



Accelerating Digital Business in a Multi-Cloud World

VMware Vision and Strategy

Hoang Tran
PBM

Digital Transformation

Impacting Every Industry



We must
Expand
Before we
Ascend



Customer



Business

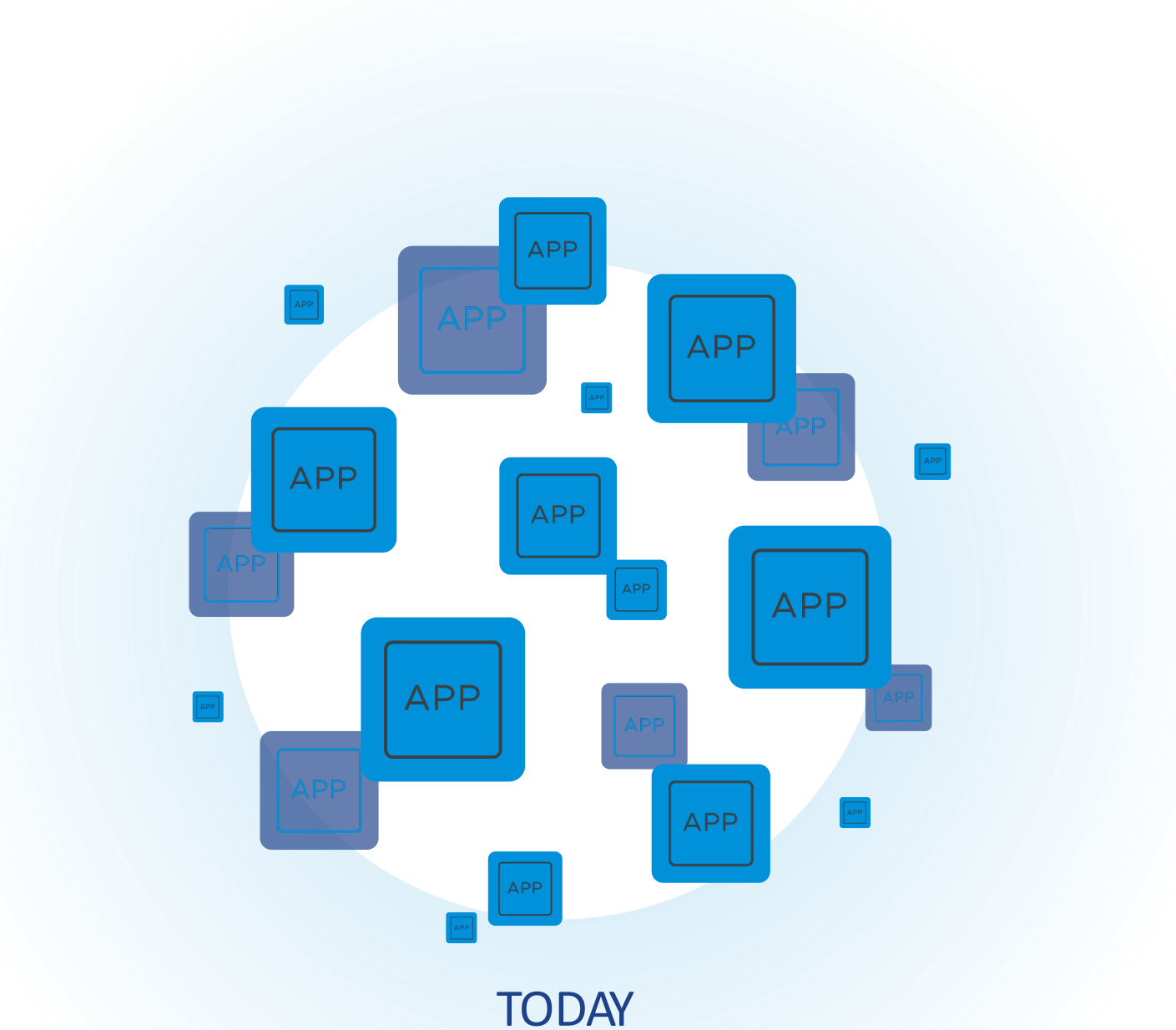


Application



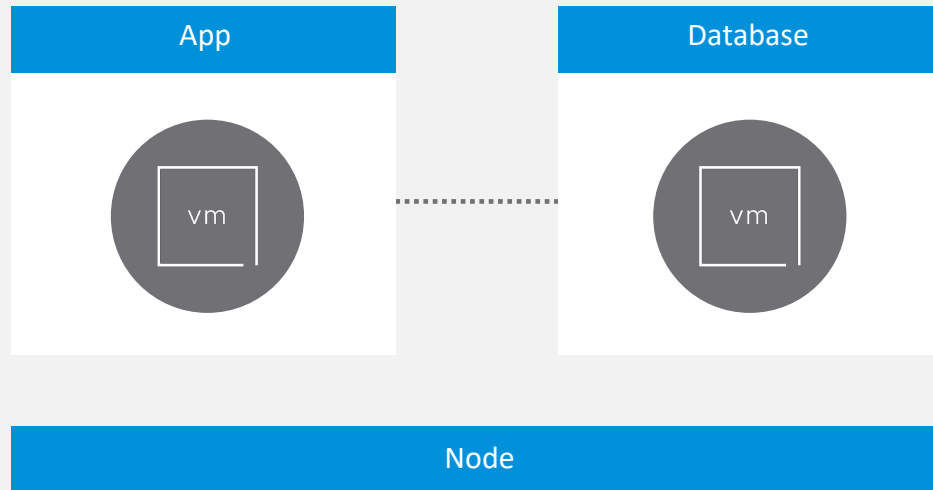
Infrastructure

Application Deployments are Accelerating

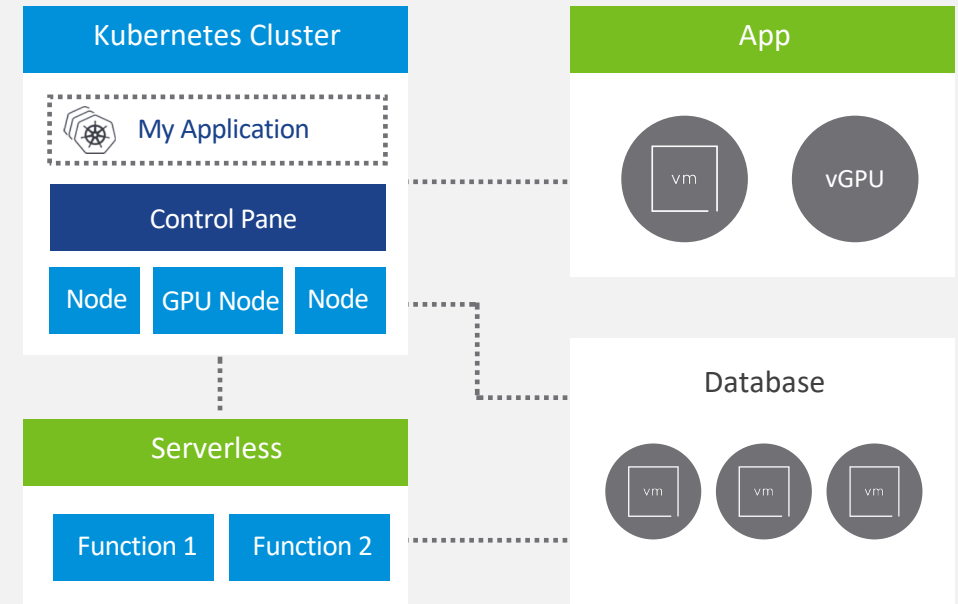


The Definition of an Application Has Changed

Traditional applications
consist of a few VMs

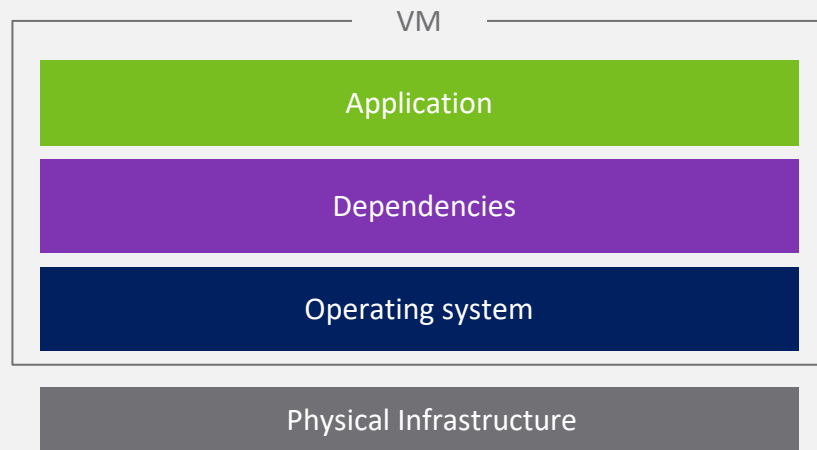


Modern applications are
distributed systems



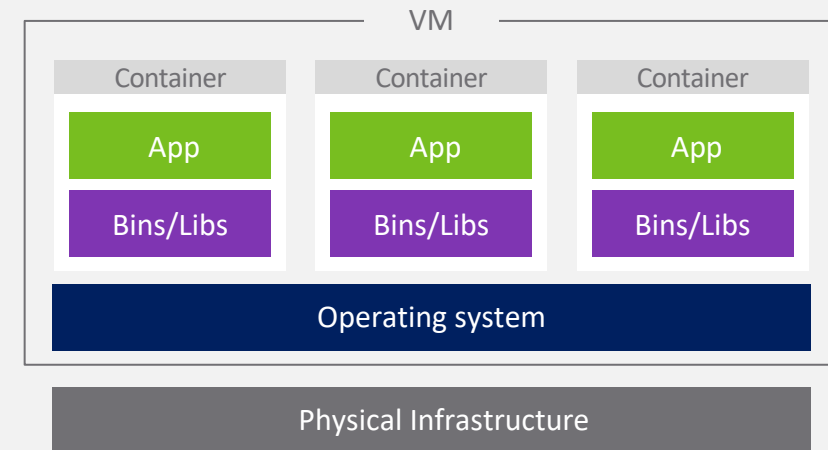
Application Deployment processes are changing!

An application used
to be deployed on VMs



Secure, reliable, highly available

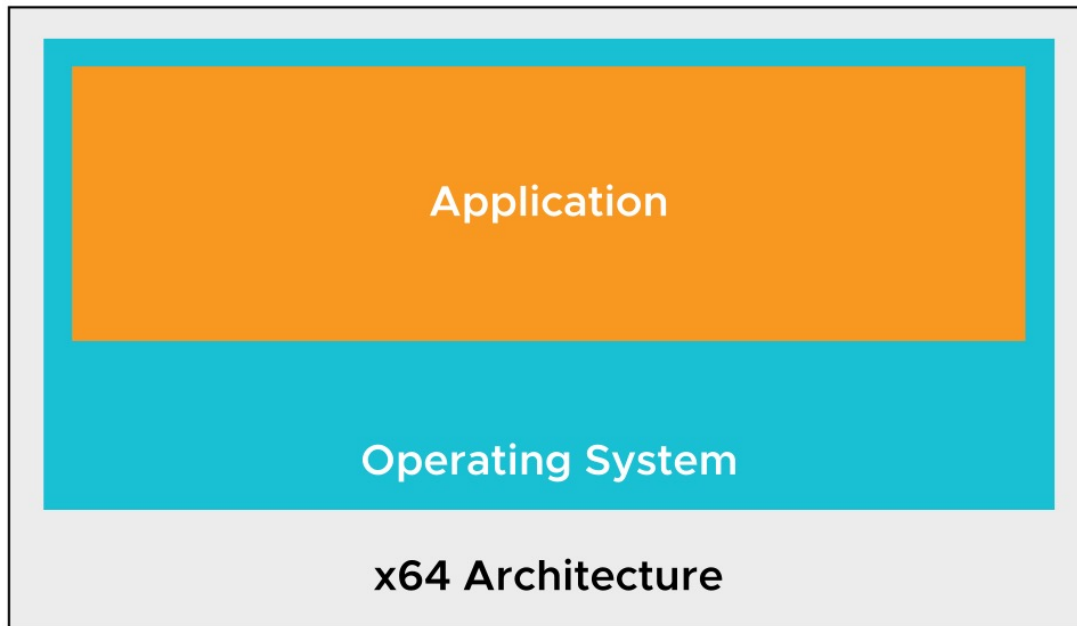
Modern apps are deployed
on containers ... on VMs



