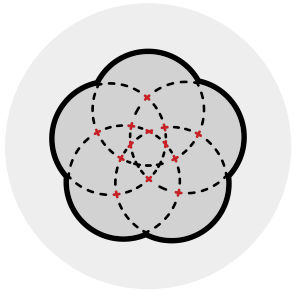
Agile Integration

From Zero to Hero

Andrzej Kowalczyk
Senior Solutions Architect

How do you drive innovation to meet business expectations while keeping the lights on?

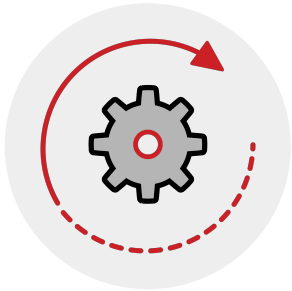
Optimize the IT you have



Integrate apps, data, & processes

Add & manage cloud infrastructure

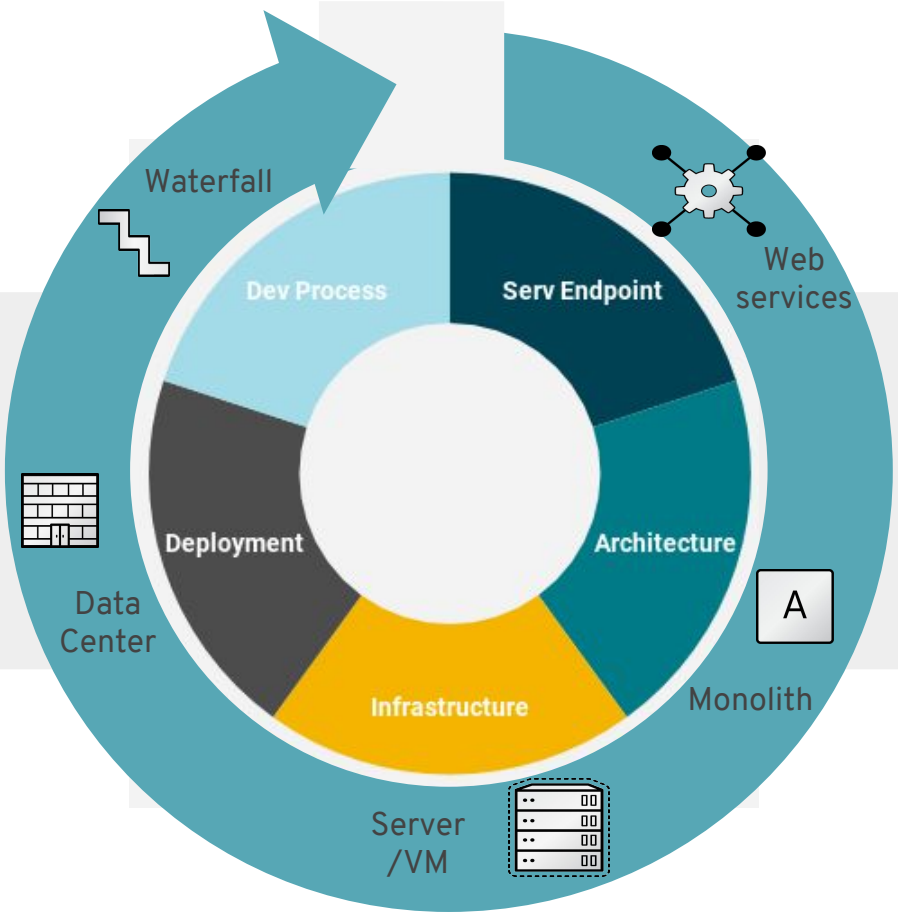
Build more modern applications

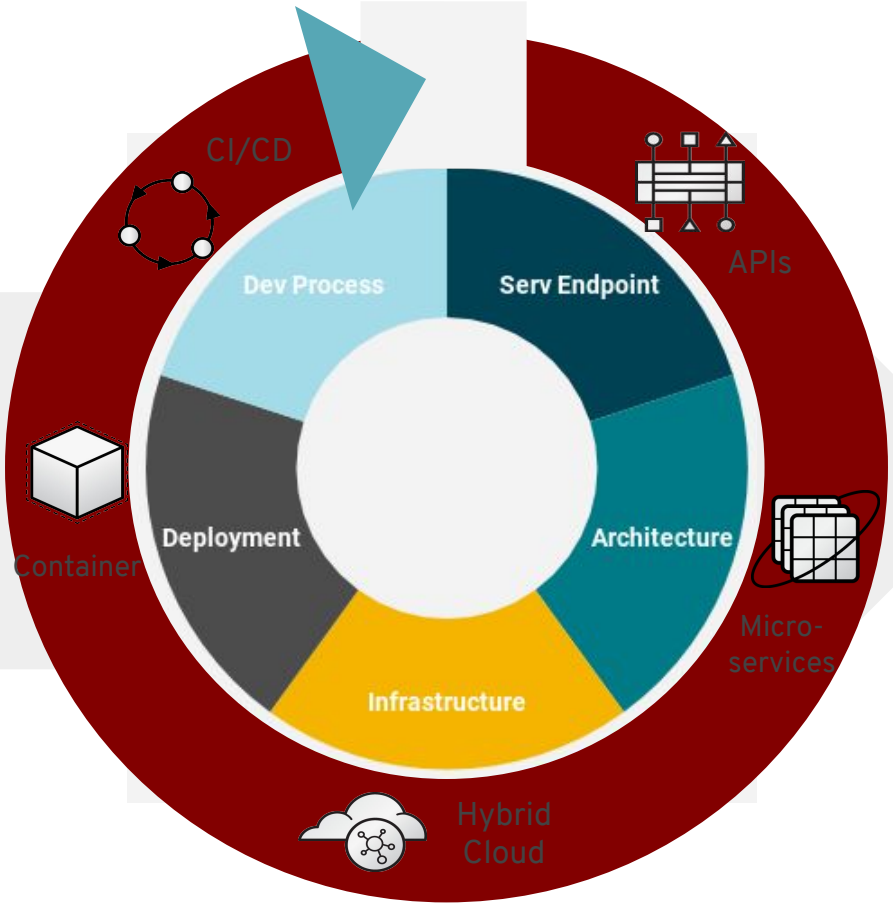


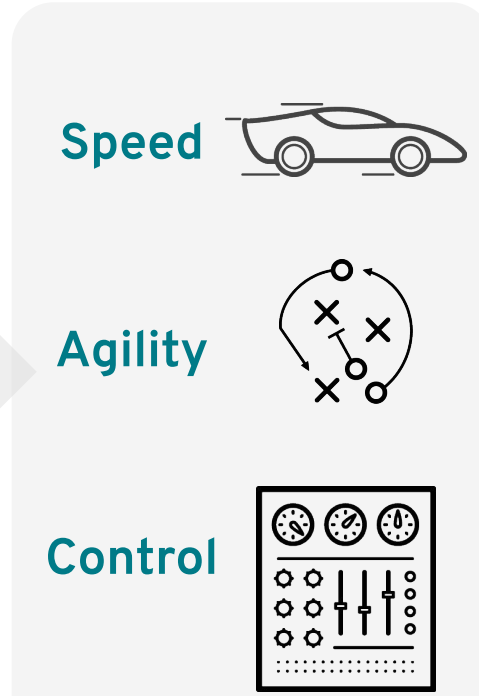
Automate & manage IT

Leveraging the cloud becomes a key strategy for success

Great Software Companies Are Adopting New Patterns For Development







OUTCOMES

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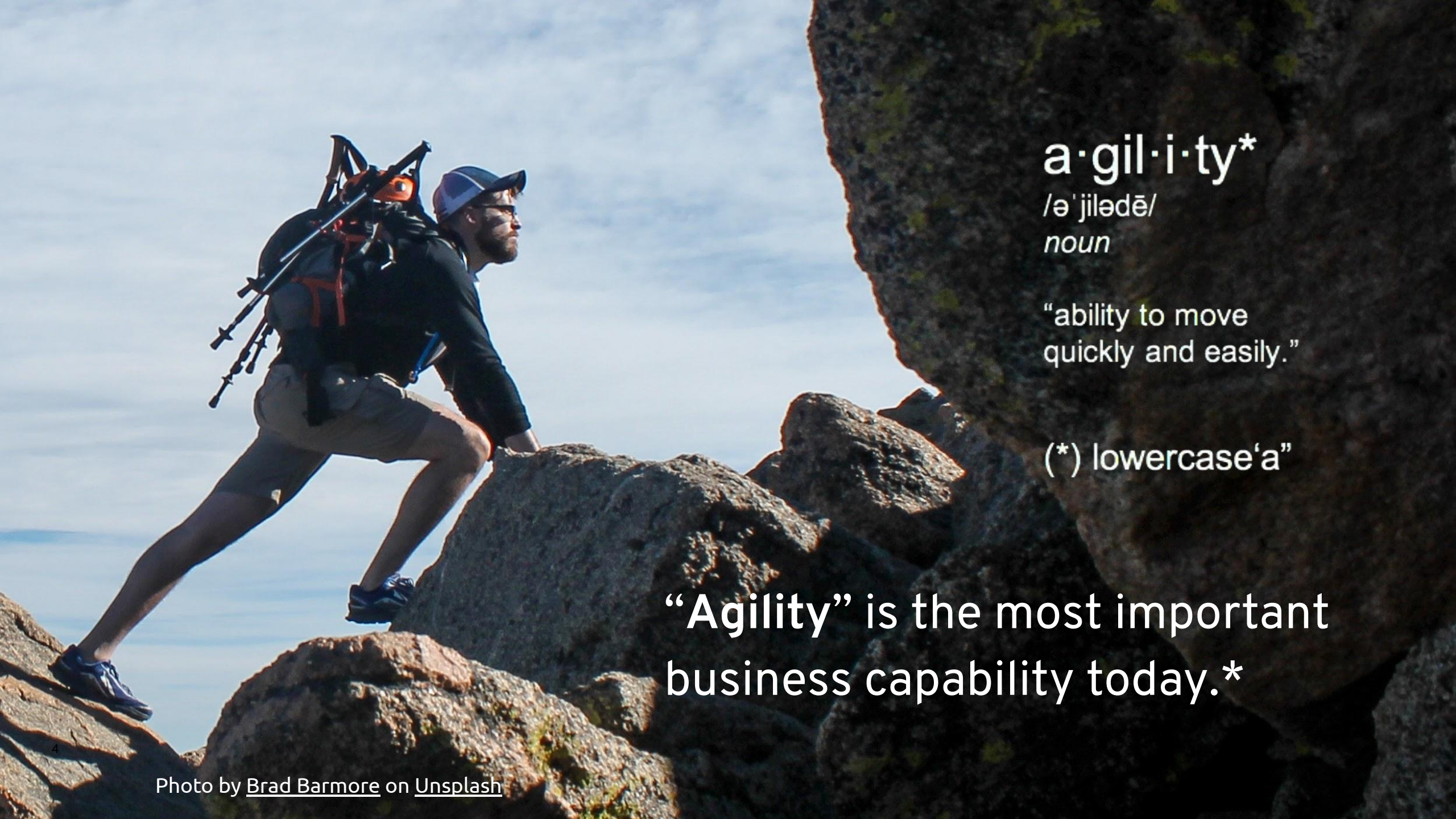

