Streamlining infrastructure services for frictionless DevOps

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Principal IT Architect

[~]$ whoami

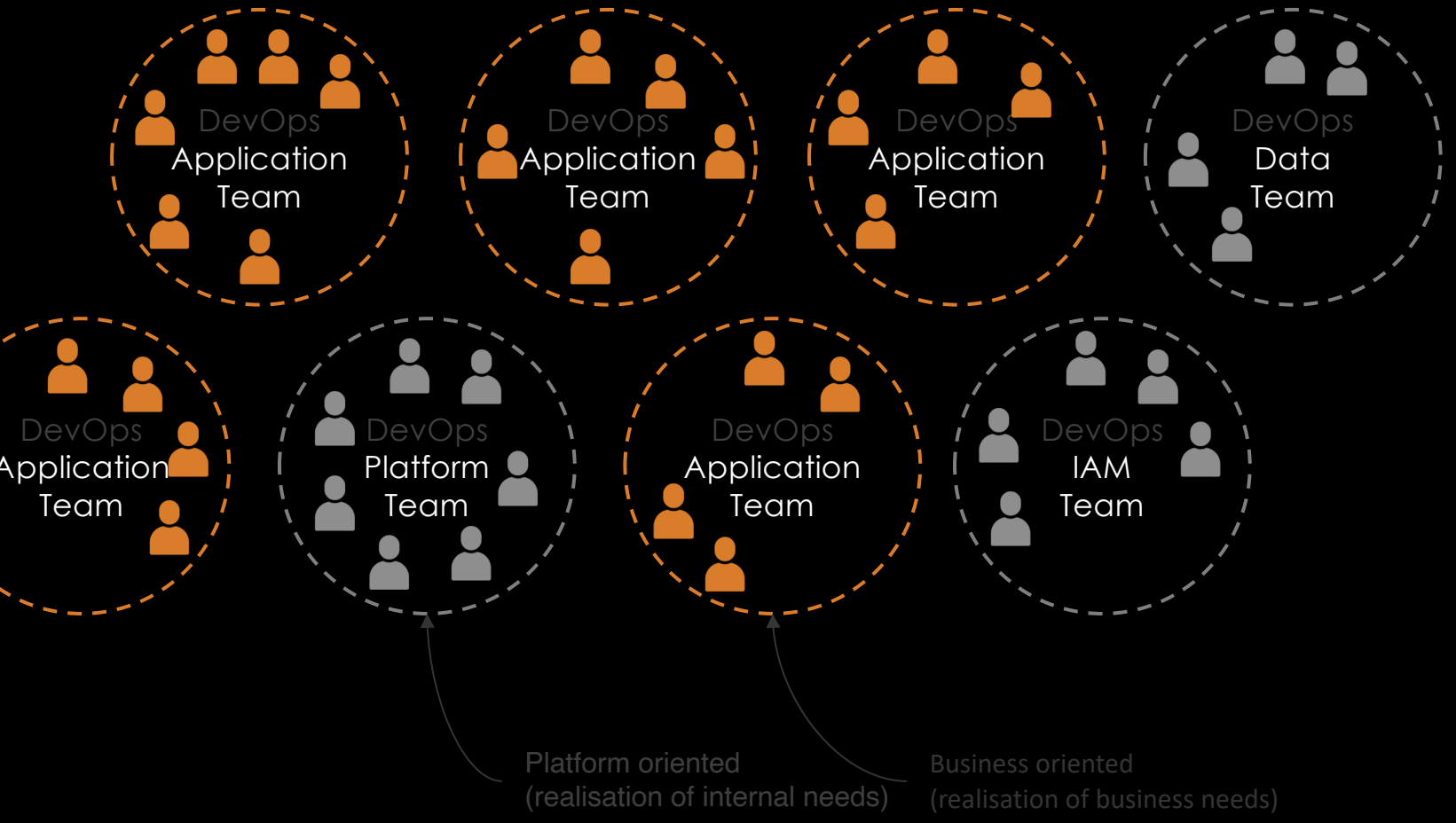
- Thomas Petit
- Principal Architect @AE

- Passion for anything cloud(-native) & integration
- Hands-on architect
- Running my house on k8s

What are we trying to streamline?

