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Navigating the infrastructure skills gap for DevOps teams

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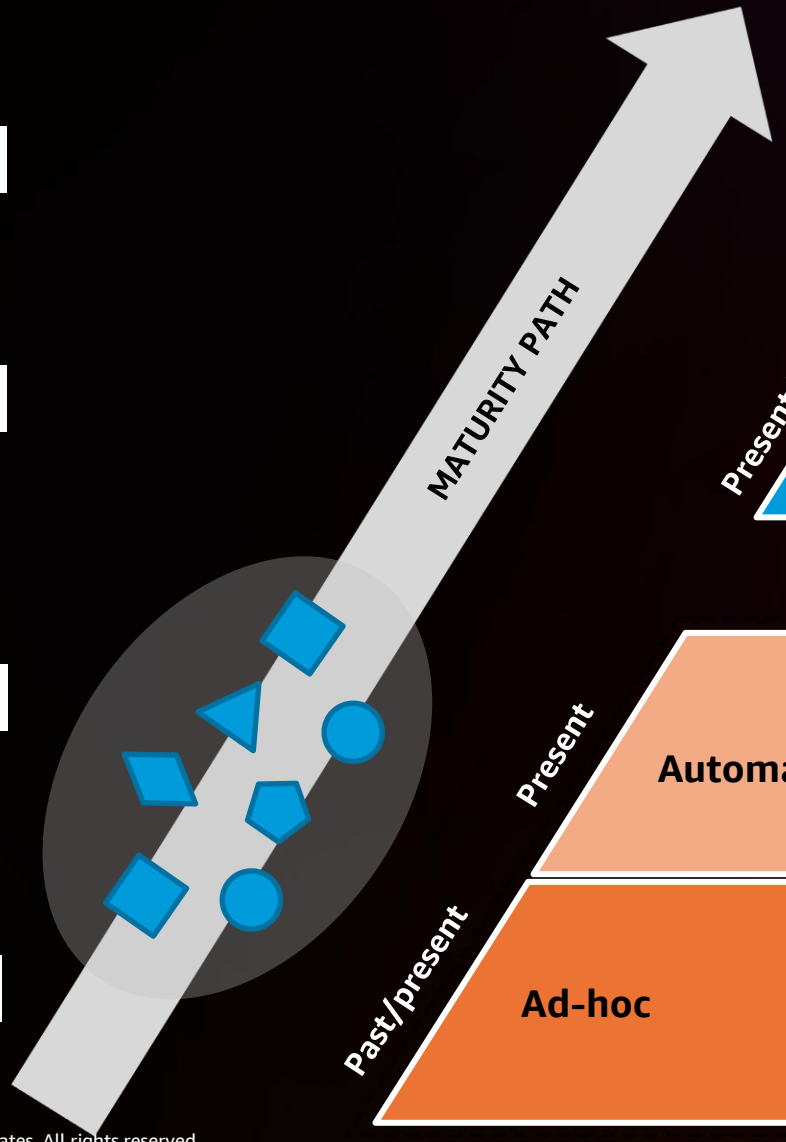
Infrastructure automation maturity path

APPLICATION-CENTRIC

CONTROL PLANE

AUTOMATION

IAAS



Future

Self-defining

Complete observability
Business value streams
Predictive change

Present/future

Frictionless

Self-service, managed changes
Scalability, automation-optimized
Expertise-optimized

The Infrastructure Gap

Present

Automated

Islands of **automation**
Scale and cost challenges
Siloed processes

Past/present

Ad-hoc

Manual **everything**
Blind to complexity and cost
Siloed expertise

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Skills challenges and complexity are slowing you down

85%

of developers and IT leaders have faced barriers to implementing DevOps*

Top barriers*

Lack of skills (37%)

Legacy infrastructure (36%)

Adjusting corporate culture (35%)

*Atlassian 2020 State of DevOps Survey

"A product mindset is key to scaling and evolving DevOps." **

68% of respondents indicate that a DevOps leader must be skilled in empowering and developing others. **

40% of workers globally say that they might leave their jobs in the near future. ***

