



Evaluator Group

# HCI in the Enterprise

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# HCI in the Enterprise



- December 2020 study
  - 3<sup>rd</sup> Study , dating to 2017
  - North American based
  - Enterprise focused – over 1000 employees
  - Over 300 respondents
  - Twenty-five 1:1 interviews
- Perspectives on next gen HCI

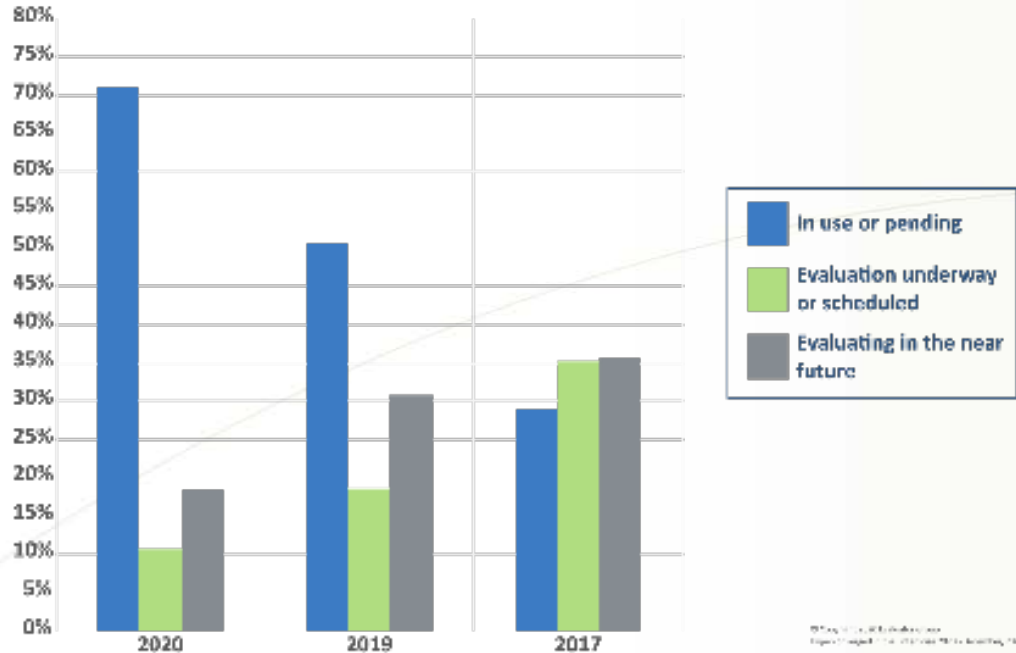
# Top Line Findings in 2020

- HCI is mature and accepted in the data center by the Enterprise
- Consolidation leads the drivers for purchase
- Maturity of HCI now shifts to focus on Management
- Resource efficiency is remains a concern
- Appliances still preferred mode of adoption

# Acceptance in the Enterprise

Which of the following best describes HCI initiatives in your company?

- Well passed the evaluation phase, on to acceptance
- 45% - there were no use cases “not well suited”
- <23% saw maturity as an issue vs 37% in 2017



