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Ansible Automation
Platform

Ansible Lightspeed

Extending the Ansible developer experience with AI

January / February 2024   Red Hat One 2024

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Agenda

▸ Customer challenges impacting enterprise-wide adoption

▸ Product strategy and direction

▸ Ansible Lightspeed with IBM watsonx Code Assistant

- Overview
- What's new in 2024

▸ Enabling the automation engineer
- New! Automation development tools
- Future: Automation developer experience

▸ Product strategy and 2024 roadmap

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Automation engineering and development challenges

Even Ansible Automation Platform customers often struggle to quickly **create**, **adopt**, and **maintain** their automation at scale...

Applying organizational **security policy requirements**

Lack of compatibility with preferred tooling

Varied tool preferences among users

The **automation skills gap**; varied level of Ansible expertise

Technical debt hinders innovation

Cultural resistance to learning new skills and behaviors

No **standards or best practices** in place to align teams
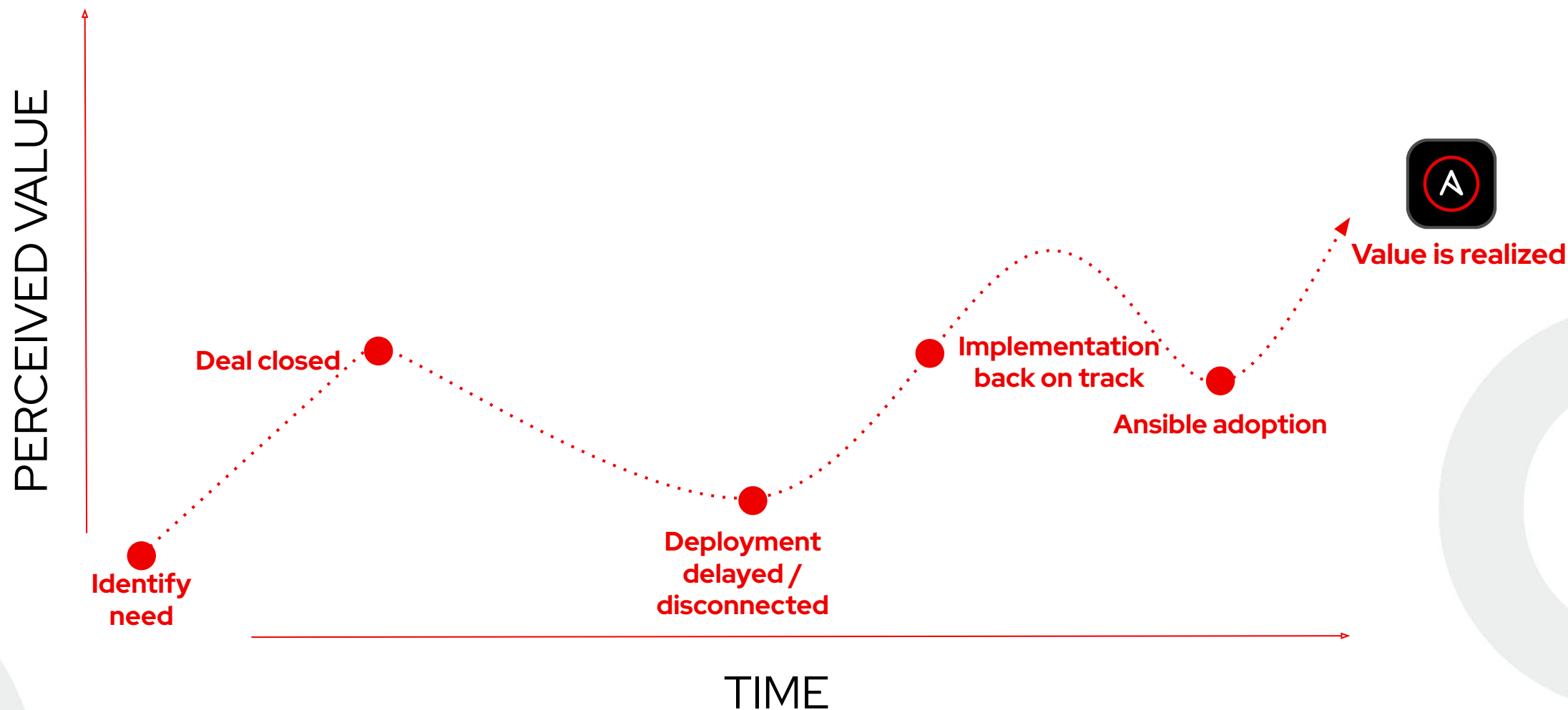
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The Ansible adoption journey