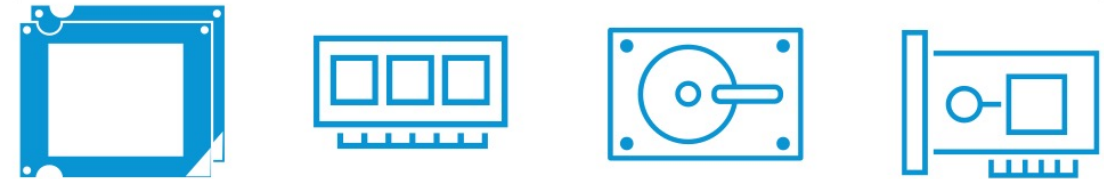
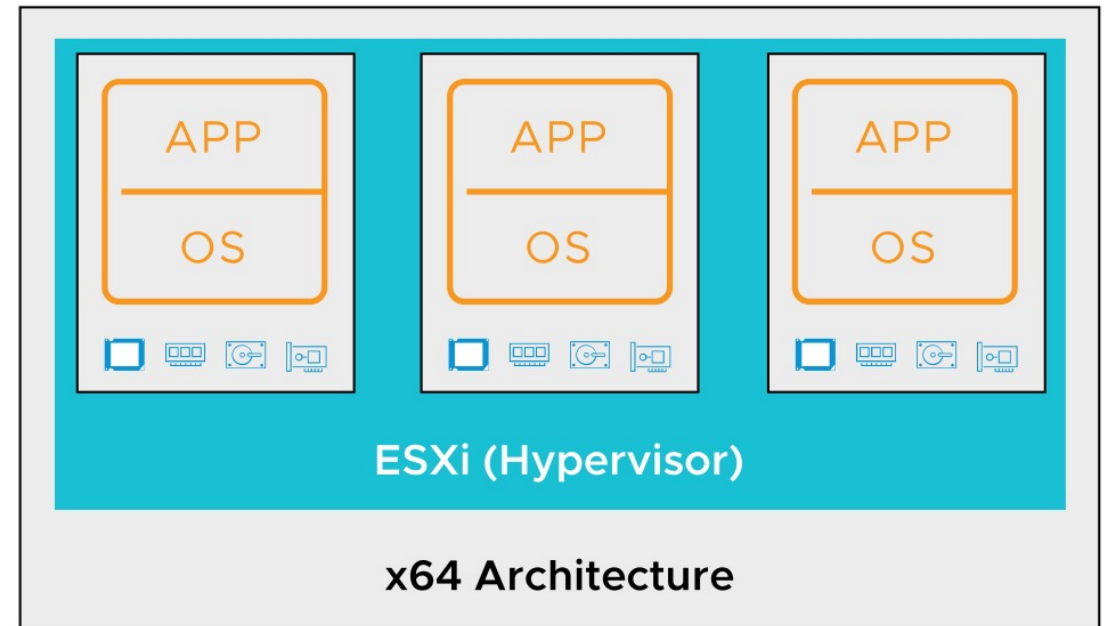
Portable, packable, easier to update

What is Virtual Machine (VM)?

Physical Architecture



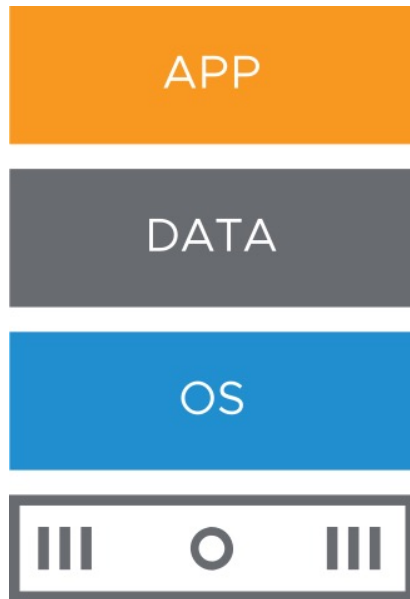
Virtual Architecture



Benefits of Using Virtual Machines

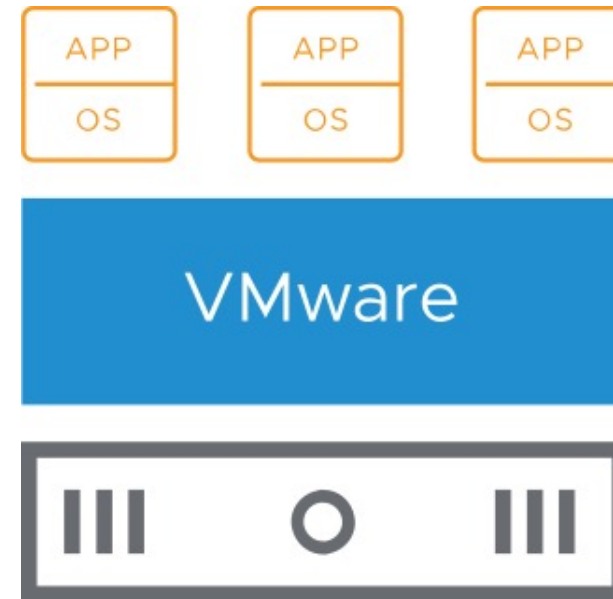
Physical machines:

- Difficult to move or copy
- Bound to a specific set of hardware components
- Often have a short life cycle
- Require personal contact to upgrade hardware



Virtual machines:

- Easy to move or copy
- Independent of physical hardware because VMs are encapsulated into files
- Isolated from other VMs running on same physical hardware
- Insulated from physical hardware changes



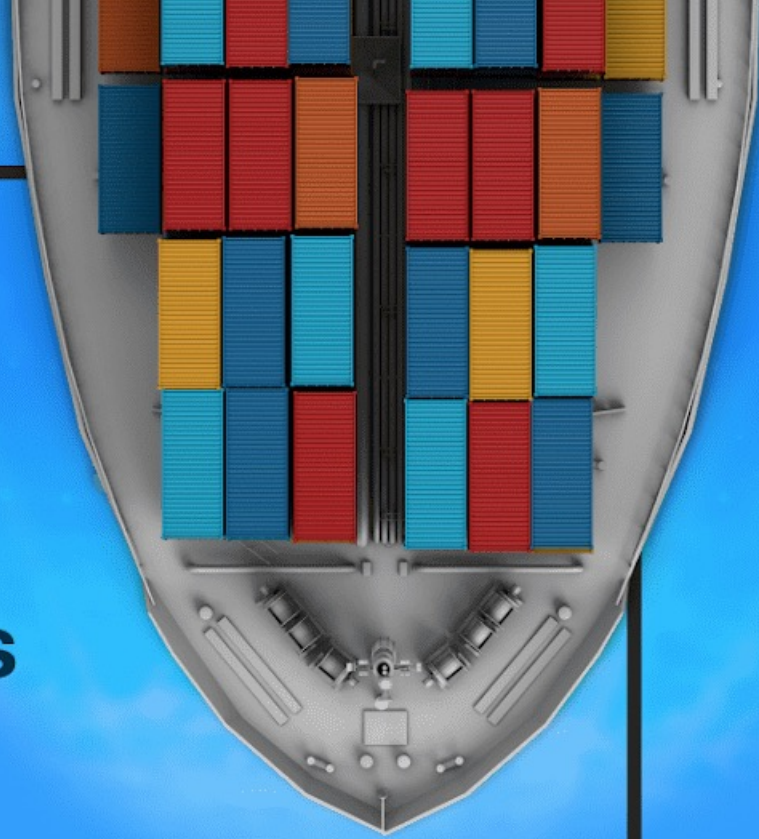
What's a Container?