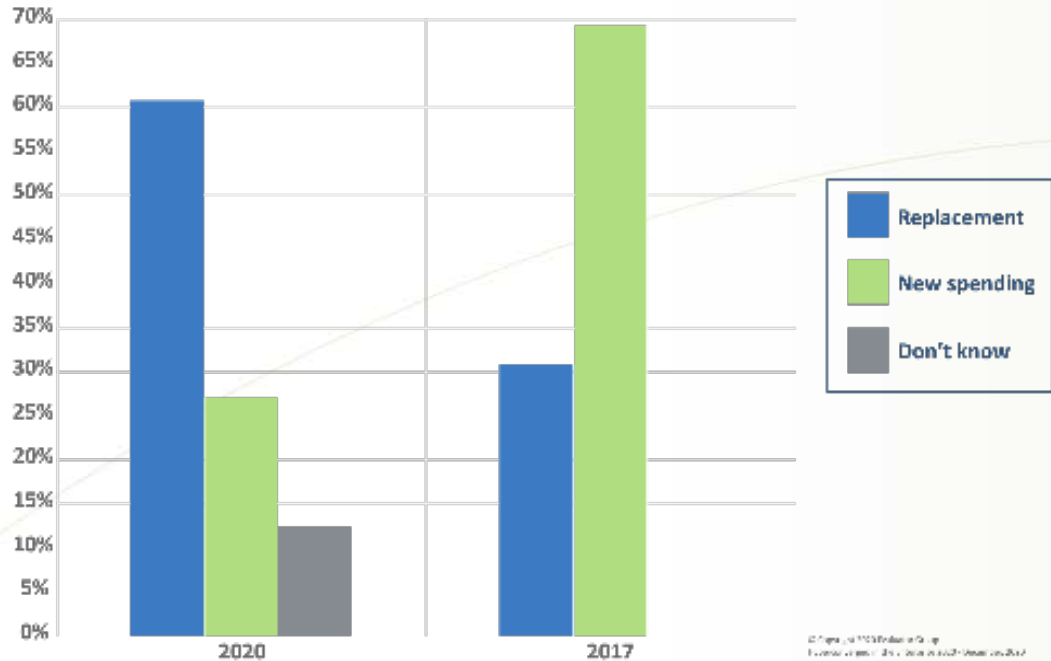
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# HCI is Replacing 3-Tier in Many Cases

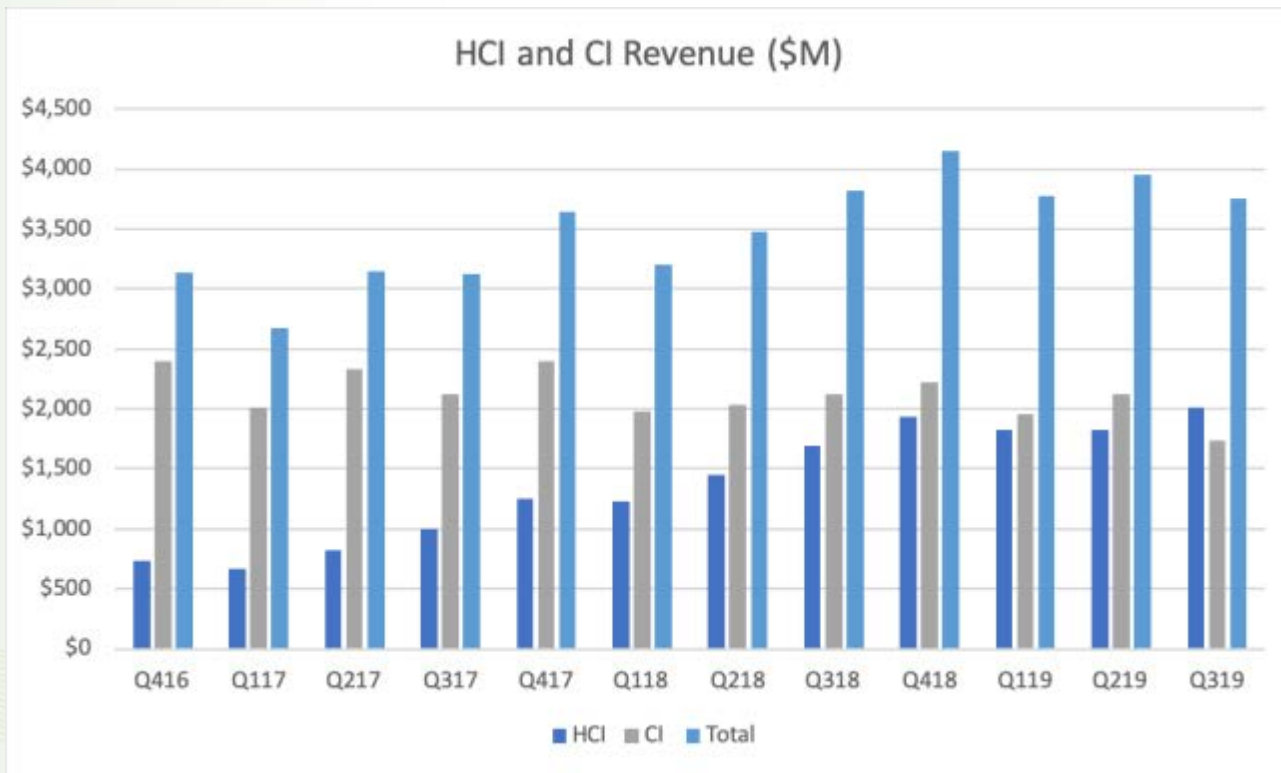
- Shift from “new spending & standalone” to “standard infrastructure”
- About 80% of Replacements were moving apps from – Server-SAN

