



OPEN HYBRID CLOUD

Hybrid IT, Cloud Computing & Open Innovation

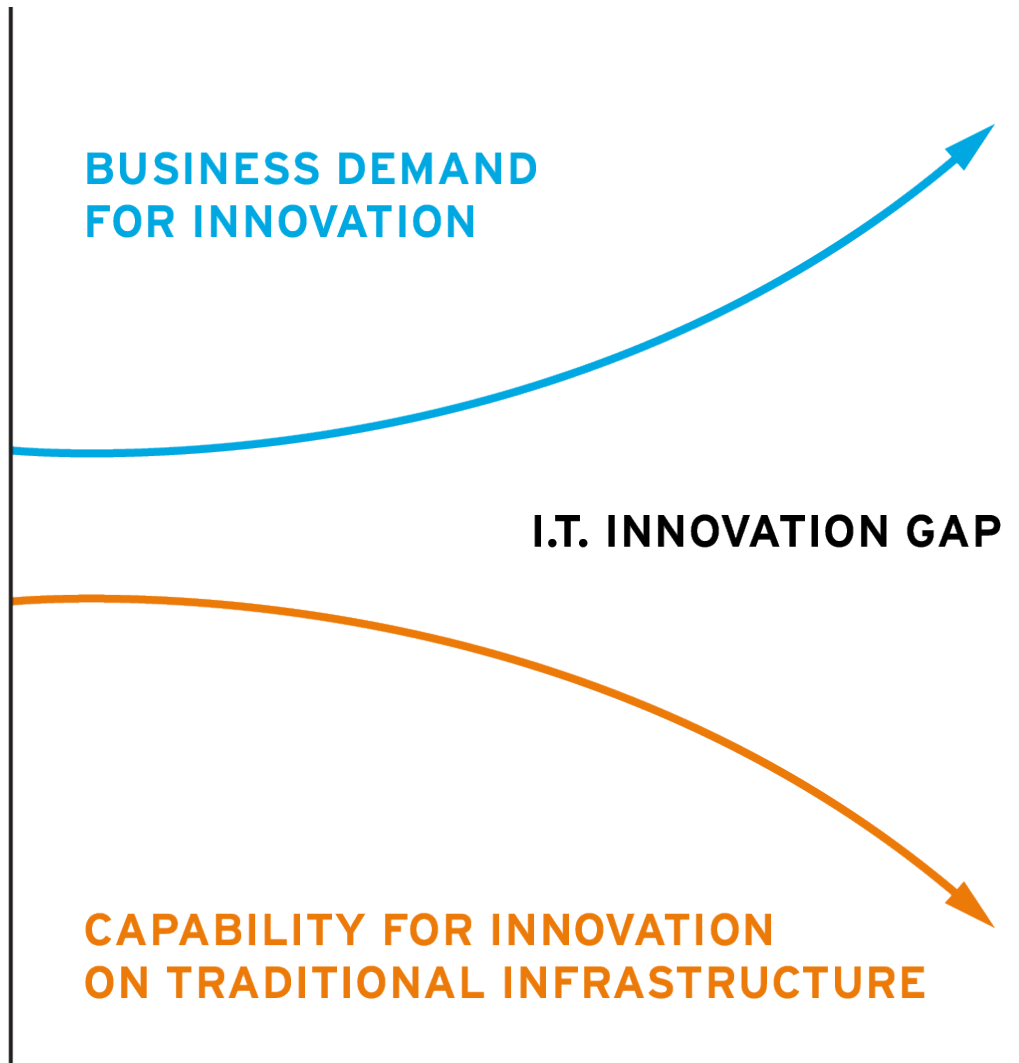
Kiheung Song

Emerging Solution BDM

Mar 2015

Red Hat

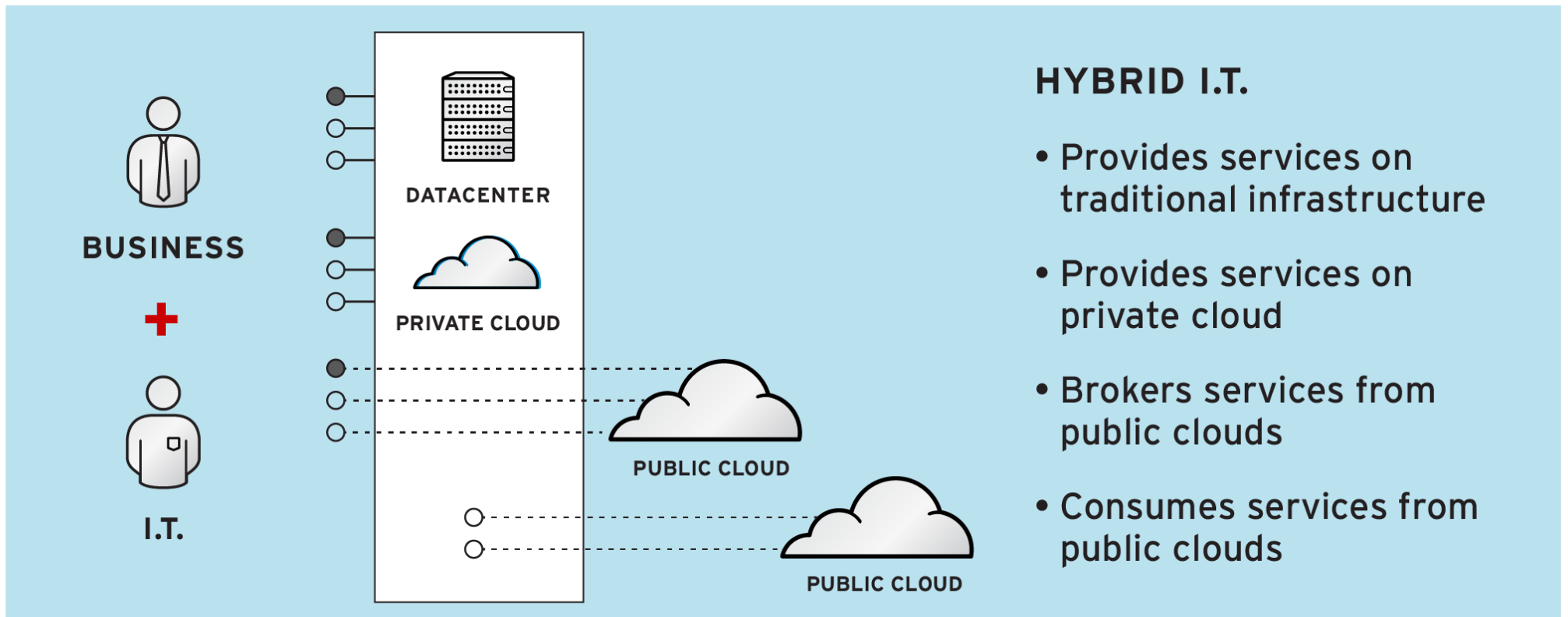
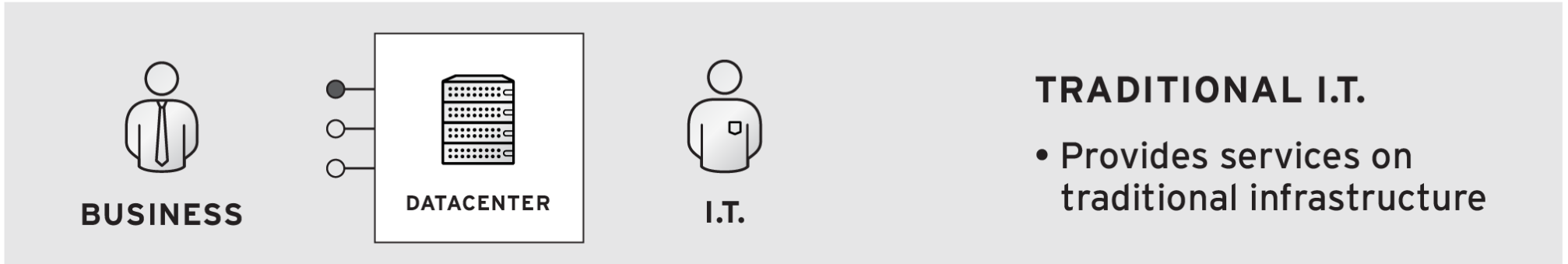
BUSINESS DEMANDS DRIVE I.T. TRANSFORMATION



- Business wants agility, lower cost, new capabilities
- IT struggling with existing legacy infrastructure architecture and cost model
- Cloud providers are using next-generation IT built on open source technologies
- IT needs to adopt cloud architectures and technologies to close innovation gap