PERCEIVED VALUE

Value is realized

Deal closed

Implementation back on track

Ansible adoption

Deployment delayed / disconnected

Identify need

TIME

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The Ansible adoption journey

Addressing where our customers get stuck

Value is realized

Ansible Lightspeed enabled

Use of Ansible development tools / experience

Deal closed

PERCEIVED VALUE

Identify need

Implementation back on track

Ansible adoption

Deployment delayed / disconnected

TIME

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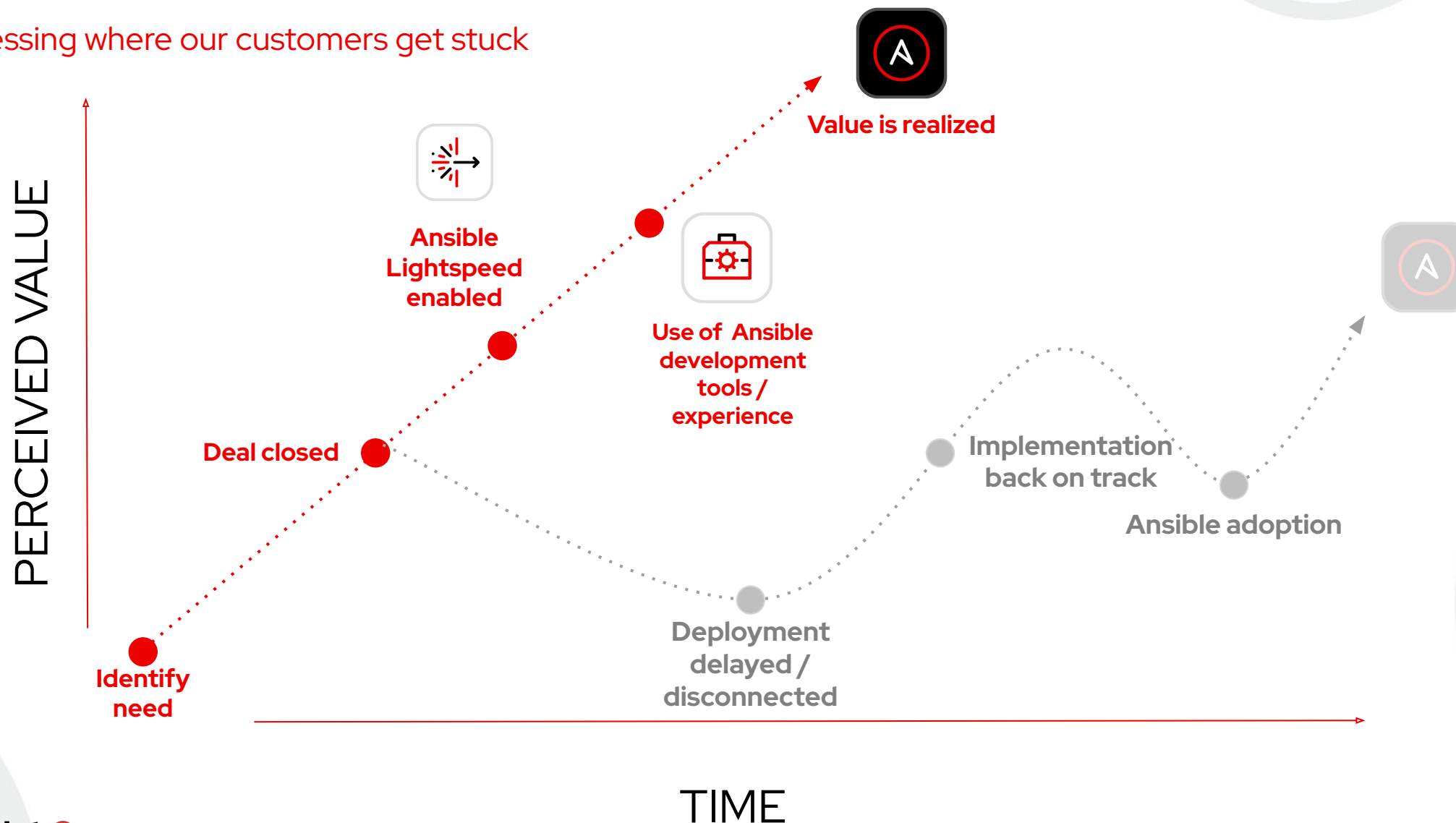
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The Ansible Automation Development Product Strategy

