

Streamlining infrastructure services for frictionless DevOps

Thomas Petit

Principal IT Architect



[~]\$ whoami

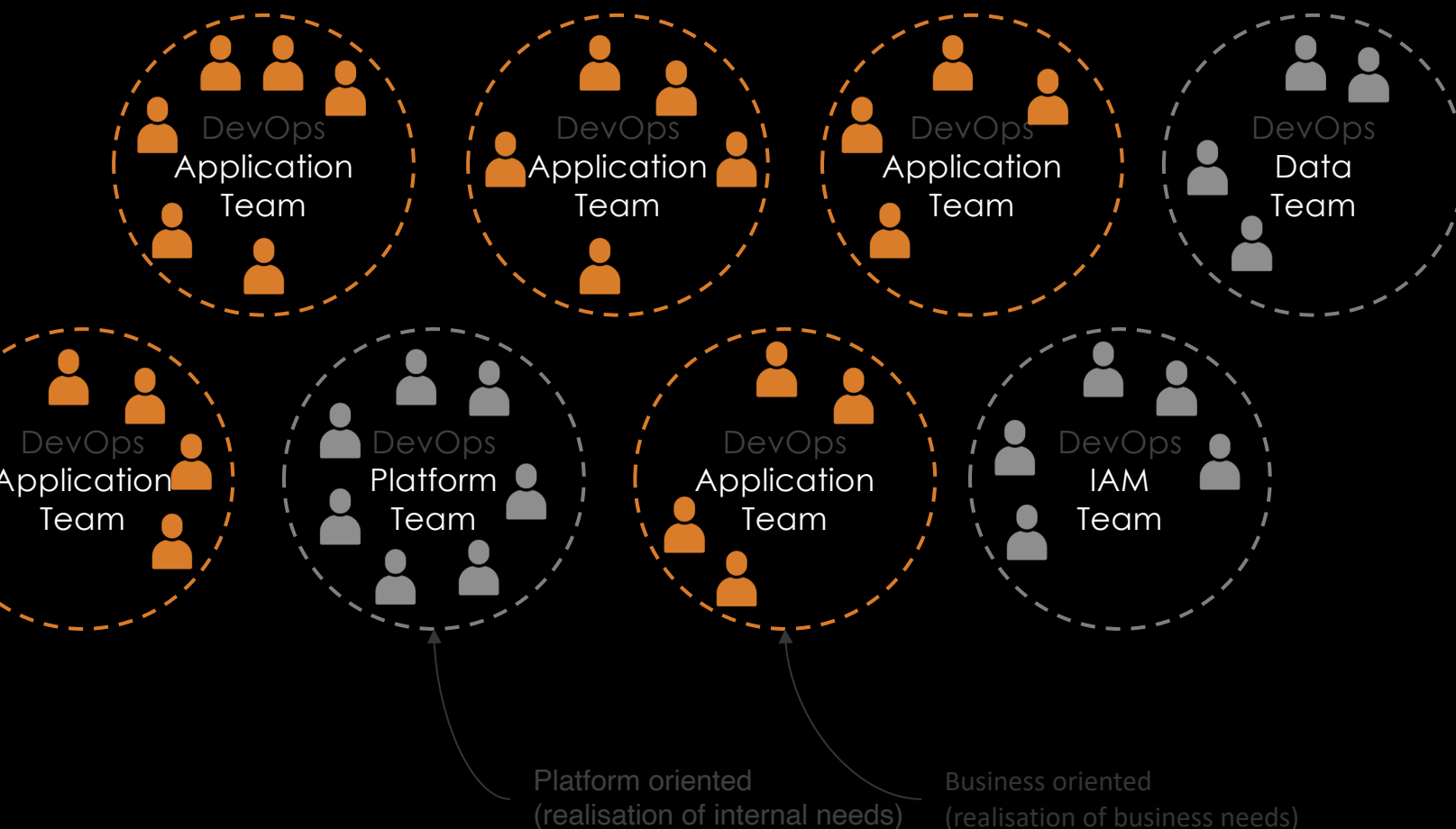
- Thomas Petit
- Principal Architect @AE
- Passion for anything cloud(-native) & integration
- Hands-on architect
- Running my house on k8s





What are we trying to streamline?
It depends...