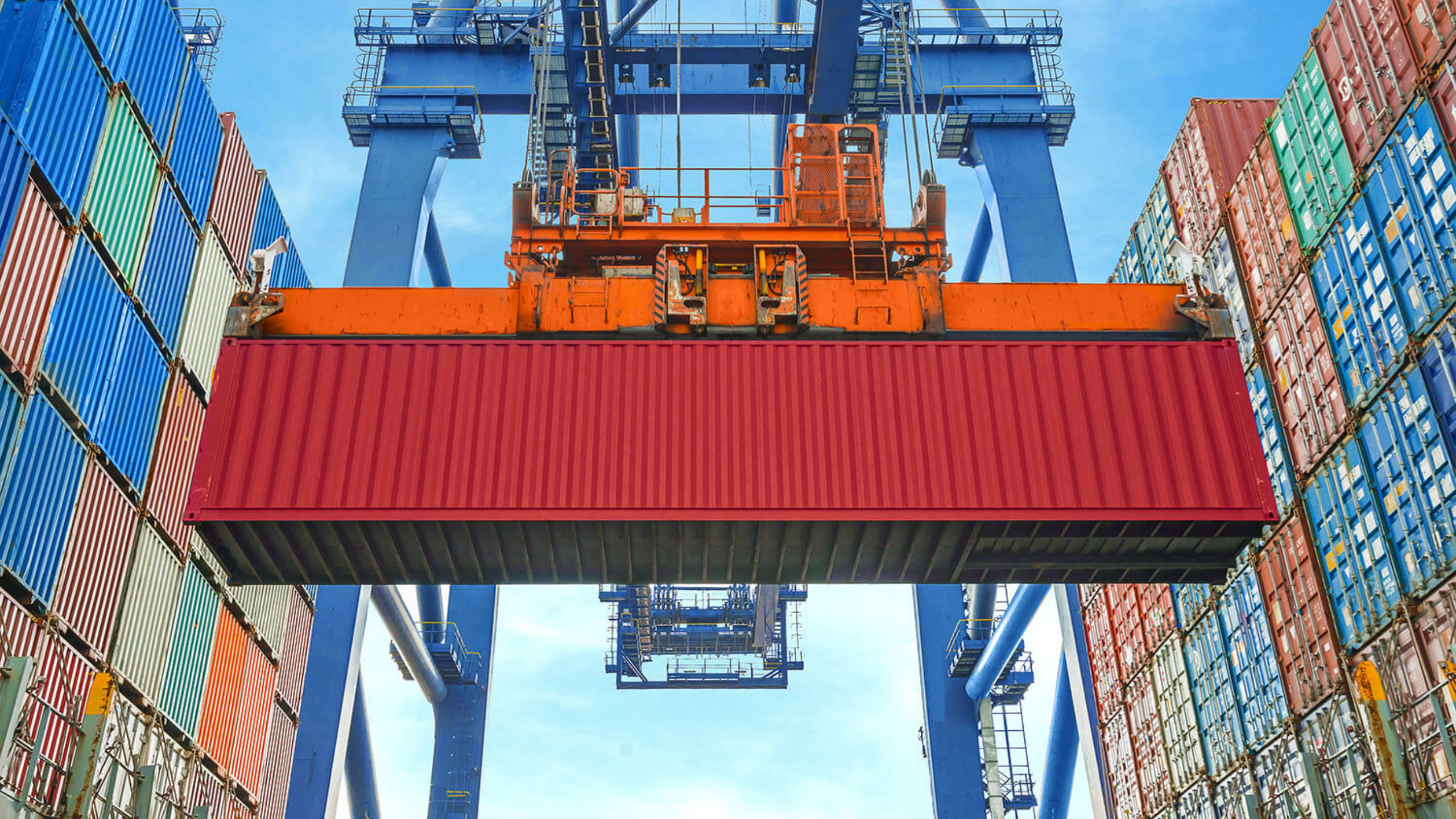


Let's store this image in a Container Registry

Container Orchestration: What Is Kubernetes

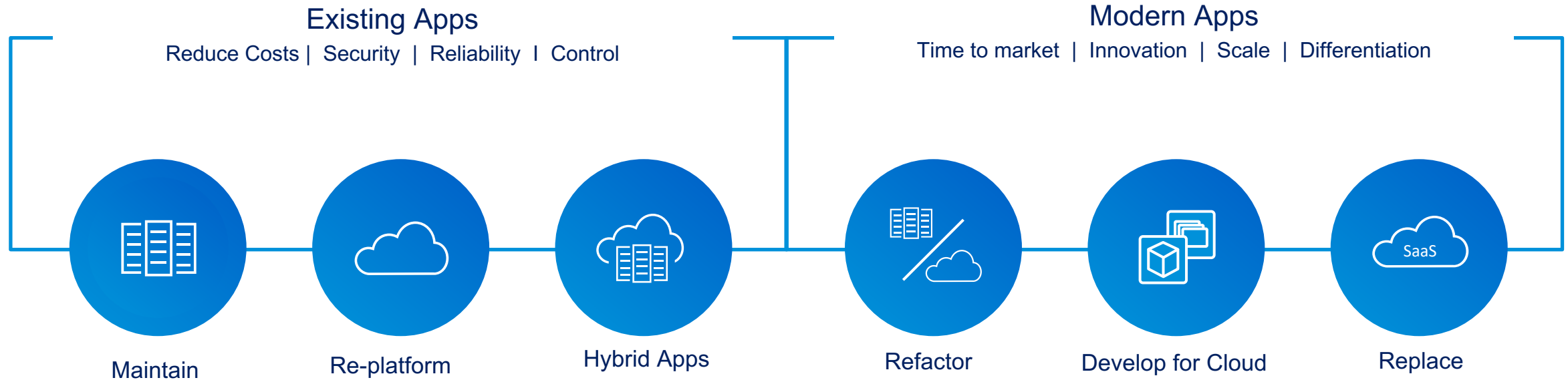




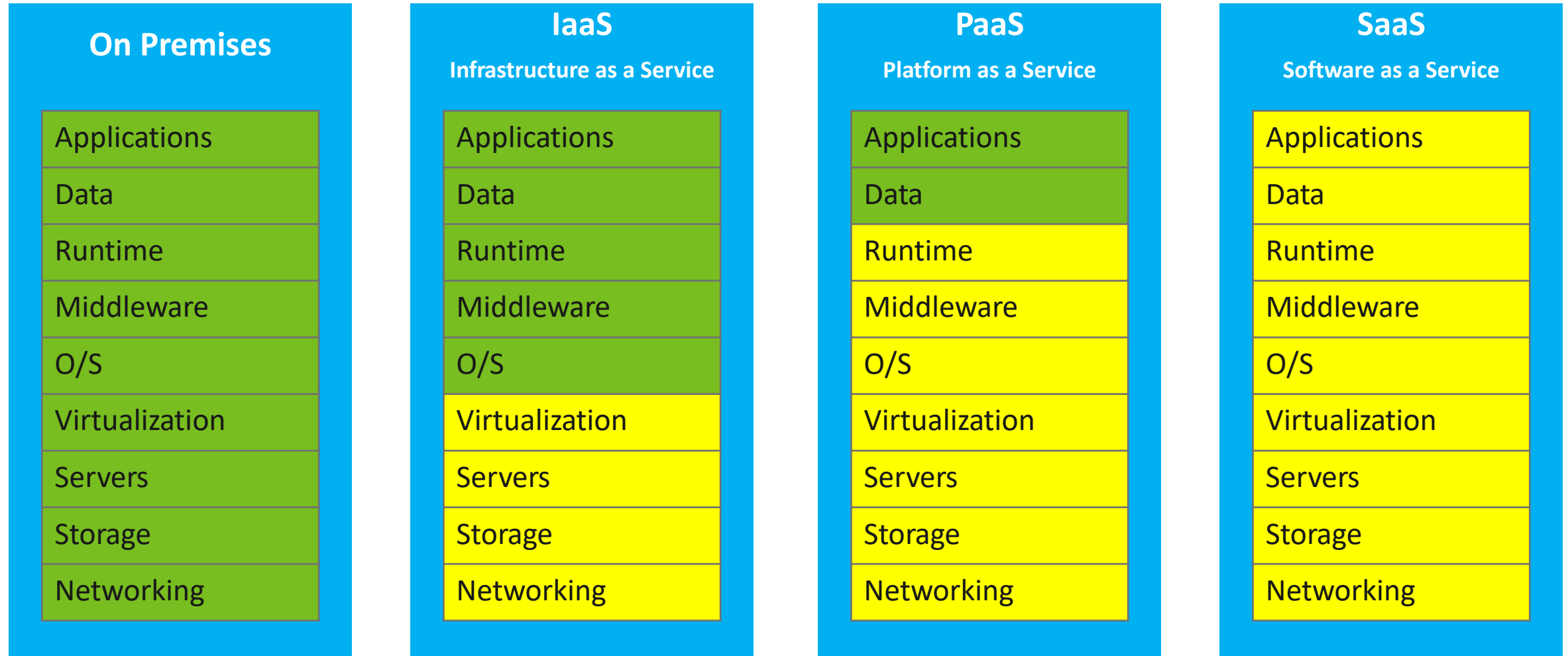




Application Needs are Driving Cloud Strategies

Cloud strategies must match the needs of application workloads



What is CLOUD?



 You Manage
 Vendor Manages

Need to Modernize, But No One Solution Solves Everything

Each environment offers a unique set of advantages, need something future-proof

PRIVATE CLOUD



Cost optimized for data intensive apps

Enterprise IT governance

Data locality and control

Leverages existing tools and operations

Ideal solution for the edge

PUBLIC CLOUD



Flexible, low upfront commitment

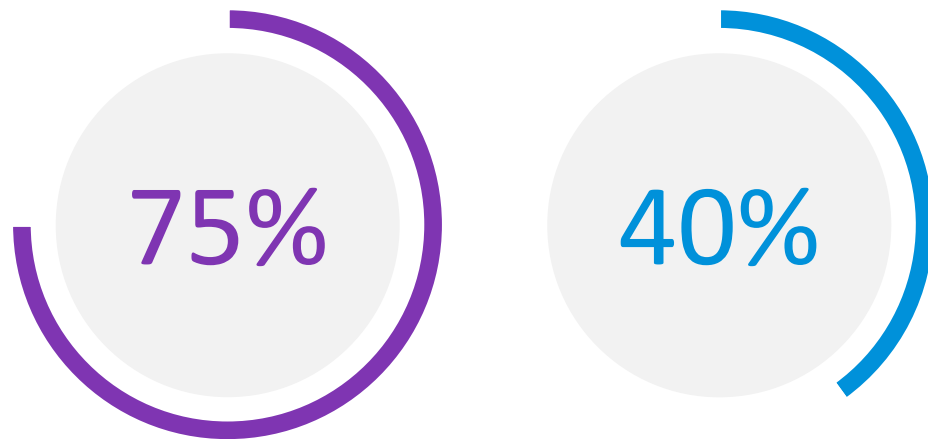
Agile and easily scalable

Built for new class of apps

Rich developer services

Fully managed and automated

Multi-Cloud is the Model for Digital Business for the Next 20 Years

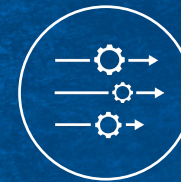


of businesses now use **2**
or **more** public clouds

of businesses now use **3**
or **more** public clouds

A typical enterprise utilizes
464 apps on average

Customers want choice:



Cloud
services



Security and
compliance



Features and
performance



Regional
proximity /
sovereignty

Multi-Cloud Is Powering Measurable Business Impact



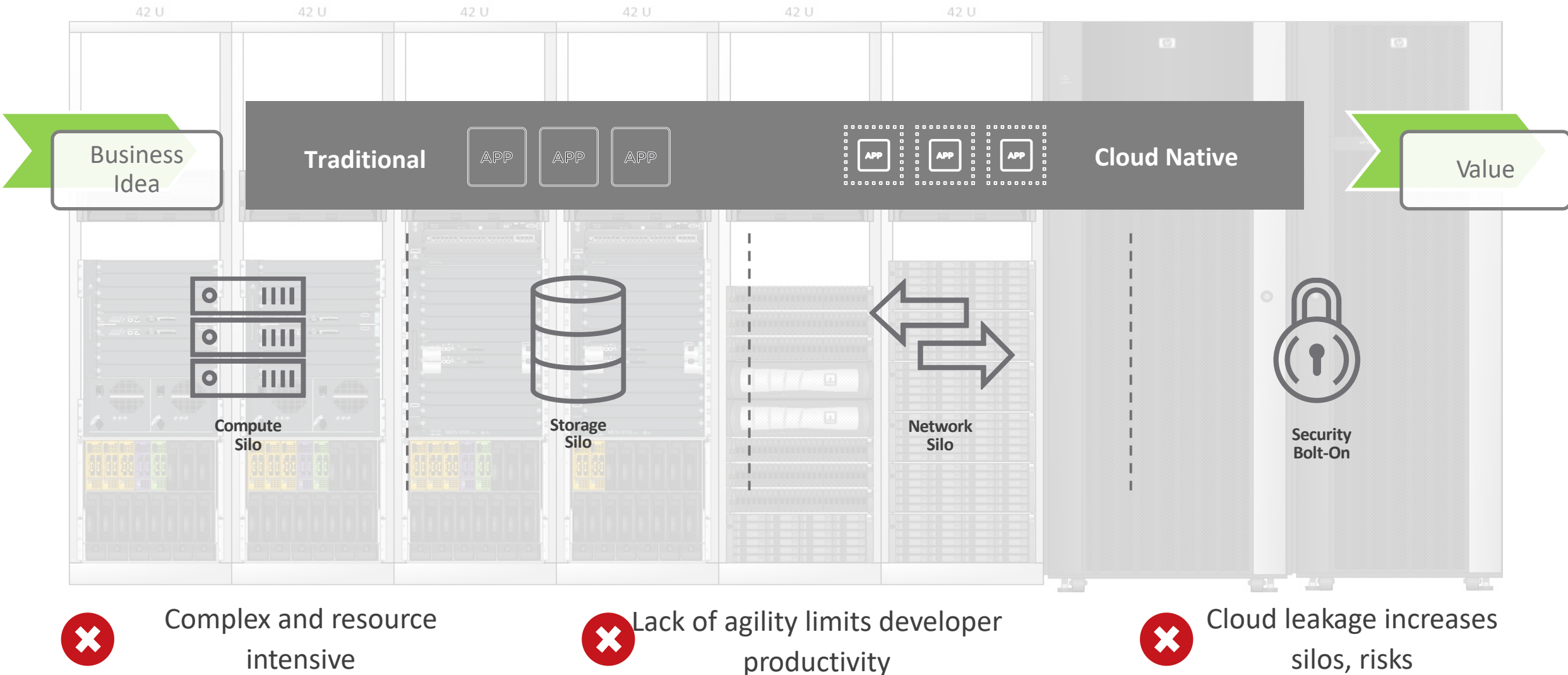
Multi-Cloud Orgs Are Seeing...

35% revenue increase from faster delivery of modern applications

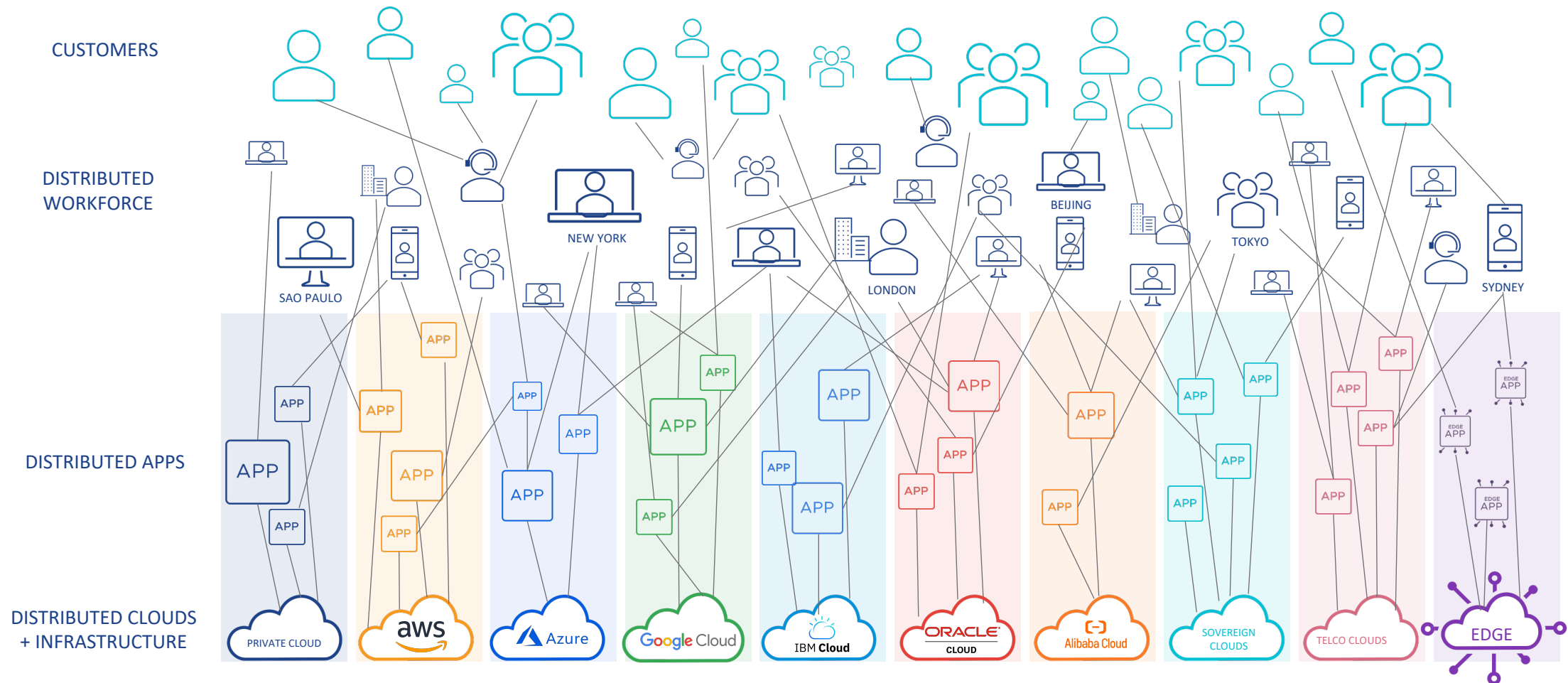
Faster innovation even at the edge—
with 41% fewer costs and hours spend on IT infrastructure

35% productivity savings across a distributed workforce

IT Infrastructure Today!