Enable automation engineering

- Lower barrier to entry into automation
- Integrate with familiar tools i.e., VS Code

Accelerate automation adoption

- Automate the entire Ansible content pipeline (create – test – verify – build – sign – publish)
- Improve Ansible content using current workflows
- Ease code maintenance with the Ansible code bot
- Enable automation development that adheres to enterprise best practices

Weave generative AI into Ansible Automation Platform

- Ease Ansible content creation and accuracy using trusted AI

Build and nurture Ansible Lightspeed trial experience

- Develop timely outreach and relevant resources to drive more sales opportunities and closed/won revenue

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Accelerating the adoption of automation

Certified + validated content

Set automation projects into motion

Ready-made roles, modules, plug-ins, and templates

Ansible Lightspeed

Collaboration with IBM to bring generative AI to Ansible

Faster and easier to create Ansible content

Ansible development tools

Suite of supported components

Build, test, and deploy Ansible content

2024 Roadmap

Ansible development experience

Opinionated, integrated dev environment

Dev tools, VS code, RHDH for Ansible, and Ansible Lightspeed

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Platform

Ansible Lightspeed with watsonx Code Assistant

Thinking strategically: the revenue opportunity

1x

Red Hat Ansible Lightspeed
with IBM watsonx Code Assistant

10x

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Platform

Better code is the key to unlocking automation acceleration

Getting the most out of automation requires driving it from an enterprise level. That involves multiple teams working together to create automation code.

> Code that **scales across domains.**

> Code that **meets the varied needs of the teams using it.**

> Code that is **trusted** and **well-maintained**

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Integrated experience

Red Hat Ansible content creation

VS Code extension

Prompt

Suggestion

Red Hat Ansible Lightspeed

Best practices anonymize post processing

Prompt

Suggestion

IBM watsonx Code Assistant

Foundation model

Ansible development tools

Upload your datasets for model customization*

Data security

+ Prompt/suggestion data is encrypted in transit and is ephemeral

+ Customer Ansible playbooks and customized models are stored in customer-owned cloud object storage and are not shared with IBM, Red Hat, or any other customers

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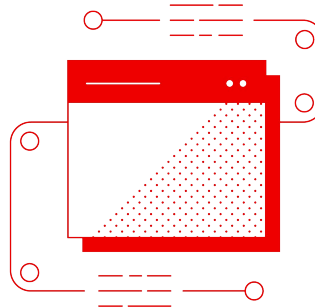One experience. One team. One purpose.