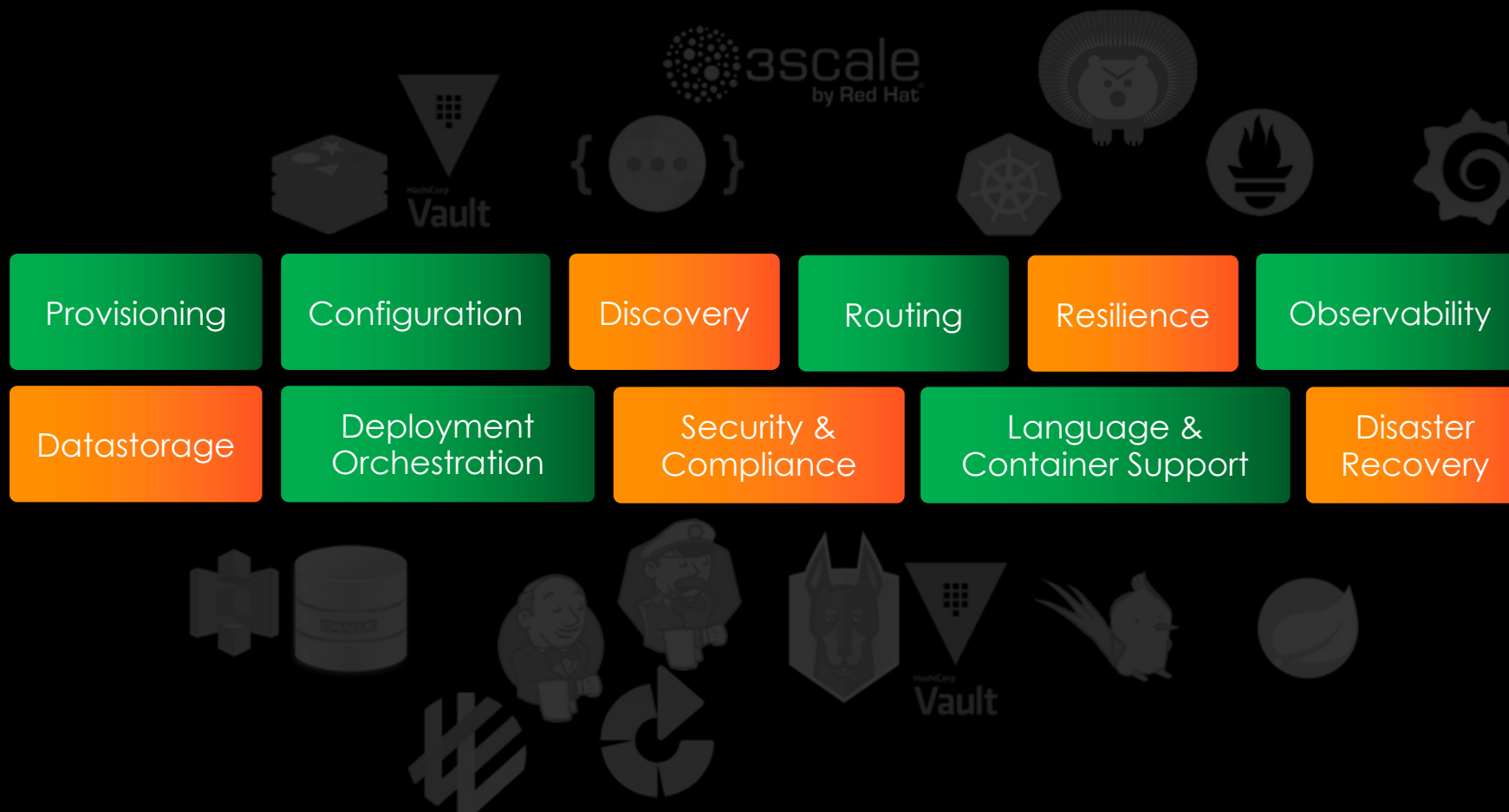
DevOps Flavors



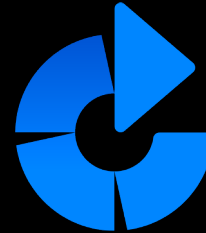
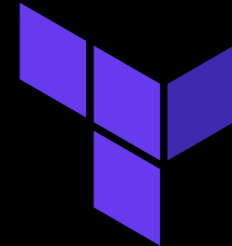
Teams are composed of multiple types of roles. Depending on the type of team, infrastructure oriented or more application oriented, the profiles and focus will differ within that team.



