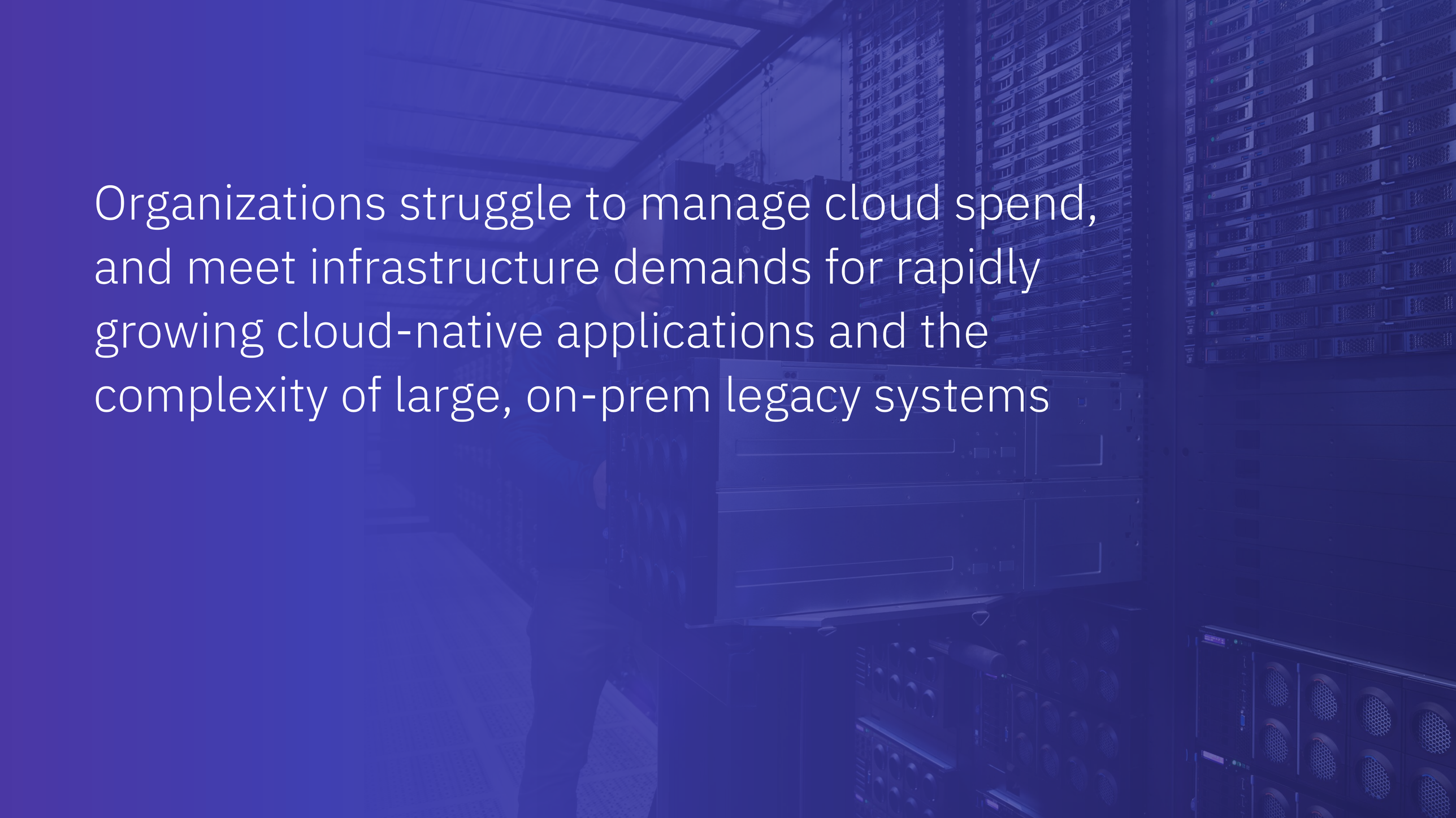
HashiCorp
an IBM Company

Red Hat

Terraform + Ansible

Infrastructure & Application lifecycle management

ZONES
First Choice for IT™



Organizations struggle to manage cloud spend, and meet infrastructure demands for rapidly growing cloud-native applications and the complexity of large, on-prem legacy systems

Infrastructure lifecycle management challenges are exacerbated by AI driven workloads. BILLIONs of cloud applications are predicted to be generated by AI by 2028

The effort to build and maintain these will push far beyond the capacity of humans to support, magnifying organizational risk and complexity