* * Model customization is planned for Q1 2024 on IBM roadmap

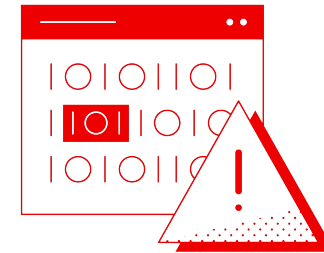# The automation code life cycle

Create

———

Multi-task generation
Foundation model for Ansible

Adopt

———

Content source matching
Post-processing capabilities

Maintain

———

Ansible code bot
User management
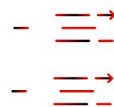
Transparency   Efficiency   Accuracy   Trust

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Ansible Lightspeed with watsonx Code Assistant

Roadmap

WCA Trial Expected (February)

Free number of task prompts

No credit card required for trial

Customer References (March)

Citibank with press release coming in March

New WCA Consumption Metric

Launching with trial

Lightspeed subscription validation still enforced

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Ansible Lightspeed

Fortune 50 IBM + Red Hat FSI customer
Red Hat Ansible Lightspeed with IBM watsonx Code Assistant POC

More efficiency

62% reduction in time spent to create Ansible playbooks

More confidence

100% More developer confidence in creating Ansible Playbooks

More quality

91% Reduction in critical playbook failures

More value

$80m Expected savings in 3 years by implementing WCA and AAP w/ Event-Driven Ansible

Ansible Lightspeed
**is just the beginning**

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Enabling automation creation

New product features and direction

Ansible development tools

> **Enhanced developer experience:**
Ansible development tools

> Automation applications

> Automation content experience

> State management for AAP

CLI tools*

Execution environment builder

ansible-builder

Automation content navigator

ansible-navigator

Ansible Molecule, ansible-lint, ansible-creator, pytest-ansible, tox-ansible, ansible-dev-environment, and ansible-sign.
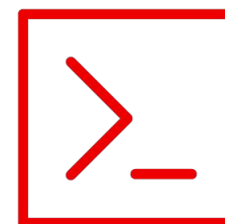
ansible-dev-tools

Packaged, supported, and opinionated collection of enterprise-grade capabilities to enable automation developers in the **building, testing, and deployment** of Ansible content.

Goal:
Deliver comprehensive suite automation development capabilities

Who:
Developers, automation engineers

When:
Q1

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New! Automation development tools

Supported, enterprise-grade components to enable building, testing, and deployment of Ansible

Build

ansible-creator
Scaffold projects and content

ansible-navigator
Develop and troubleshoot with execution environments

Enhanced VS Code integration
Native graphical user interface to Ansible Lightspeed and command line tools

Ansible development environment
Build and manage virtual environments for content development

Test

Ansible Molecule
Functional test runner for collections, playbooks and roles

ansible-lint
Identify and correct stylistic errors and anti-patterns

pytest-ansible
Added functions for module and plugin Python code unit testing

tox-ansible
Test collections under different Python interpreters and Ansible core versions

Deploy

ansible-builder
Build Ansible execution environments

ansible-sign
Sign and verify Ansible content

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Enhanced developer experience:
Red Hat Developer Hub

