

This month snapshot

# PROVISION-ING CLOUD RESOURCES

Crossplane (the project) has matured fast and is ready for its prime time. The Open Source project is a safe bet today. The company behind the project (Upbound) had created amazing momentum bringing collaborations from large companies in the Cloud-Native space to contribute back. The future looks bright for Crossplane (the project), but what about the company? Monetizing an Open Source project is hard, but Upbound is betting on a managed service around the Open Source project and establishing partnerships with other software and service providers.

KubeCon Europe was a great chance to see how vibrant the Cloud-Native space is. In this monthly report, I wanted to highlight a company and a project close to my heart: Crossplane and Upbound, which were very active at this year's conference.

I've been contributing where I can to the Crossplane project for a while and interacting with Upbound

engineers, Crossplane maintainers, and some of the companies associated with the project.

I know the project well, I've been following Upbound for a while now, so I thought about using my personal experience, the data that I've collected during KubeCon, and some external feedback to shape up these reports.

### PROBLEM SPACE

Creating Cloud-Native applications require teams to provision cloud resources such as databases, clusters, networks, VMs, brokers, buckets, etc.

Creating and configuring these cloud resources is challenging and Cloud Provider specific. Teams have learned to use tools like <a href="HashiCorp's Terraform">HashiCorp's Terraform</a> to describe and provision complex infrastructure across cloud providers. Terraform uses its own language (HCL) to describe what needs to be provisioned then the operator can run a terraform command to apply these configurations to your Cloud Provider of choice. This approach (infrastructure as code) is well-known and widely used in the industry.

## THE OPEN SOURCE OCCOSSPIGNED PROJECT

Crossplane was created to make the process of defining and configuring infrastructure Kubernetesnative. What does this mean? Or why is this important? First, Crossplane allows users to define the infrastructure needed as Kubernetes resources.

It doesn't introduce a new language. If you are a Kubernetes user, using Crossplane feels natural. This also allows you to reuse all your Kubernetes tooling to manage and use Crossplane. No new tools are needed. For teams that are heavily invested in Kubernetes, Crossplane makes a lot of sense.

## PRODUCT SPACE Upbound

After almost 3 years after Crossplane's inception (donated to the CNCF on June 25, 2020) into the Kubernetes space, I can say that the tool is solid, production-ready, and has support from a very healthy community. Recently VMware added support for Crossplane in their Kubernertes offering, Tanzu, which is a good sign of trust from third-party product providers. Upbound the company behind the project, offers Upbound, a Crossplane Managed Service. In other words, you offload the responsibility of running Crossplane itself to Upbound. Check their company's one pager released after KubeCon here.