30+

tools used across 10 vendors

75%

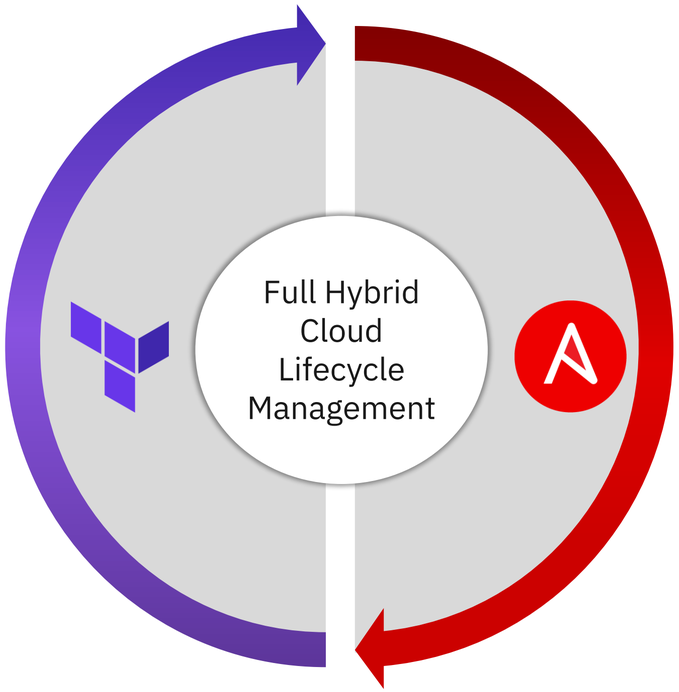
enterprises fail to generate consistent ROI from hybrid cloud investment

35%

average waste on cloud spend [3]

3. Gartner 2023 Worldwide public cloud forecast (2023)

Build and manage infrastructure and application stacks



Terraform and Red Hat Ansible provide full Hybrid Cloud lifecycle management to build and manage applications and supporting infrastructure

This combination of best of breed tooling provides a consistent, reliable, and scalable path to automation, accelerating ROI, while decreasing costs, complexity and risk

Terraform + Ansible solve infrastructure challenges

Reduce Cost

Reduce cloud waste, manual processes, tool sprawl

25%

reduction in infrastructure costs [2]

668%

three-year return on investment (ROI)[1]

Reduce Risk

Lower the risk of breach and enforce policy

96%

Faster provisioning without security or compliance issues with modules [2]

61%

reduction in unplanned downtime[1]

Unlock time to value

Boost developer productivity

5x

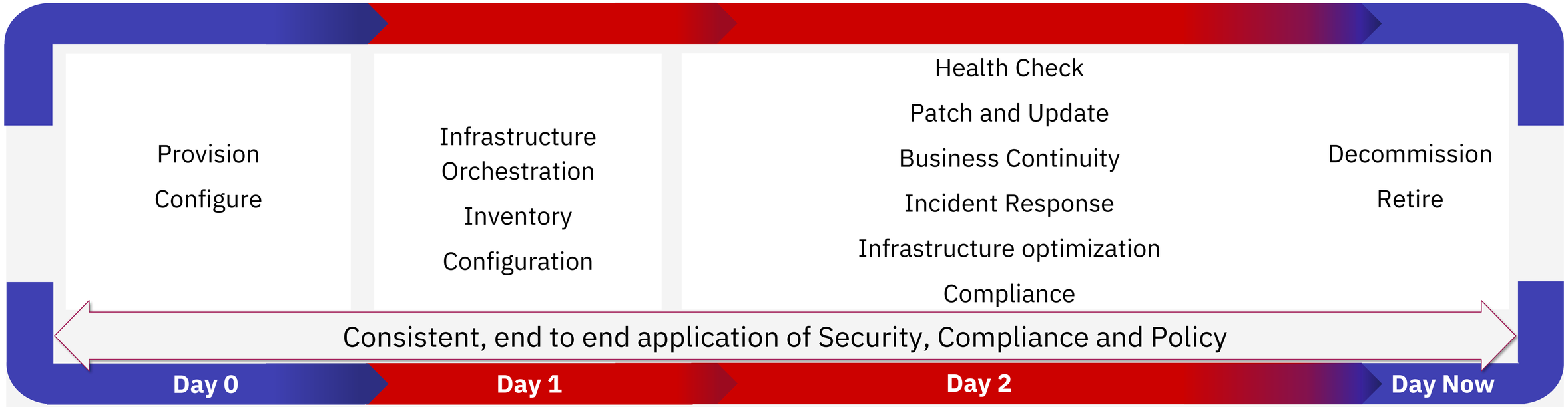
faster to GTM [2]