“**Agility**” is the most important business capability today.*

Photo by Brad Barmore on Unsplash

Empire State Building

Photo from Unsplash

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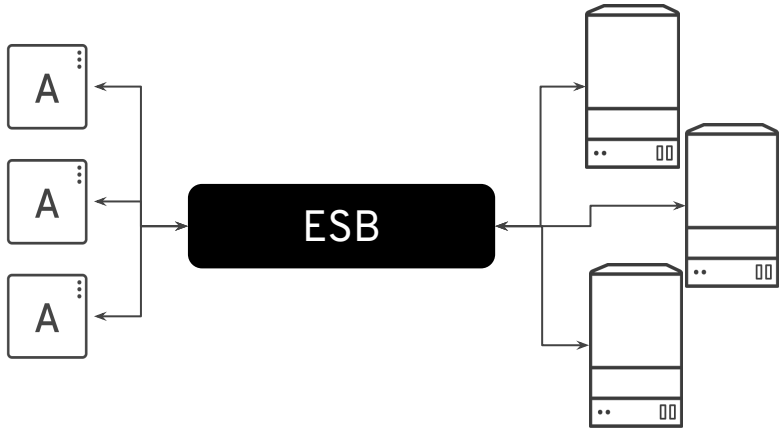
Integration Is Going Through Rapid Change: Hybrid Cloud And Need For Agility