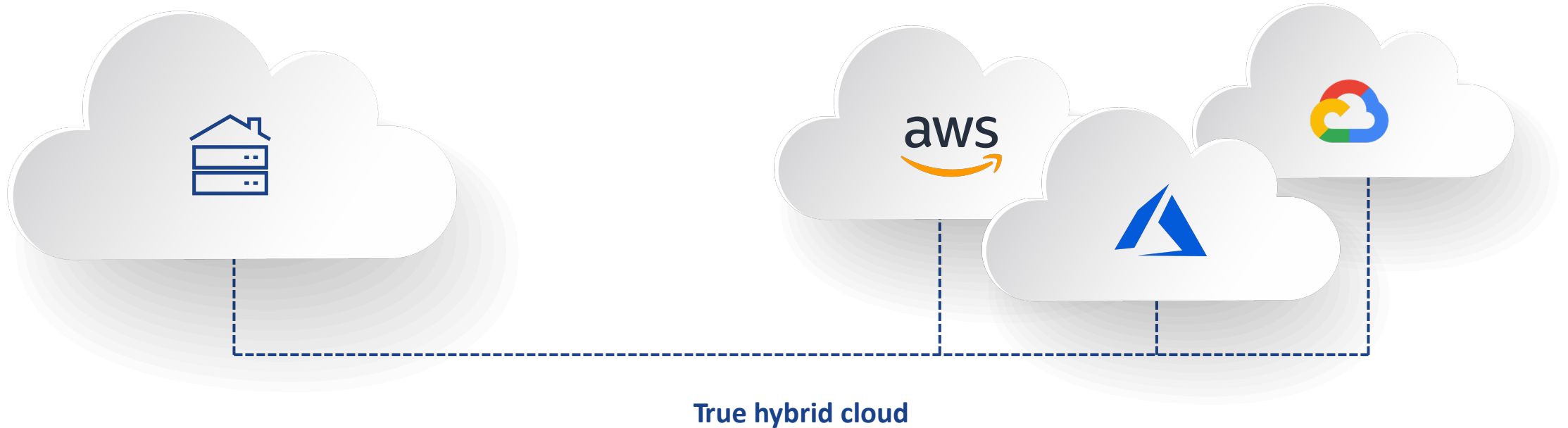
Today's Multi-Cloud Environment



A diverse and siloed environment that's only growing more complex over time

You've had this conversation many times before

Advanced organizations are after the same cloud objectives



Desired business outcomes



Faster time to market



Quickly adapt to changes



Reduce TCO



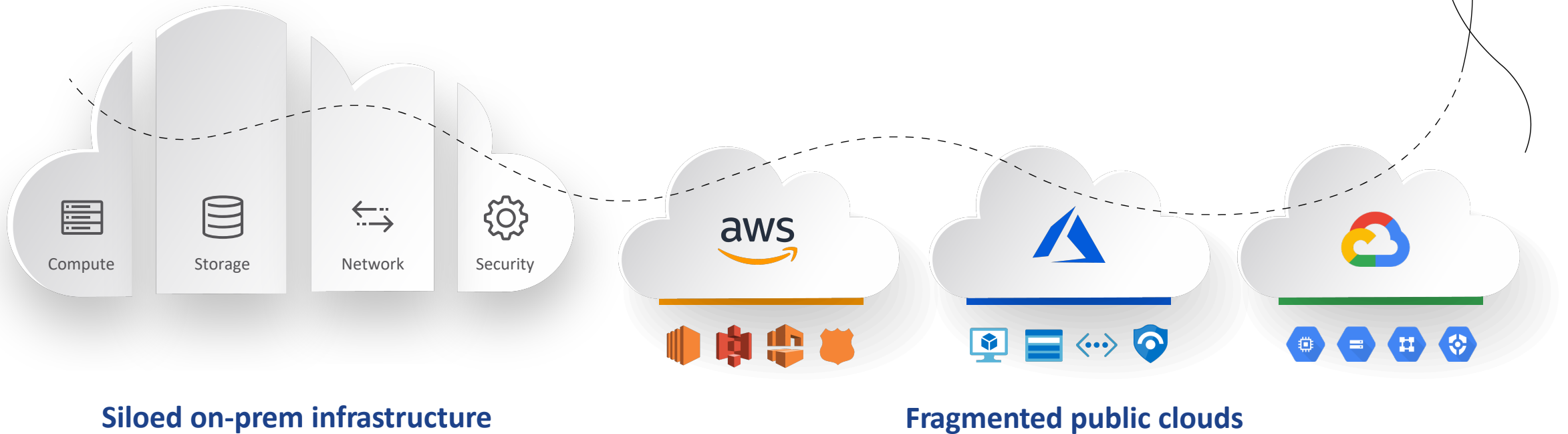
Minimize security threats

Many attempts,
few successes...



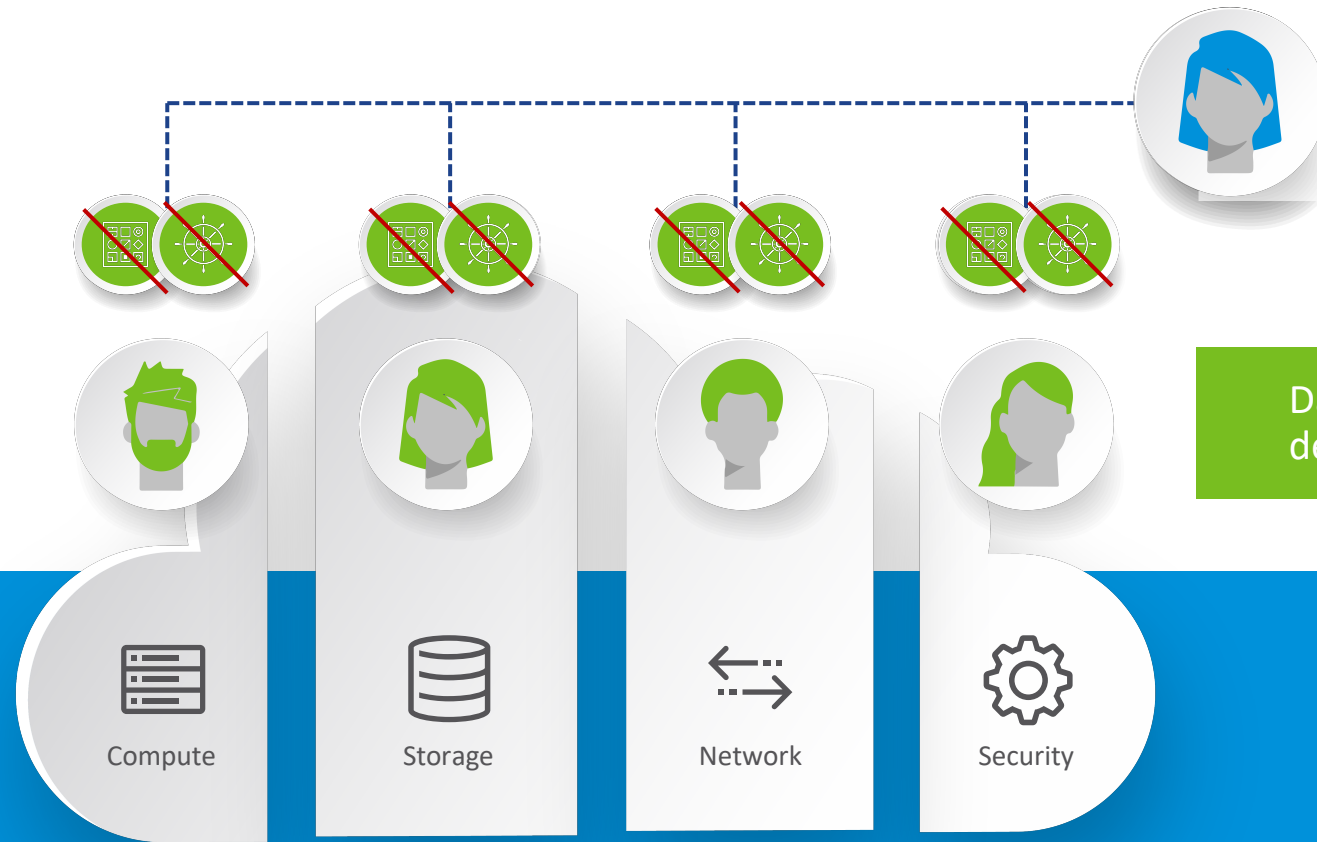
Common approach: stitching a fragmented infrastructure

Reinventing the wheel creates an operational nightmare



Complex to design | Expensive to manage | Hard to secure | And... doesn't deliver

Stitched infrastructure doesn't deliver



Modern apps and containers not fully supported,
rich services limited

Days or even weeks wait
design, and manual provisioning

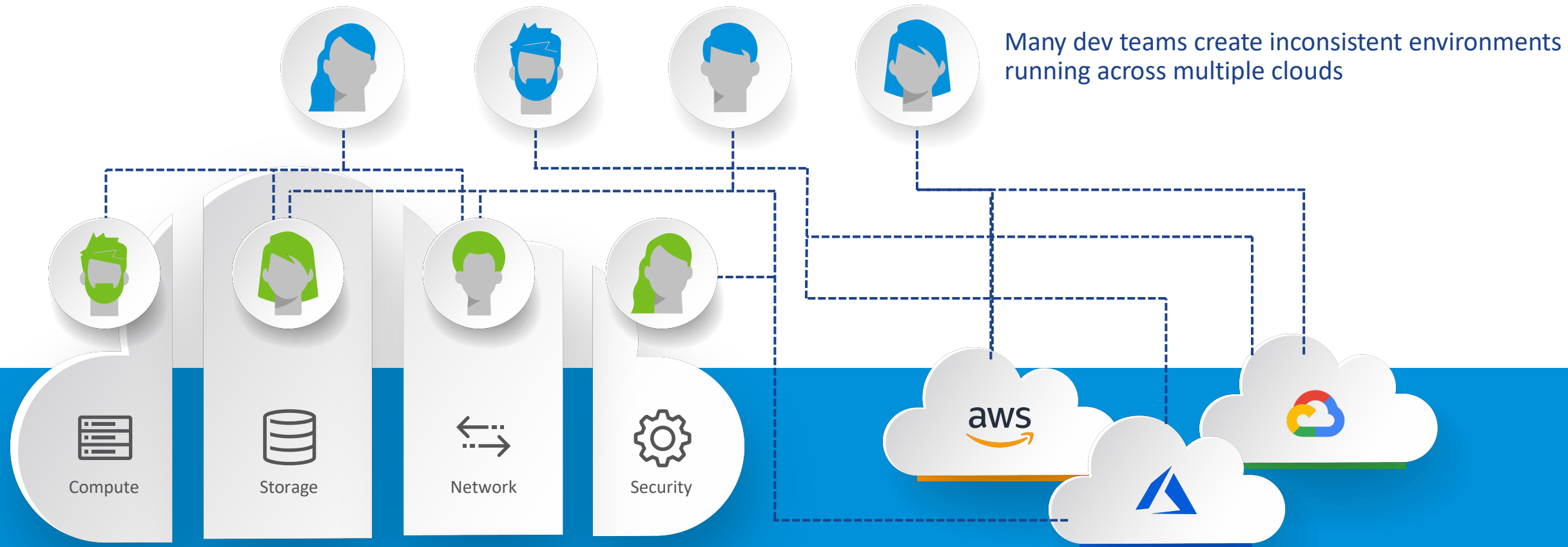
**95% of new apps use
containers**

Source: 451 Research, 2020



Siloed on-prem infrastructure

Stitched infrastructure doesn't deliver



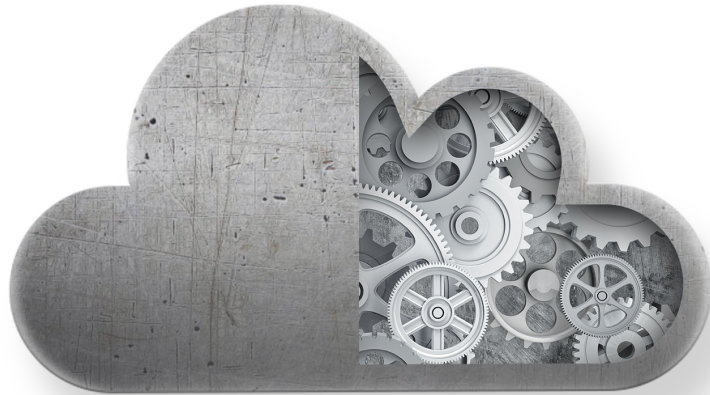
Multiple teams & skill sets | Multiple tools | Multiple processes