> Automation applications

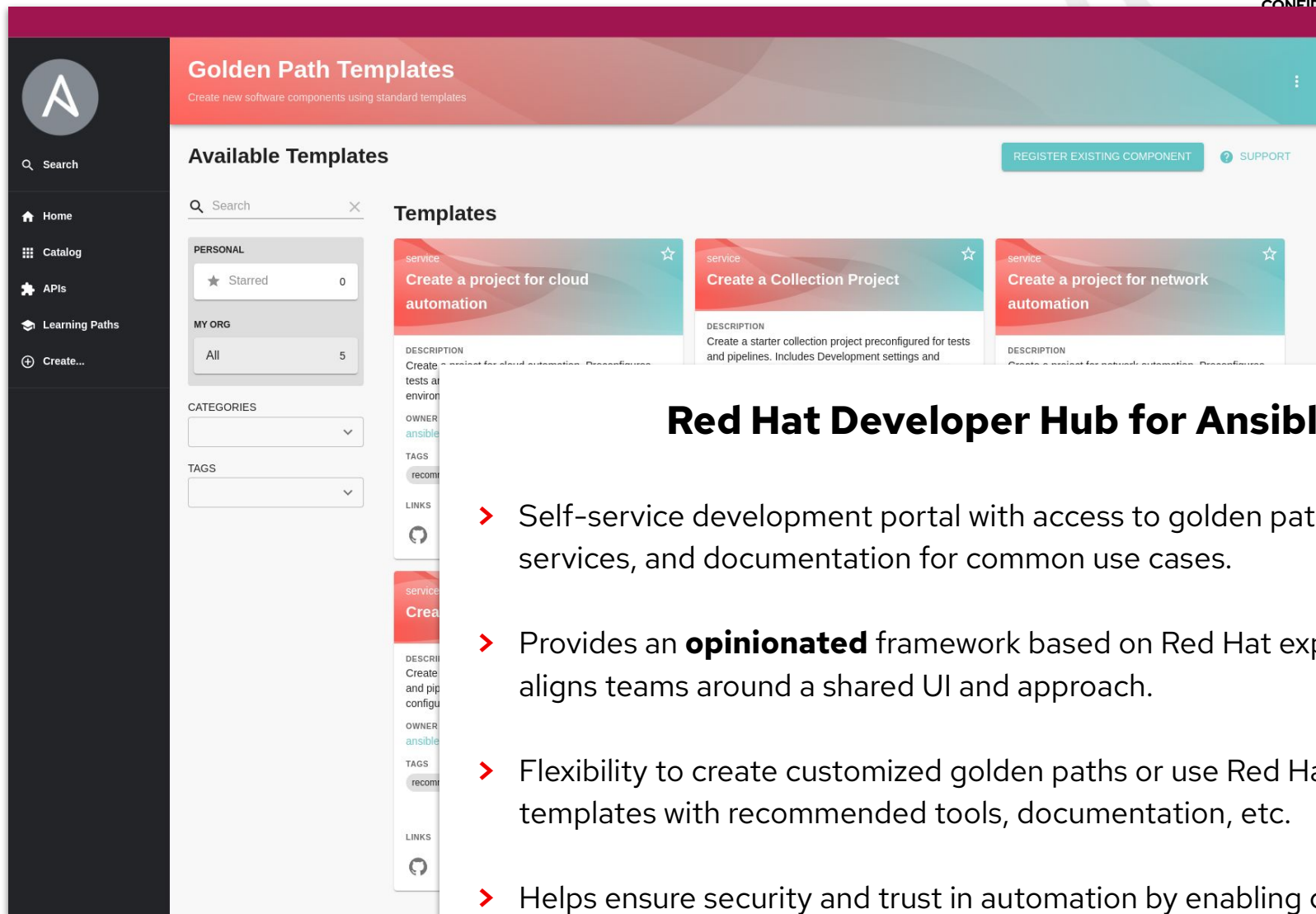> Automation content experience

> State management for AAP

Goal:
Single entrypoint for automation development

Who:
Developers, automation engineers

When:
2H

Golden Path Templates
Create new software components using standard templates

Q Search
🏠 Home
⧉ Catalog
✳ APIs
◈ Learning Paths
⊕ Create...

Available Templates

REGISTER EXISTING COMPONENT   ❓ SUPPORT

Q Search ✕

Templates

PERSONAL
★ Starred   0

MY ORG
All   5

CATEGORIES

TAGS

service
Create a project for cloud automation
DESCRIPTION
Create a project for cloud automation. Preconfigures tests ar
environ
OWNER
ansible
TAGS
recomm
LINKS

service
Create a Collection Project
DESCRIPTION
Create a starter collection project preconfigured for tests and pipelines. Includes Development settings and

service
Create a project for network automation
DESCRIPTION
Create a project for network automation. Preconfigures

service
Crea
DESCRI
Create and pip configu
OWNER
ansible
TAGS
recomm
LINKS

Red Hat Developer Hub for Ansible

> Self-service development portal with access to golden paths / templates, services, and documentation for common use cases.

> Provides an **opinionated** framework based on Red Hat expertise that aligns teams around a shared UI and approach.

> Flexibility to create customized golden paths or use Red Hat opinionated templates with recommended tools, documentation, etc.