68%

faster to deploy new compute resources[1]

1. The Business Value of Red Hat Ansible Automation Platform, IDC, March 2024
2. HashiCorp customer references

Holistic orchestration and automation across the infrastructure lifecycle



Infrastructure provisioning

Infrastructure-as-Code

Terraform

Configuration management + Operational management

Config-as-Code + Day 2 Operations

Red Hat Ansible Automation Platform

Infrastructure Lifecycle

Terraform

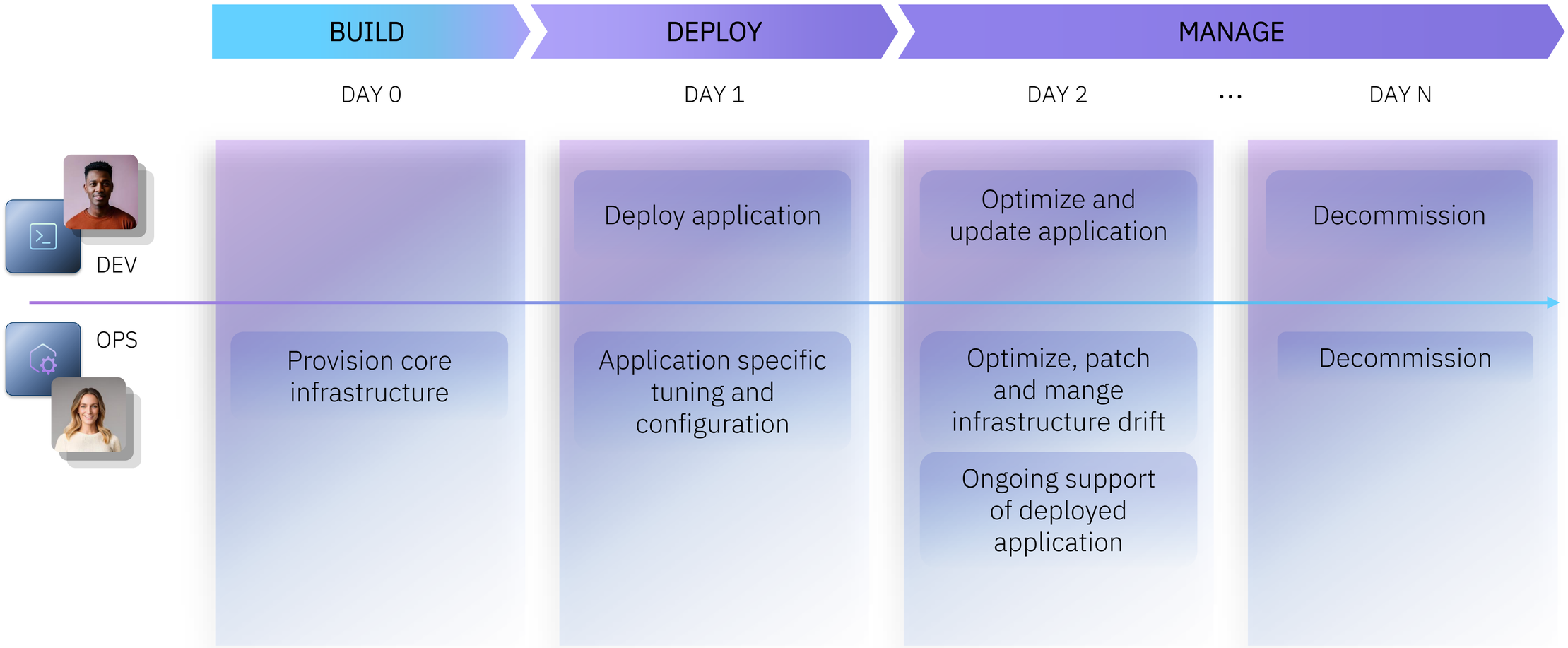
Rich and Nelson to update if needed

Stages of Infrastructure Lifecycle

	Day 0	Day 1	Day 2
Stage	**Infrastructure provisioning** Definition and provisioning of cloud services such as compute, network, storage etc. are required for hosting applications on cloud and need to be instantiated and tracked starting Day 0	**Configuration management** On Day 1 infrastructure needs to be configured for applications, their dependencies and be tuned for the specific needs of the business service provided by the application	**Operational management** Ongoing management activities to support a deployed application such as troubleshooting, maintenance, backup, upgrade, restore and monitoring activities are Day 2 tasks
Challenges	- Cost optimization and efficiency - Agile management & modernization - Data residency & sovereign hosting - Disparate, multiple tools add risk & complexity - Lack of skills	- Outdated legacy processes make it difficult to track and ensure consistency of configurations - Error prone, manual procedures	- Reliability and ensuring service availability - Ensuring performance and scale required by the business