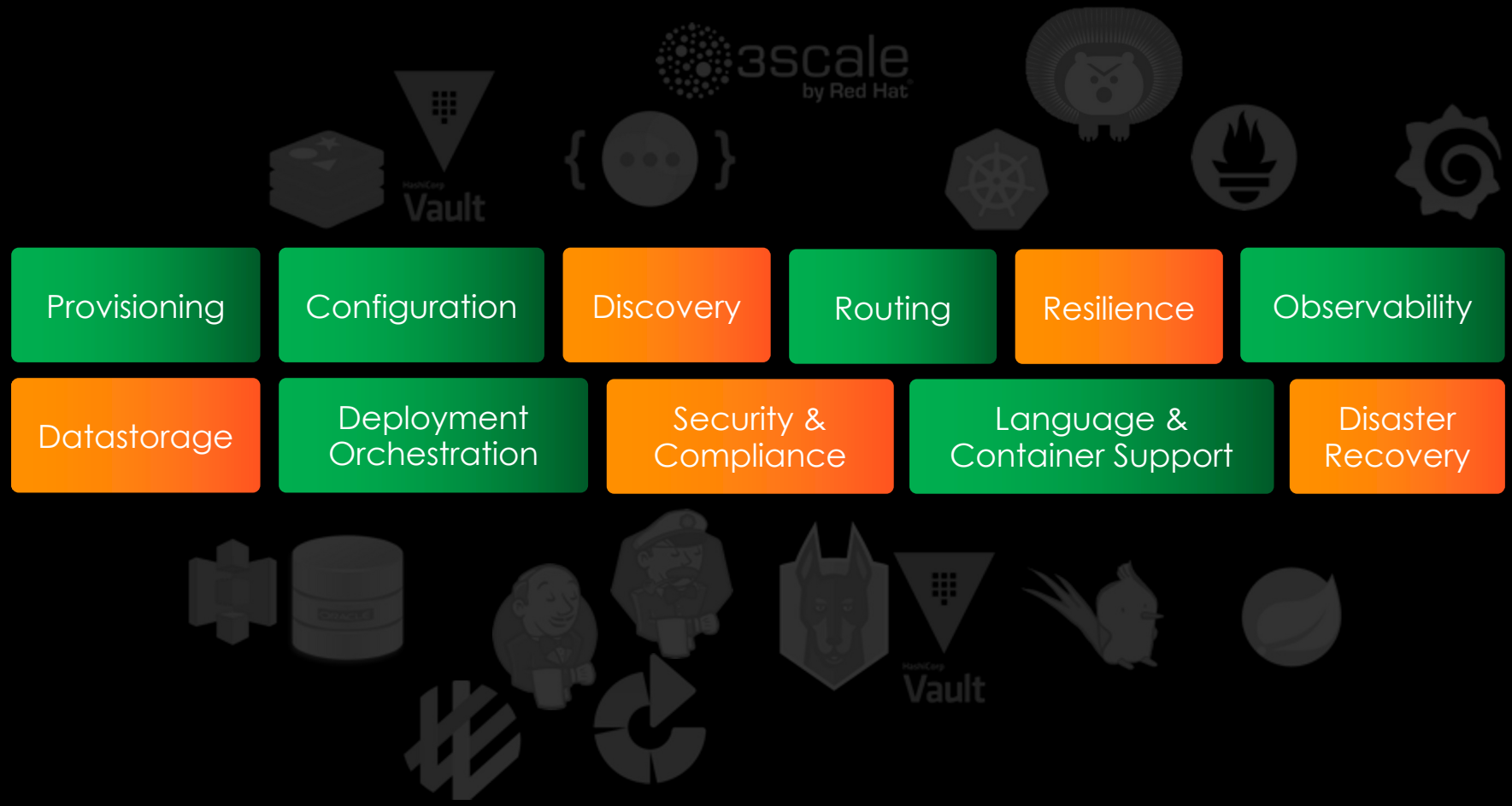
It depends…

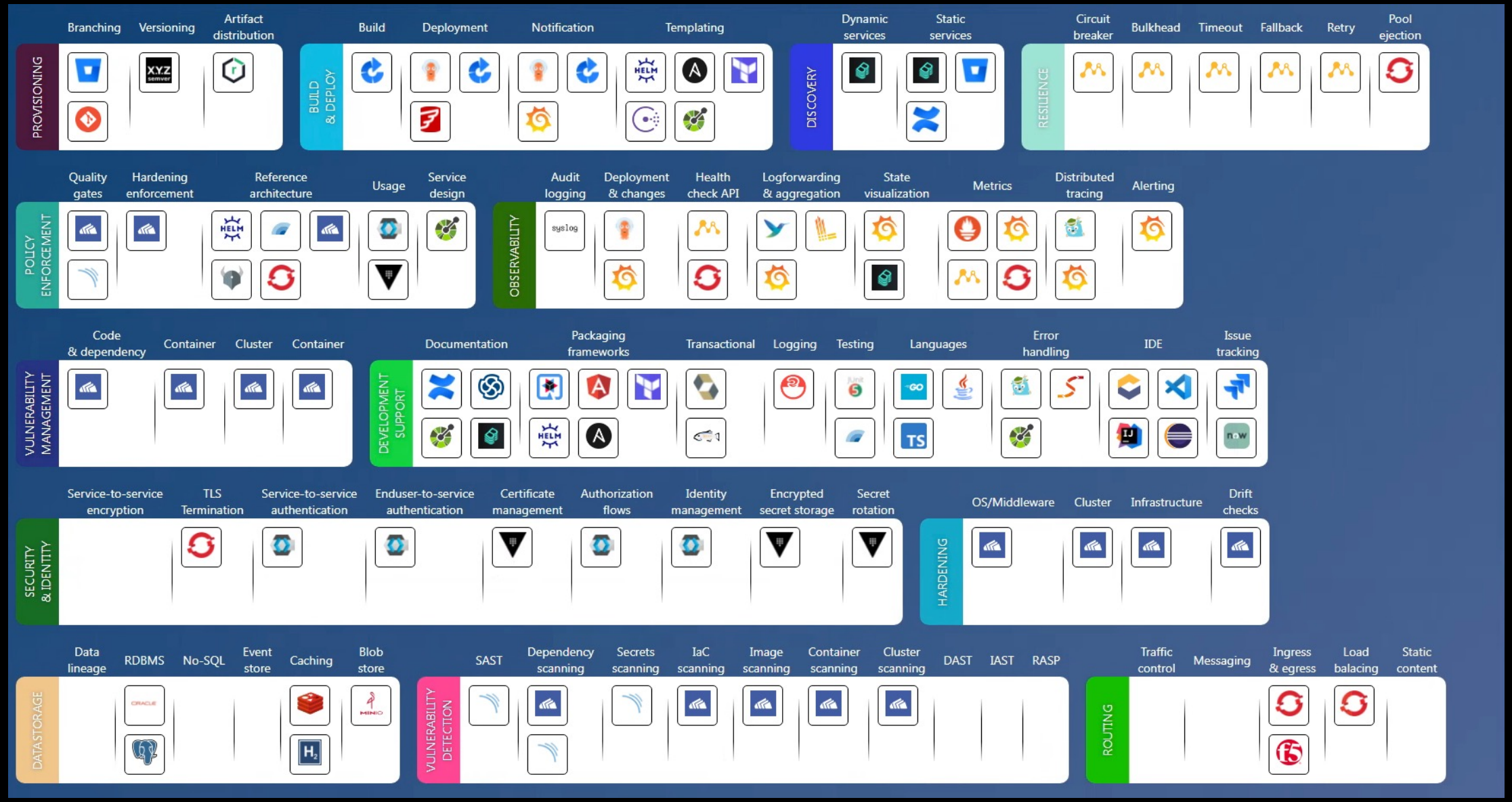
DevOps Flavors



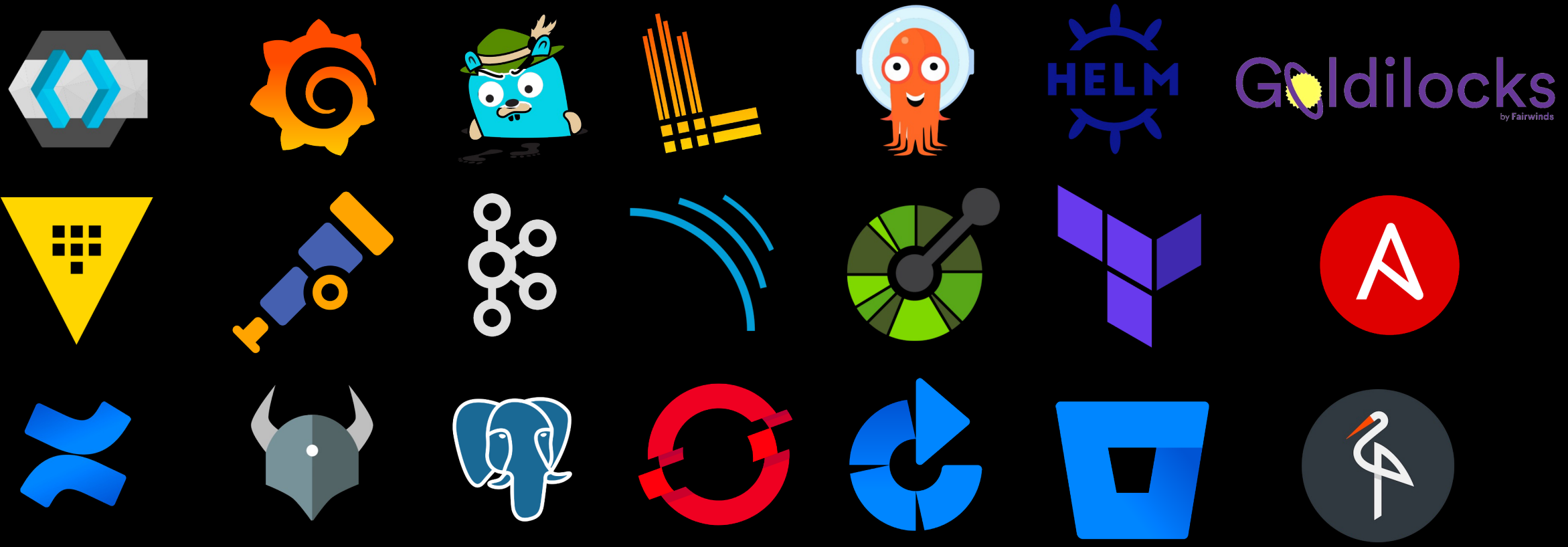
Teams are composed of multiple types of roles. Depending on the type of team, infrastructure oriented or more application oriented, the profiles and focus will differ within that team.