THE ROLE OF I.T. IS CHANGING

From service provider to strategic partner



MANY ORGANIZATIONS ARE TARGETING HYBRID CLOUDS

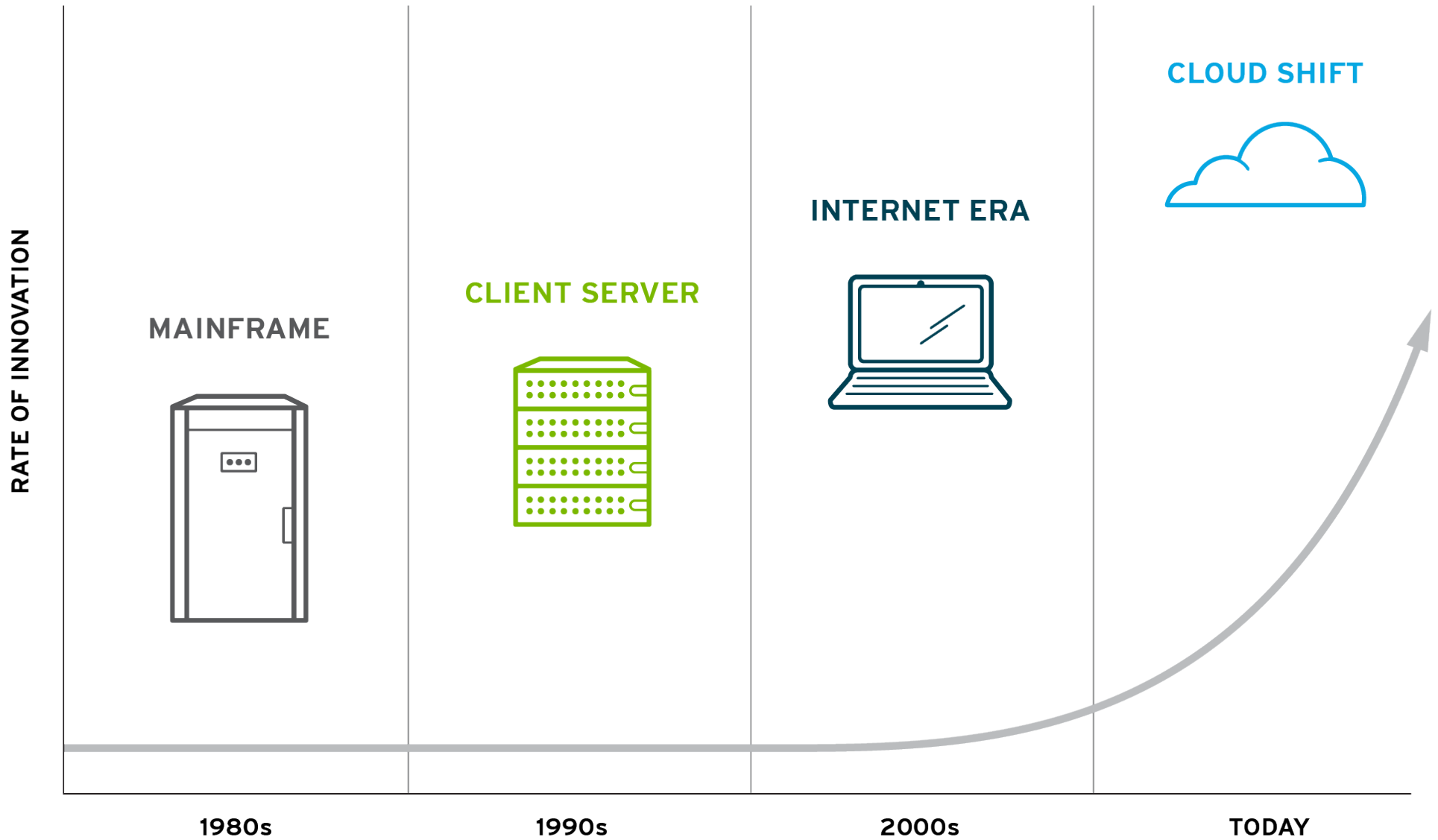


- Pay as you go
- Capacity on demand
- Hyperscale
- Provider managed

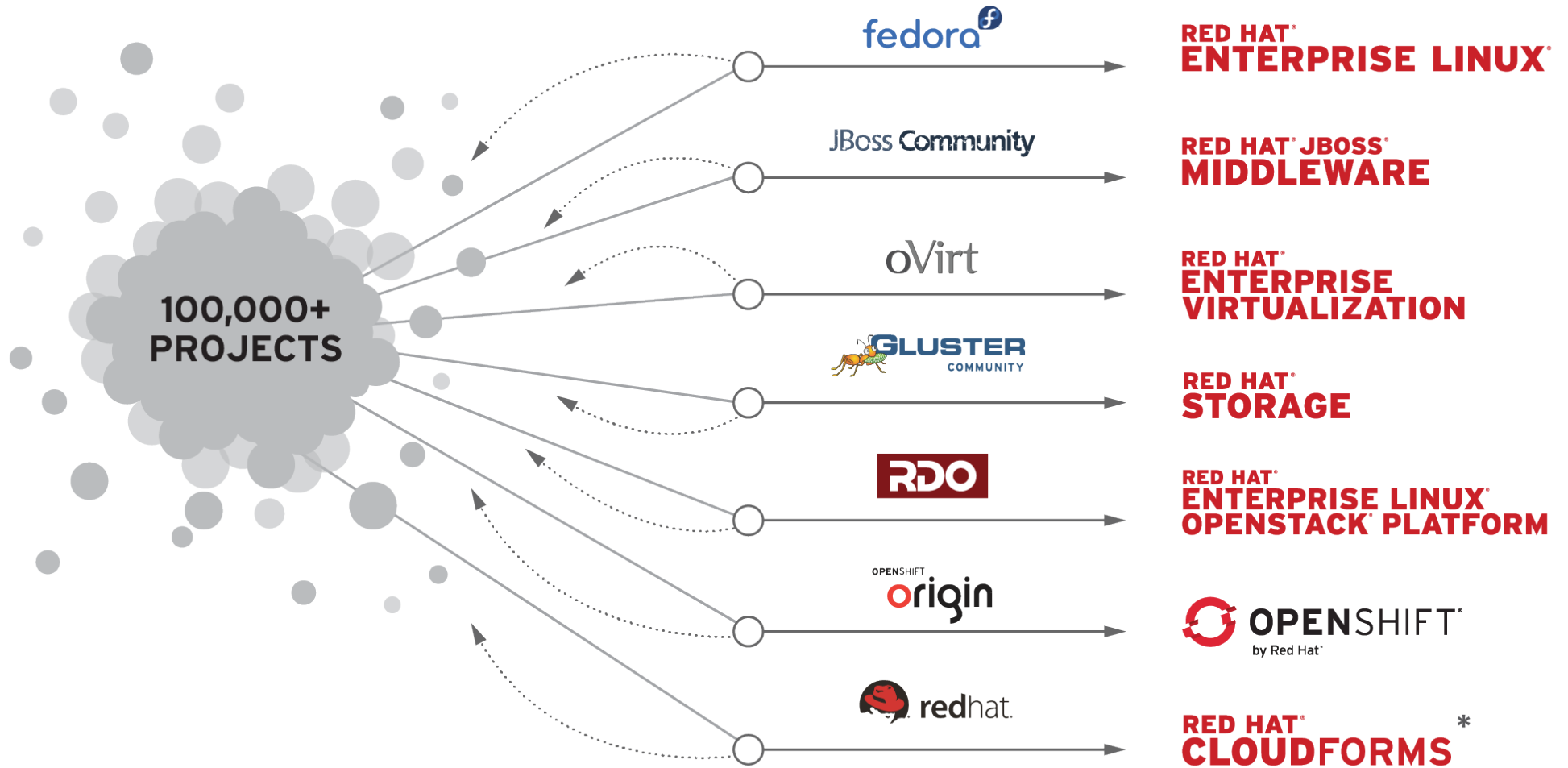
- Choice of environment per project
- IT managed