Reality for most organizations

Hybrid cloud not materializing

On-prem infrastructure lagging

Cloud strategy bottleneck



Multiple public clouds out of control

Fragmented security, outrageous bills, and workload duplications



Business outcomes not achieved



Inefficiencies slow down business



Difficult to adapt to changes



High TCO



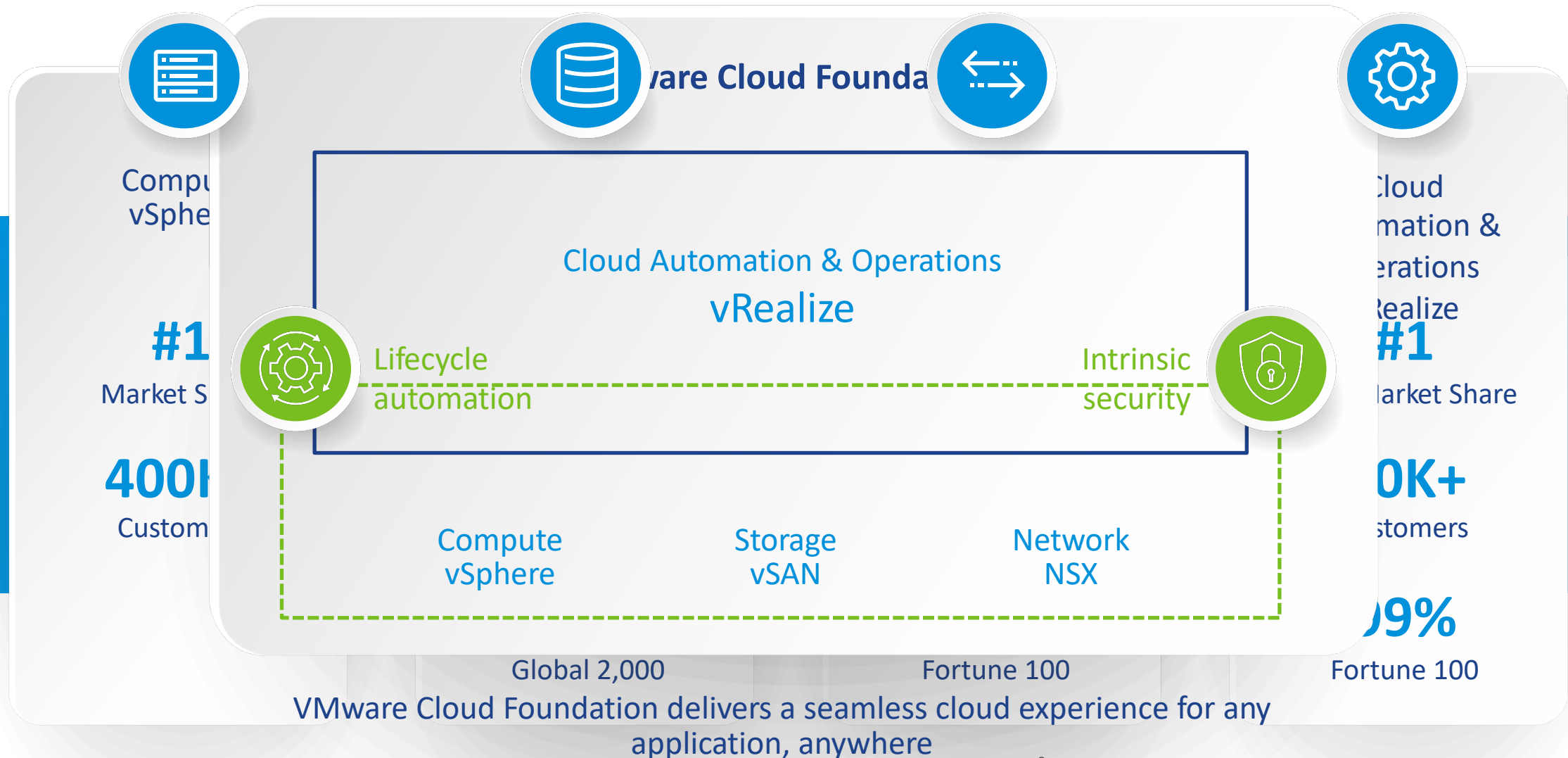
Security risks

The answer:

Unification & Standardization

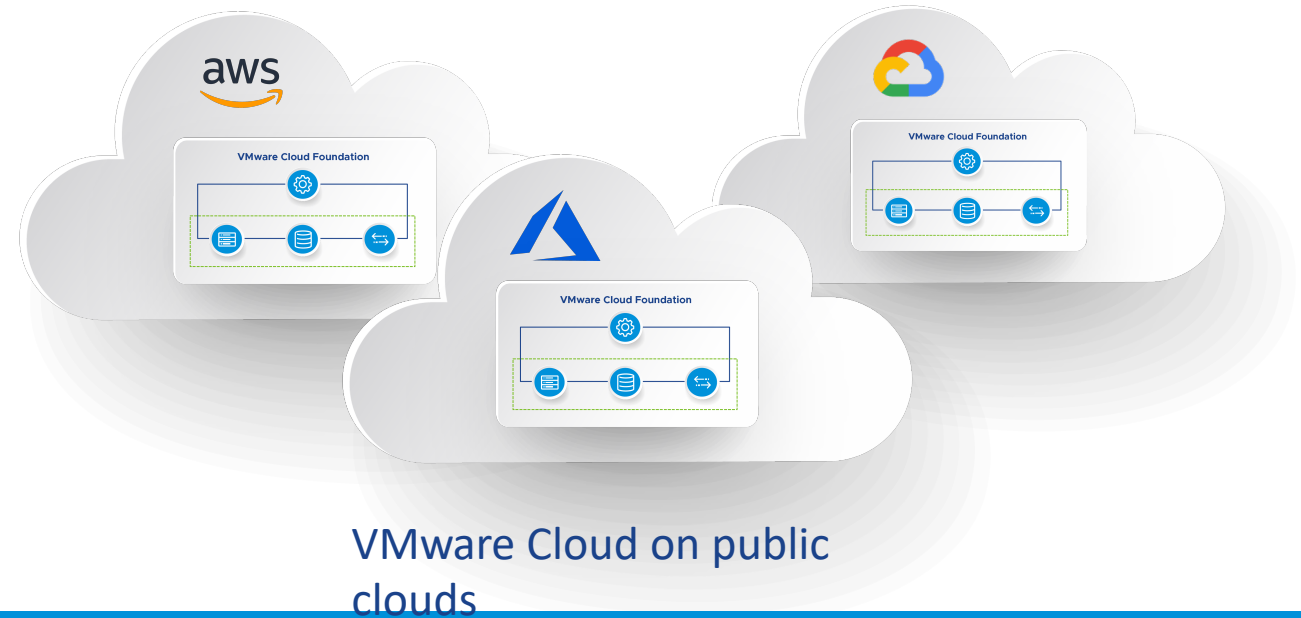
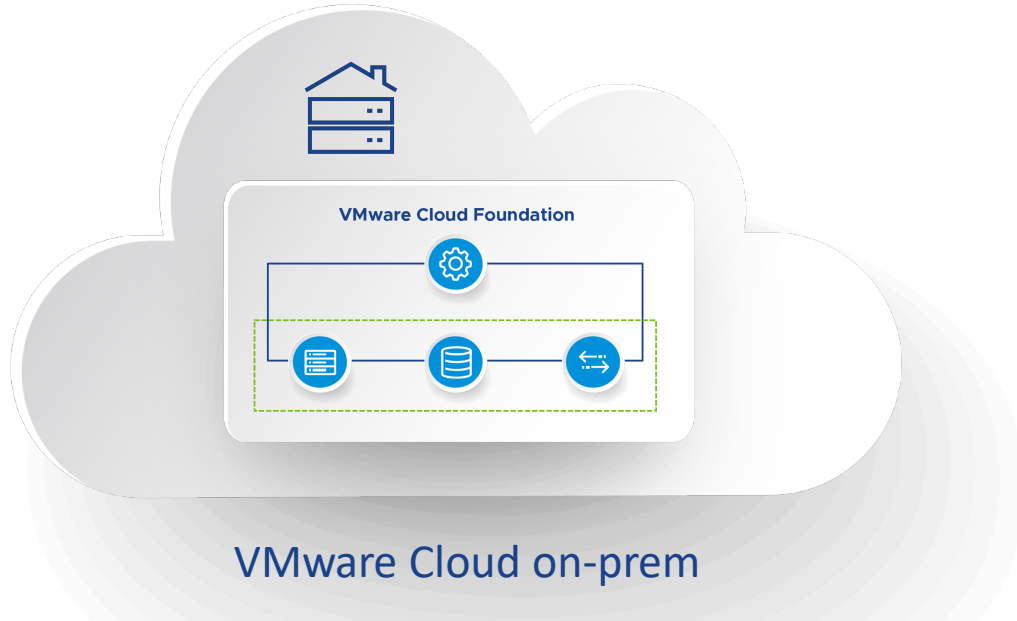


Market leading unified components



VCF: single platform, multiple clouds

Unique characteristics enable a standardized approach



Hardware agnostic
Same software runs on
all environments



Completely unified stack
Guaranteed interoperability **no
integration needed**



Tested and validated
VMware Validated
Designs (VVD)



**Unified tools
and interfaces**
Consistent experience across
environments

Standardization drives choice

Broadest set of deployment options - over 500 alternatives



Private cloud



DELL EMC

FUJITSU

HITACHI



NEC



TOSHIBA

Atos

acer

inspur

Lenovo



ERICSSON

Hewlett Packard
Enterprise

VXRAIL



Public clouds

FUJITSU



Microsoft
Azure

Google Cloud



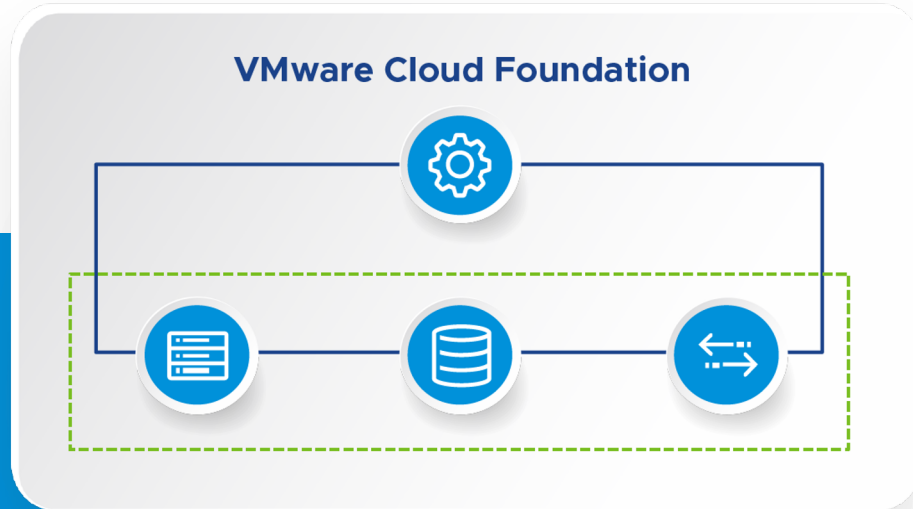
OVH



CenturyLink™

rackspace

The only complete and proven platform



Battle tested in multiple
operational scenarios

\$1B+
Projected sales in
2020

62%
Y/Y growth

500+ Customers



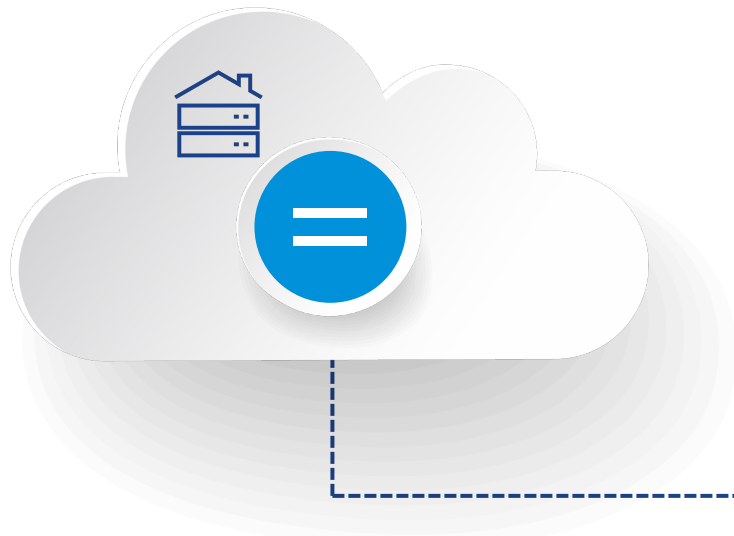
Cloud. Delivered.