Plot tools on capabilities

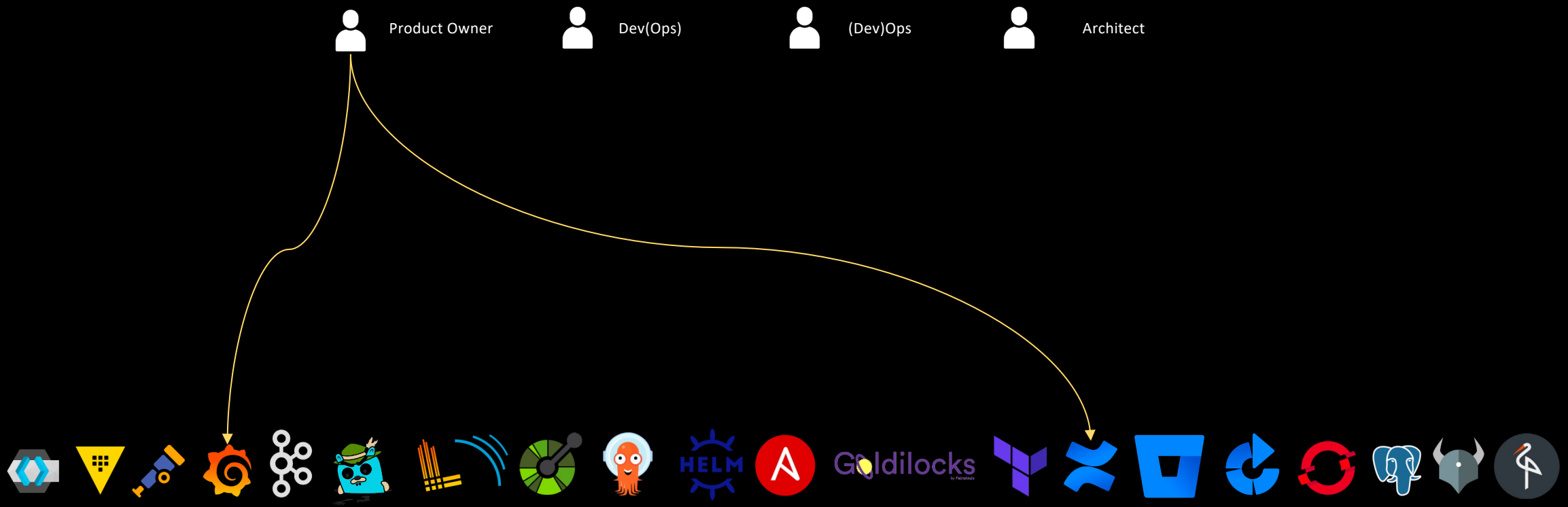



PROVISIONING
Branching
Versioning
Artifact distribution
BUILD & DEPLOY
Build
Deployment
Notification
Templating
DISCOVERY
Dynamic services
Static services
RESILIENCE
Circuit breaker
Bulkhead
Timeout
Fallback
Retry
Pool ejection
POLICY ENFORCEMENT
Quality gates
Hardening enforcement
Reference architecture
Usage
Service design
OBSERVABILITY
Audit logging
Deployment & changes
Health check API
Logforwarding & aggregation
State visualization
Metrics
Distributed tracing
Alerting
VULNERABILITY MANAGEMENT
Code & dependency
Container
Cluster
Container
DEVELOPMENT SUPPORT
Documentation
Packaging frameworks
Transactional
Logging
Testing
Languages
Error handling
IDE
Issue tracking
SECURITY & IDENTITY
Service-to-service encryption
TLS Termination
Service-to-service authentication
Enduser-to-service authentication
Certificate management
Authorization flows
Identity management
Encrypted secret storage
Secret rotation
HARDENING
OS/Middleware
Cluster
Infrastructure
Drift checks
DATASTORAGE
Data lineage
RDBMS
No-SQL
Event store
Caching
Blob store
VULNERABILITY DETECTION
SAST
Dependency scanning
Secrets scanning
IaC scanning
Image scanning
Container scanning
Cluster scanning
DAST
IAST
RASP
ROUTING
Traffic control
Messaging
Ingress & egress
Load balacing
Static content

One size does not fit all



People <> Tools



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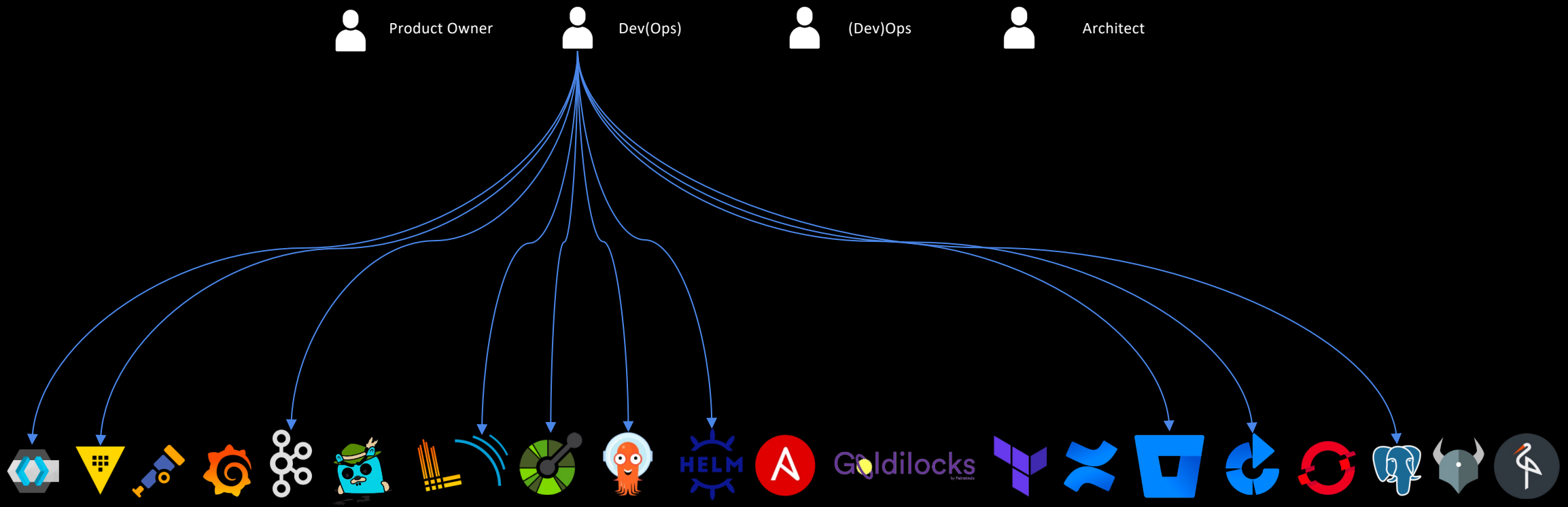
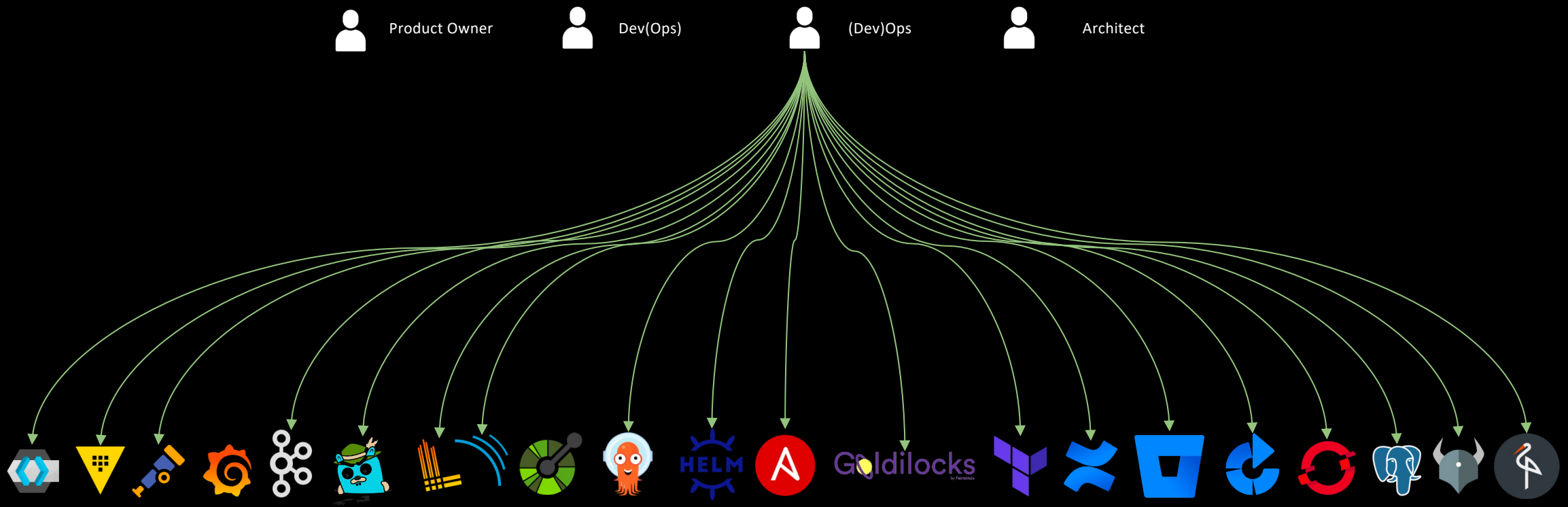
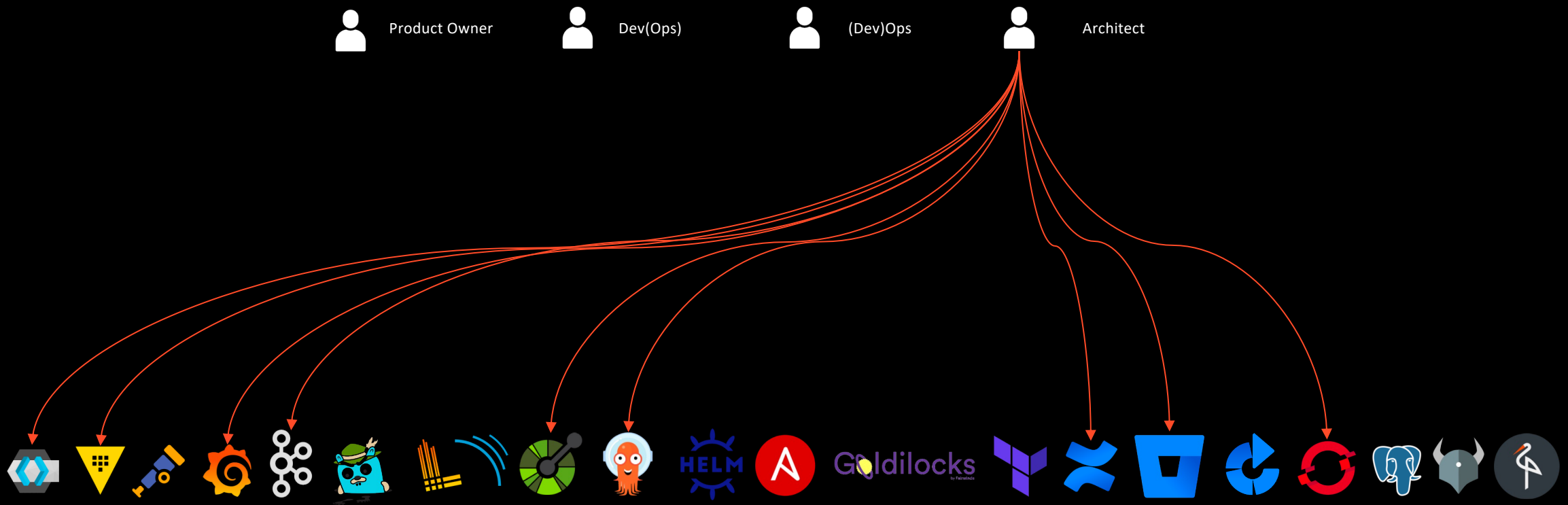