- Control
- IT managed
- On-premise
- SLAs

ALL THIS INNOVATION LED TO CLOUD



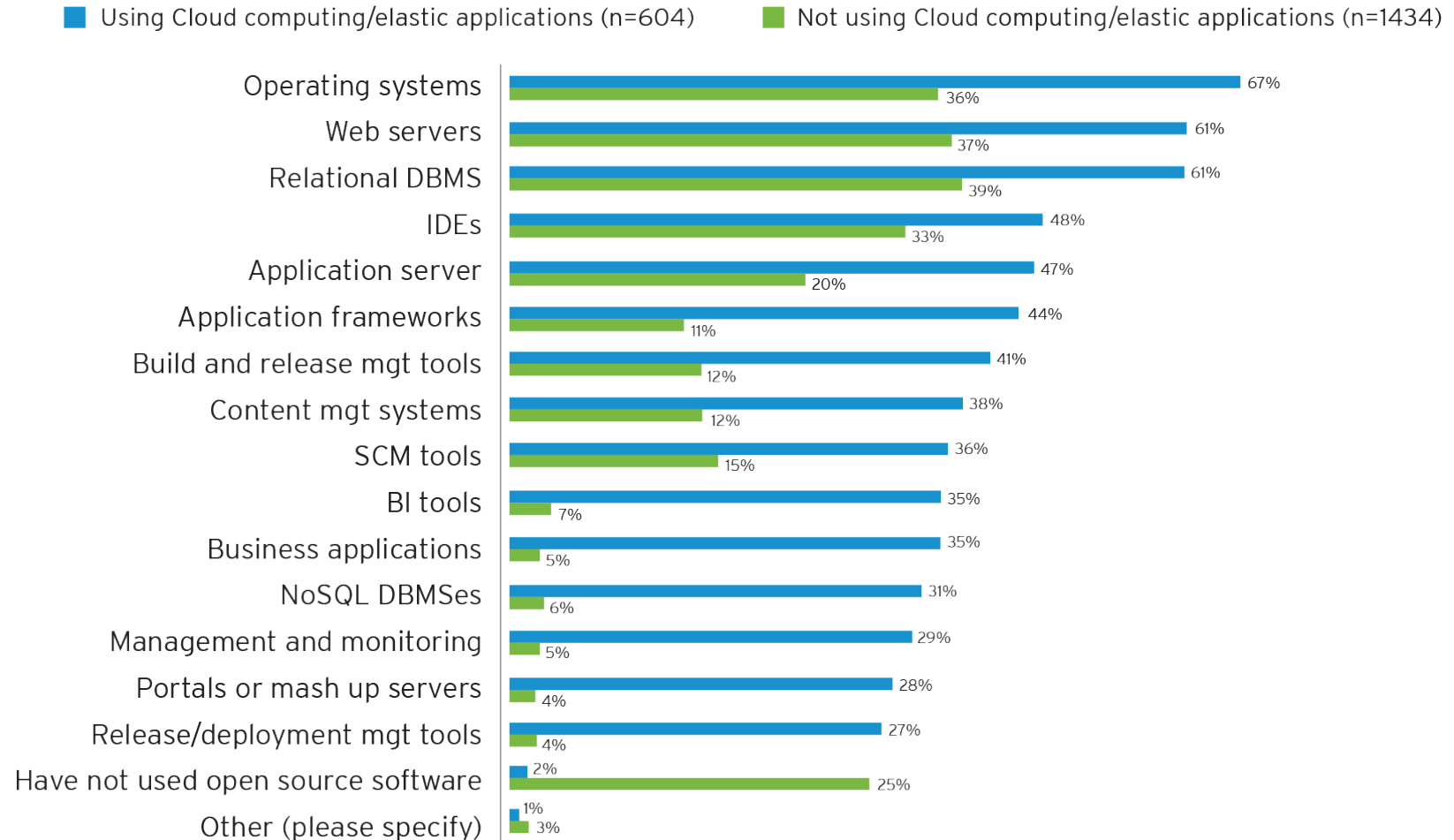
OPEN INNOVATION LEADS TO ENTERPRISE SUCCESS



* Red Hat CloudForms is being opensourced now by Red Hat – a \$100MM investment in the community

CLOUD DEVS PREFER OPEN SOURCE – BY FAR

Which of the following classes of open source software tools/frameworks have you used for development or deployment in the past 12 months? (Select all that apply)