VMware Cloud Foundation:
standardization in action

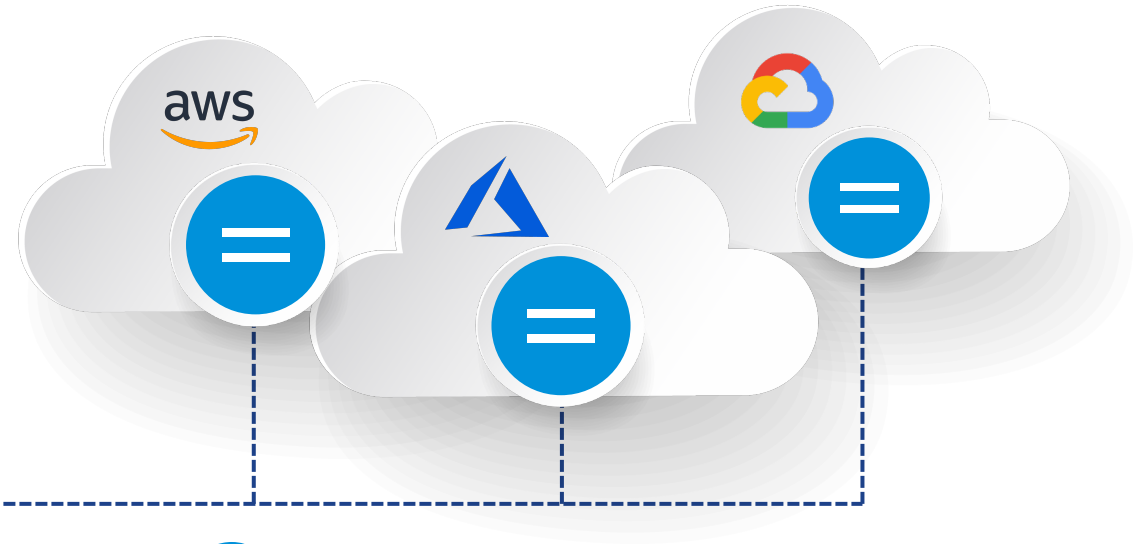


Unified standardized platform: the only way to true hybrid

Two places to standardize



1 On-prem is on par with public clouds to eliminate weakest link



2 Same platform across on-prem and public clouds

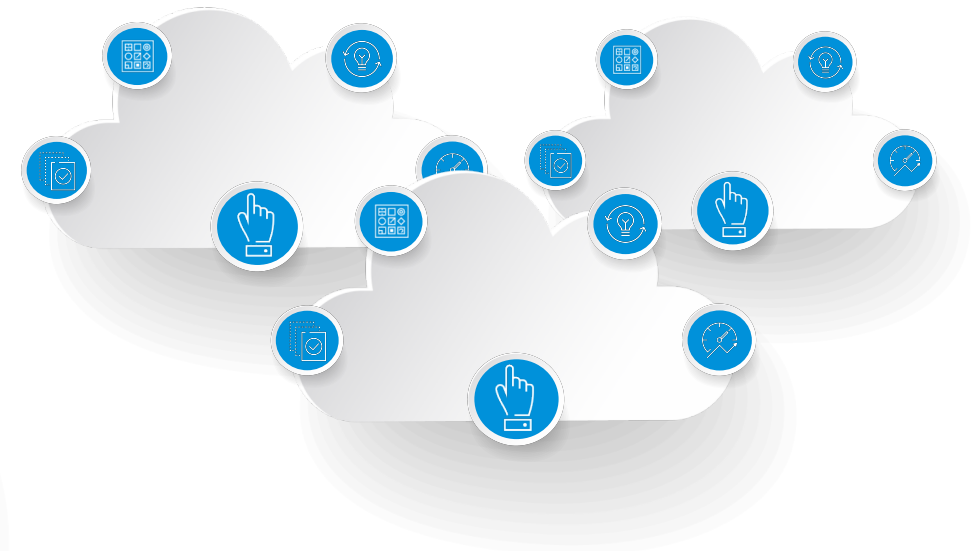
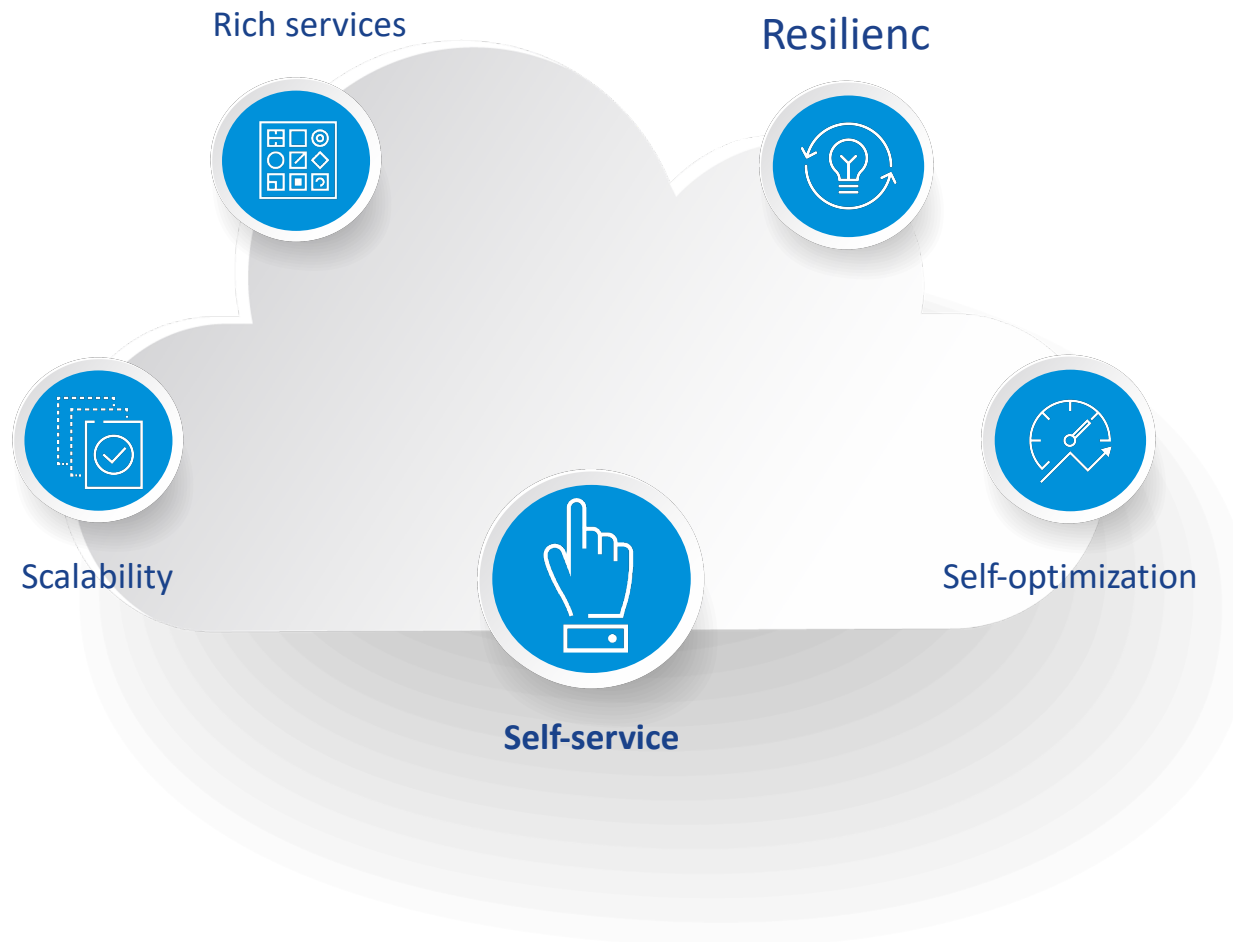
Same people | Same tools | Same process



78% have fragmented cloud management and agreed that greater consistency would provide increased efficiency and simplified operations.
Source: Enterprise Strategy Group, 2020, surveyed 1257 IT managers

On-prem on par: self-service and advanced capabilities

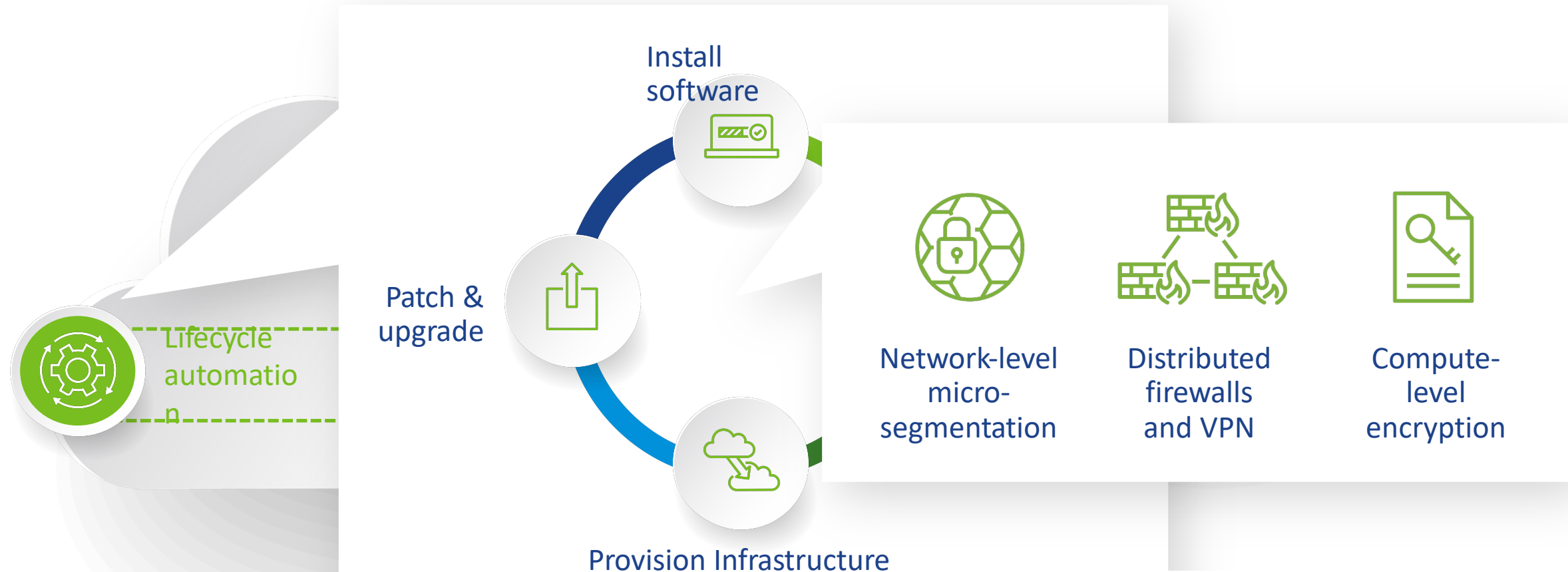
VCF is doing for the private cloud what AWS and Azure did for the public cloud



***“Reduced service provisioning from
months to 15 minutes”***
British multinational investment bank

On-prem on par: lifecycle automation and security

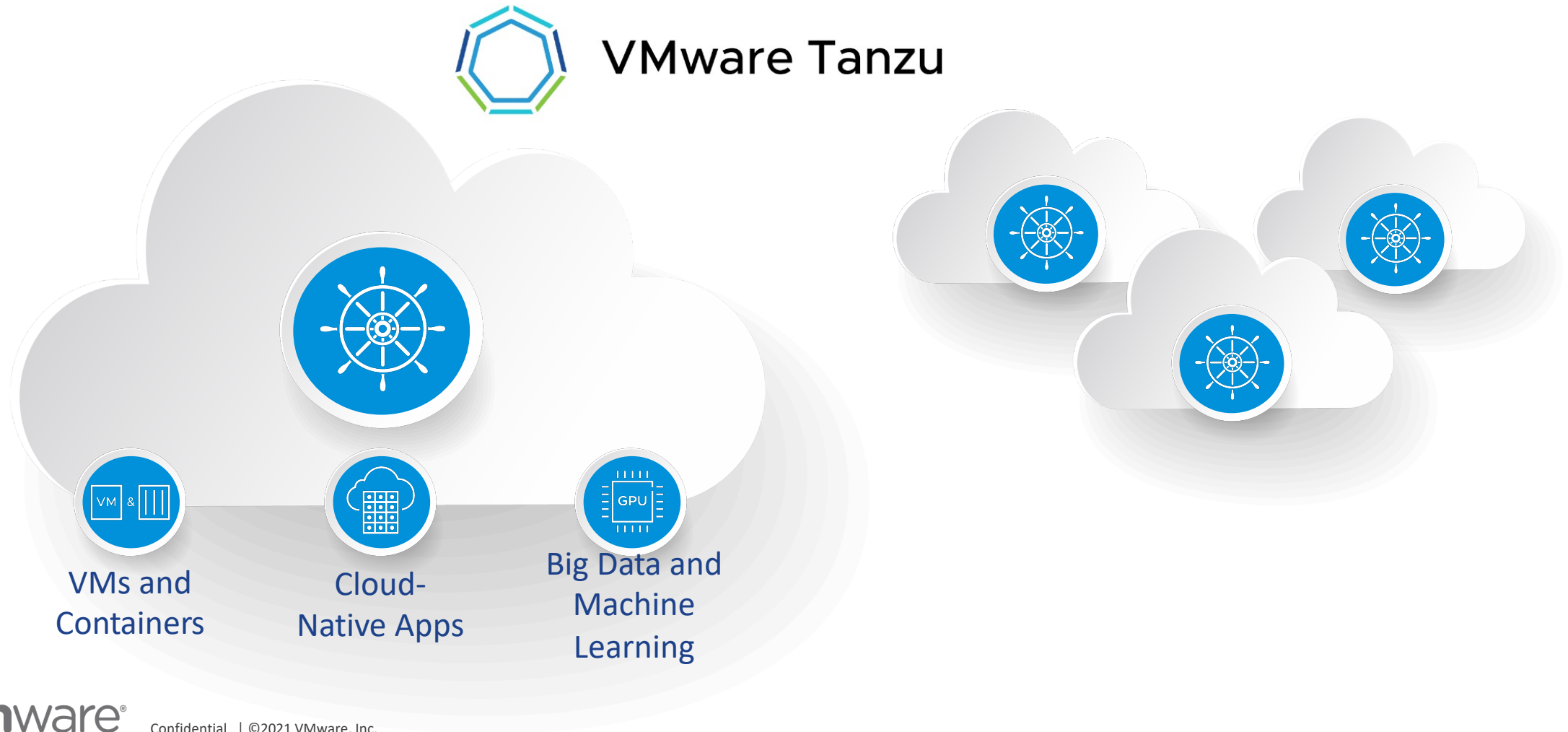
Essential Day 2 capabilities built into the unified stack



*Organizations with fragmented cloud environments have experienced **3.6x more cloud-related security and availability incidents in the past 12 months***
Source: Enterprise Strategy Group, 2020, surveyed 1257 IT managers