Does this current or potential HCI purchase represent new spending or does it replace existing infrastructure?



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Evaluator Group, Inc. 2021 HCI Market Report

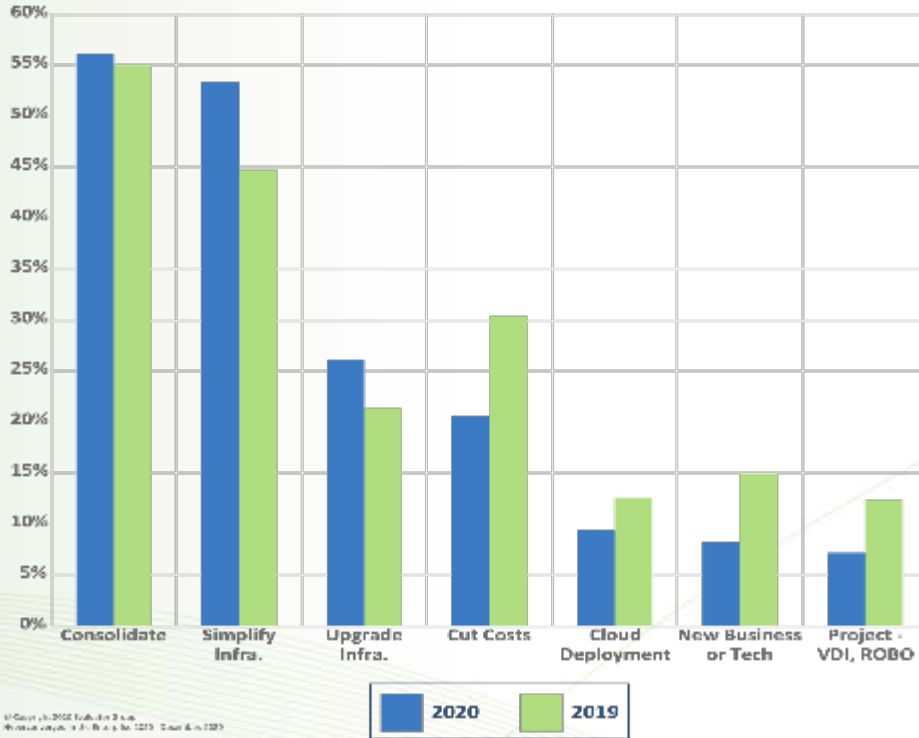
# HCI Drives the Growth of Integrated Systems



- 2020 Growth was .3% for the sector
- \$3.9B market
- IDC Source Data

# Consolidation & Simplify

What were / are the PRIMARY drivers for your HCI purchase or evaluation?