> Helps ensure security and trust in automation by enabling customers with golden paths that meet their unique requirements.

> Can initiate a custom IDE in customer's enterprise or **Dev Spaces** environments with **VS Code**

> **Enhanced developer experience:**
Ansible development workspaces

> Automation applications

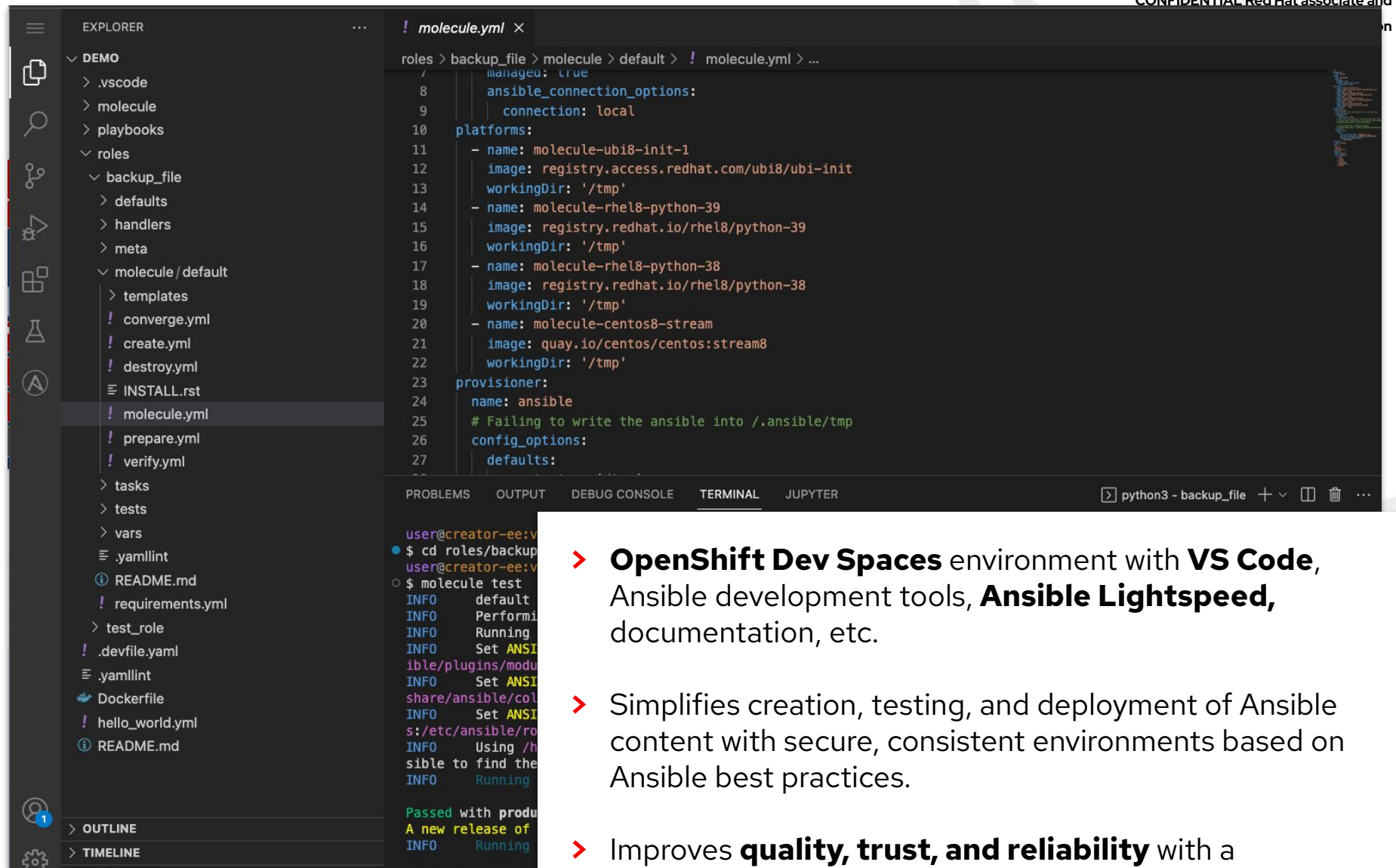> Automation content experience

Goal:
Enterprise-ready development environments

Who:
Developers, automation engineers

When:
2H

> **OpenShift Dev Spaces** environment with **VS Code**, Ansible development tools, **Ansible Lightspeed,** documentation, etc.