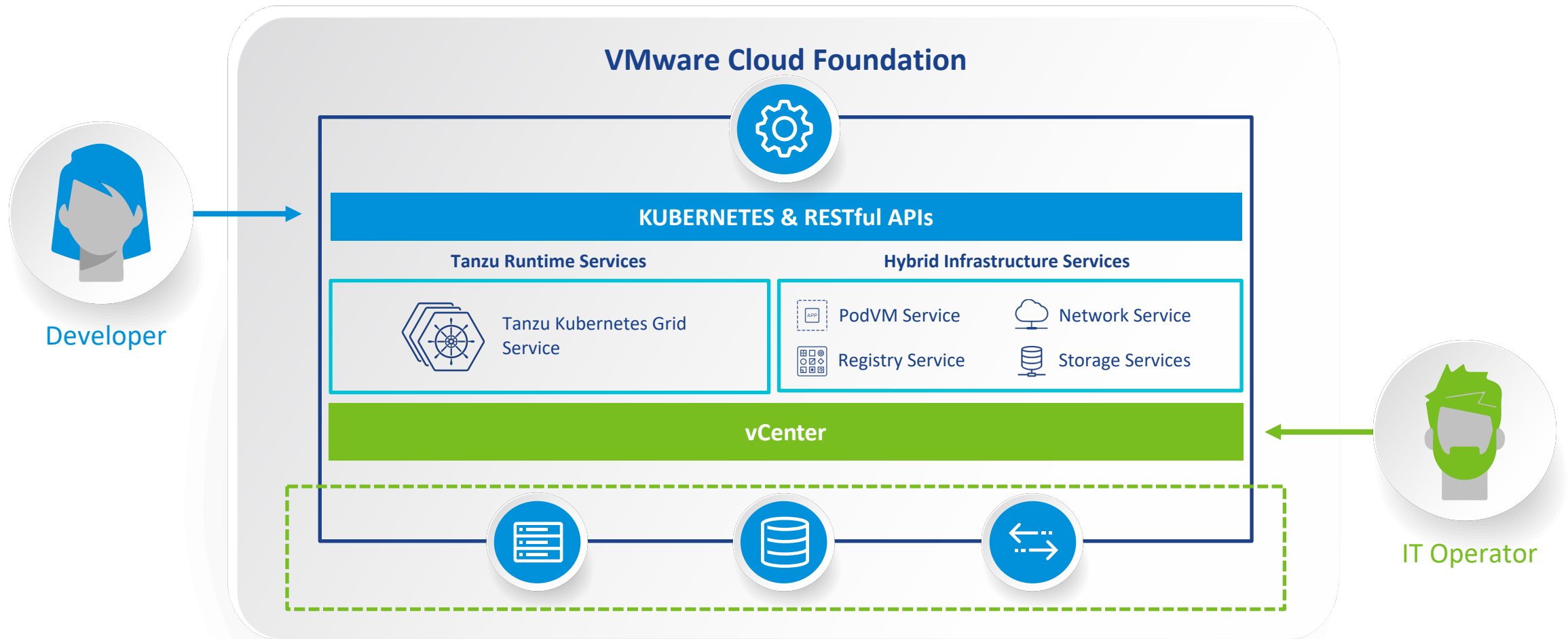
Infrastructure as modern as apps

Container-based applications supported natively to enable modern apps on all clouds



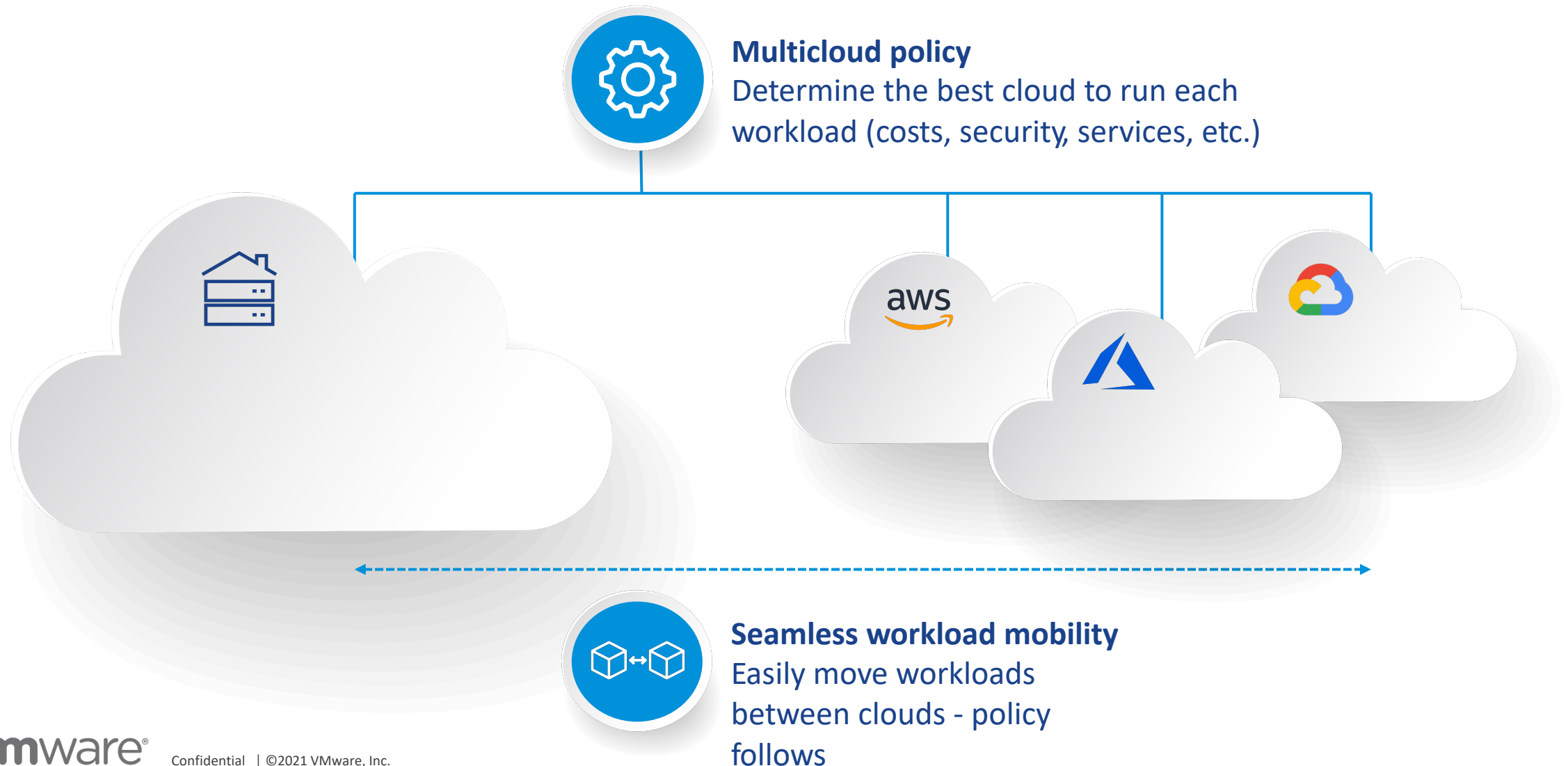
VCF drives developer and IT collaboration

Tanzu and hybrid infrastructure



Hybrid cloud for real: multicloud policy, workload mobility

Infrastructure delivered at the right size and service level for the task



The reality of organizations with VCF

IT regains control, business gains agility and lowered costs



Developers define requirements and run workloads instantly using self-service portals and APIs



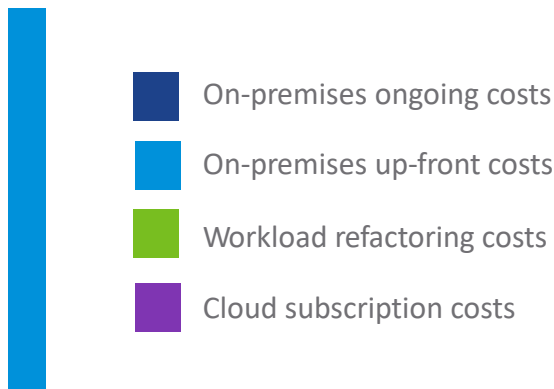
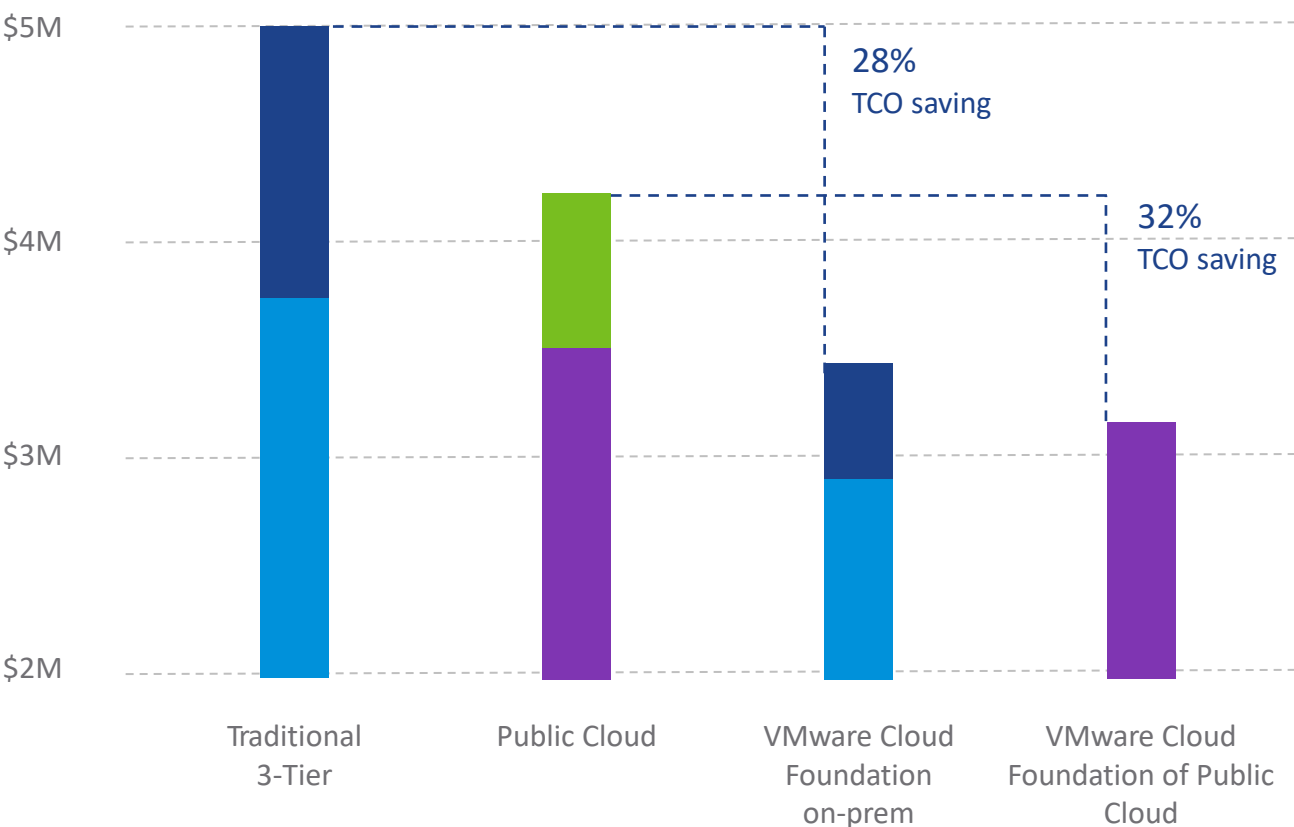
IT policy determines best cloud for every workload (transparent to the developer)



"Cut down deployment time from 1-2 weeks to just minutes for a team of 35 IT engineers"
Largest fundamental science agency in Europe

Standardization drives cost reduction

Cloud 3-Year TCO comparison:



Leading US
vehicle
manufacturer

- **VM Consolidation:** \$7.5M in HW savings – 12 to 20 VMs/Host reduction
- **VCF OPEX Savings:** \$1.2M+ in automation and lifecycle management savings
- **Global Efficiency:** 35% in hardware cost savings

Standardization drives agility

The Today Cloud

With tested and validated designs, on-prem cloud is up and running in just days

Innovation without restraints

Remove barriers with common processes and skill sets from DC to cloud

(Any) future proof

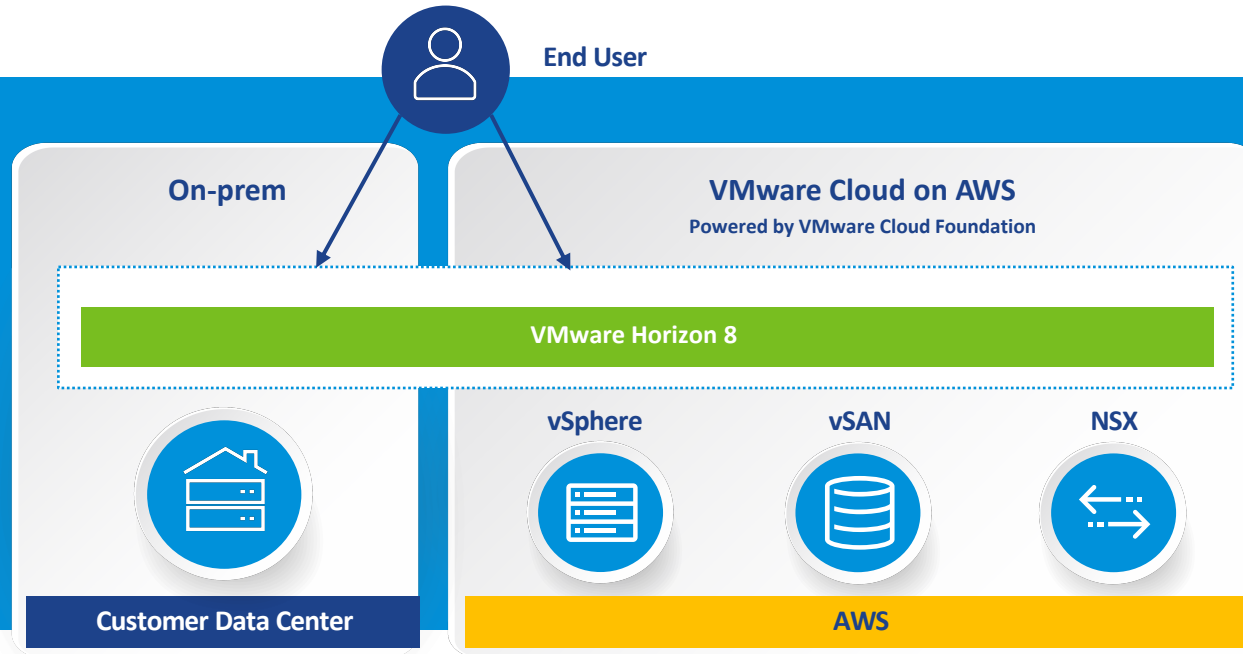
Common infrastructure means IT can react to the unexpected with fantastic agility



3.5 days to deploy the full SDDC stack, with infrastructure management, visibility, automated patching and micro-segmentation "
Materials handling and environmental solutions

Standardization drives adaptability

Adaptive and agile infrastructure is a must in the current market climate



Example: instant work from home with infrastructure for VDI

- Build on VCF's standardized infrastructure across all clouds
- Deploy and scale Horizon 8.0 instantly on-prem or on the public cloud



"Deployment was incredibly slick and fast. I can't think of anything else that works that simply."