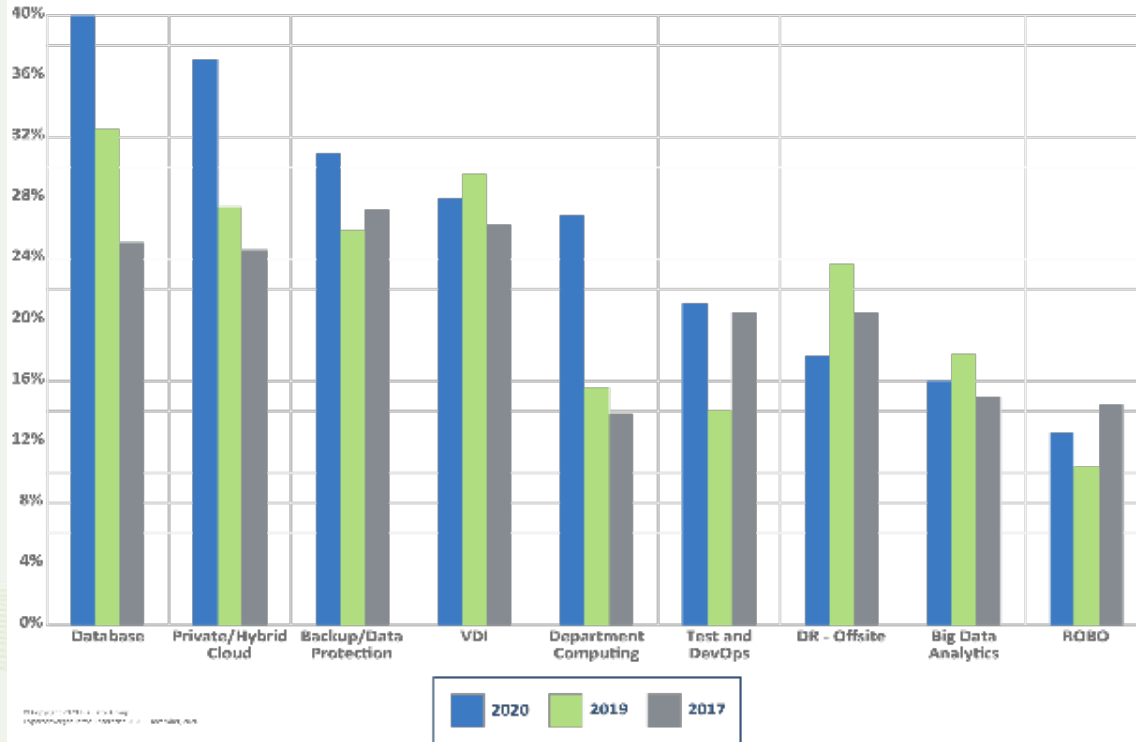


- *"It's a consolidation platform. Not everything, but we move a lot of [workloads] to HCI from the traditional, 3-tier architecture."*
- *" [HCI] allows you to do things a lot quicker than with servers and SAN. ....It made things a lot easier."*

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# Primary Workloads for HCI

Which workloads / use cases do you run or expect to run on HCI?