**COMPANY** 

### upbound

WEBSITE  $\rightarrow$ 

**FUNDING** 

SERIES ~60 PEOPLE GGG MILLIONS U\$D

INVESTMENT

**PRODUCT** 

Upbound. Managed Control Planes

**COMPETITORS** 

- Pulumi →

**COMMUNITY INVOLVEMENT** 

**CNCF Sliver Sponsor** 

CORE MAINTAINERS  $\rightarrow$ 

**PROJECT** 



 $\underline{\mathsf{WEBSITE}} \rightarrow$ 

**POPULARITY** 

## 6.9KC) Github stars

**MATURITY** 

CNCF incubating,
Mature, and
production-ready

**SPACE** 

INFRASTRUCTURE AS CODE

INTERNAL DEVELOPMENT PLATFORM

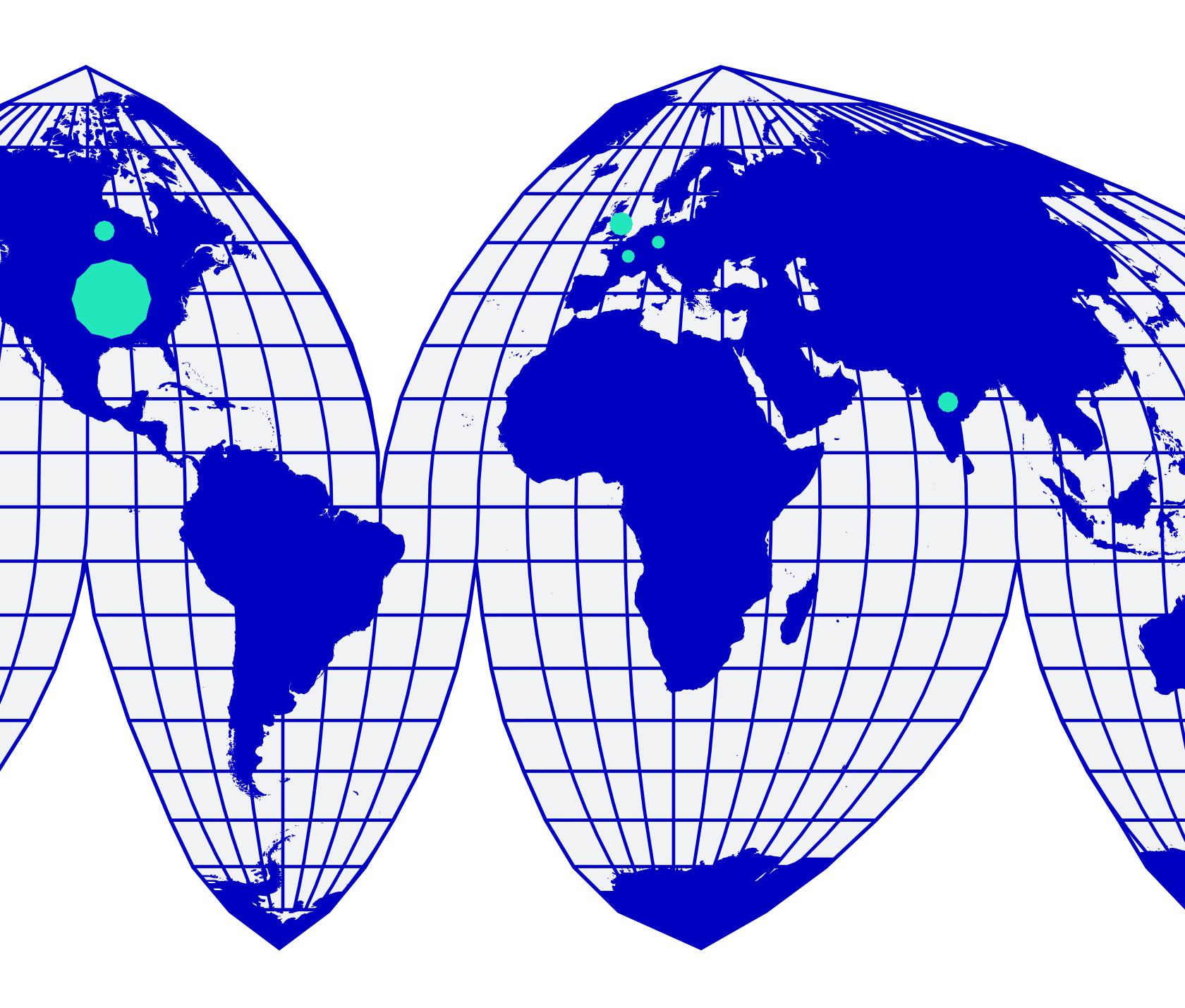
| Upbound | 23.7% |
|---------|-------|
|---------|-------|

| Google     | 4.0% |
|------------|------|
| Microsoft  | 4.0% |
| Akuity     | 2.6% |
| Movableink | 2.6% |
| DKB        | 2.6% |
| Apple      | 2.6% |
| AWS        | 2.6% |
| Coingaming | 1.3% |