B2B IT services provider

15,000 virtual desktops in 3 days with VCF:

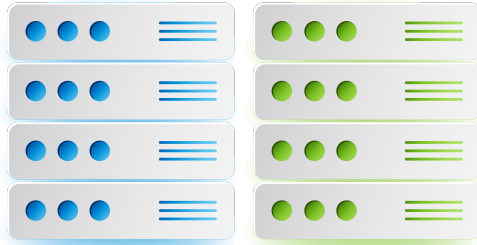
- Partner deployed VDI infrastructure for up to 15,000 desktops for a public sector customer in 3 days
- Simple scaling of additional capacity, no IT silos complexity
- Reduced footprint by 6:1 vs. converged infrastructure

First steps



Choose your path to destination

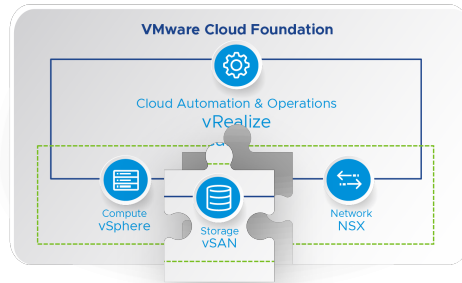
No forklift upgrade - value realized with every step



Path A:

Deploy VCF in parallel (Kick-Start promotion)

Experience the complete on-prem value for selected workloads



Path B:

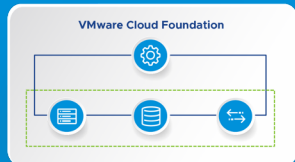
Component-by-component

Gradually add four core components.
Gain value as progress is made.



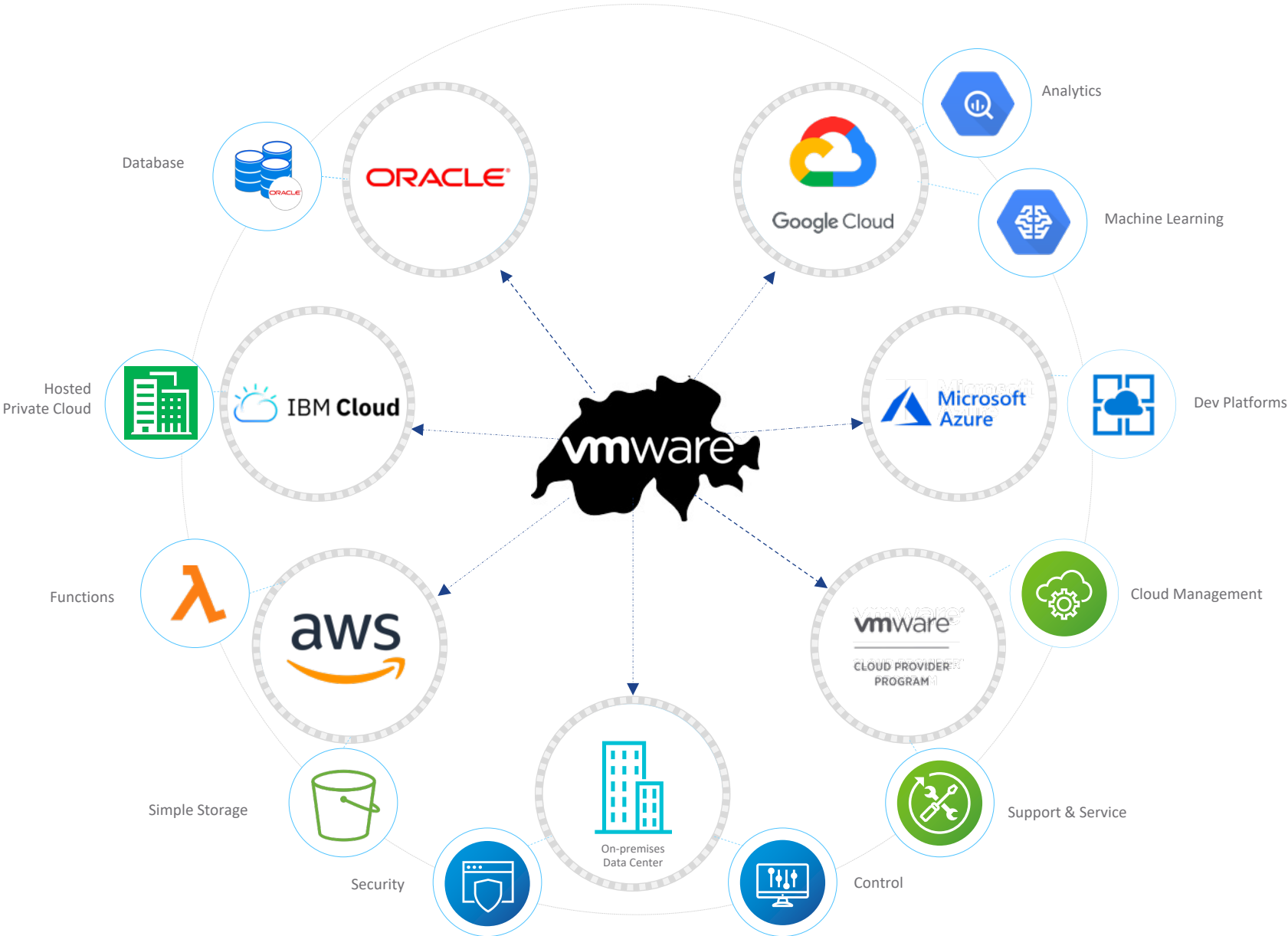
Complete hybrid cloud

Seamless cloud experience for any application, anywhere



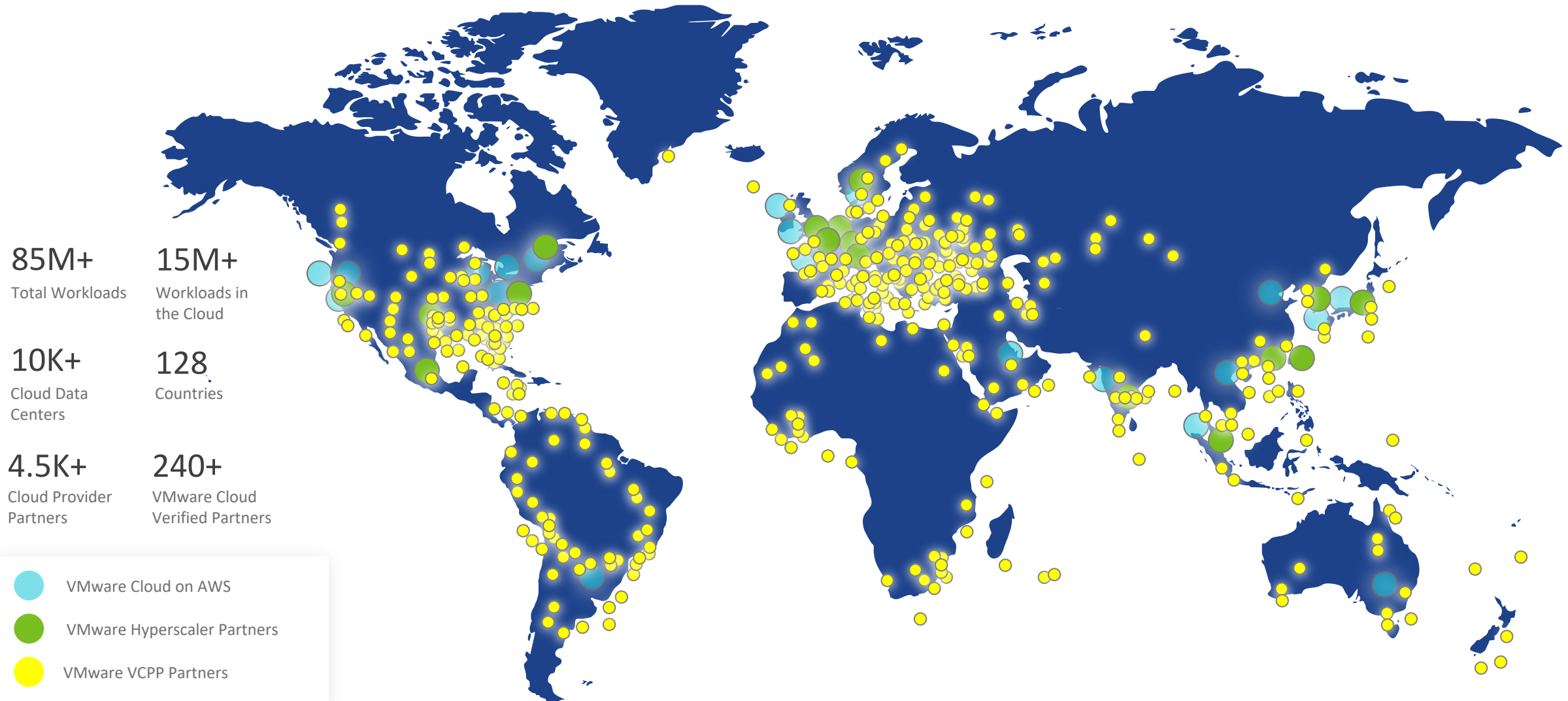
VCF on public clouds (VMC)

VMware Multi-Cloud Portfolio








VMware Cloud Global Availability

Expanding locations, certifications, capabilities, and partner ecosystem



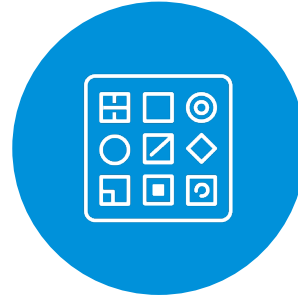
Delivering Customer Choice With Access to Unique Value

<div><div>vmware</div><div></div></div> <div>Azure VMware Solution</div> <div>17 regions</div> <div>Lower cost for Microsoft applications</div> <div>Simpler multi-environment operations</div> <div>Faster delivery of modern applications</div> <div>What's New with Azure VMware Solution: Migrate, Modernize Apps with Speed [MCL1741]</div>	<div><div>vmware</div><div></div></div> <div>Google Cloud VMware Engine</div> <div>12 regions</div> <div>Access Google's reach and platforms</div> <div>AI/ML, private networking, services</div> <div>Speed, ease of migration</div> <div>Turbocharge Your Cloud Transformation with Google Cloud VMware Engine [MCL30475]</div>	<div><div>vmware</div><div></div></div> <div>IBM Cloud for VMware Solutions</div> <div>35 regions</div> <div>Secure, automated architecture for regulated workloads</div> <div>Larger number of configuration options</div> <div>Wider regional availability</div> <div>Maintaining Real World Security and Compliance in the Cloud [SEC31935]</div>	<div><div>vmware</div><div></div></div> <div>Oracle Cloud VMware Solution</div> <div>30 regions</div> <div>Customer-managed and controlled</div> <div>Optimized for Oracle applications and databases</div> <div>Compliance options (FedRAMP High, DISA IL5)</div> <div>Oracle Cloud—The Ideal Platform for VMware and a Multicloud Journey [MCL30825]</div>	<div></div> <div>Alibaba Cloud VMware Solution</div> <div>9 regions</div> <div>VMware Cloud environment in greater China geo</div> <div>Operational expertise of China's largest cloud provider</div> <div>Access to rich ecosystem of native services</div> <div>Empower Business in Asia with Alibaba Cloud VMware Solution [MCL30305]</div>
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VMware Cloud Value



Fastest path to
the cloud of your choice for all
your applications



Accelerate app modernization with
best of breed platform services
across clouds



Consistent security and
governance across clouds with
consistent operations



Attractive TCO and strong economic
value in comparison
to other alternatives

5x higher developer
productivity¹

46% faster cloud
migration²

57% reduction in total
cost of ownership²

Thank You