** UpSkilling 2021 Enterprise DevOps Skills Report

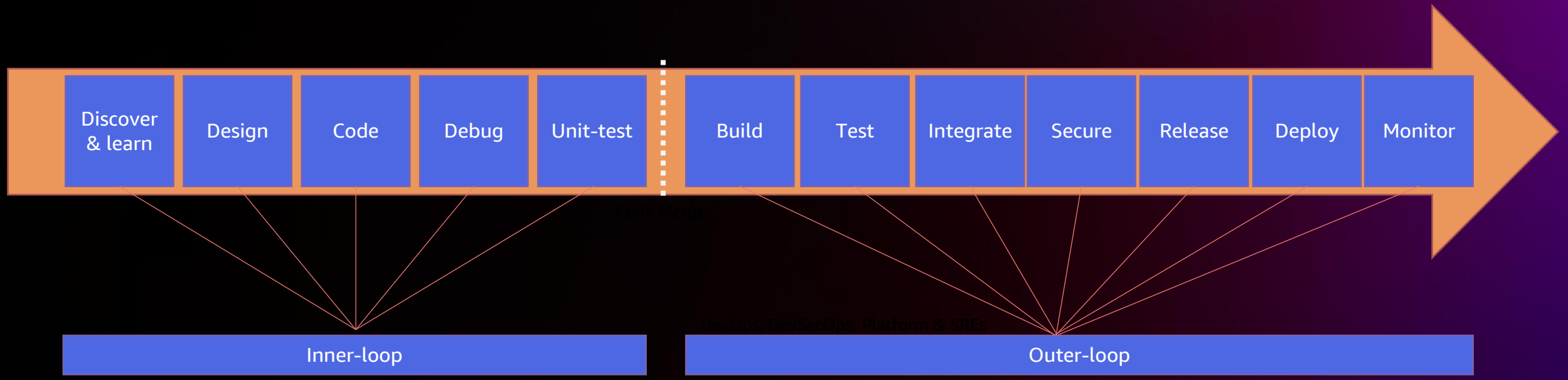
*** McKinsey: The Great Attrition is making hiring harder

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Day in the life of a software service

THE INFRASTRUCTURE NEEDED FROM DESIGN TO PRODUCTION



Environment services

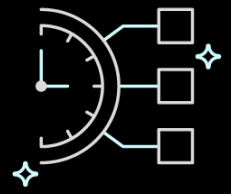
IDP		
	Launch from IDE	Rollout changes
	Audit	Debugging
	Logs	Direct access

GitOps			
	Drift detection & reconcile	Tagging	Cost control
	Approval flows	Secrets	Policies
	Torque actions	Monitoring	RBAC

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What’s stopping DevOps from evolving?



Complexity & scalability

Complexity is increasing as the business demands more and more software

IT is challenged to scale environments while ensuring control and visibility



Leveraging in-house expertise & technical debt

Capturing, leveraging, and transferring in-house expertise across the software lifecycle in DevOps and IT Ops teams