**OTHER 56.6%** 

### Source: OSSInsights TRIBUTORS

### CECLOCATIONS

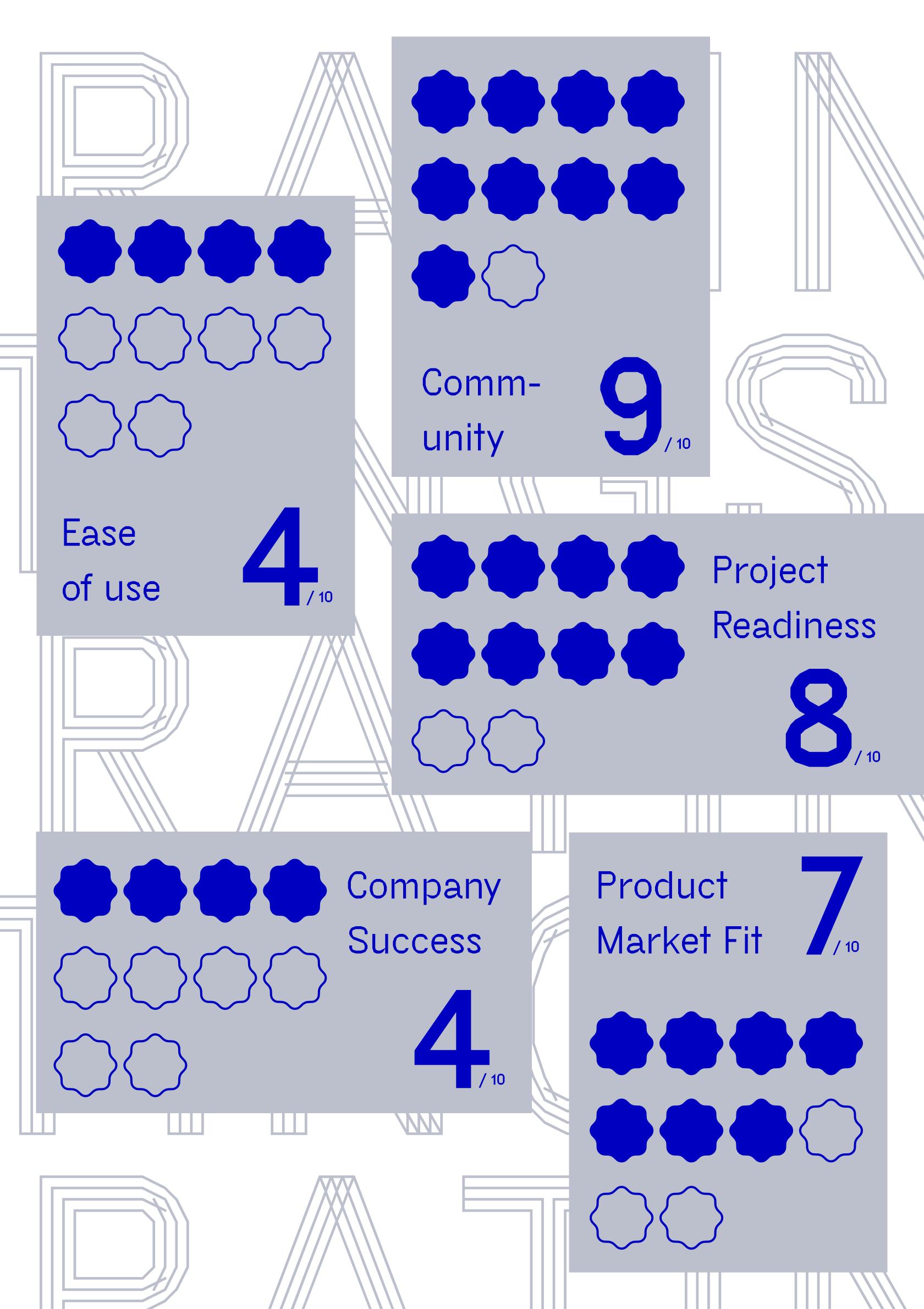


- 1. United States 33.9%
- 2. United Kingdom 9.1%
- 3. India 8.3%

- 4. Canada 8.3%
- 5. France 5.8%
- 6. Germany 5.8%

Source: OSSInsights 8





### 10 Buzz Factor:

great community project that had a lot of potential to a solid project with massive support from different companies interested in the space. The amount of companies mentioning Crossplane on CNCF working groups and on main tracks in conferences like KubeCon NA and KubeCon EU shows that the project is ready for mass adoption.

### 9 Community:

The Crossplane Contrib GitHub organization contains 75 extensions that are community driven. Showing integrations with other Cloud Providers such as Linode, Civo and Digital-Ocean.

### Product market fit:

10 If you are a Kubernetes user and working on top of a Cloud Provider, Crossplane makes a lot of sense. Running and maintaining Crossplane in a production setup is a completely different story, as SREs will need to learn how to manage and troubleshoot it when problems arise.

### **Project Readiness:**

While Crossplane is quite complete with its basic features, there are some complex features being developed. This shows that the project is entering a phase where it needs to be ready for complex and large setups for real life use cases.

### Ease of use:

you need to be a seasoned Kubernetes users. Crossplane extends Kubernetes with very advanced capabilities, this require you to understand how Crossplane will connect and interact with Cloud Providers to create external resources. Extending Crossplane is possible, but requires seasoned engineers.

### Company success:

doesn't show any big names, but convincing big names to endorse startups is always hard. I expect an expansion in their public customer references and partners. I am sure that more announcements will come for KubeCon NA in Novemember.