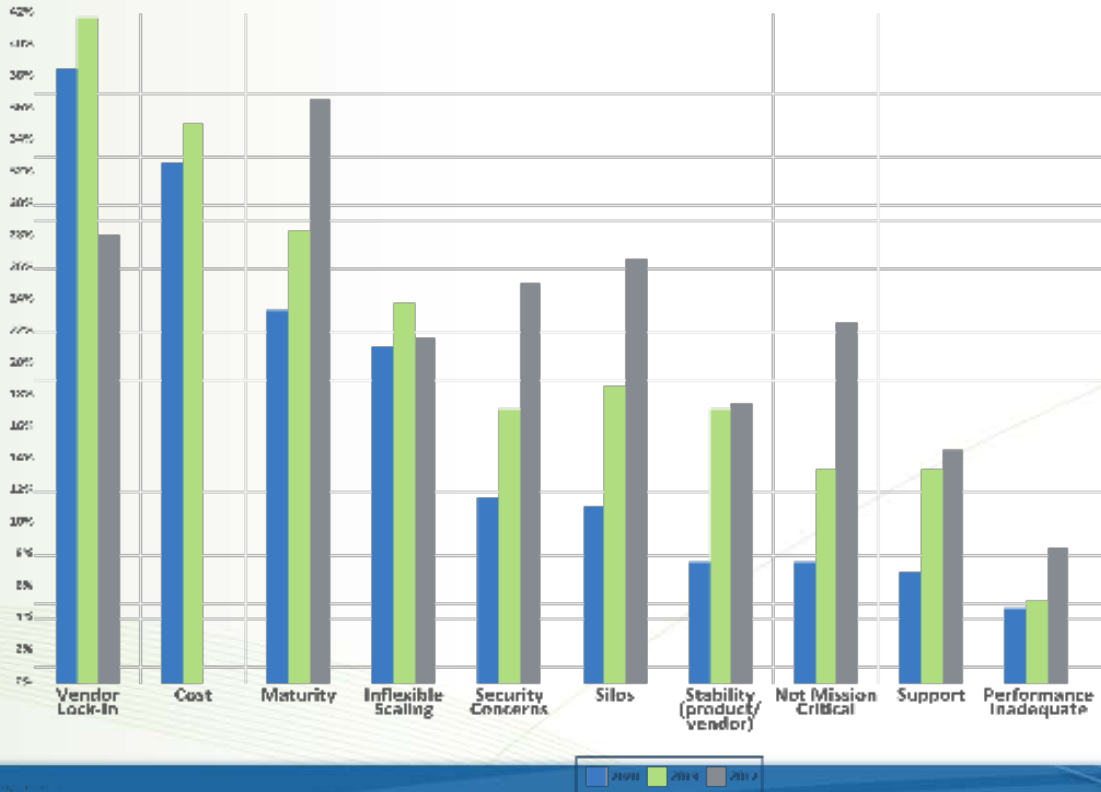


- VDI drove early success
- VDI still dominates deployment
- Databases 'part of' Consolidation Use cases – indicative of Server-SAN change
- Multi - Hybrid Cloud next battleground



# Drawbacks: Vendor Lock In

What do you consider the biggest drawbacks to an HCI solution?



➤ Underlying issue is stranded resources

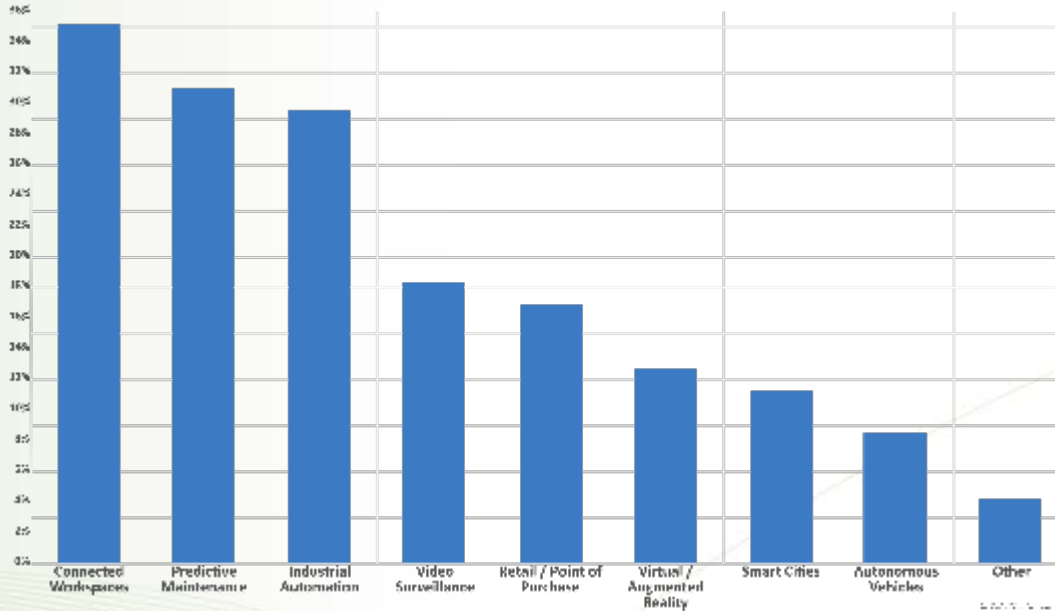
*"We ended up paying for a lot of [capacity] we didn't need, \$200 grand each time you need another node. When we deployed separate [components], I never had this issue"*