Source: Terraform Customer Survey (N=80), Expert interviews, BCG Analysis

Standardize workflows with Terraform and Ansible across the organization for cloud success



Understanding the drivers for key user groups

Primary Buyers: *CIOs and CTOs for any enterprise.*

Role: *The CIO plays a key role in aligning technology strategy with business goals, overseeing the technical teams The CTO is a key decision maker and advisor to the CIO*

Our technology C-suite customers measure their success by three primary metrics:

- Increased productivity for IT teams
- Faster-time to value for technology investments
- Deliver resilience & compliance at scale

***Secondary Buyer/Trusted Advisor*:** *Head of Platform Engineering, Head of DevOps, Head of Service Delivery*

Role: *Builds and delivers standardized shared services for cloud, datacenter, and edge infrastructure with tight integration into developer and security workflows*

Head of platform engineering/Service Delivery is responsible for policy for security, compliance, and managing cloud costs.
Head of DevOps is responsible for technology workflow and efficiency to enable delivery teams.

Their challenges are;

- Speed/efficiency – Tool sprawl, policy enforcement
- Risk/Governance, Risk, Compliance (GRC) –, security, and visibility for compliance/audit; managing cloud costs.
- Cost Controls and responsibility for service availability

Primary Users: *Platform Team **, ITOps, CloudOps, SRE*

Role: *Responsible for standardizing delivery of shared services and infrastructure lifecycle management across the entire technology stack for an organization*

Ensure reliability, performance, and disaster recovery for shared services.

These users are interested in technology that is reliable, well integrated and facilitates efficiency to perform their designated role. Technology choice can strongly influence morale, productivity and employee satisfaction.

** For some customer this is a mix of technical teams, with highest usage by DevOps / DevSecOps / Cloud engineers, system admins, and in some cases developers / QA engineers

Rich and Nelson to augment

Benefits Across Infrastructure Lifecycle

Day 0

Infrastructure provisioning

Initial definition and provisioning

Users:: Platform Engineering, Cloud/IT Ops, SRE and CIO/CTO

1. Efficient tooling enables agile infrastructure processes/workflows, responsive to the needs of the business
2. Mange cloud costs
3. Self Service availability with built in security and compliance

Day 1

Configuration management

Application configurations & tuning

Users:: AppDev Teams, Platform Engineering, IT Ops and CIO/CTO

1. To increase consistency and reduce human error
2. Self Service access to increase business agility

Day 2

Operational management

Ongoing management activities

Users:: IT Ops, SRE, AppDev Teams and CIO/CTO

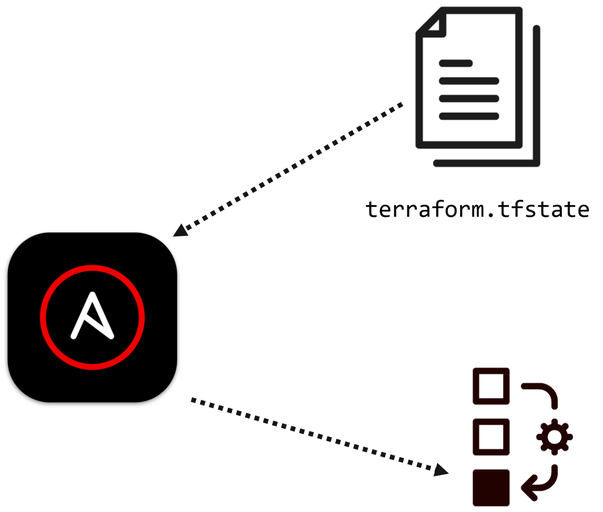
1. Improved service availability and reduced outage
2. Self Service access to improve security and compliance