BASE: 2,038 developers
SOURCE: Forrsights Developer Survey, Q1 2013

OHCO027

NEXT GENERATION I.T. INFRASTRUCTURES

BUSINESS / CONSUMER

I.T. MANAGEMENT / PROVIDER

APPLICATIONS AND WORKLOADS WITH RED HAT

Red Hat Enterprise Linux, Red Hat JBoss Middleware, Red Hat Storage



Red Hat CloudForms,
Red Hat Satellite

PLATFORM-AS-A-SERVICE WITH RED HAT

OpenShift by Red Hat

PaaS



SERVICE MANAGEMENT

MONITORING AND EVENT MANAGEMENT



INFRASTRUCTURE-AS-A-SERVICE WITH RED HAT

Red Hat Cloud Infrastructure, Red Hat Storage

IaaS



AUTOMATION



CLOUD BROKERING

VIRTUAL RESOURCES



PHYSICAL RESOURCES



LIFECYCLE MANAGEMENT



CONFIGURATION MANAGEMENT

PUBLIC CLOUD RESOURCES



PUBLIC CLOUD RESOURCES



PUBLIC CLOUD RESOURCES

RED HAT CERTIFIED CLOUD PROVIDER

PRIVATE CLOUD

NEXT GENERATION I.T. INFRASTRUCTURES

BUSINESS / CONSUMER

I.T. MANAGEMENT / PROVIDER

APPLICATIONS AND WORKLOADS WITH RED HAT

RED HAT JBOSS MIDDLEWARE

PLATFORM-AS-A-SERVICE WITH RED HAT

PaaS

OPENSIFT BY RED HAT

INFRASTRUCTURE-AS-A-SERVICE WITH RED HAT

IaaS

RED HAT CLOUDFORMS

RED HAT ENTERPRISE LINUX OPENSTACK PLATFORM

CLOUD BROKERING

VIRTUAL RESOURCES

RED HAT ENTERPRISE LINUX

RED HAT STORAGE

PUBLIC CLOUD RESOURCES

PUBLIC CLOUD RESOURCES

PUBLIC CLOUD RESOURCES

PRIVATE CLOUD

PHYSICAL RESOURCES

RED HAT ENTERPRISE VIRTUALIZATION

RED HAT STORAGE

RED HAT SATELLITE

SERVICE MANAGEMENT

MONITORING AND EVENT MANAGEMENT

RED HAT CLOUDFORMS

AUTOMATION

RED HAT CLOUDFORMS

OPENSIFT BY RED HAT

LIFECYCLE MANAGEMENT

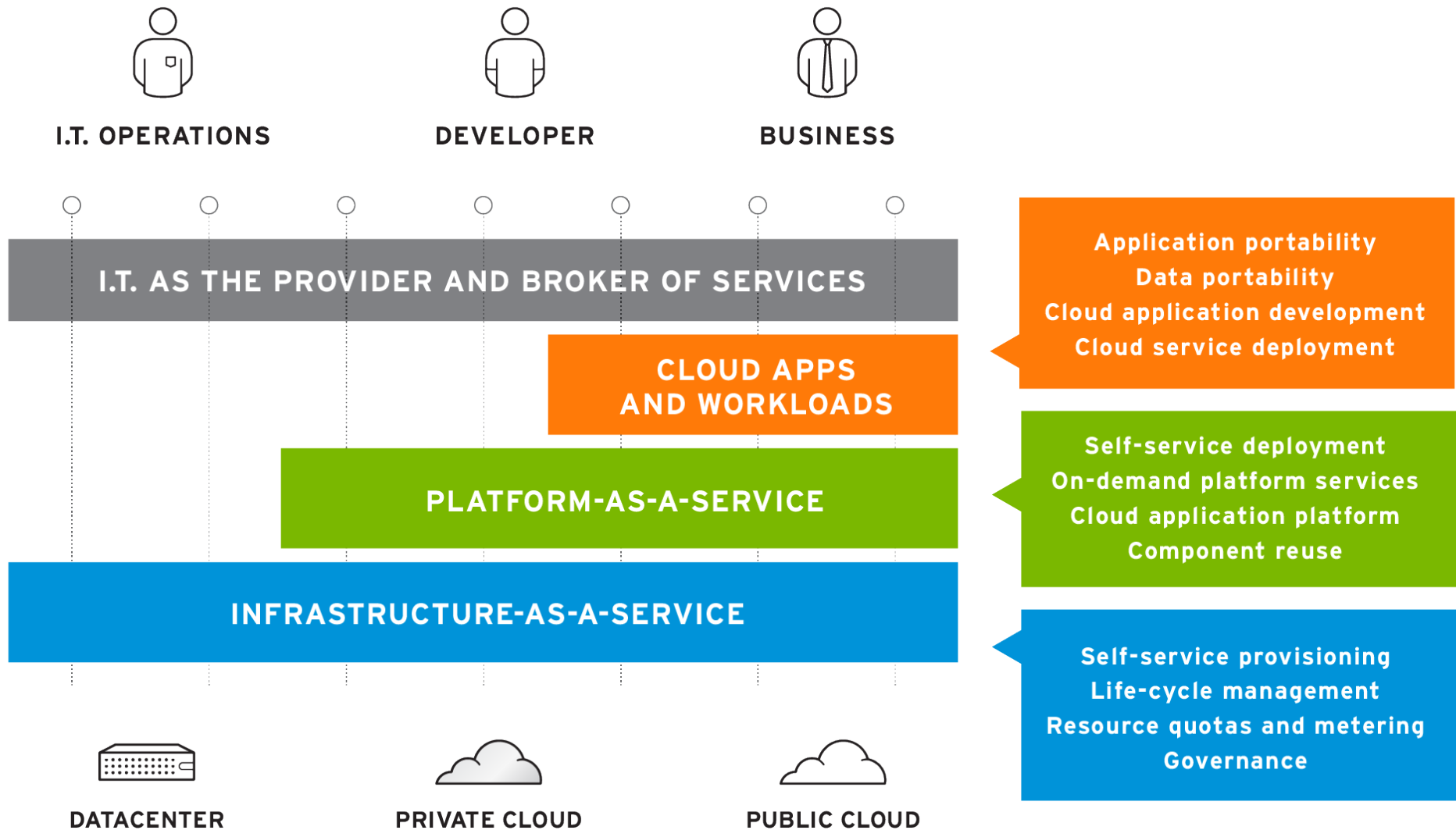
RED HAT CLOUDFORMS

OPENSIFT BY RED HAT

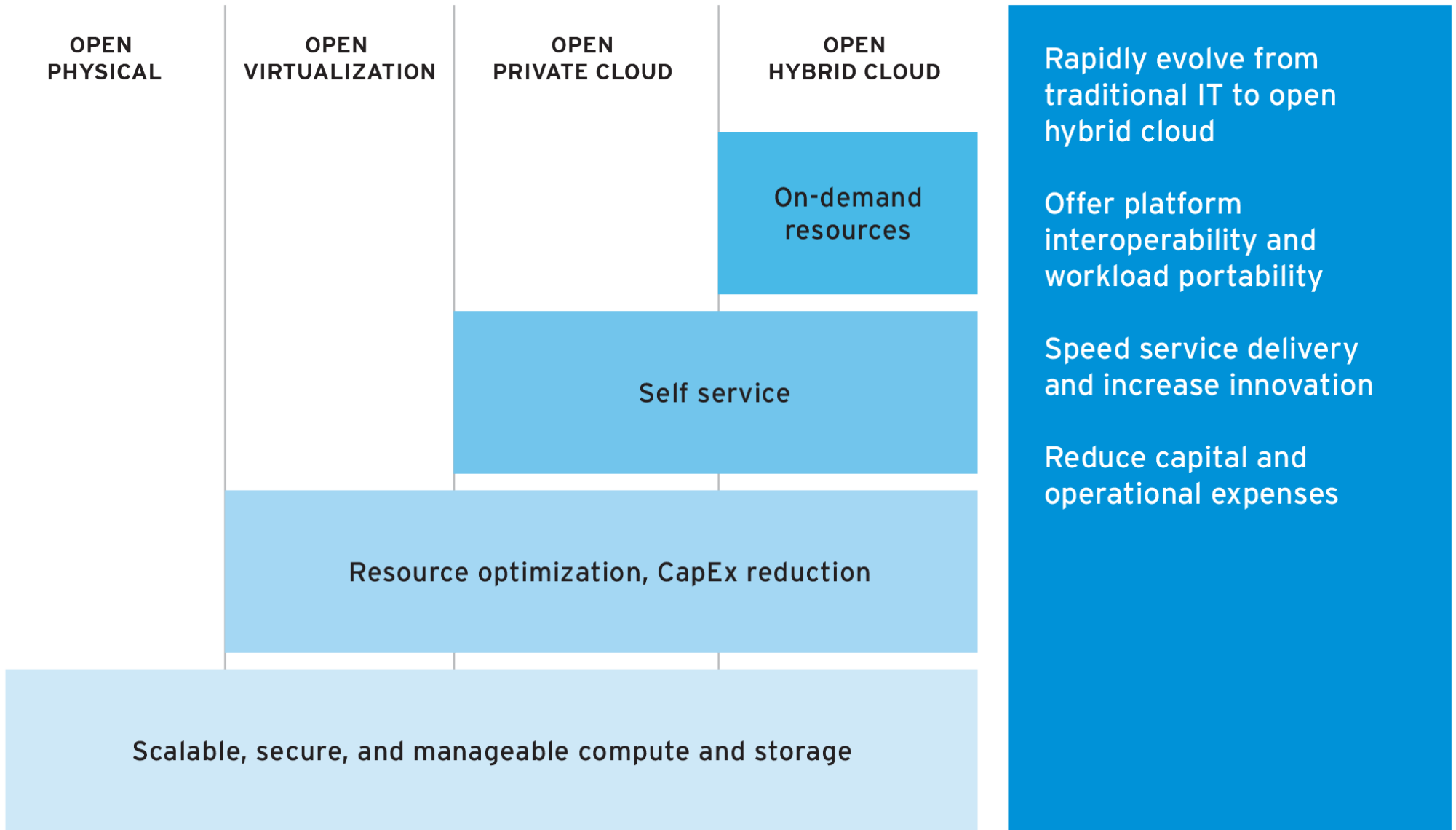
CONFIGURATION MANAGEMENT

RED HAT SATELLITE

MOVING TOWARD IT-AS-A-SERVICE



INFRASTRUCTURE-AS-A-SERVICE



INFRASTRUCTURE-AS-A-SERVICE

OPEN
PHYSICAL

OPEN
VIRTUALIZATION

OPEN
PRIVATE CLOUD

OPEN
HYBRID CLOUD

Red Hat
CloudForms

Red Hat CloudForms,
RHEL OpenStack Platform

Red Hat Enterprise Virtualization

Red Hat Enterprise Linux,
Red Hat Satellite, Red Hat Storage

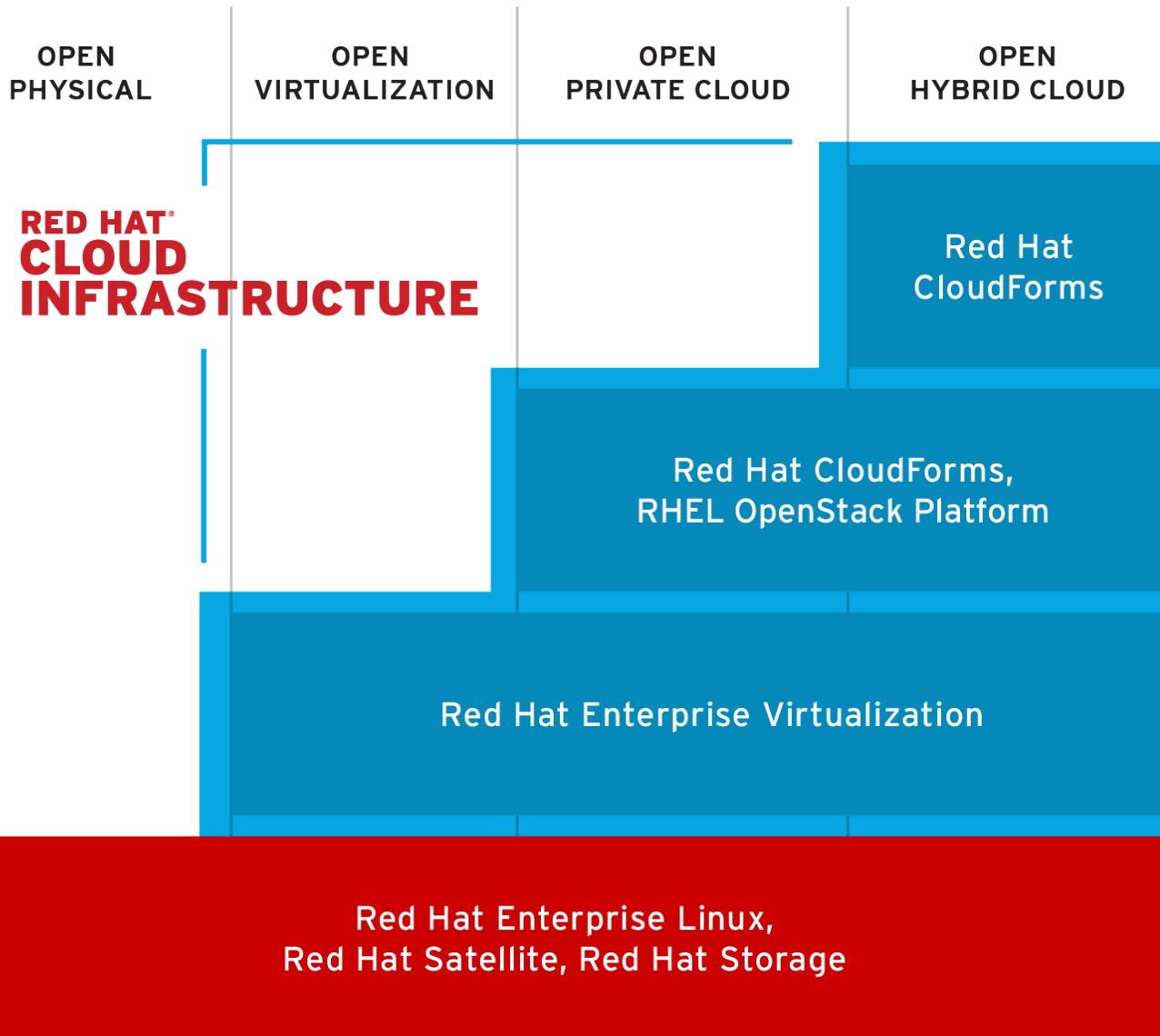
Rapidly evolve from traditional IT to open hybrid cloud

