself

- Based in Berlin
- Run pybootcamp.com (training & consulting)
- PSF Fellow

- Develop your interest in Kubernetes
- Understand what you can do with it

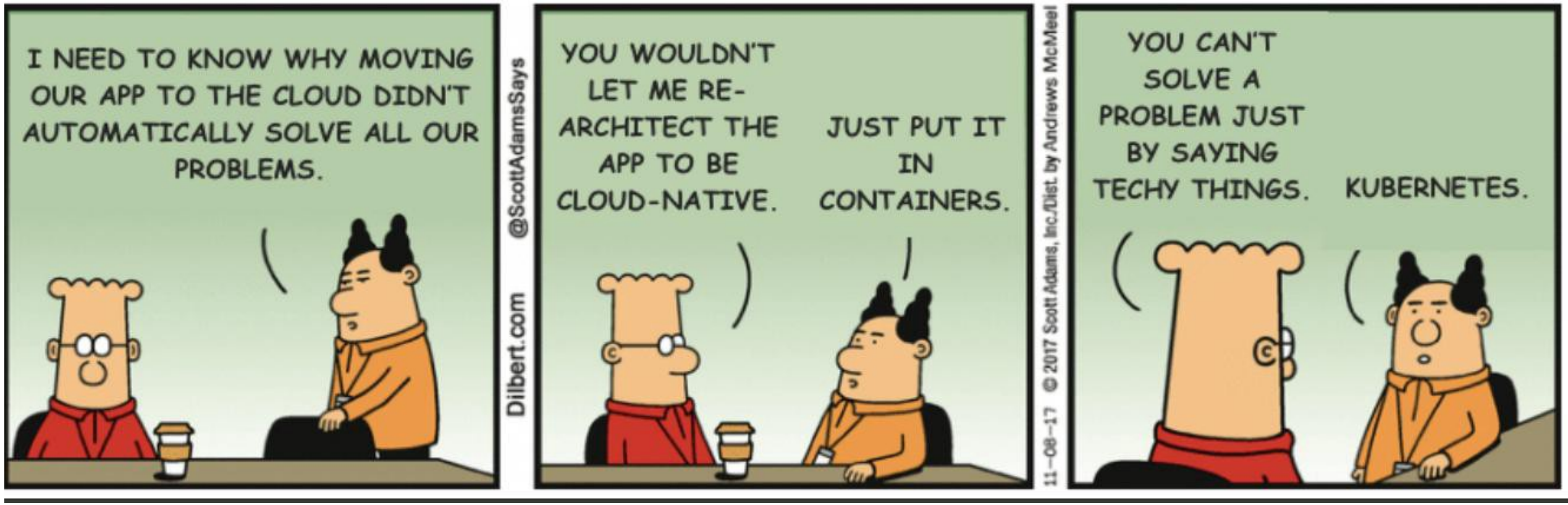
Random conversations with EM/PO/Head/Director:

- The data science team is not delivering, none of the things they are working on are running in production

- We are too slow, we release features only once every 14 days

Causes:

- Different mindset
- Problem with deployment pipeline
- Buggy software
- Lack of tools
- *