Source: Terraform Customer Survey (N=80), Expert interviews, BCG Analysis

Available now - Customer value from combined use cases

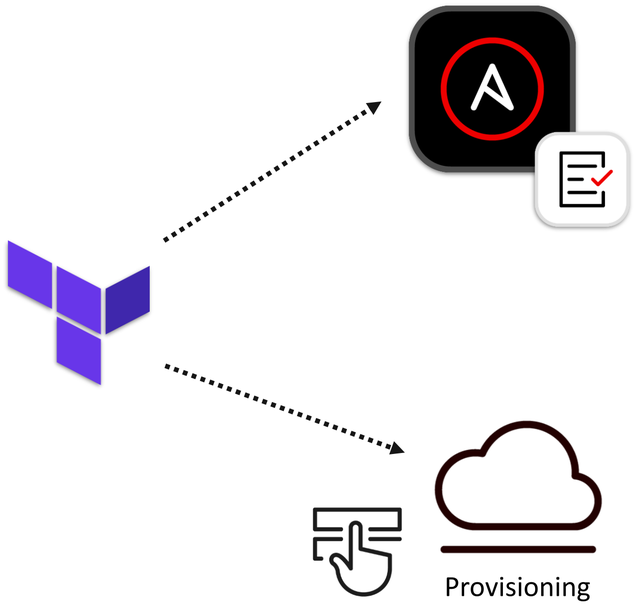
Optimize cost with single source of truth

Ansible can leverage a Terraform state file as its inventory to run Day 1 and Day 2 automation against a consistent Source of Truth



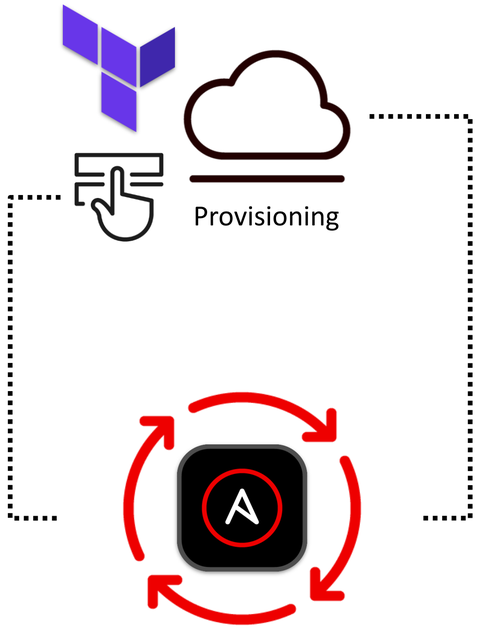
Reduce risk by enhanced product integrations