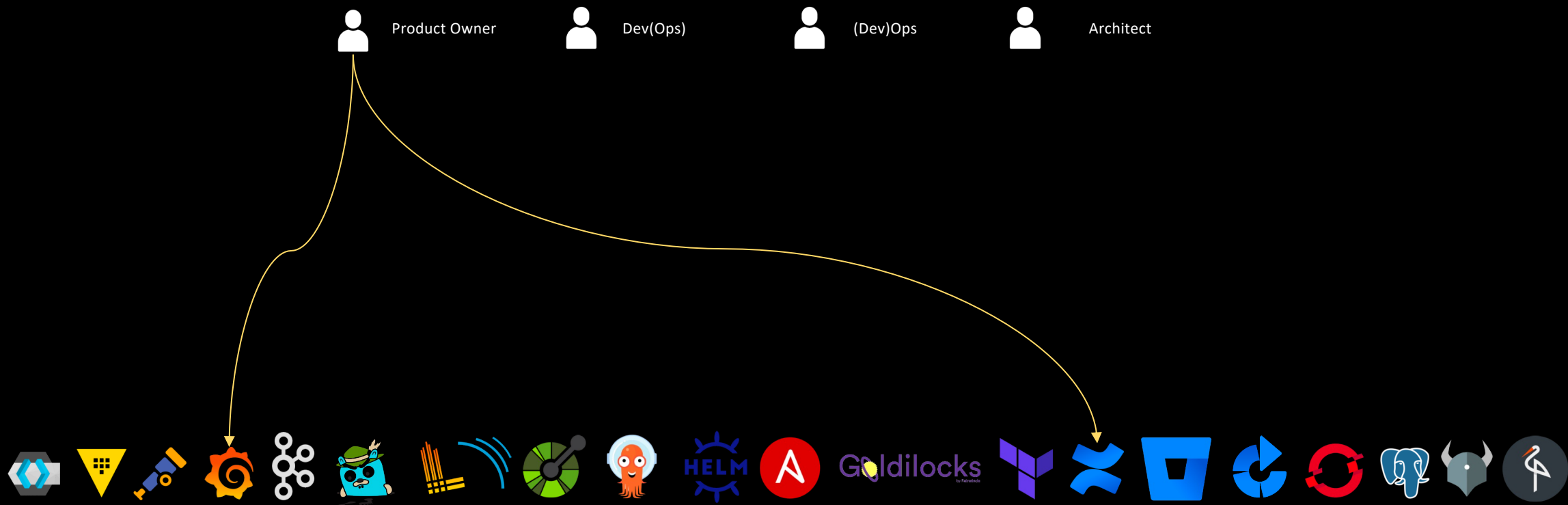
Plot tools on capabilities



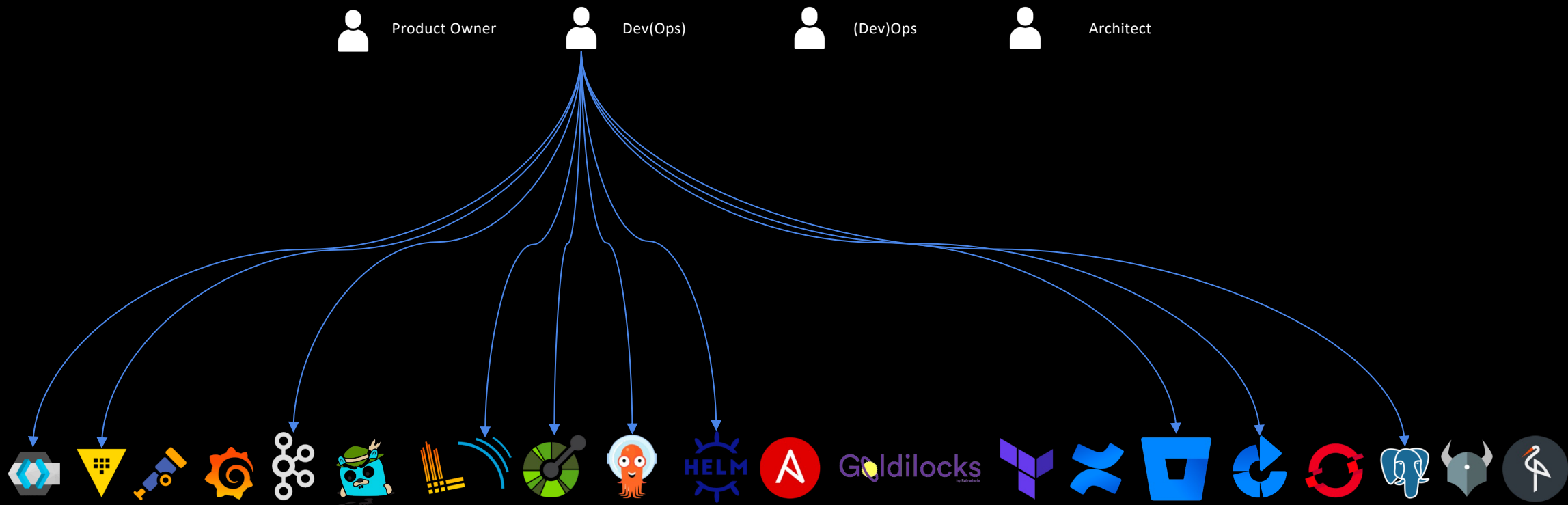
One size does not fit all



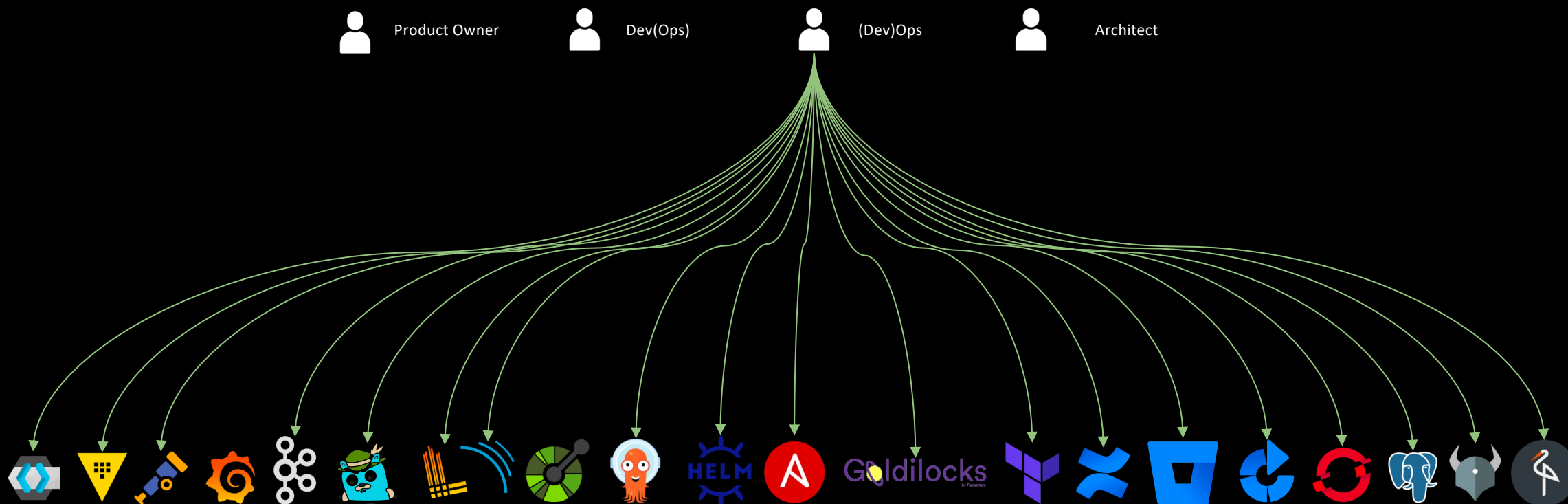