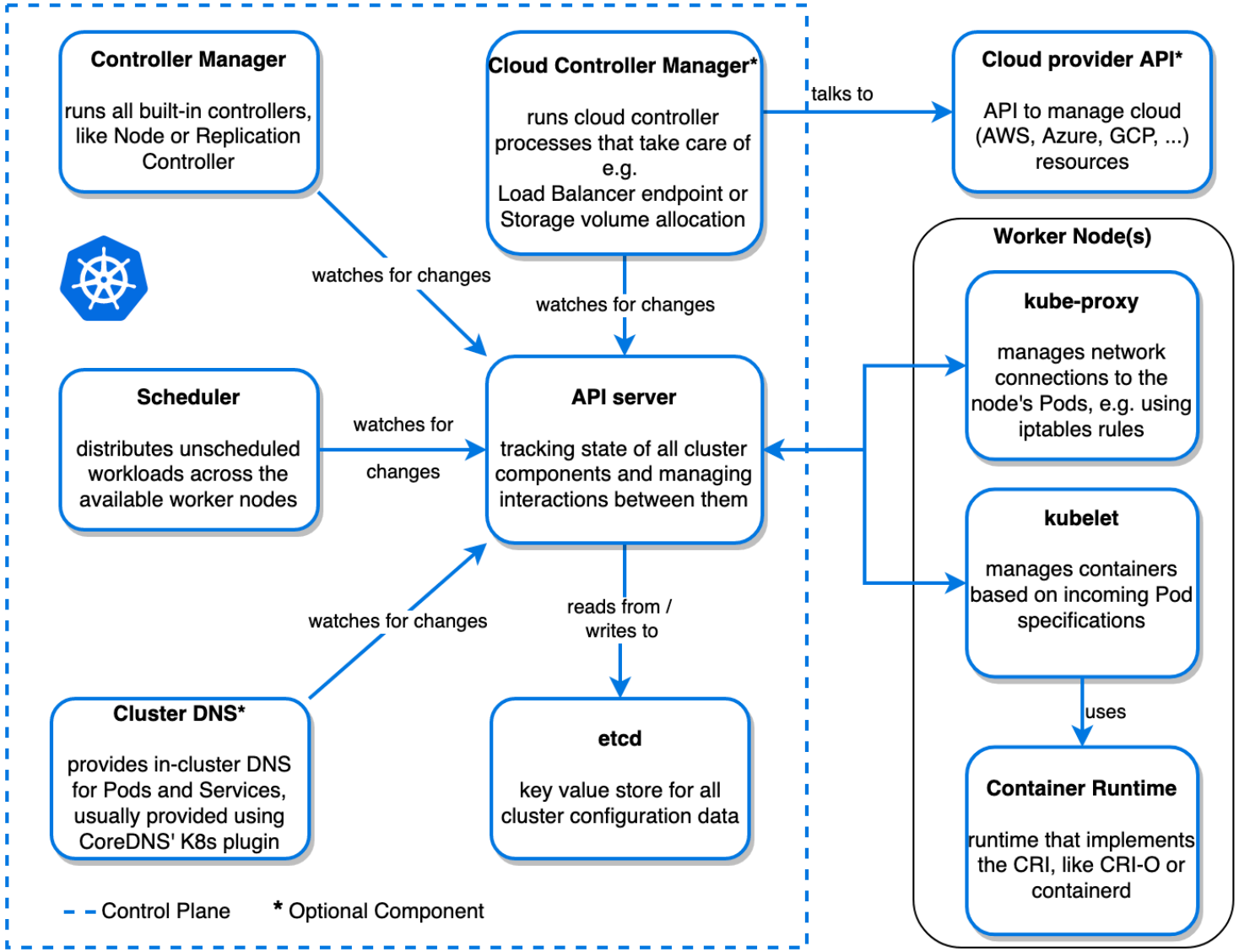
@christianbarra

1. What is Kubernetes?

- **open-source**
- **system**
- **deploy, scale** and **manage** containerized **workloads**