People <> Tools



People <> Tools



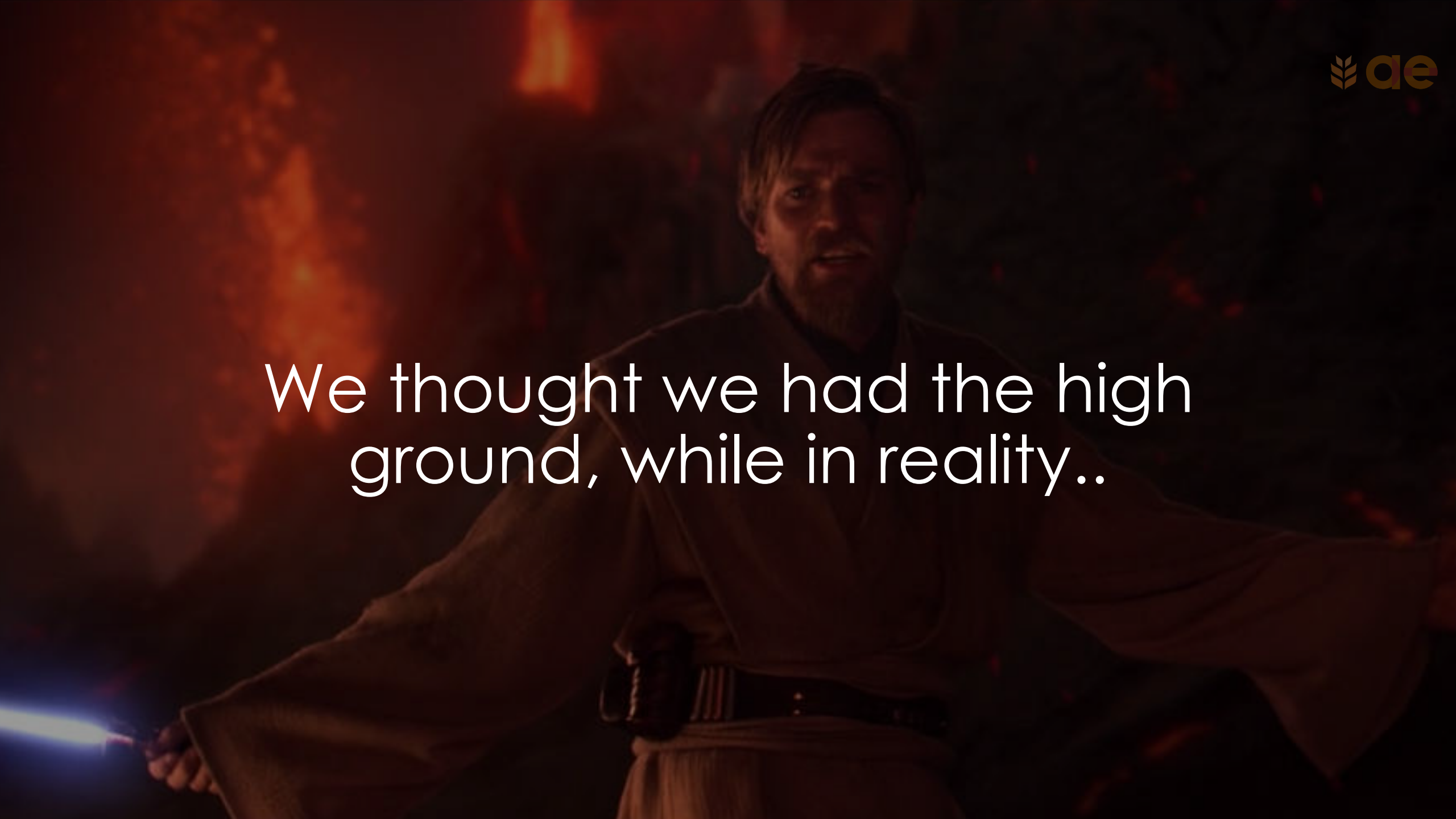
People <> Tools

Product Owner

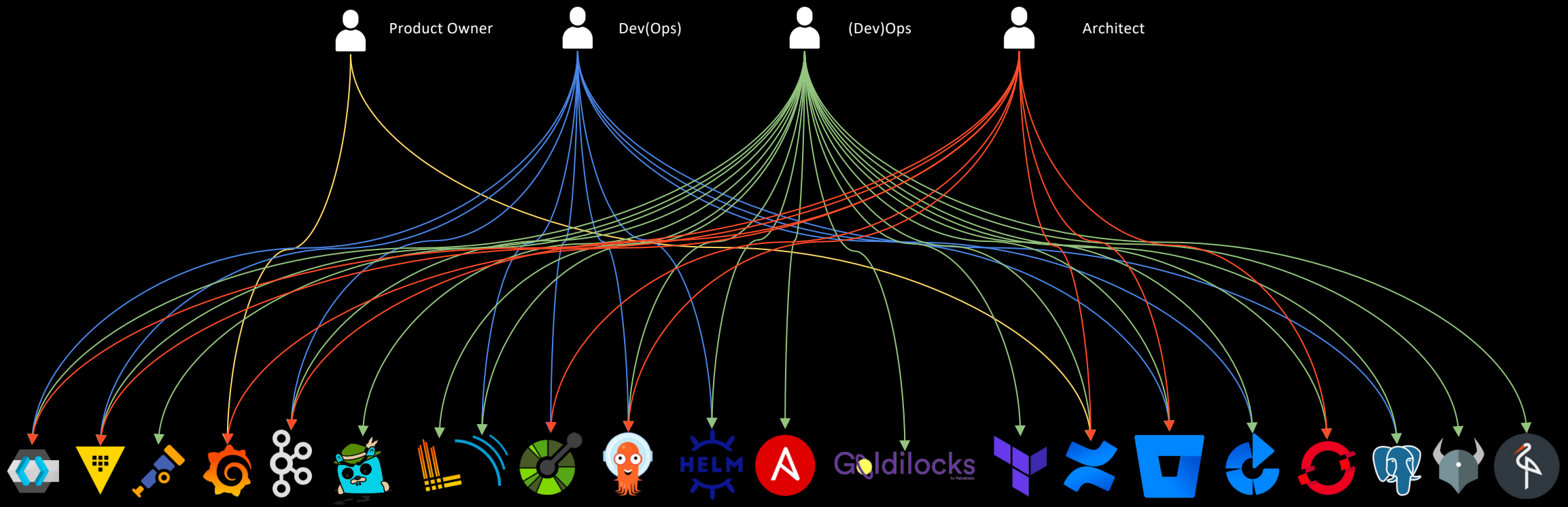
Dev(Ops)

(Dev)Ops

Architect


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

Tooling interactions will become complicated



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.
Access denied
Access is denied
OK