People <> Tools



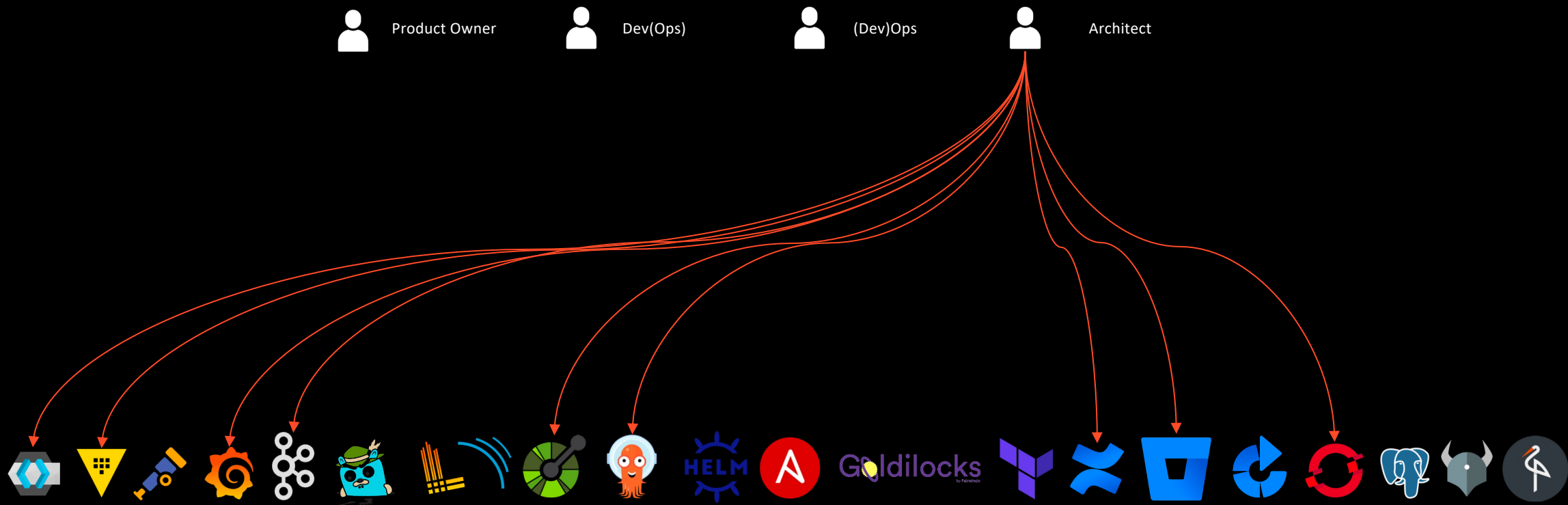
People <> Tools



People <> Tools



People <> Tools



People <> Tools



Product Owner



Dev(Ops)