Traditional integration incompatible with hybrid cloud development



Centralize ♦ Leverage ♦ Simplify

Internal teams ♦ Maximize use of resources

Modern architectures and app development requires more agile integration

Distributed Integration ♦ APIs ♦ Scalability

Agile Teams ♦ Cloud App Dev ♦ DevOps

USE INTEGRATION WHERE NEEDED, RATHER THAN CENTRALIZING

Agile Integration: Effectively Address new Approaches & Initiatives

Modern architectures and app development requires more agile integration

Distributed Integration ♦ APIs ♦ Scalability

Agile Teams ♦ Cloud App Dev ♦ DevOps

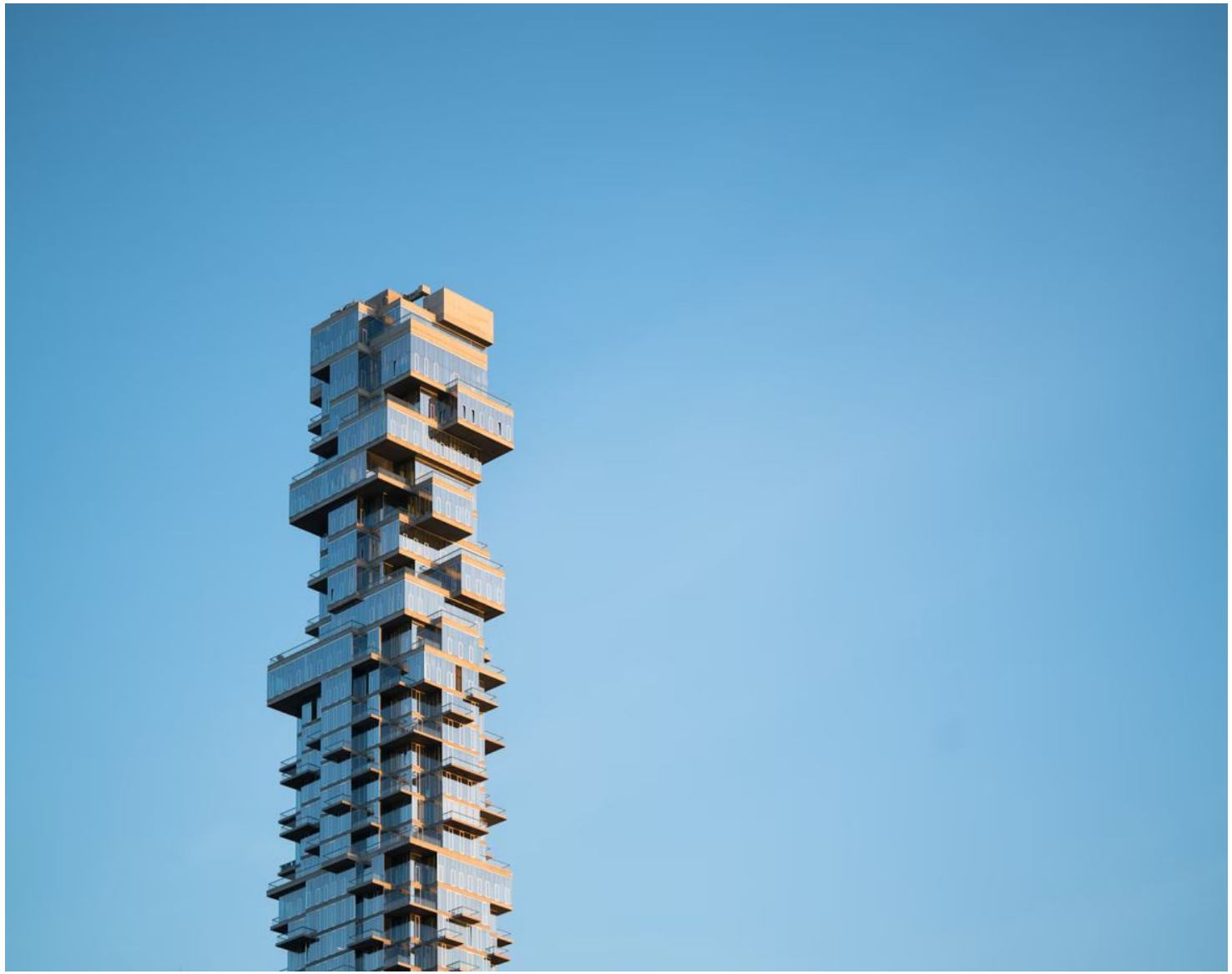
NEWER/EMERGING APPROACHES

- API-FIRST
- CLOUD-NATIVE SERVICES
- EVENT-DRIVEN STREAMING
- LOW-CODE
- MULTI-CLOUD

Source[1]: Integration Architecture and Platforms Primer for 2019, Gartner. **Source [2]:** Agile Integration Is Critical to Successful Digital Transformation, Forrester (commissioned by Red Hat).

Empire State Building

Photo from Unsplash



Modern - Modular

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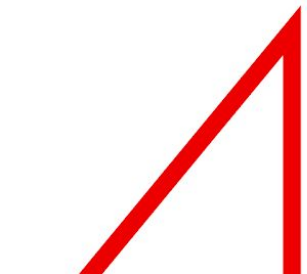
How to do it?