# Disaggregated HCI?

- Less interest or Less market presence?
  - HPE dHCI, NetApp HCI and AzureStack HCI
- Abandoned storage and repeat of the SAN?
- Performance scaling variations
  - *"We do see some performance impact from processing IO, [not] enough CPU and enough memory. The controller VM residing on each node, which is responsible for processing IO between disks and virtual machines, is not capable to push or pull the data in that high rate."*

# Edge Computing

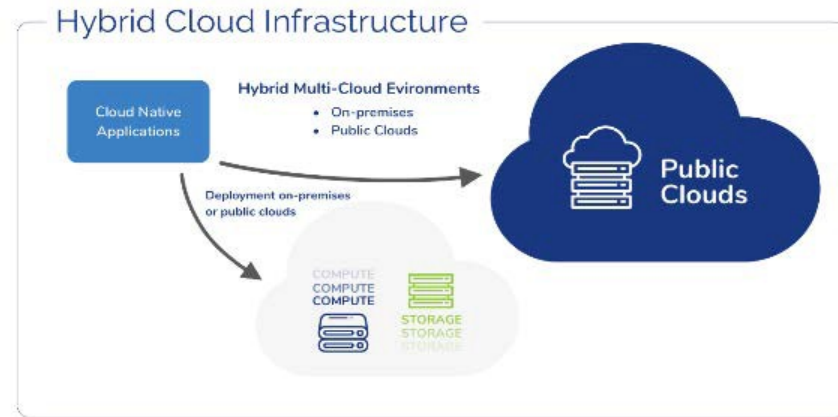
Which of the following edge computing applications are you using / planning to use HCI for?



- Expect 40%+ to have an edge use case
- Logical, self contained option
- Will compete with 'custom' designed
- Ruggedized is common offer

# Next Battleground: VMs, Containers, Cloud

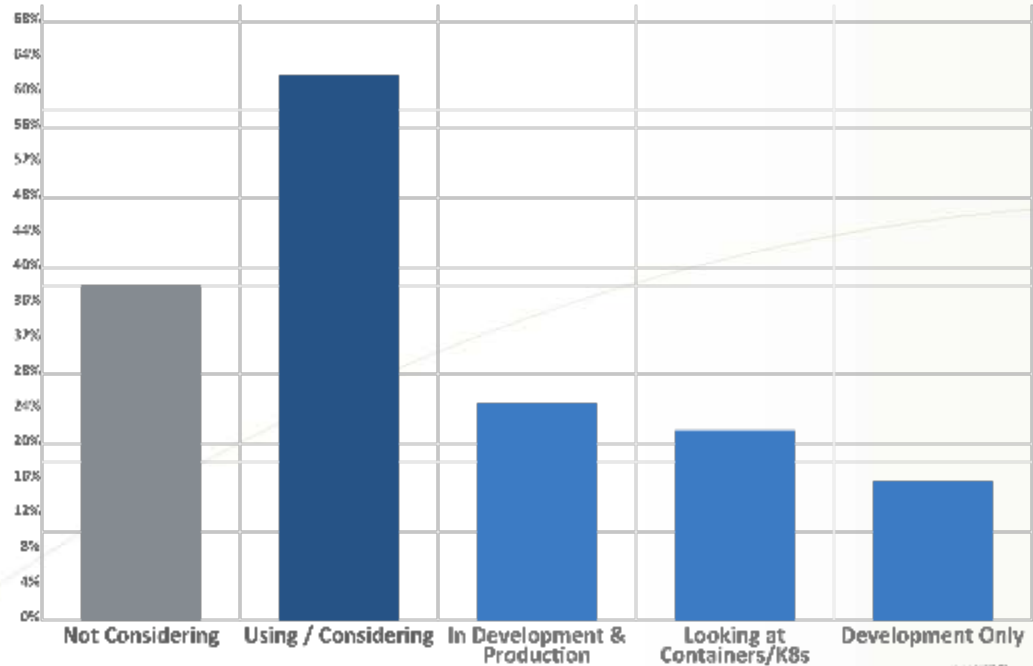
- Container support is critical decision point
  - So far, most IT operations have separate container environment
- Desire is one infrastructure for hybrid cloud – supporting both containers and VMs
  - Leverage infrastructure
  - Reduce diversity – commonality
- HCI's are based on VMs