Offer platform interoperability and workload portability

Speed service delivery and increase innovation

Reduce capital and operational expenses

INFRASTRUCTURE-AS-A-SERVICE



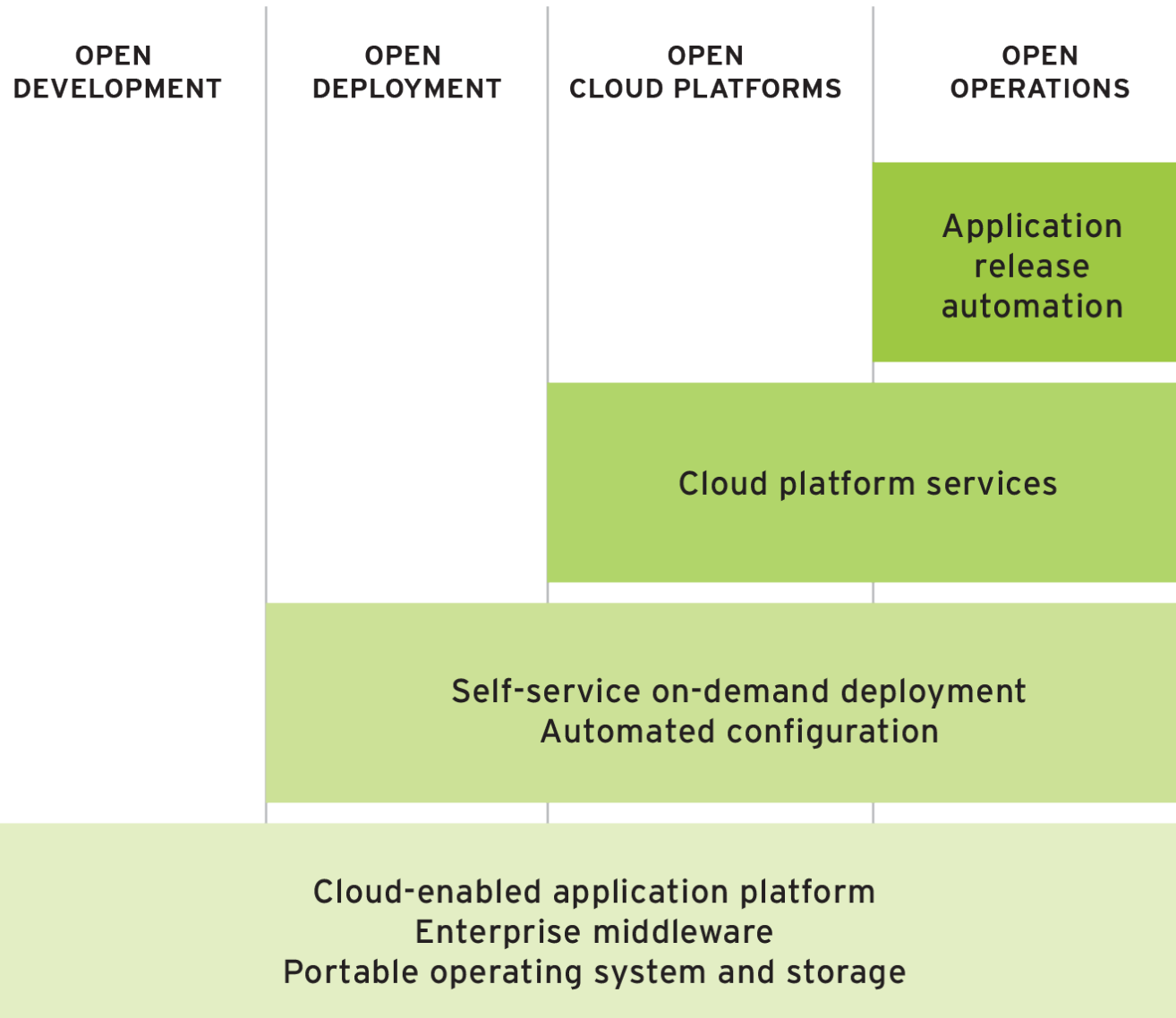
Rapidly evolve from traditional IT to open hybrid cloud

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PLATFORM-AS-A-SERVICE

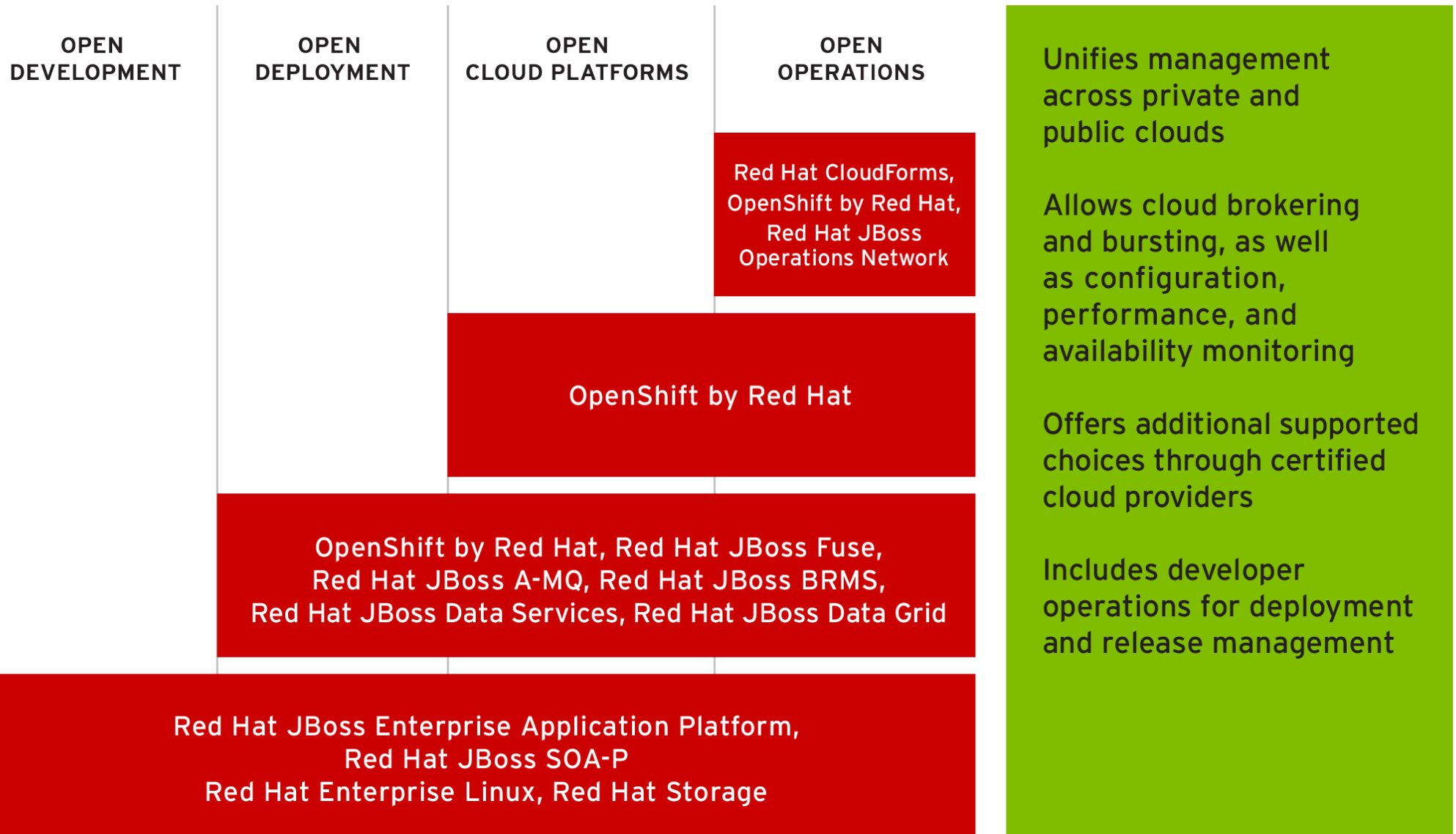


Streamlines and speeds application development and release

Automates deployment

Promotes development, integration, and migration of cloud applications

PLATFORM-AS-A-SERVICE



PLATFORM-AS-A-SERVICE

OPEN
DEVELOPMENT

OPEN
DEPLOYMENT

OPEN
CLOUD PLATFORMS

OPEN
OPERATIONS



OPENSIFT[®]
by Red Hat[®]

Red Hat CloudForms,
OpenShift by Red Hat,
Red Hat JBoss
Operations Network

OpenShift by Red Hat

OpenShift by Red Hat, Red Hat JBoss Fuse,
Red Hat JBoss A-MQ, Red Hat JBoss BRMS,
Red Hat JBoss Data Services, Red Hat JBoss Data Grid