Islands of automation

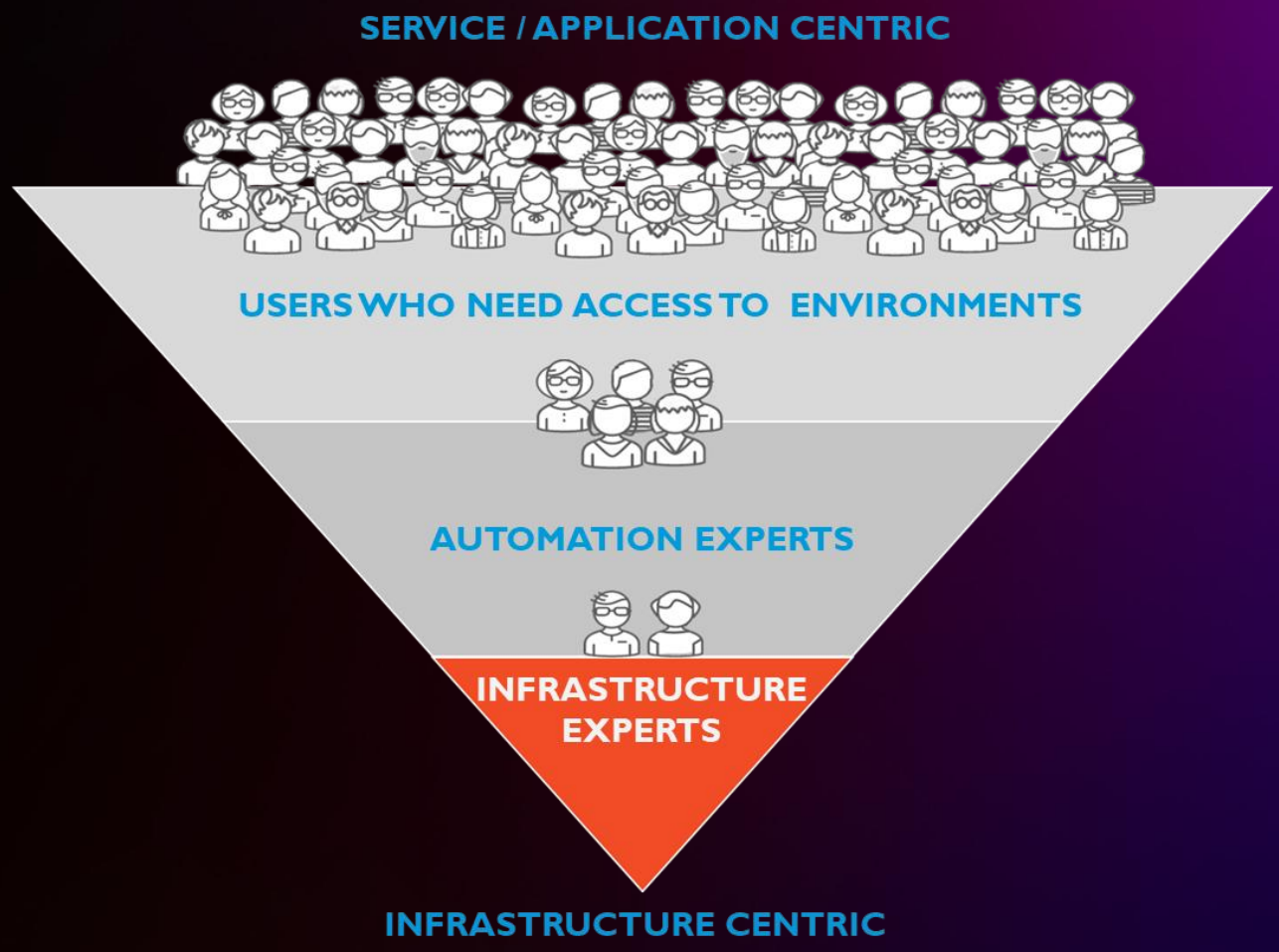
Automation is often deployed in silos and contributes to broken processes, piece-part and fragile systems, excess cost, and security risks

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The expertise bottleneck's full impact

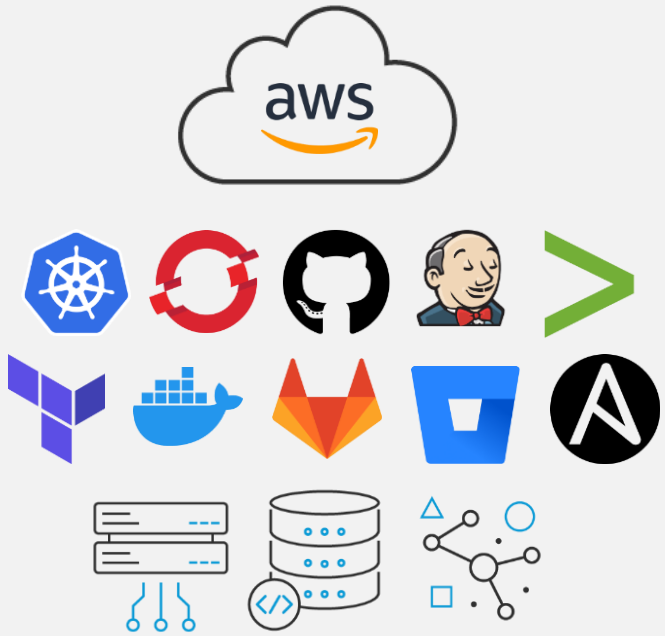
- Lengthy wait times for developers, testers, and other end users
- Repetitive manual tasks to support day-to-day infrastructure needs
- Burnout and turnover among DevOps experts
- Shadow environments that lead to bugs, security risks, and budget overruns



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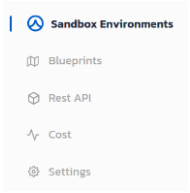
What is a blueprint?