### Community Buzz



Daniel Magnum, one of the original Crossplane engineers, recently left the company to follow his passion for hardware and loT. He was experimenting with managed control planes on the commercial side, and I was half surprised by his departure.

Someone extremely experienced in the Kubernetes/
Control plane space is joining the Crossplane/
Upbound team.

Maybe Stefan?

Provisioning infrastructure has a direct impact on developer activities.

Enabling developers to consume all the created cloud resources is also an important piece of the puzzle.

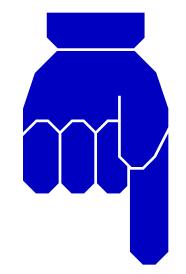
Check this blog post.

I've heard more than once: "I love Crossplane, but I'm already using Terraform"

A Red Hat founded/sponsored project called KCP is now dead and defunded.

Check this tweet.

### TAKEAWAYS



Why should you keep an eye on Crossplane and Upbound

They are pushing the boundaries on how managed services on top of Kubernetes are run and productized.

They are partnering with organizations like VMware, which aggregates multiple Open Source projects to offer services and products to large organizations. This is a great sign of maturity. As larger companies bet on the project, the adoption will grow.

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Upbound's biggest challenge is gaining market share with Pulumi and Terraform users. Showing more production use cases and case studies greatly impacts the community and new potential large users' perceptions.

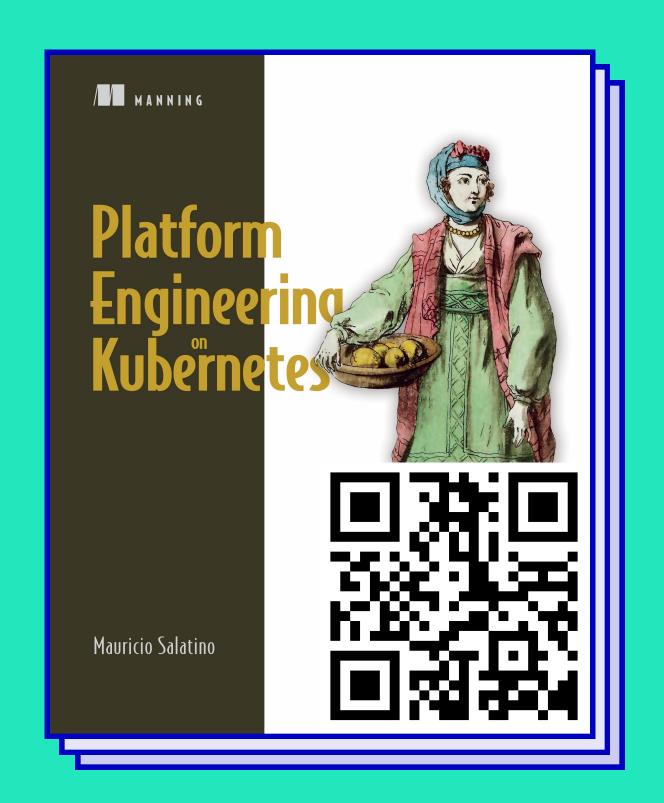
They are solving challenges that you will need to solve sooner or later in your Kubernetes journey.

Thanks for reading SALABOY 

### Rating system explanation

These ratings are my opinion based on what I hear, see, and feel after engaging with these companies and projects. The idea of these ratings is to give an indication in time about how do I evaluate different aspects of the projects and companies covered in these reports. Take these ratings as conversation starters and evolving and opinionated measurements.

- 1. Buzz Factor: how much do I hear about the project in the cncf working groups, community channels, conferences, being adopted or tested in different companies.
- 2. Project Readiness: is the project missing any main feature that makes it unusable? Can you easily isntall it and implement things without hitting any major blockers?
- 3. Community: how engaged is their community on decisions, designs, contributions, extensions.
- 4. Ease of use: How easy is to get started? How easy is to extend?
- 5. Product market fit: how much sense does the project makes in the ecosystem? Is this something you will need to create if you are building platforms or adopting Kubernetes?
- 6. Company success: Does the company have a business model that make sense to people? Are there a lot of customers using the company product? Has the company product or focus changed in the last year?



In the Platform Engineering on Kubernetes book, you can find hands-on examples of Cloud-Native technologies companies use to build their Internal Development Platforms. The book covers the most common challenges you will face when adopting Kubernetes and the tools from the Cloud-Native space. As a token of appreciation, here is a 40% discount:

salatino40

### Support the book

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