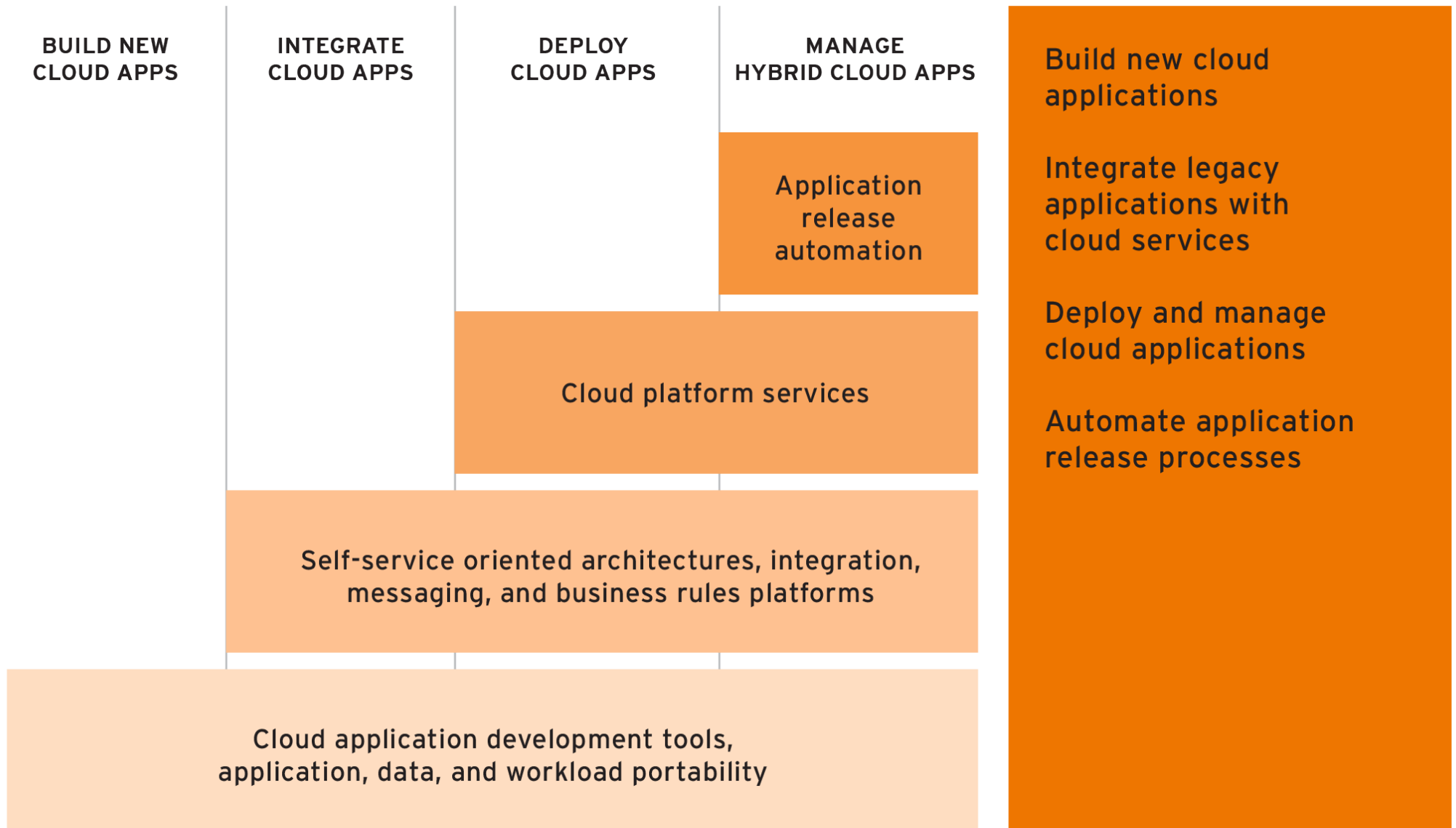
Red Hat JBoss Enterprise Application Platform,
Red Hat JBoss SOA-P
Red Hat Enterprise Linux, Red Hat Storage

Streamlines and speeds
application development
and release

Automates deployment

Promotes development,
integration, and migration
of cloud applications

CLOUD APPLICATIONS AND WORKLOADS



CLOUD APPLICATIONS AND WORKLOADS

**BUILD NEW
CLOUD APPS**

**INTEGRATE
CLOUD APPS**

**DEPLOY
CLOUD APPS**

**MANAGE
HYBRID CLOUD APPS**

Build new cloud applications

Integrate legacy applications with cloud services

Deploy and manage cloud applications

Automate application release processes

Red Hat CloudForms,
OpenShift by Red Hat,
Red Hat JBoss
Operations Network,
Red Hat Satellite

Red Hat CloudForms,
Red Hat JBoss Operations Network,
OpenShift by Red Hat,
Red Hat Satellite

Red Hat JBoss Fuse, Red Hat JBoss A-MQ,
Red Hat JBoss Enterprise SOA-P, Red Hat JBoss BRMS

Red Hat JBoss Enterprise Application Platform,
Red Hat JBoss Developer Studio,
Red Hat Enterprise Linux, Red Hat Storage