A MODULAR, REUSABLE PACKAGE OF ALL ENVIRONMENT COMPONENTS



Applications
Infrastructure – IaC
Data
Services
Source control
IAM

TORQUE





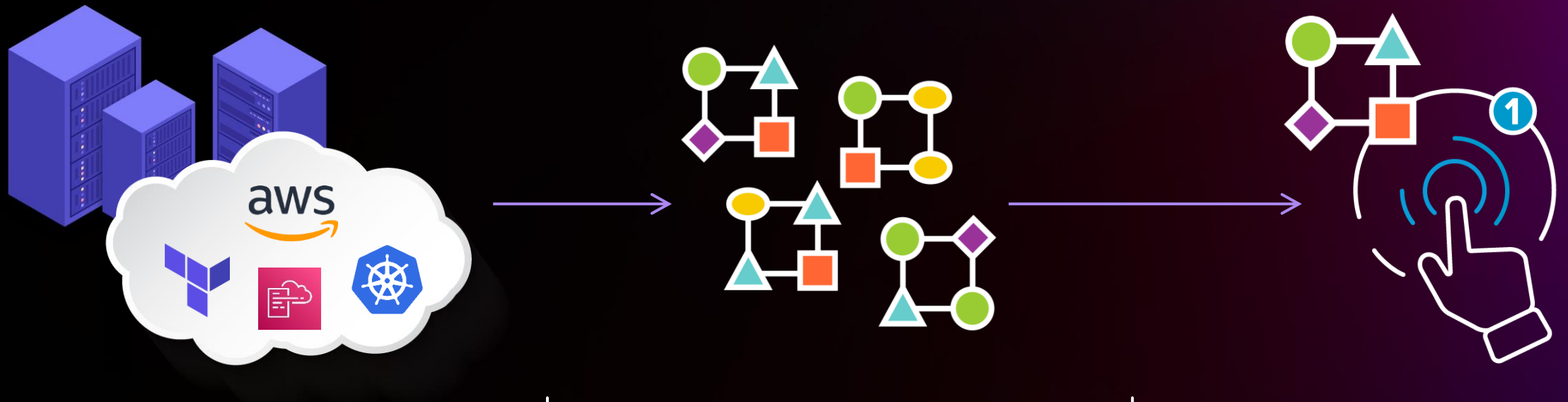
COMPONENTS
Infrastructure
and software

QUALI BLUEPRINTS
Modular and scalable
self-service catalog

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Move fast, but don’t break things

TORQUE AUTOMATES BUILDING AND DEPLOYING ENVIRONMENTS PRECONFIGURED WITH POLICIES AND PERMISSIONS



Application environment blueprint

- IaC files
- AWS Cloud services
- Datasets
- Network topologies
- Custom governance rules, tagging policies, and role-based access control

Automation and orchestration

- Create a self-service catalog of blueprints for all common use cases, integrated with CI/CD and ITSM tools
- Centrally managed so all environments deployed from blueprints are consistent and up to date

Self-service access for developers

- Developers can access the application environments they need, when they need them
- Restricted from accessing the infrastructure and data they don’t need

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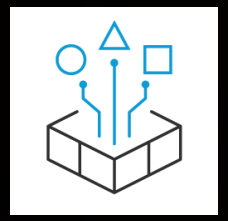
Skills gaps – How we address challenges



Auto discover



Role-based access



Reusable blueprints

- Auto discover and import existing IaC and K8s configurations
- Reuse existing configurations across teams/projects
- Adopt new infrastructure patterns quickly
- Cascade infrastructure changes to teams automatically
- Auto drift detection, actively manage config changes
- Deploy complex hybrid infrastructure in one configuration

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