(Dev)Ops



Architect



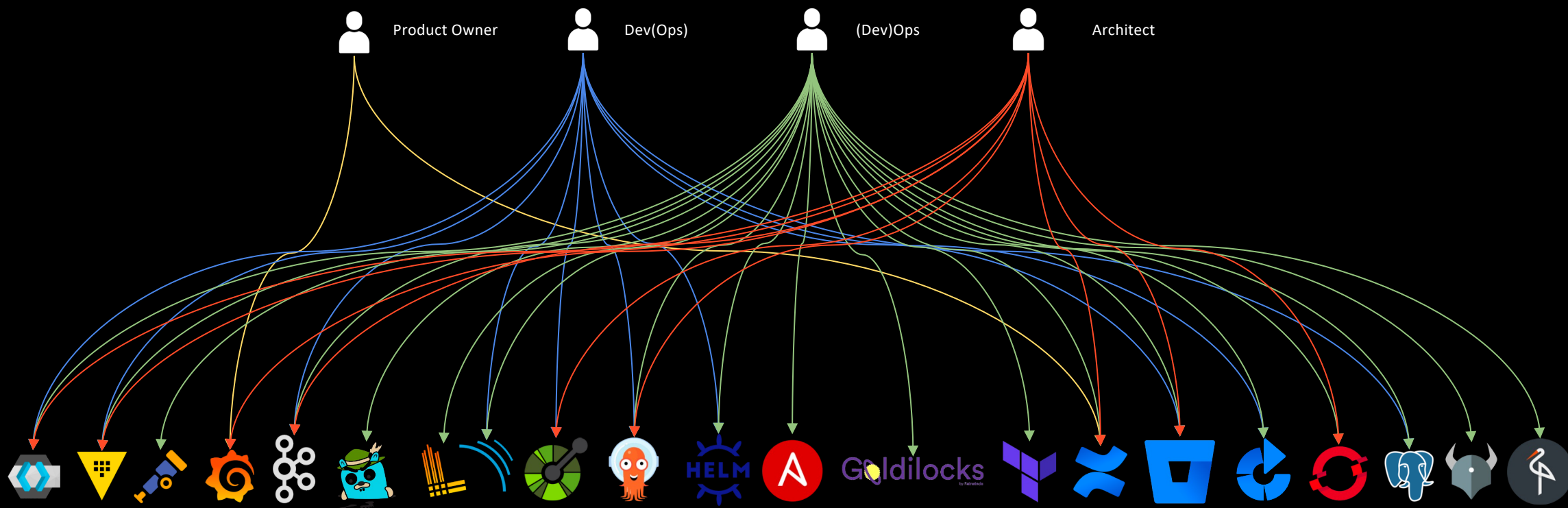
Goldilocks
by Facebook



A full-page background image featuring Anakin Skywalker from Star Wars. He is shown from the waist up, wearing his brown Jedi robes and a black belt. He has a serious expression and is looking directly at the camera. His right arm is extended, holding a glowing blue lightsaber. The background is a dark, fiery environment with orange and red flames and smoke, suggesting a battle scene. The text 'We thought we had the high ground, while in reality..' is overlaid in the center in a white, sans-serif font.

We thought we had the high
ground, while in reality..

die



When people start panicking they stop looking at tools..



Sending a mail is easier
than looking in the
different tools



Contacting a person that
knows the tools, typically
a platform team member

SECURITY
=
INCONVENIENCE



"Access to **server-core** denied." Hmm, looks like I'm not the only administrator here.



Administrator

Bad idea

Key challenges we observe



No automations in place to support recurring demands from application teams



Finding information is scattered over different tools



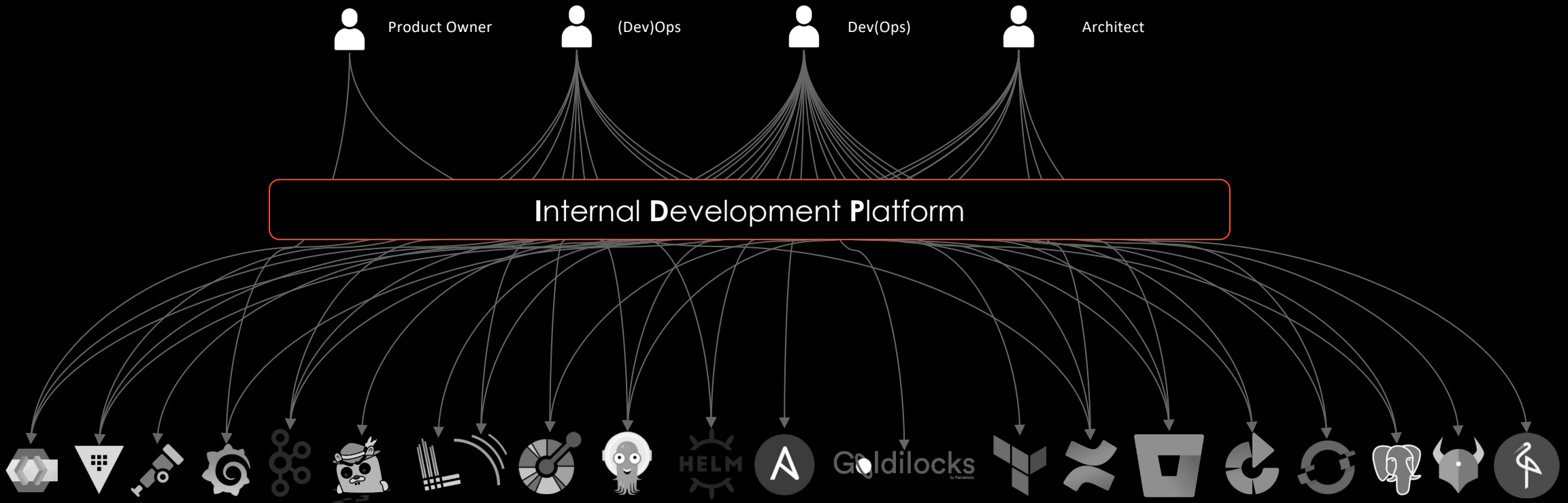
Onboarding process of different people is a pain