Interface

Application concerns

Microservices Connectivity

Infrastructure concerns

API

- API Contracts
- Monetisation
- Business strategic policy enforcement
- Partner ecosystem

APPLICATION

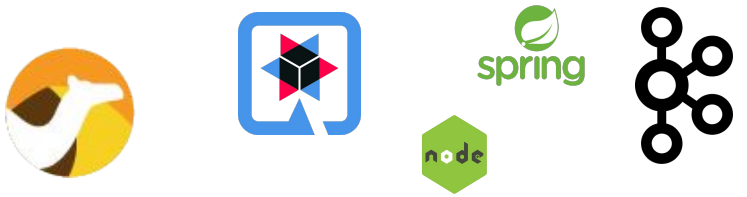
- Choice of language/framework
- Self-service / productivity
- Low mem, fast startup
- Integrations framework

SERVICE TO SERVICE

- Network resilience
- Service security
- Policy enforcement
- Metrics/Observability
- Load balancing

DEPLOYMENT PLATFORM

- Reliability
- Instance placement
- Scaling/autoscaling
- Resource usage
- Job scheduling
- Distributed Logging



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Red Hat Application Services

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Red Hat Application Services

Red Hat OpenShift

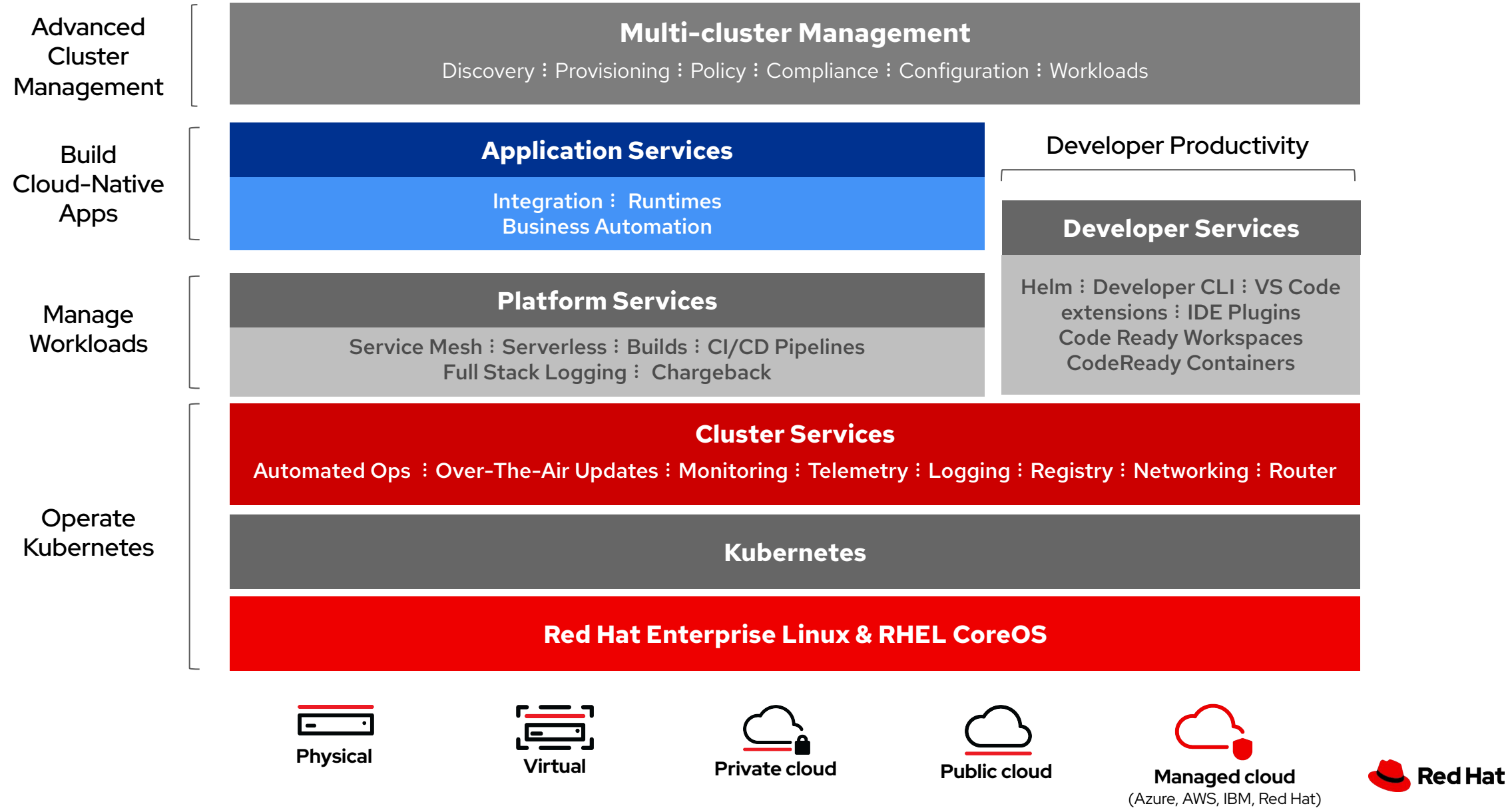
Red Hat Cloud-Native Application Platform