Administrator

Bad idea

Key challenges we observe

No automations in place to support recurring demands from application teams

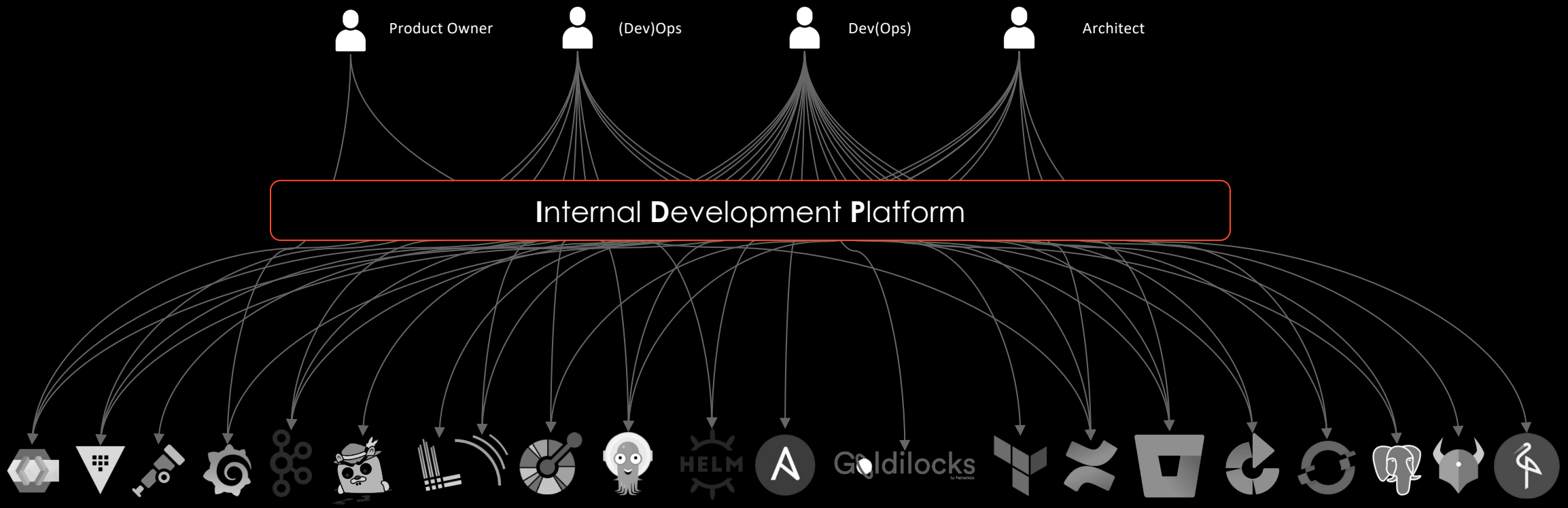
Finding information is scattered over different tools

Onboarding process of different people is a pain

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

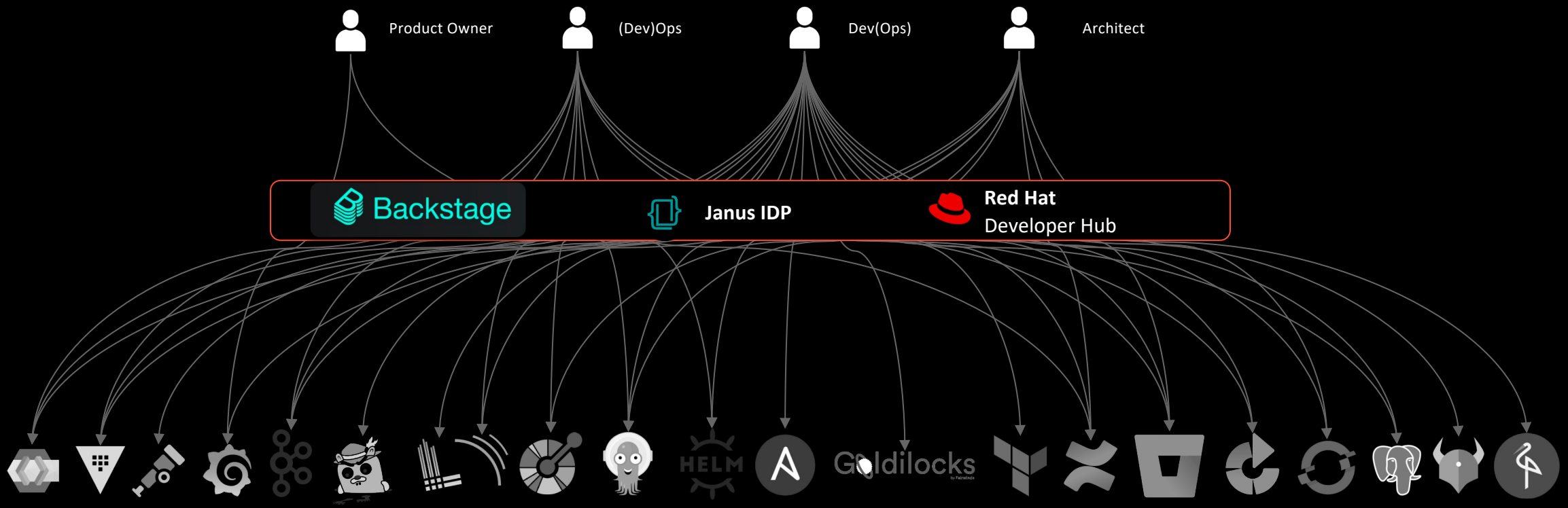
Relatable?