Platform team is not designed to scale with the organisation, nor must it be

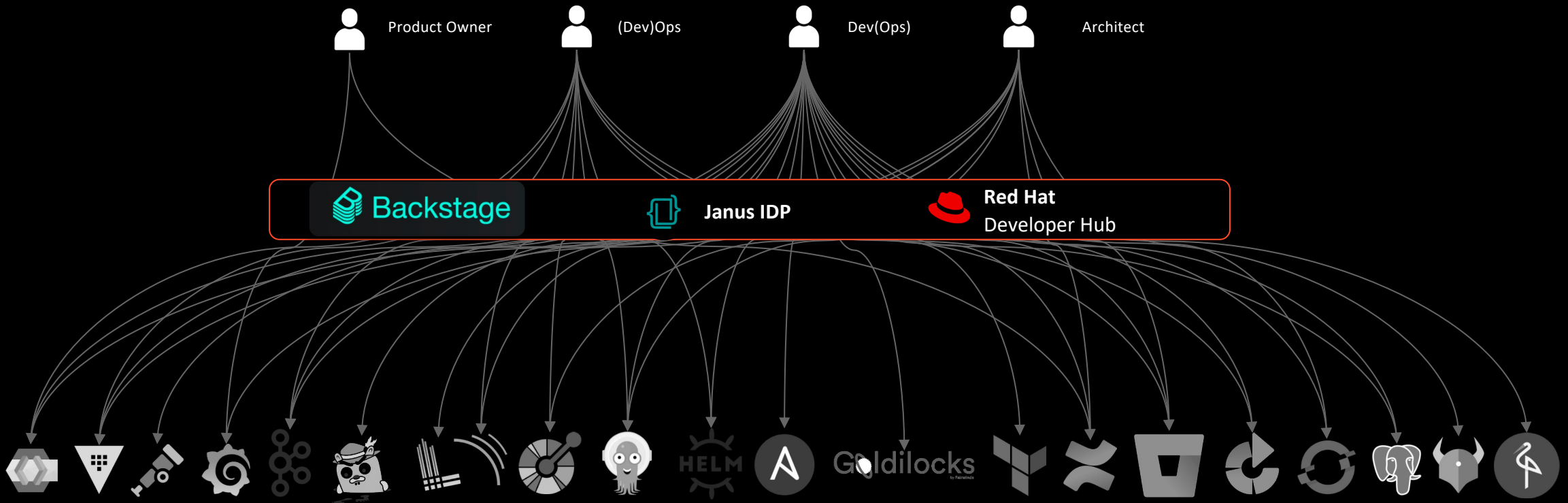
Relatable?