Terraform can directly call an Ansible job/workflow at the end of provisioning

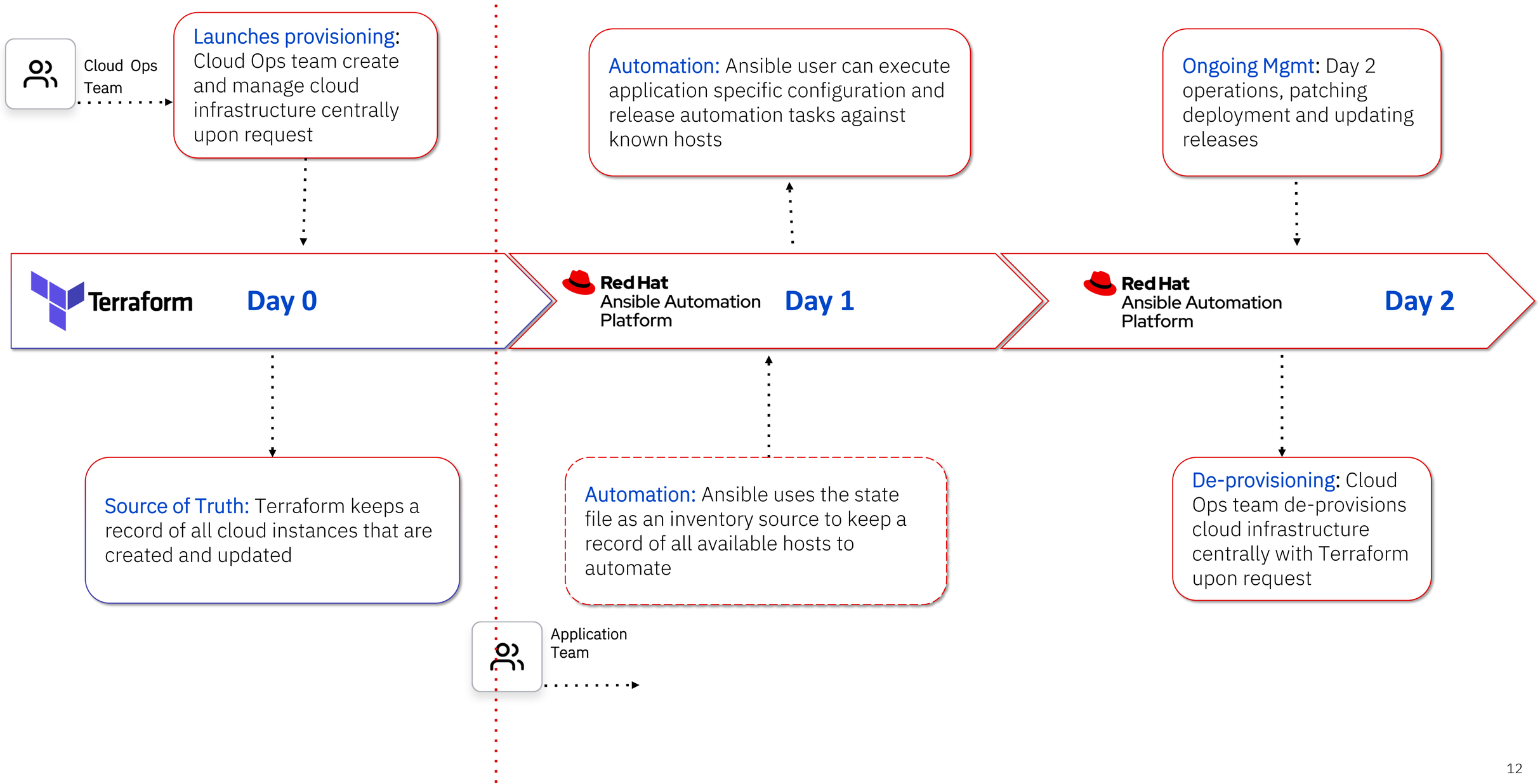


Unlock time to value by creating combined workflows

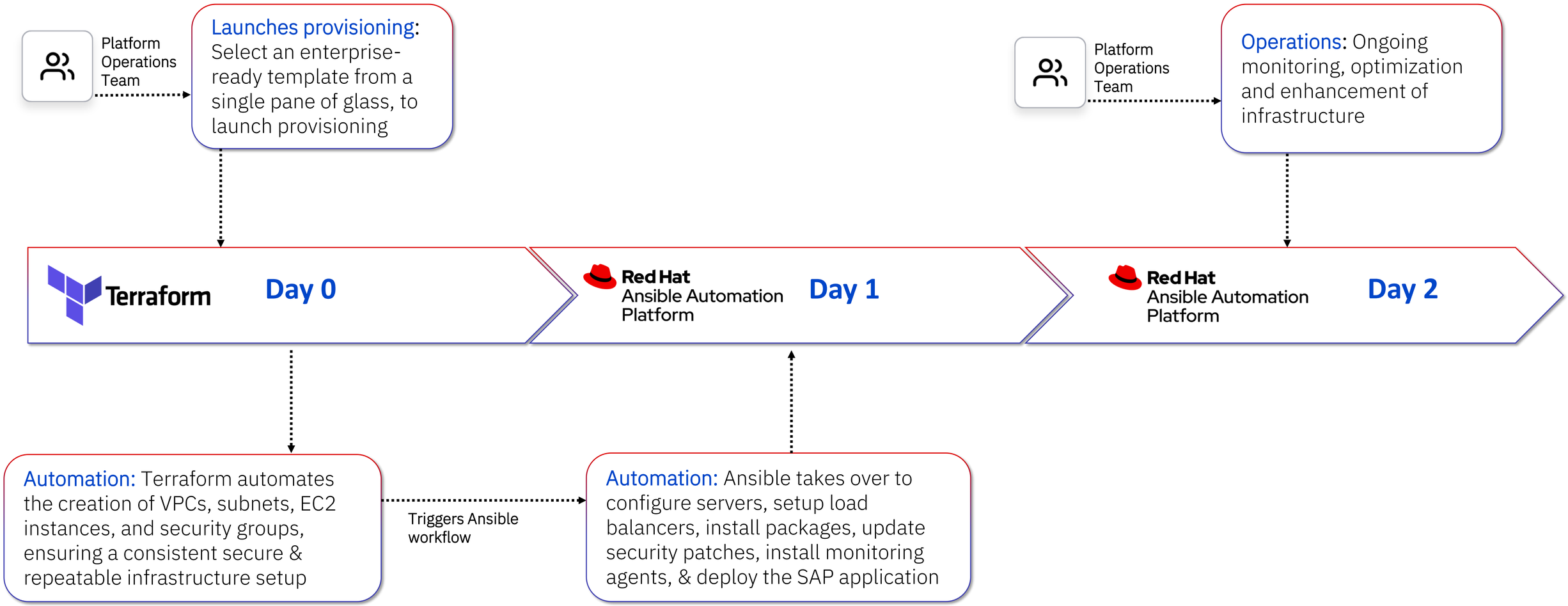
Ansible can call Terraform provisioning directly from within comprehensive end-to-end automation workflows