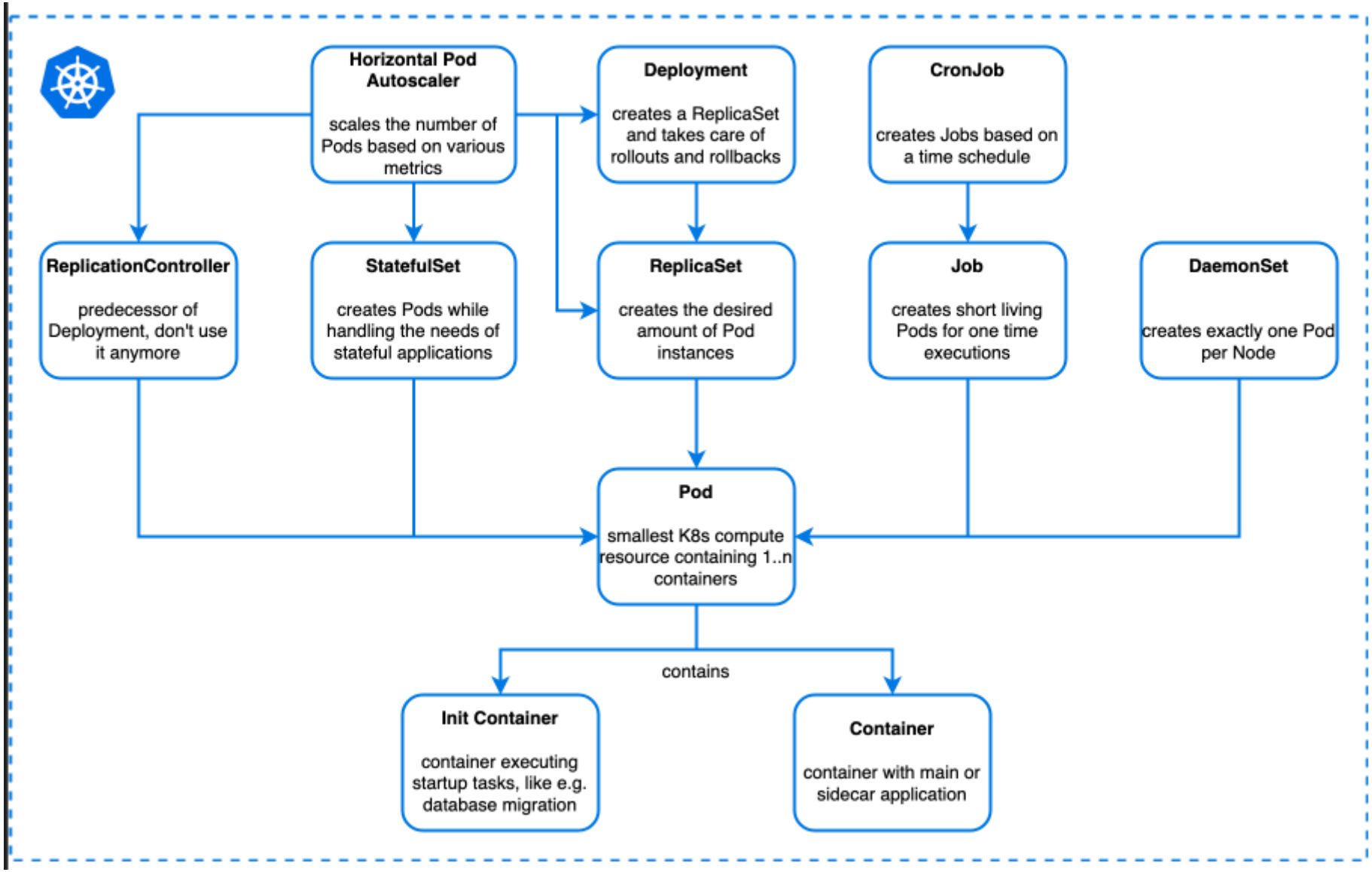
2. Kubernetes architecture

@christianbarra



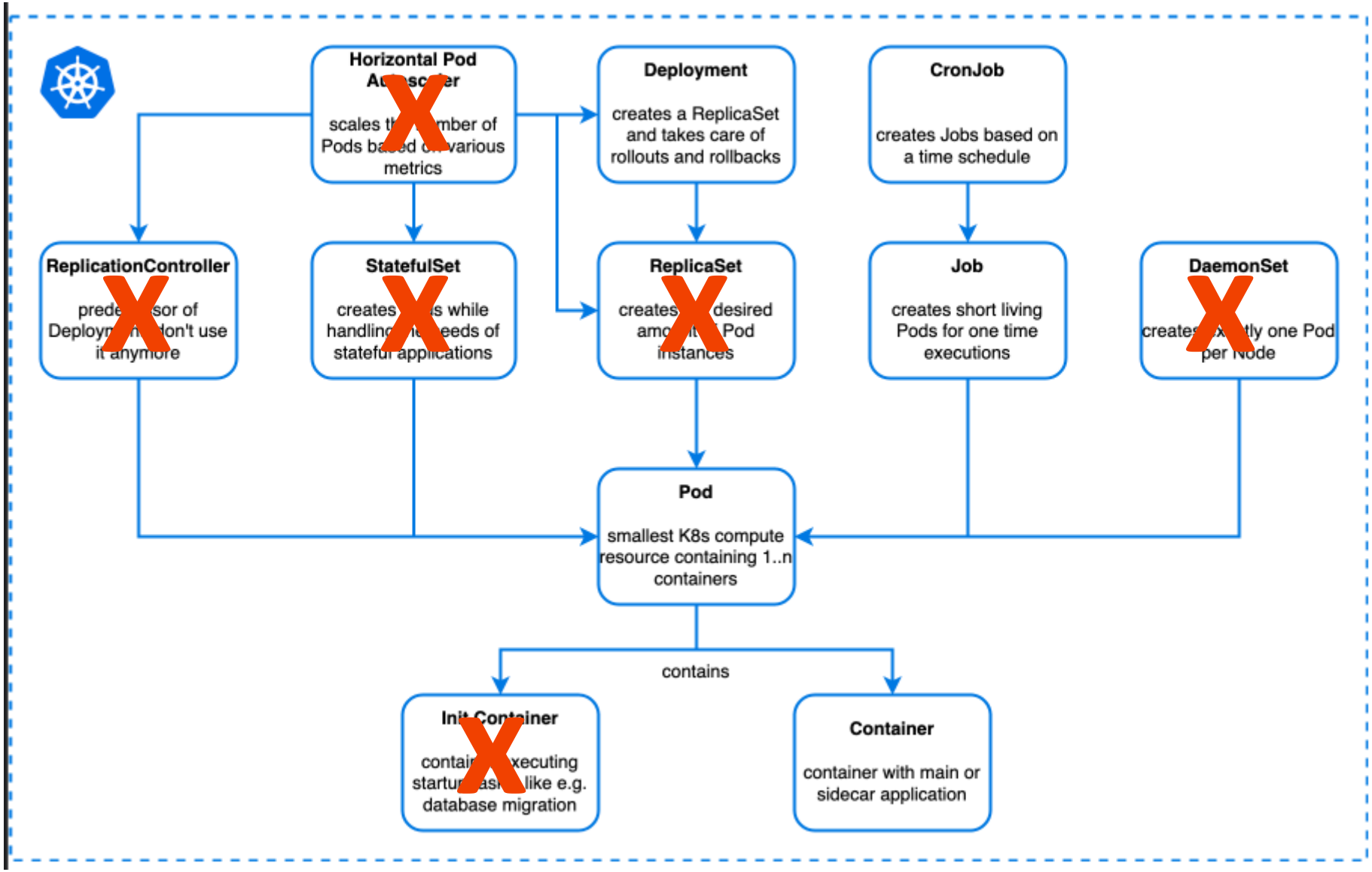
Credit: https://brennerm.github.io/posts/kubernetes-overview-diagrams.html

@christianbarra



Credit: https://brennerm.github.io/posts/kubernetes-overview-diagrams.html

@christianbarra



Credit: https://brennerm.github.io/posts/kubernetes-overview-diagrams.html

@christianbarra

run k8s ≠ use k8s

@christianbarra

4. What’s in for Developers?

- Software based and programmable infrastructure
- Reduce handover
- Bring Dev and Ops even closer
- Embrace `You build it, you run it`

4. What’s in for Data scientist?

- Shift in the expectations
- Reduce handover
- Introduce `You build it, you run it`
- Playground to run their workloads

- Kubeflow
- Airflow for Kubernetes
- Dask for Kubernetes

Let’s create a Kubernetes cluster 🚀

https://github.com/py-bootcamp/django-app-example

@christianbarra

Takeaways

- Kubernetes is here to stay
- Experiment with k8s
- *Hands-on experience for developers is becoming a requirement*
- *Check pybootcamp.com*