Our vision is to simplify the creation of cloud-native services and serverless functions with a rich set of components and tools to match the **workloads** of modern cloud native apps.

Automate Kubernetes application operations with DevOps in mind

Runtimes, frameworks and services to build applications natively on Kubernetes

Tools and standard processes to increase developer productivity on Kubernetes


Advanced Cluster Management
Multi-cluster Management
Discovery ⁝ Provisioning ⁝ Policy ⁝ Compliance ⁝ Configuration ⁝ Workloads
Build Cloud-Native Apps
Application Services
Integration ⁝ Runtimes
Business Automation
Developer Productivity
Developer Services
Helm ⁝ Developer CLI ⁝ VS Code extensions ⁝ IDE Plugins
Code Ready Workspaces
CodeReady Containers
Manage Workloads
Platform Services
Service Mesh ⁝ Serverless ⁝ Builds ⁝ CI/CD Pipelines
Full Stack Logging ⁝ Chargeback
Operate Kubernetes
Cluster Services
Automated Ops ⁝ Over-The-Air Updates ⁝ Monitoring ⁝ Telemetry ⁝ Logging ⁝ Registry ⁝ Networking ⁝ Router
Kubernetes
Red Hat Enterprise Linux & RHEL CoreOS
Physical
Virtual
Private cloud
Public cloud
Managed cloud
(Azure, AWS, IBM, Red Hat)

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Why the platform?

Benefits of the container development and orchestration platform

Faster software delivery	Fostering business needs
Cloud-like experience	Speeds up development process
Automation everywhere	Eliminates human errors
DevSecOps enabler	Engages people
Portability	Deploy wherever you want
Resource scalability	Better resource utilization
Failure isolation	Increases uptime
Consistent environment for any load	Simplifies application deployment
Unified high availability & failover	Simplifies HA architecture