Streamlining interactions



Please do not confuse IDP != IdP ☺

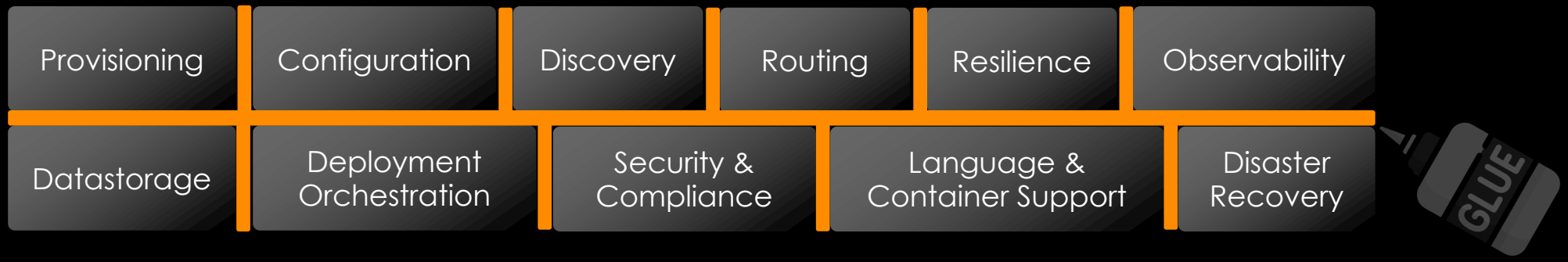
Streamlining interactions



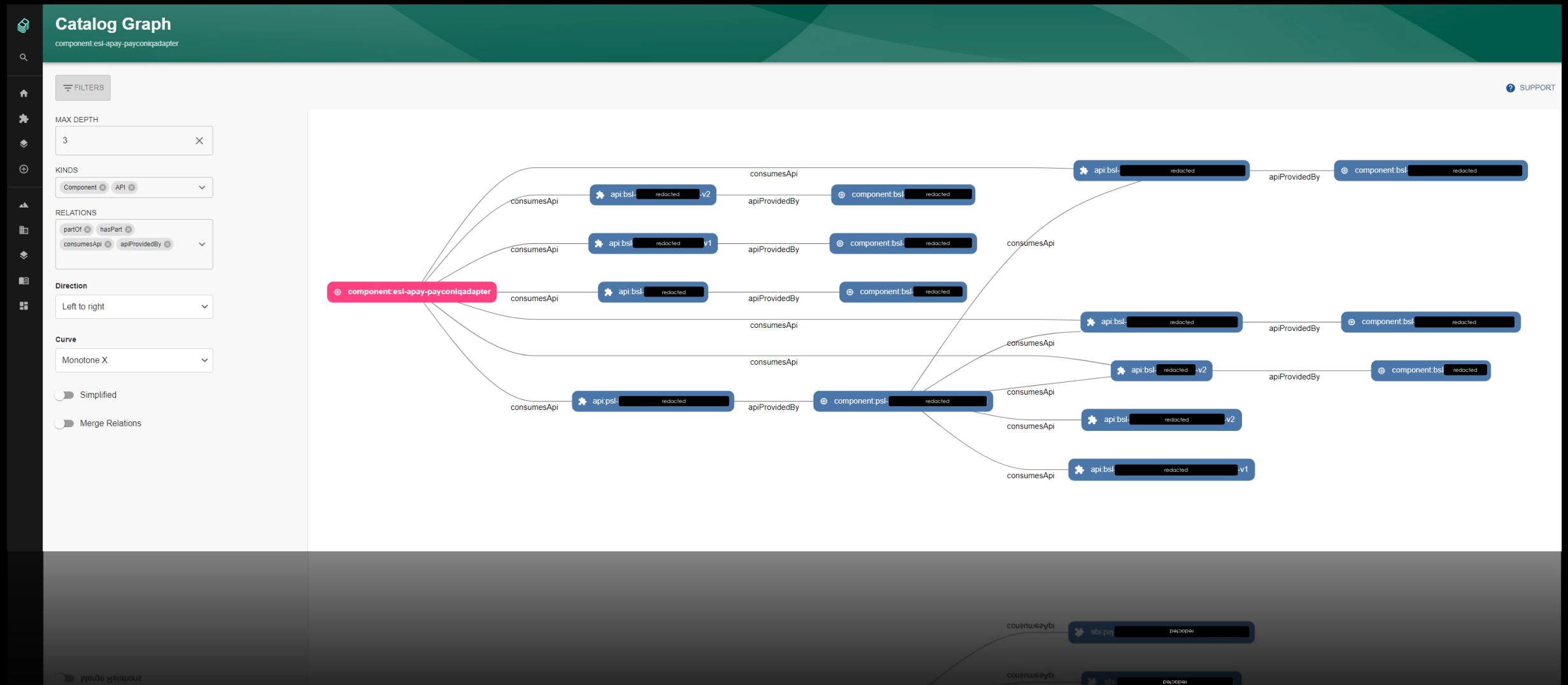

WHEN PRESENTED WITH YET ANOTHER TOOL
YOU
VENDOR
LIGHTYEAR

Power of IDPs

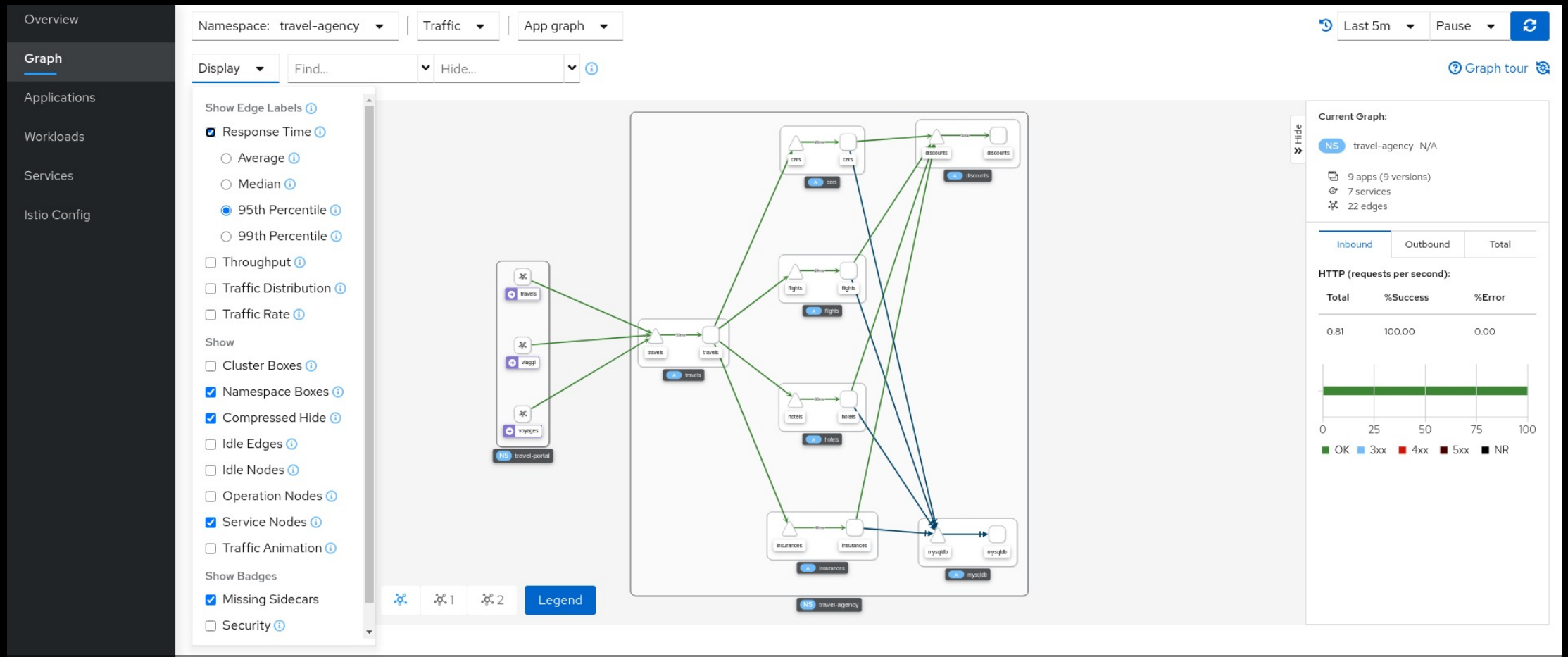
1. Do not replace your existing tooling & capabilities but rather..
2. Connect your existing processes while..
3. Allowing teams to access them in a secure and self-service way