Scenario: Automate to optimize cost with single source of truth

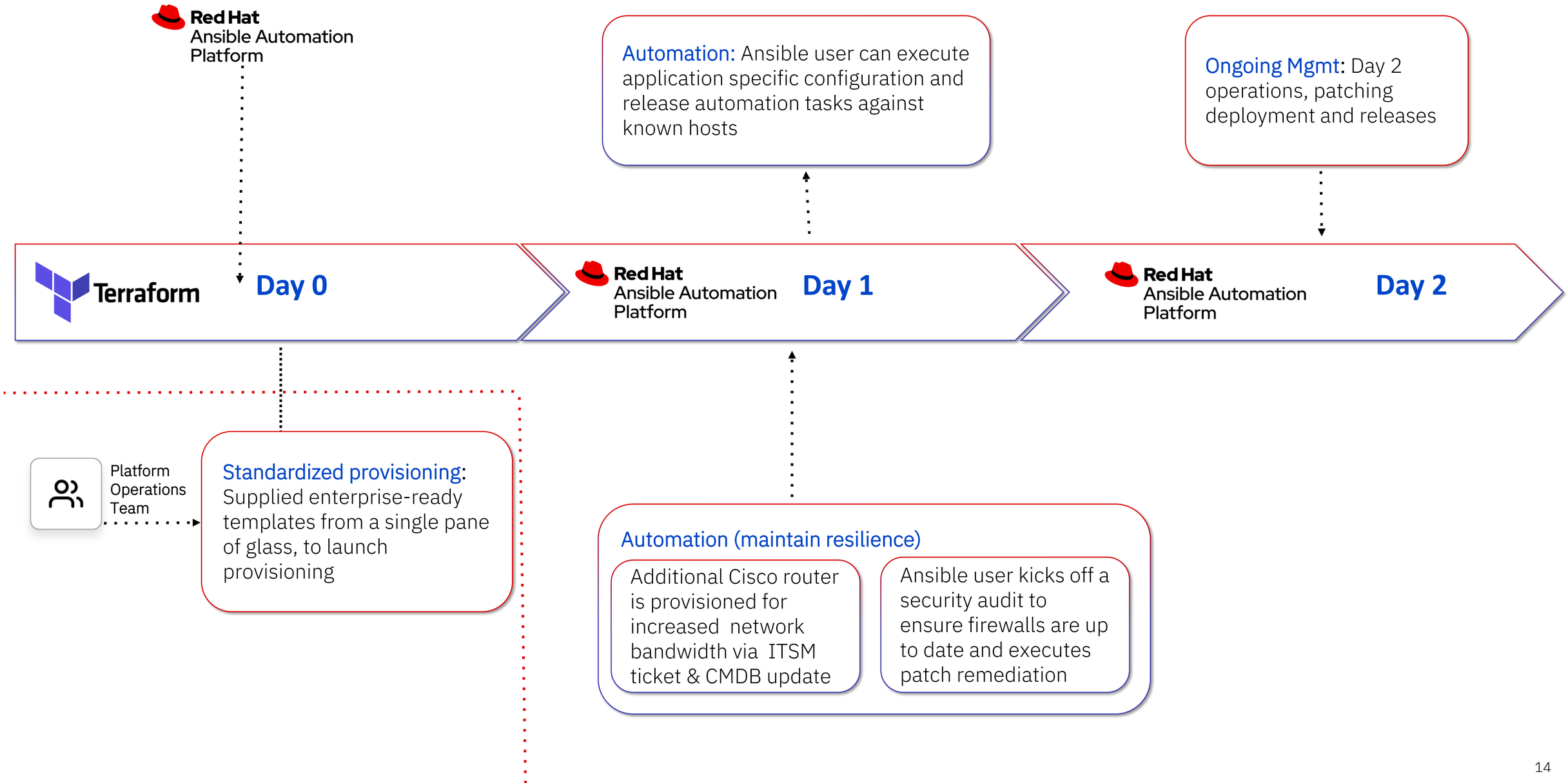


Scenario: Automated deployment of SAP on AWS



Security is enabled by design, seamless handoff between Terraform and Ansible ensures that all configurations are consistent and compliant with organizational standards.