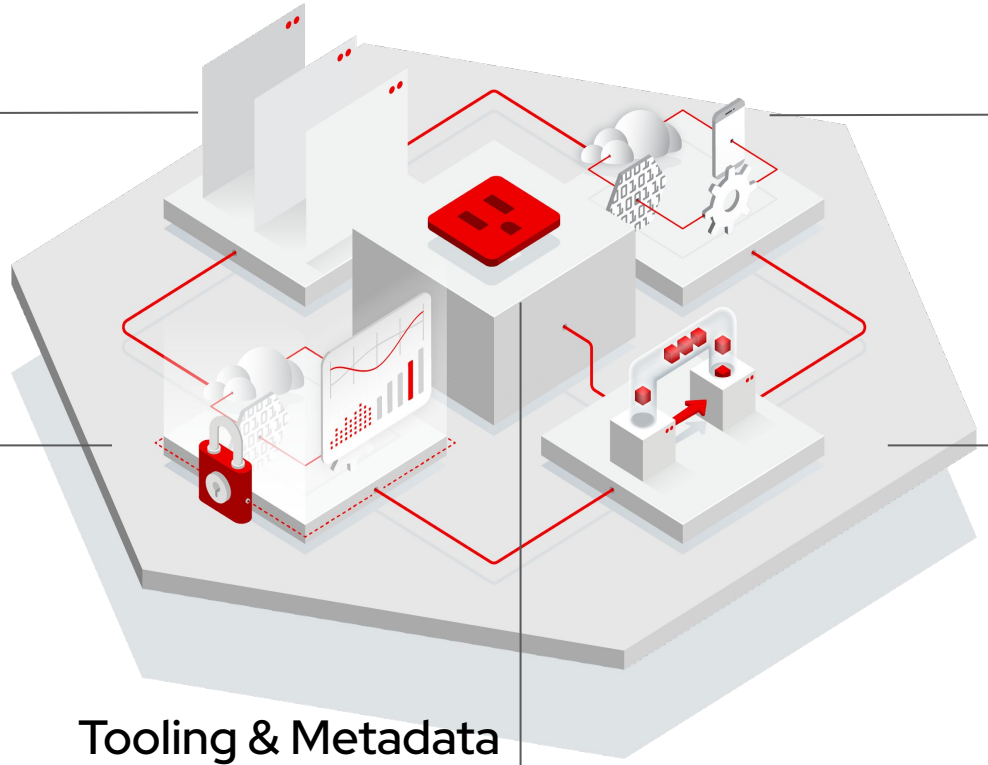
Red Hat Integration

Data Integration

- Change Data Capture with Debezium

API Management

- API Manager
- API Gateway
- Istio Service Mesh Adapter



Tooling & Metadata

- Service Registry
- API Designer
- Integration Operator

Enterprise Integration

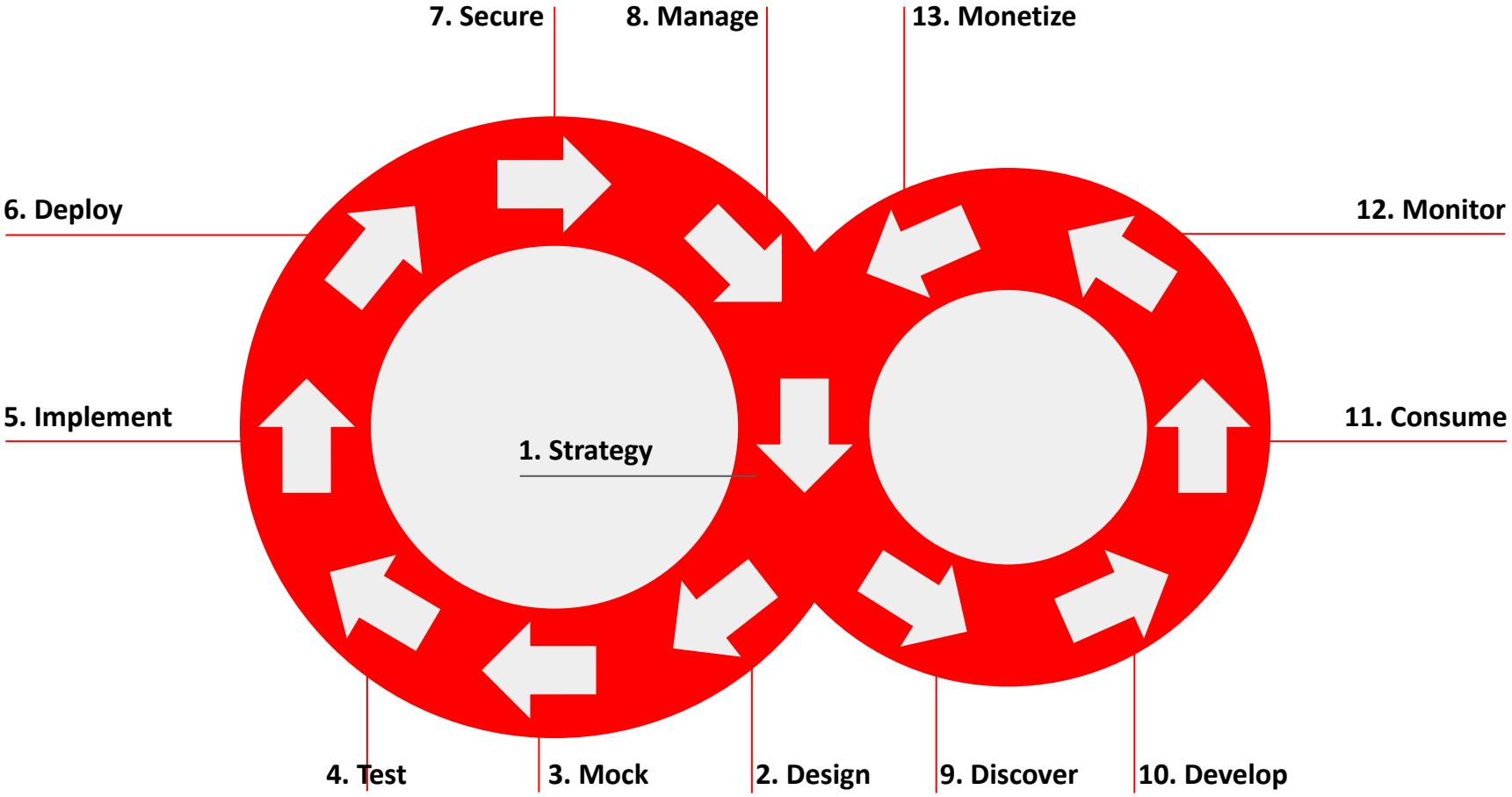
- Comprehensive connectors
- Microservices orchestration
- Data Transformation
- Low-code iPaaS
- Serverless Composition with Camel K