Render complex service interactions

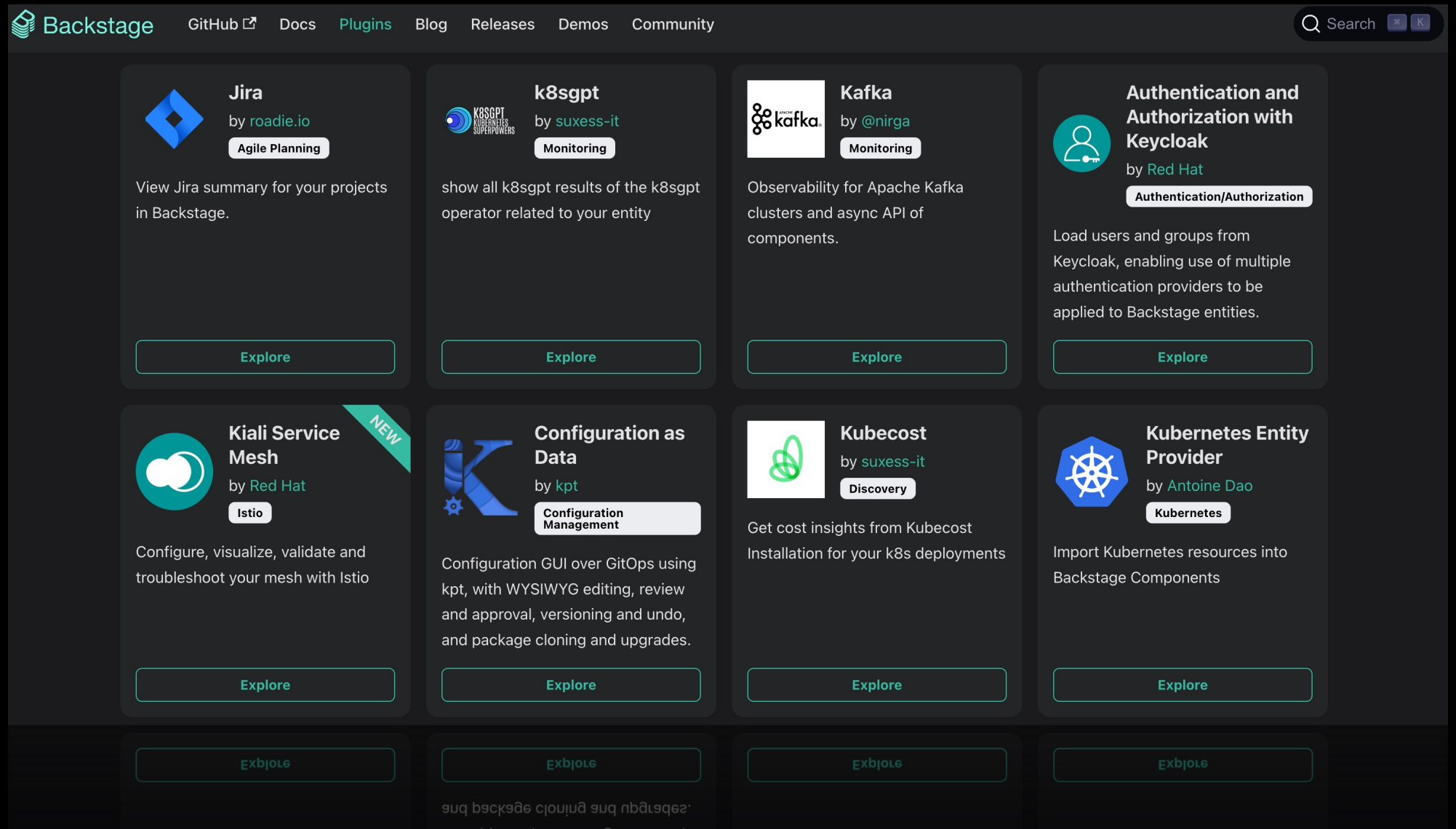


We already have Kiali for that?!

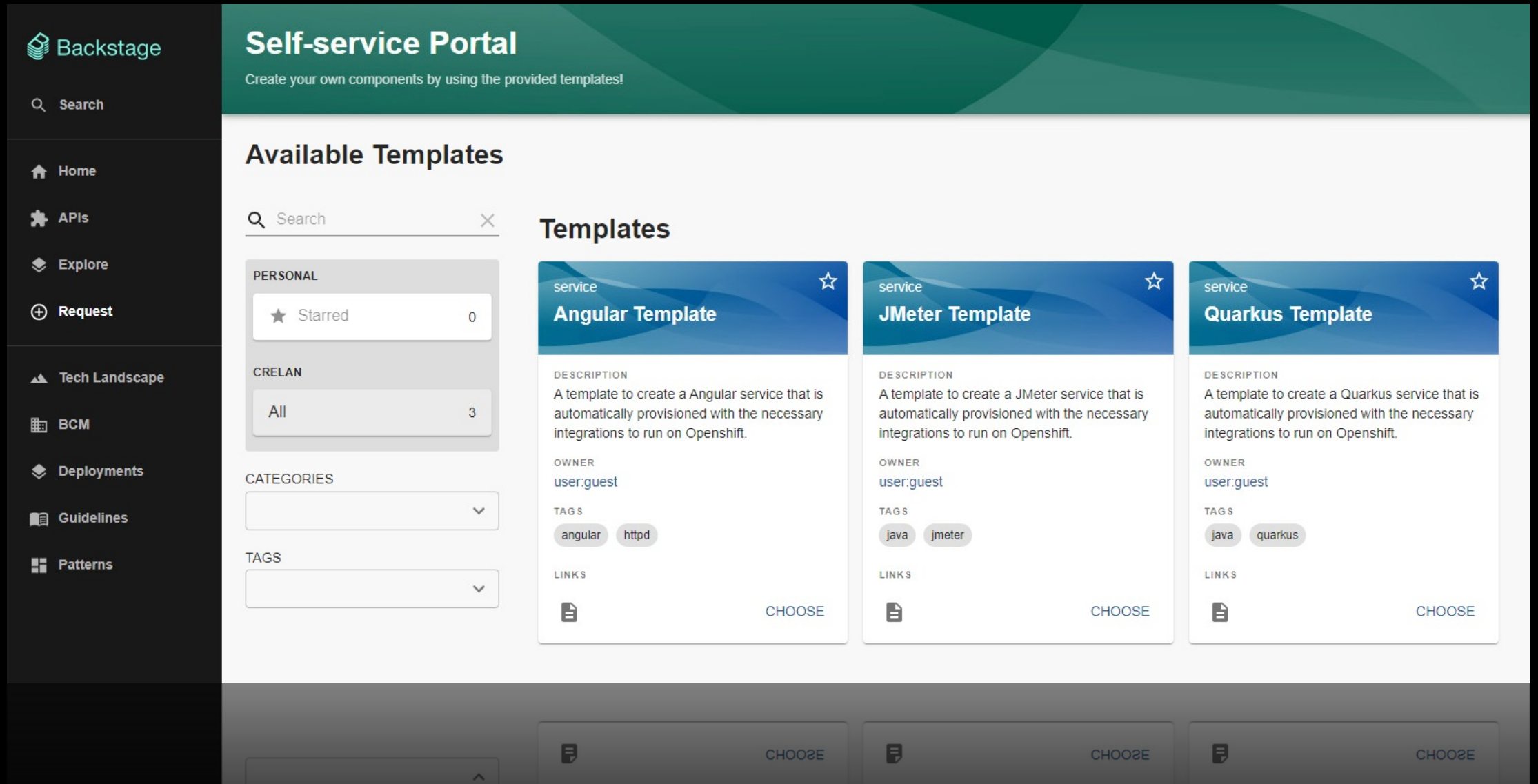


It visualizes the service mesh topology and provides visibility into features like request routing, circuit breakers, request rates, latency