Streamlining interactions

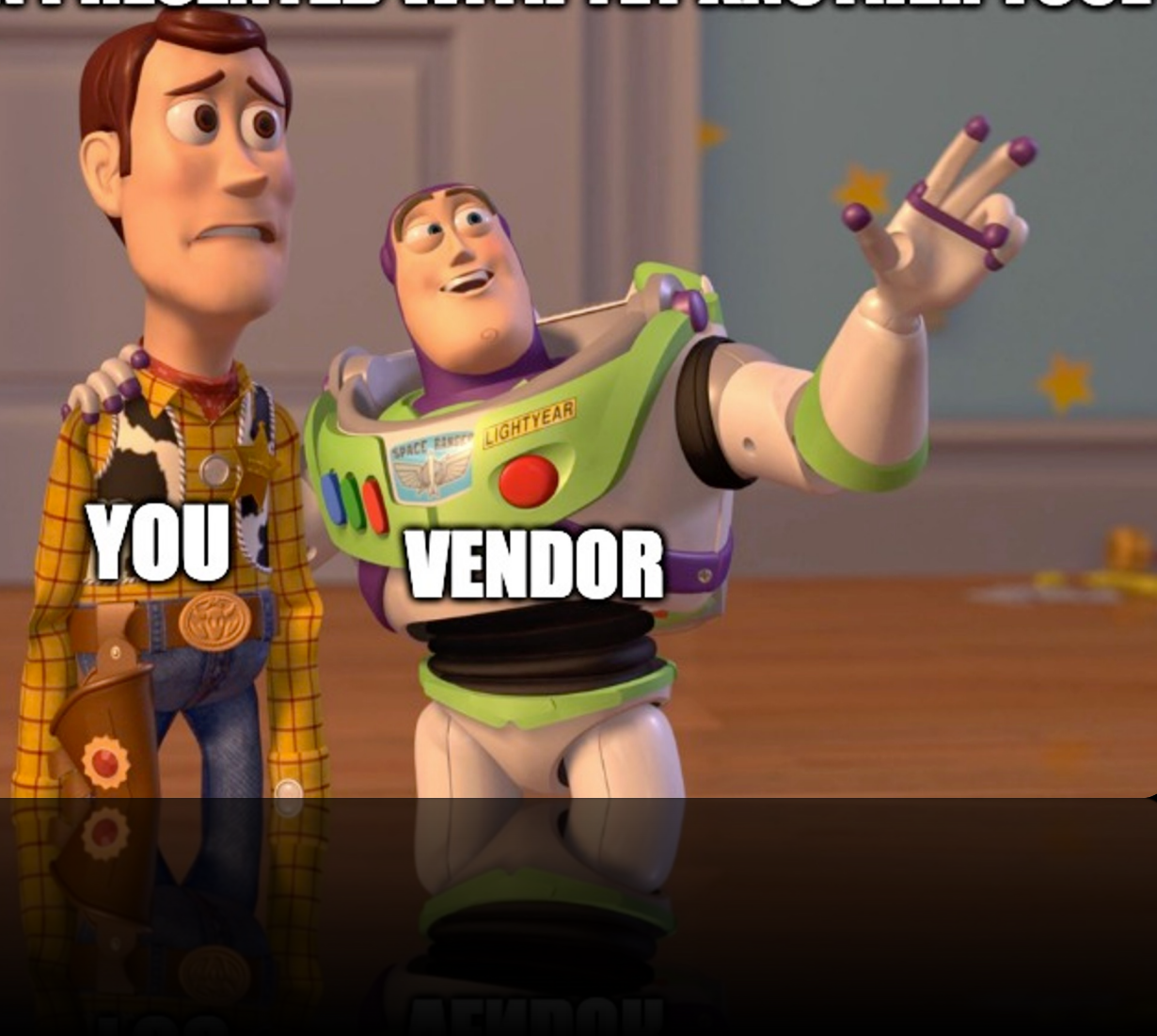


Please do not confuse IDP != IdP ☺

Streamlining interactions



WHEN PRESENTED WITH YET ANOTHER TOOL



YOU

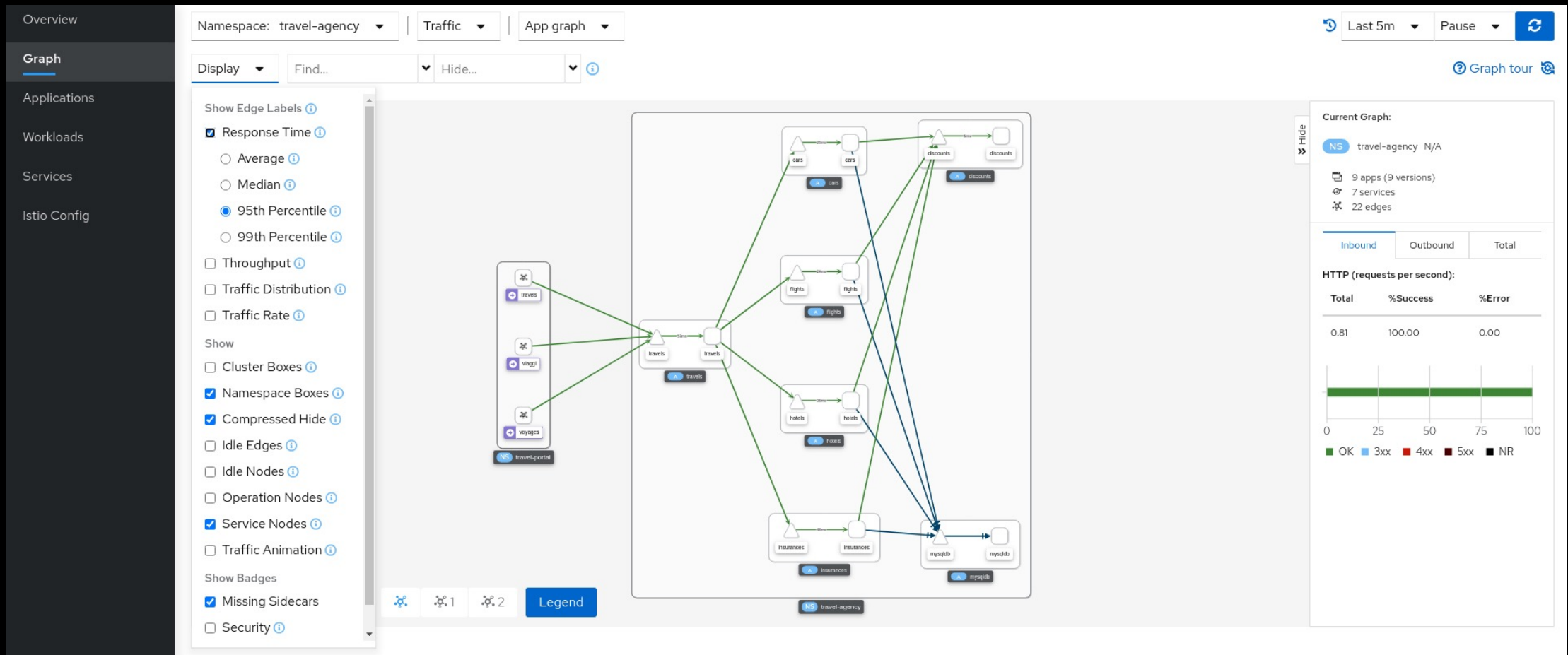
VENDOR

Power of IDPs

1. Do **not replace** your existing tooling & capabilities but rather..
2. Connect your existing **processes** while..
3. Allowing teams to **access** them in a secure and self-service way



We already have Kiali for that?!