GET STARTED WITH PRIVATE CLOUD TODAY

PLATFORM-AS-A-SERVICE



AGILE



FRAMEWORK AND
LANGUAGE CHOICE



DEVELOPER
PRODUCTIVITY

OpenShift Enterprise by Red Hat

CLOUD MANAGEMENT



SELF-SERVICE



ORCHESTRATION



INTEROPERABILITY

Red Hat CloudForms

INFRASTRUCTURE-AS-A-SERVICE



MASSIVE
SCALABILITY



ON DEMAND



INCREASED
EFFICIENCY

Red Hat
Enterprise Linux OpenStack Platform

Red Hat Cloud Infrastructure

VIRTUALIZATION



SECURE



COST
EFFECTIVE

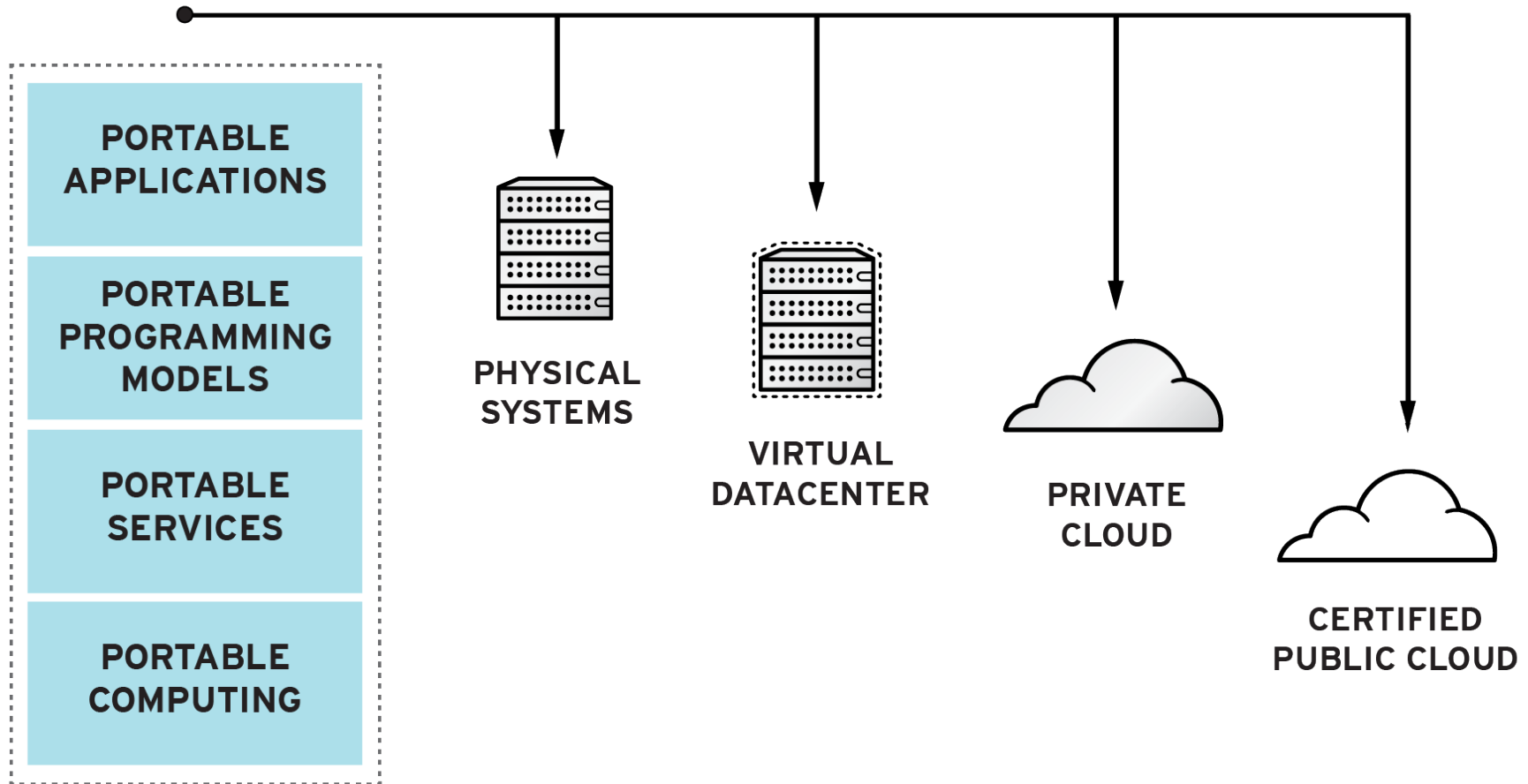


HIGH
PERFORMANCE

Red Hat Enterprise Virtualization

RED HAT ENTERPRISE LINUX

Portable workloads across hybrid clouds



RED HAT STORAGE

Software-defined storage across hybrid clouds



DATA SERVICES



ENTERPRISE APPLICATIONS



BIG DATA WORKLOADS



CLOUD APPLICATIONS



ENTERPRISE MOBILITY

**RED HAT®
STORAGE**

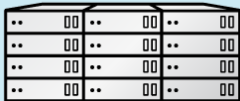
FILE SERVICES

OPEN OBJECT APIs

CONVERGED COMPUTE AND STORAGE

OPEN, SOFTWARE-DEFINED STORAGE PLATFORM

PHYSICAL



Standard x86 systems
Scale-out NAS solutions

VIRTUAL



Include idle or legacy resources

CLOUD



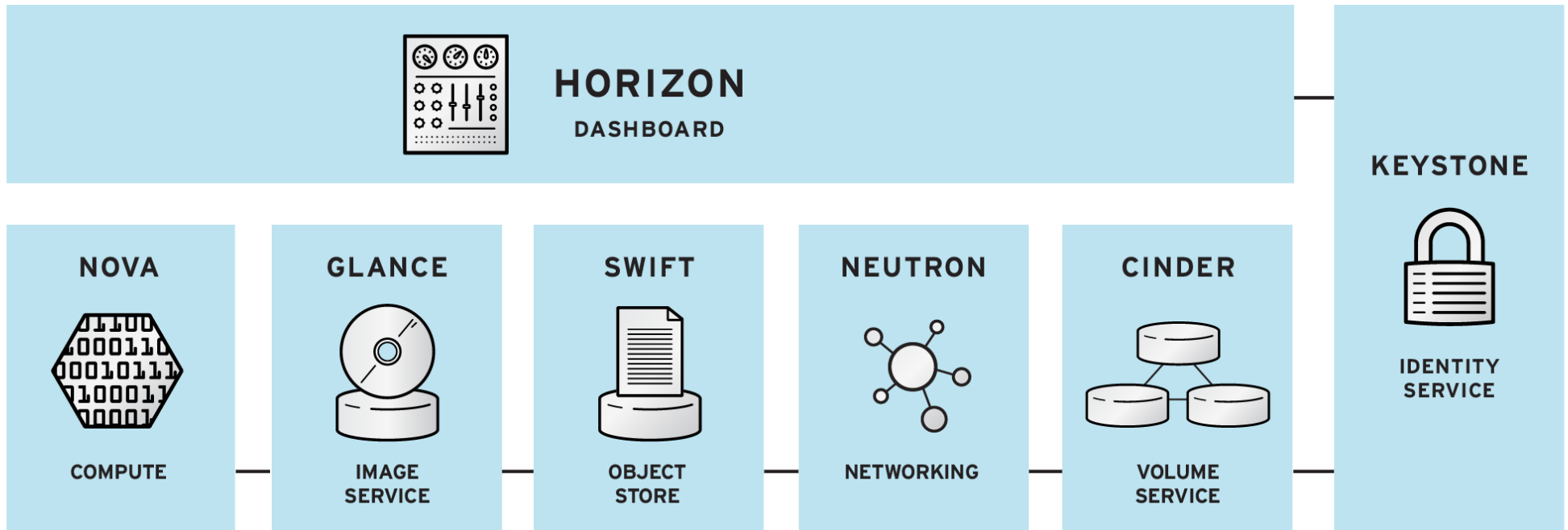
EBS EBS

Scale-out storage architecture

PERSISTANT DATA STORES

RED HAT ENTERPRISE LINUX OPENSTACK PLATFORM

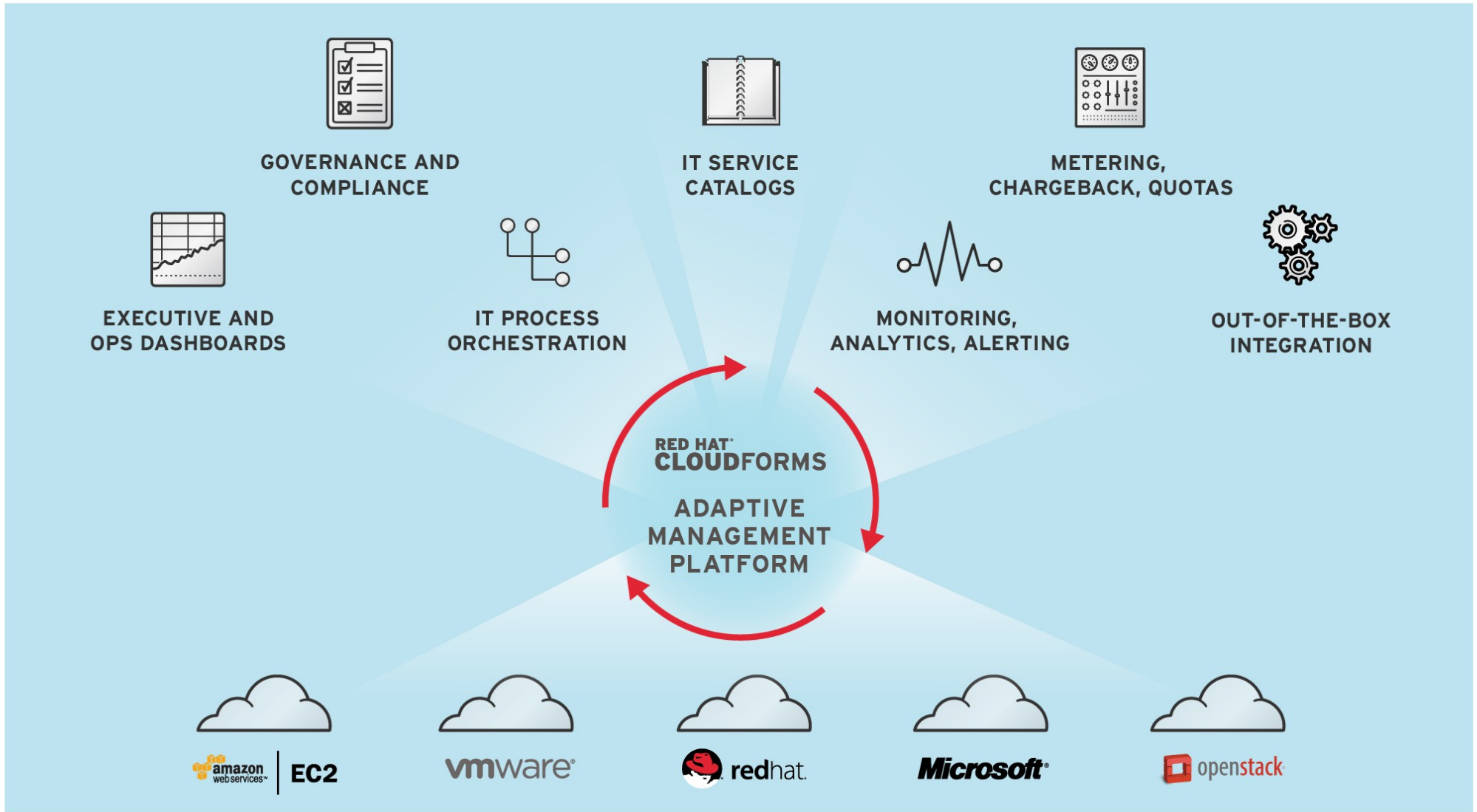
Cloud infrastructure solution



- Modular Architecture
- Designed for scale out
- Based on a set of core shared services
- Flexible Networking Models
- Redundant Scalable Storage
- Dashboard for Self-Service

RED HAT CLOUDFORMS

Cloud operations management



RED HAT CLOUDFORMS

Built for enterprise scale cloud operations management

**AGENT-FREE,
VIRTUAL APPLIANCE
ARCHITECTURE**



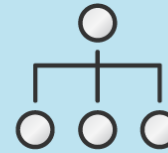
Rapid deployment, non-invasive
(Industry Standard OVF)