> Simplifies creation, testing, and deployment of Ansible content with secure, consistent environments based on Ansible best practices.

> Improves **quality, trust, and reliability** with a **supported and secure** framework built for the enterprise.

Ansible Development Experience w/ Ansible Lightspeed Roadmap

Now

> **Lightspeed natural language prompting**
> Generate single and multiple tasks from a single prompt to create Ansible tasks.

> **Ansible lint transform features**
> Ansible-lint (write) transform functionality used in Ansible code bot

> **Ansible content monitoring and improvement**
> (Phase 1) Ansible code bot: Monitor Ansible content GitHub repositories create pull requests with improvements using Ansible lint

> **Ansible content Python testing**
> Plugins for standard Python testing tools (pytest, tox) for Ansible modules and plugins (Molecule)

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Near term

> **Accelerate the automation engineer**
> - Ansible automation developer tools
> - Integrated Ansible content bootstrapping in workflows

> **Developer trial and nurture experience**
> Enable trial platform and nurture leads.

> **Expand generative AI into AAP**
> - GenAI model fine tuning
> - Playbook generation.

> **DevOps integration**
> - Ansible Risk Insights integration
> - Pipeline integration (REST APIs)

> **Ansible Developer Hub**
> Integration with golden path templates and documentation.

Long term

> **Lightspeed content discovery/description/explanation**
> - Find existing Ansible content; generate descriptive documentation

> **On-premise deployment**
> - On-premise deployment option for air-gapped environments

> **Expand supported Ansible development environments**
> Consistent one-click Ansible developer environments across customer platforms

> **Integration with Event-Driven Ansible**
> Generate code recommendations for EDA rulebooks

> **Ansible Developer Hub**
> Integrate generative AI services into Red Hat Developer Hub.

Pioneering the automated future
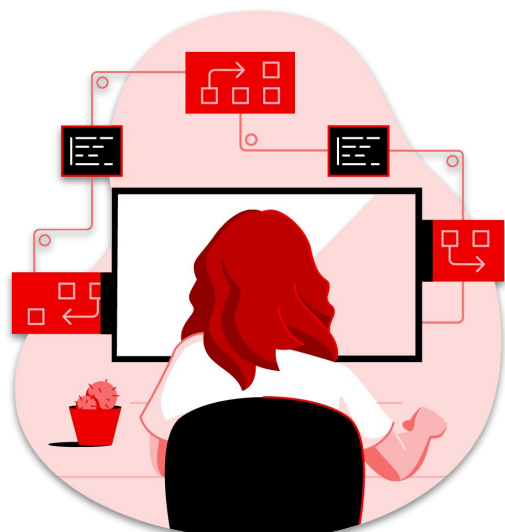## AAP has consistently evolved to lead the market

Customers Need to Get Ready for the AI Revolution

MISSION CRITICAL

AI can't fix broken or manual Day 2 processes or siloed teams.

An automated foundation is a **requirement.**

Only then can companies can leverage AI to **reduce toil and skills gaps**.

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Key takeaways:
Automation Development = Automation Adoption

Content creation and execution made easier

✓ Ansible Content Collections + Ansible Lightspeed + new development enhancements **accelerate automation adoption**

✓ **Ansible Lightspeed**
   ○ GenAI model fine tuning and playbook generation.
   ○ On-premise deployment option for air-gapped environments

✓ **Ansible development tools**
   ○ Create - test - deploy automation code

✓ **Enhanced developer experience**
   ○ Self-service portal to golden paths / templates
   ○ Dev environment with access to

Thank you

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