It visualizes the service mesh topology and provides visibility into features like request routing, circuit breakers, request rates, latency

"The ecosystem"

The screenshot displays the Backstage ecosystem dashboard, which is a central hub for managing and discovering various plugins. The dashboard is organized into a grid of plugin cards, each representing a different tool or service integrated into the Backstage framework. Each card includes a logo, the plugin name, the creator, a category tag, a brief description, and an 'Explore' button.


Backstage | GitHub | Docs | **Plugins** | Blog | Releases | Demos | Community


Search [K]


- Jira** by roadie.io | Agile Planning | View Jira summary for your projects in Backstage. | Explore
- k8sgpt** by suxess-it | Monitoring | show all k8sgpt results of the k8sgpt operator related to your entity | Explore
- Kafka** by @nirga | Monitoring | Observability for Apache Kafka clusters and async API of components. | Explore
- Authentication and Authorization with Keycloak** by Red Hat | Authentication/Authorization | Load users and groups from Keycloak, enabling use of multiple authentication providers to be applied to Backstage entities. | Explore
- Kiali Service Mesh** by Red Hat | Istio | Configure, visualize, validate and troubleshoot your mesh with Istio. | Explore
- Configuration as Data** by kpt | Configuration Management | Configuration GUI over GitOps using kpt, with WYSIWYG editing, review and approval, versioning and undo, and package cloning and upgrades. | Explore
- Kubecost** by suxess-it | Discovery | Get cost insights from Kubecost Installation for your k8s deployments | Explore
- Kubernetes Entity Provider** by Antoine Dao | Kubernetes | Import Kubernetes resources into Backstage Components | Explore


Self-service done right





 Backstage


 Search


 Home


 APIs


 Explore


 Request

 Tech Landscape

 BCM

 Deployments


 Guidelines

 Patterns

Self-service Portal

Create your own components by using the provided templates!

Available Templates

 Search

PERSONAL

★ Starred

0

CRELAN

All

3

CATEGORIES

TAGS

service

Angular Template

★

DESCRIPTION

A template to create a Angular service that is automatically provisioned with the necessary integrations to run on Openshift.


OWNER

user:guest

TAGS

angular httpd

LINKS

 CHOOSE

service

JMeter Template

★

DESCRIPTION

A template to create a JMeter service that is automatically provisioned with the necessary integrations to run on Openshift.


OWNER

user:guest

TAGS

java jmeter

LINKS

 CHOOSE

service

Quarkus Template

★

DESCRIPTION

A template to create a Quarkus service that is automatically provisioned with the necessary integrations to run on Openshift.


OWNER

user:guest

TAGS

java quarkus

LINKS

 CHOOSE

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Self-service done right

Self-service Portal

Create your own components by using the provided templates!

Quarkus Template

1 Service Agreement

The service request requires the approval of the ARB (Architecture Review Board), by the accepting you confirm that the service has been discussed and approved by the ARB. If you are not sure of this, please contact the architect on your project to validate.

☐ Approved by ARB?

BACK NEXT STEP

2 Project Information

3 Service Information

STEP 1

Self-service Portal

Create your own components by using the provided templates!

Quarkus Template

✓ 1 Service Agreement

2 Project Information

Provide the project information for the service.

Project Code *

R2145

The project code is in format of R[0-9]{4} e.g. R4209

BACK NEXT STEP

3 Service Information

STEP 2

Self-service Portal

Create your own components by using the provided templates!

Quarkus Template

✓ 1 Service Agreement

✓ 2 Project Information

3 Service Information

The following information is required to know what service we need to provide

Layer *

Business Service Layer (bsl)

Select the layer on which the component will operate

Name *

privatefunds

Unique name of the component, eg mycrelapi, pepipeed

Owner *

DevOps Invest (devopsinvest)

What team is the owner of this application?

Domain *

investments

Provide the domain for the specific component.

BACK NEXT STEP

STEP 3

Self-service Portal

Create your own components by using the provided templates!

Quarkus Template

✓ 1 Service Agreement

✓ 2 Project Information

✓ 3 Service Information

Review and create

Agreement	✓
Code	R2145
Layer	bsl
Name	privatefunds
Owner	devopsinvest
Domain	investments

BACK RESET CREATE

STEP 4

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Key Takeaway

Streamlining implies continuously evolving your technology landscape with new capabilities



IDP is just one building block that leverages your IT automation, rather than replacing it

Questions?



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THANK YOU

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