**WEB-BASED
OPERATIONS, ADMIN
AND SELF-SERVICE**



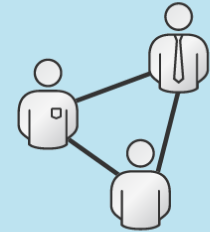
Access anywhere from
any browser

**ENTERPRISE
DIRECTORY SUPPORT**



Leverage directory for
authentication and role

**SUPPORTS
MULTI-TENANCY**



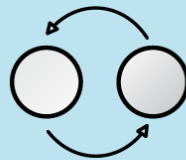
Securely share
infrastructure

**HORIZONTALLY
SCALABLE**



Highly scalable,
load balancing

**LOAD BALANCING,
FAILOVER/BACK**



Provides reliability,
high availability

**MANAGEMENT
ACROSS MULTIPLE
LOCATIONS**



Single pane of glass,
unified management

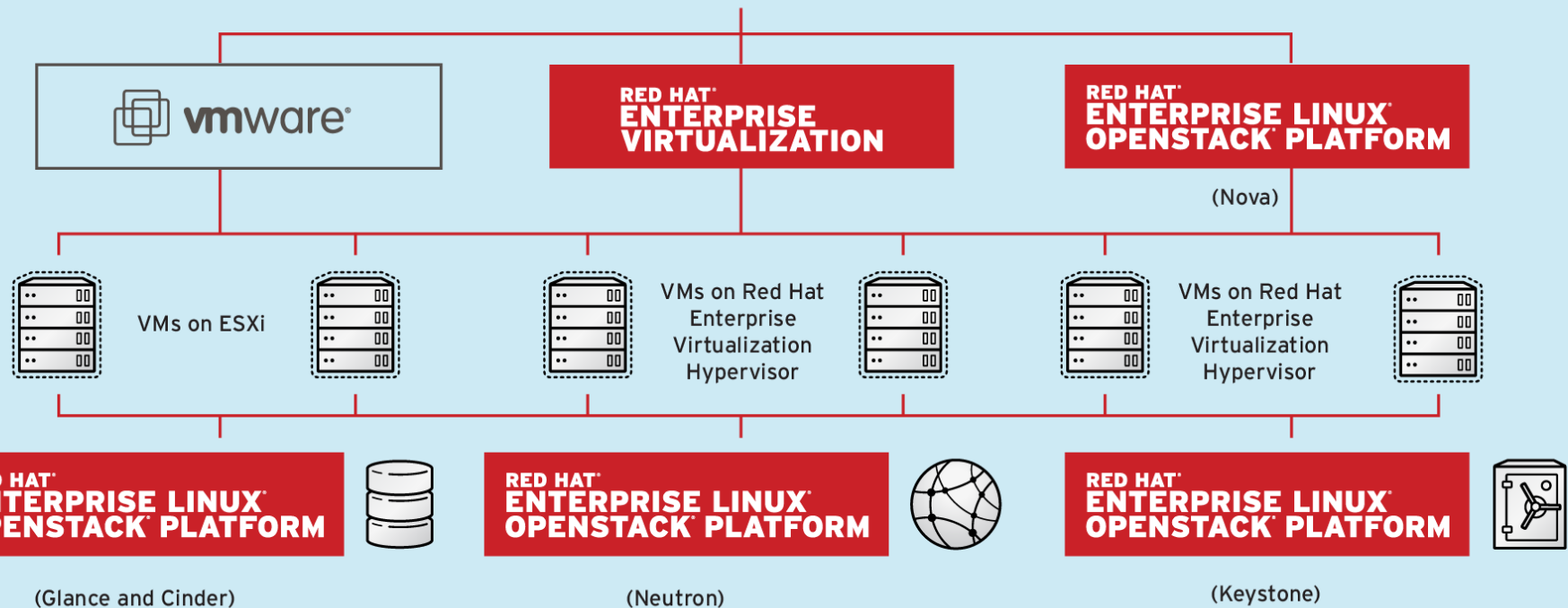
**MANAGEMENT
ACROSS VIRTUAL
PLATFORMS &
PUBLIC CLOUDS**



Single pane of glass,
unified management

RED HAT CLOUD INFRASTRUCTURE

**RED HAT[®]
CLOUDFORMS 2**



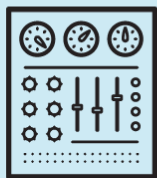
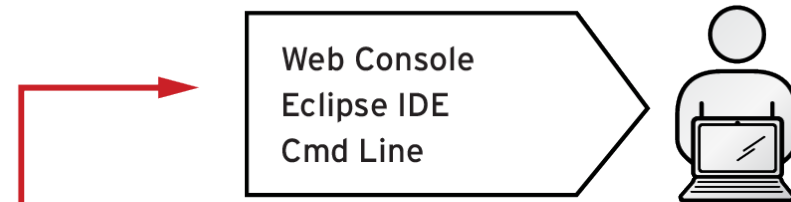
BENEFITS:

- Fast Time to Cloud
- Low Acquisition Cost
- Tool Reduction
- Low Implementation Costs
- Continuous Optimization
- Increased Automation
- Open/Flexible

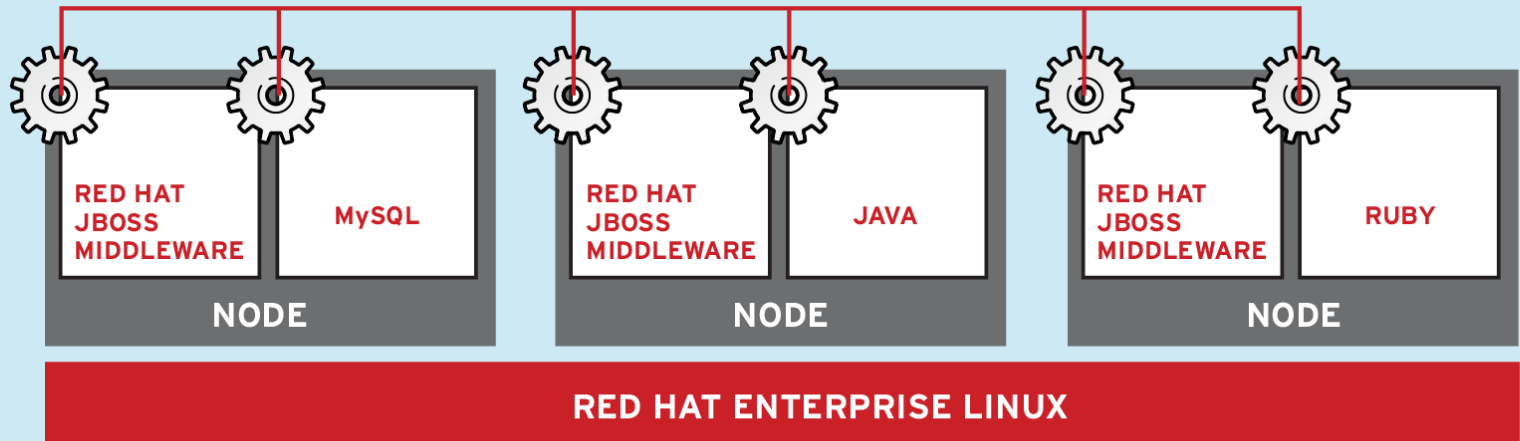
OPENSIFT ENTERPRISE BY RED HAT

Automation and efficiency for operations

Self-service for developers



BROKER



PHYSICAL



VIRTUAL

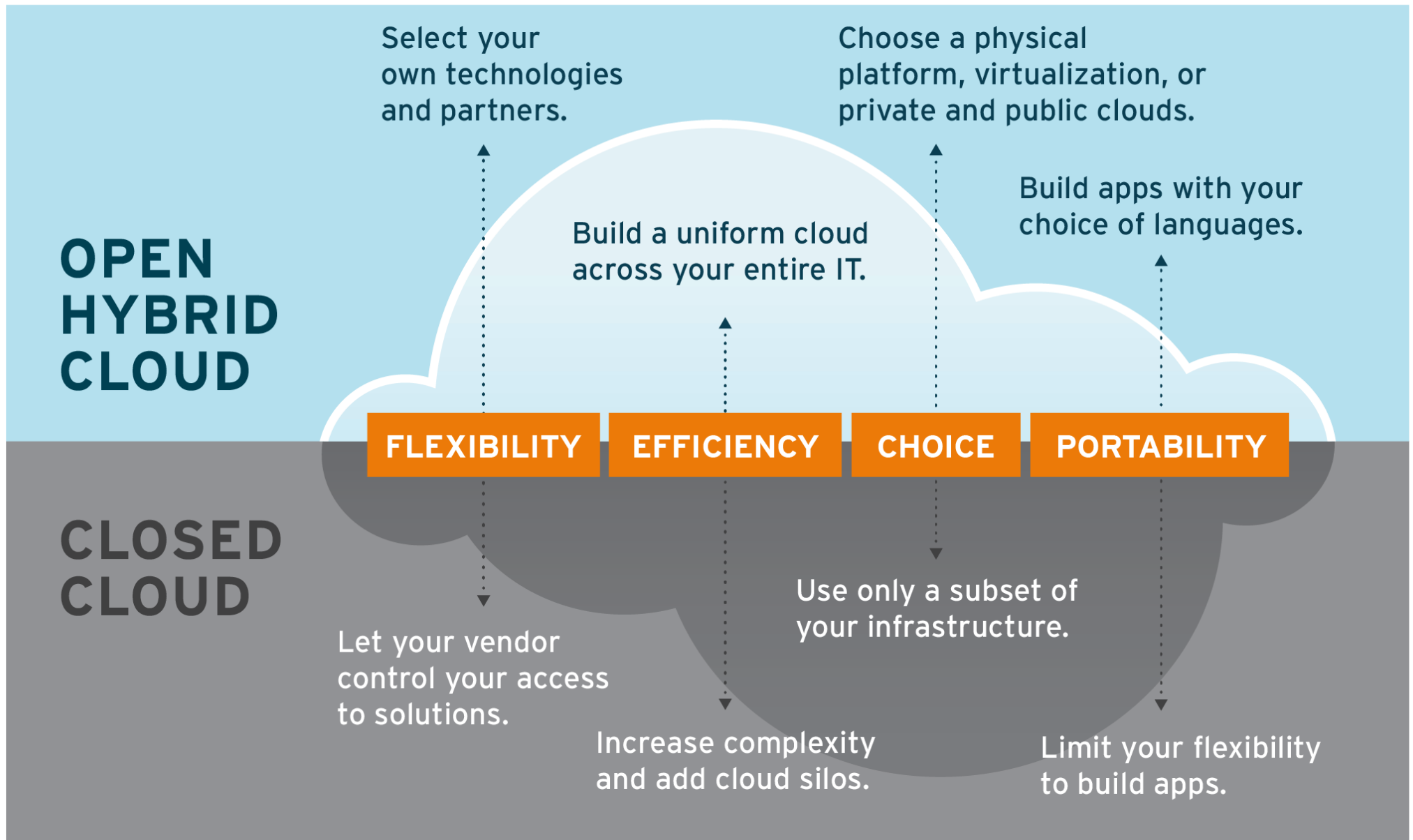


PRIVATE CLOUD



PUBLIC CLOUD

OPEN HYBRID CLOUD VS. CLOSED CLOUD





redhat.®