Events & Messaging

- JMS Message Broker
- Wide Area Routing
- Data Streaming with Apache Kafka
- Self-service messaging

Source

Full API Lifecycle Management



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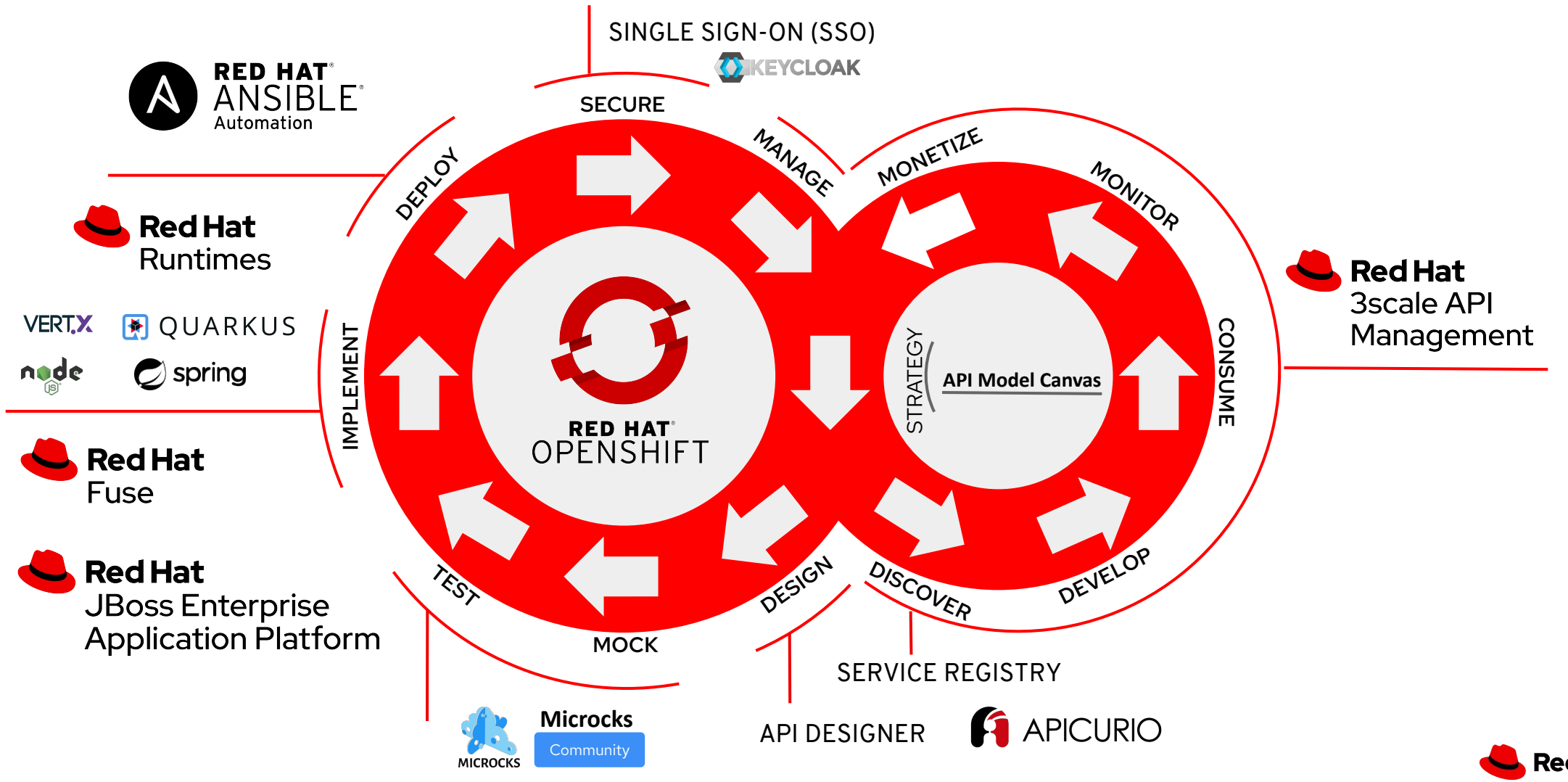
API Lifecycle and Stack



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Red Hat CodeReady

Questions?

Thank you


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