Scenario: Automate with combined workflows



Save costs, reduce risks, and improve speed

Cost

TransUnion Accelerates Cloud-Native Innovation with Red Hat Ansible Automation Platform – *"Now, we can focus on innovation in the cloud, without having to worry about how we're going to get there."*

- AAP integration with AWS shortened migration pipeline development from months to minutes
- **Reduced cost** of feature development and sped up delivery to customers

Risk

"Ansible Automation Platform helps us complete work faster, safer, and with more resiliency."

- Improved infrastructure security and reliability running automation from a managed-cloud environment
- Saved hundreds of annual work hours by automating database cloning, patching, and recovery

Speed

"Every organization with a large technological footprint is deploying in the cloud and building a hyperscaler strategy, so implementing tools that help us run **better and faster** in the cloud is critical."

- Saved thousands of hours a year in manual work, freeing up time for the technology teams to work on higher value initiatives
- Decreased risk of downtime and increased stability of their system
- Accelerated remediation of incidents

A Terraform + Ansible Customer Case Study

Asian Development Bank leverages the flexible integration capabilities of Red Hat Ansible to adopt an Infrastructure as Code (IaC) approach based on Terraform as part of its shift to automated, central processes and a modernized, resilient IT infrastructure

Challenges

Traditional infrastructure hampering business
Legacy infrastructure and manual processes were gating ability to meet customer needs and did not meet the standard of resiliency required

Lack of visibility, inadequate security
ADB did not have adequate visibility to identify and patch and their secrets management approach needed to be modernized

Repetitive manual toil, slow time to value
Paper-based, manual tasks were prone to human error, lack of resilient infrastructure exposed the business to risk

Migrate to cloud while boosting security, speed & resiliency

Terraform reduced VM provisioning time, automated infrastructure, and dramatically accelerated the build out of disaster recovery datacenter while improving security and network resiliency.

- Automated & standardized network configuration, enhanced resiliency, flexibility, and security
- Improved regulatory compliance around provisioning governance and reduced time from 3 days to 2 minutes
- Built out the virtual datacenter in less than 5 days, configured the 2,000+ assets in less than 45 days
- Gained ability to deploy a complete data warehouse in less than 5 minutes

Ansible significantly reduced the time needed to complete provisioning, patching, and other infrastructure management tasks

- Automated monitoring, patching, and remediation help protect the organization's IT environments and resources from vulnerabilities and human errors freeing team to focus on building and delivering innovative, user-friendly digital services
- Saved hundreds of work hours every year by automating database cloning, patching, and recovery

Roadmap toward an integrated experience

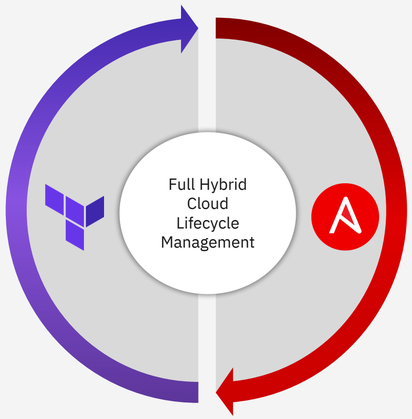
A seamless experience and holistic, reducing implementation effort while enhancing user experience and operational efficiency with tightly unified tools

Timeline

1H 2025

2H 2025

- Streamline Day 0 through Day Now provisioning, configuration and ongoing management with OOTB Terraform + Ansible workflows and templates
- Manage configurations consistently across products and lifecycles with golden path templates provided OOB
- Speed development efforts with no-code Terraform templates built using watsonx and Ansible Lightspeed
- A single source of security truth ensures consistent, automated security setup and management
- Simplified UX and consistent CI/CD reference architecture alleviates risk



GET STARTED TODAY!

Visit zones.com or call 800.408.ZONES

ZONES
First Choice for IT™

CORPORATE PLUS®
NMSDC
MEMBER