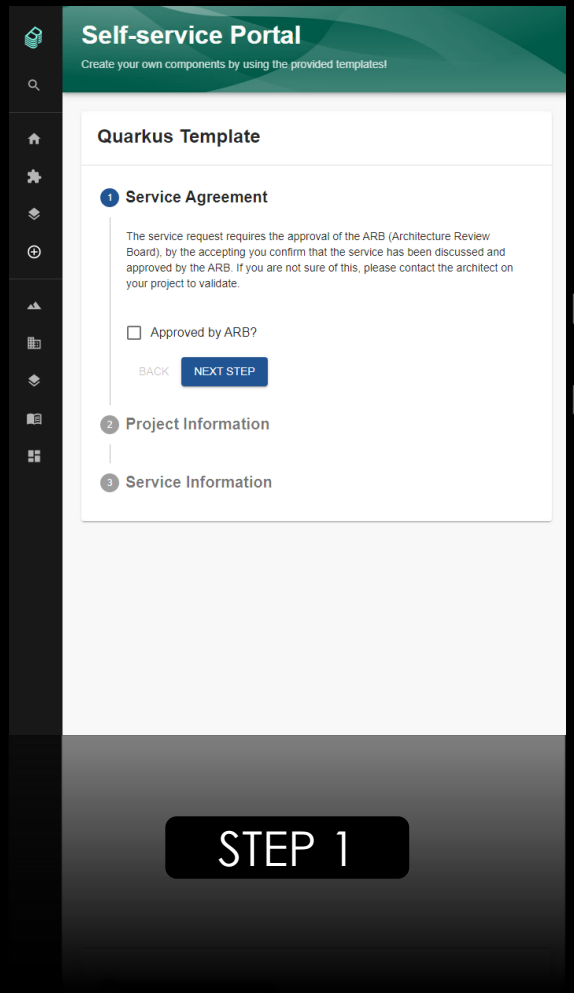
"The ecosystem"

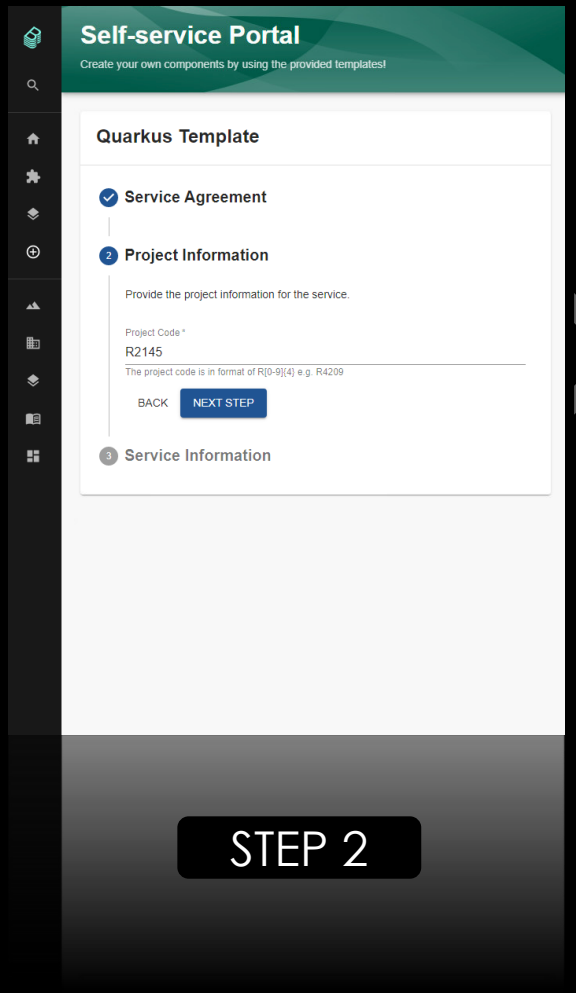


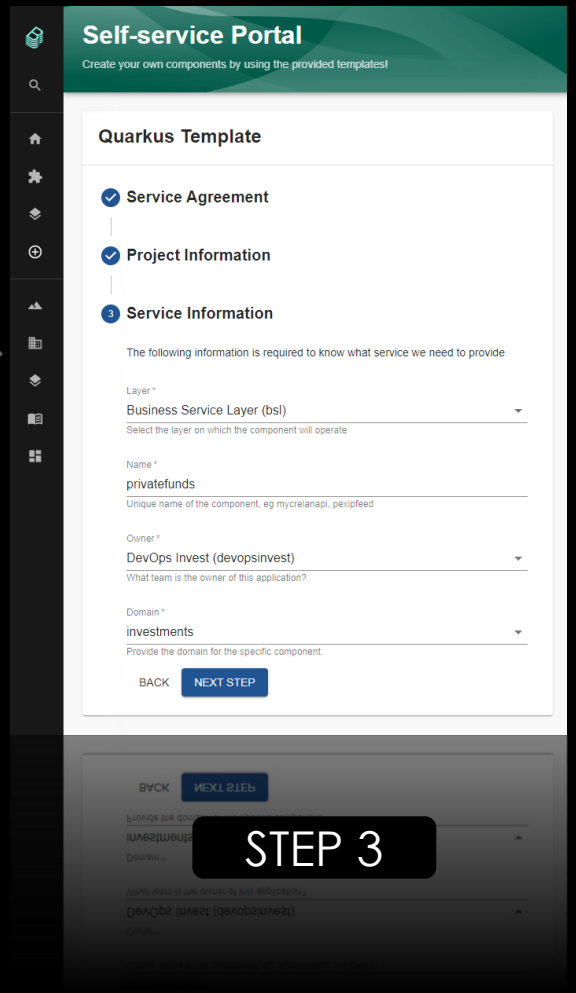
Self-service done right

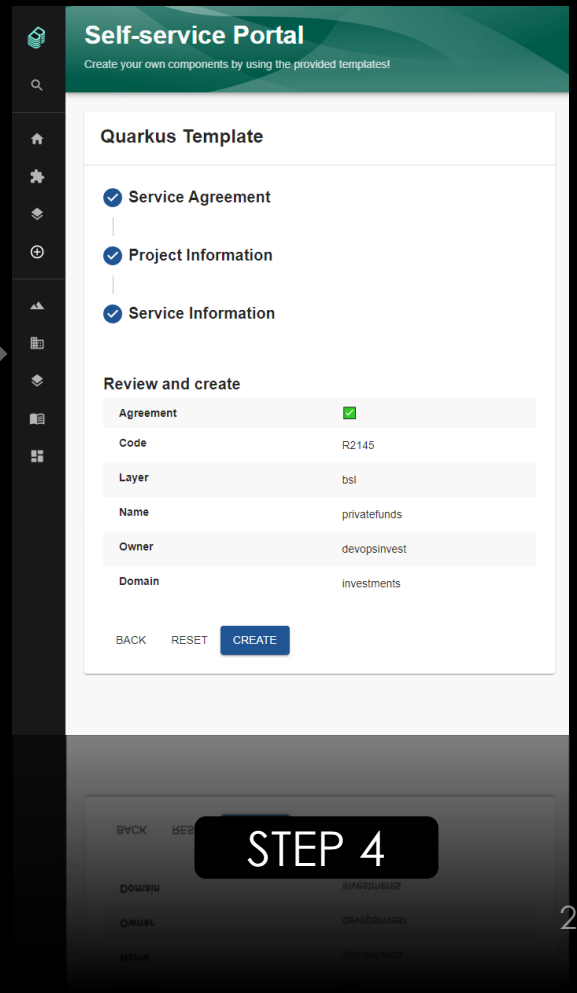


Self-service done right









Key Takeway

Streamlining implies continously 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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