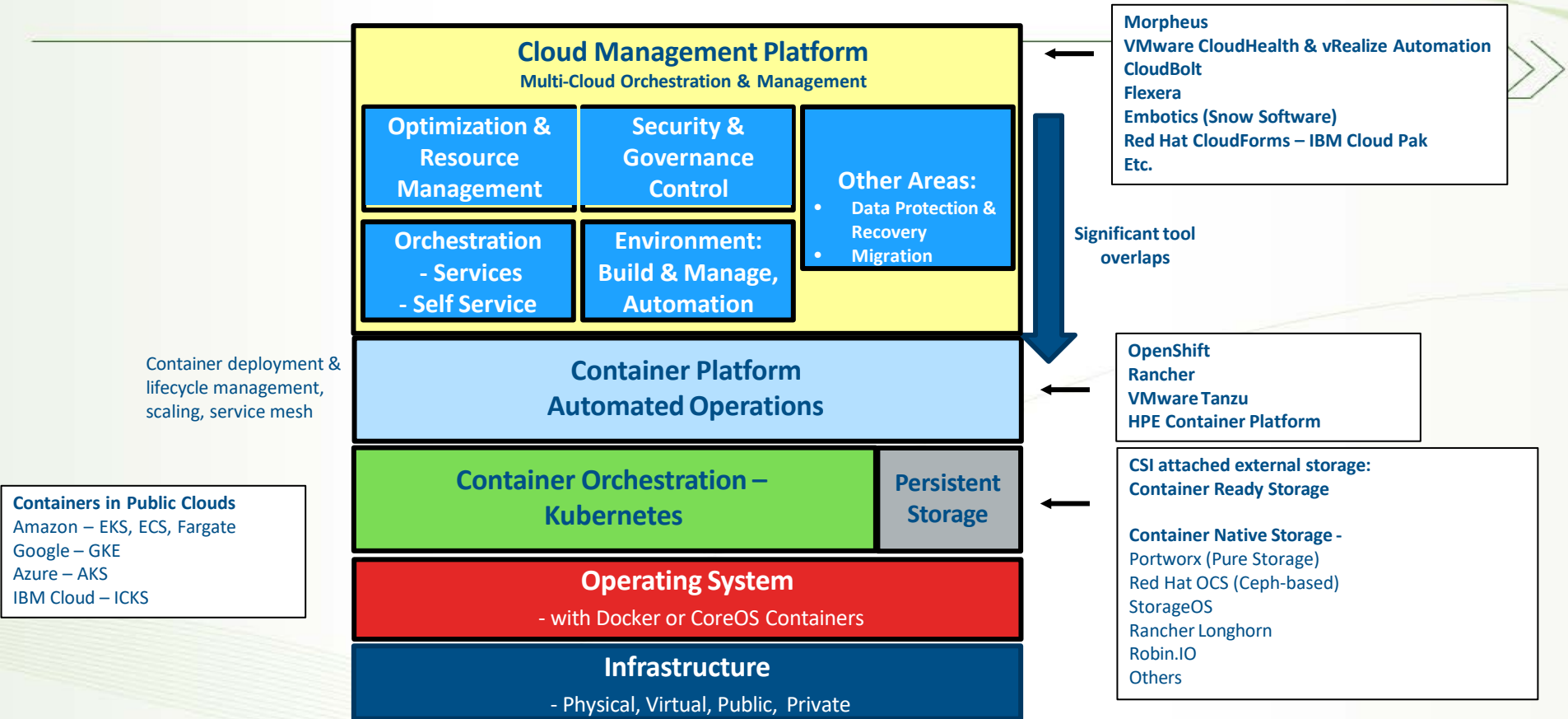
# Enterprise and Containers

How are containers / Kubernetes used in your company?

*“How do we manage that (containers)? We’ll need the whole gamut from provisioning to monitoring”*

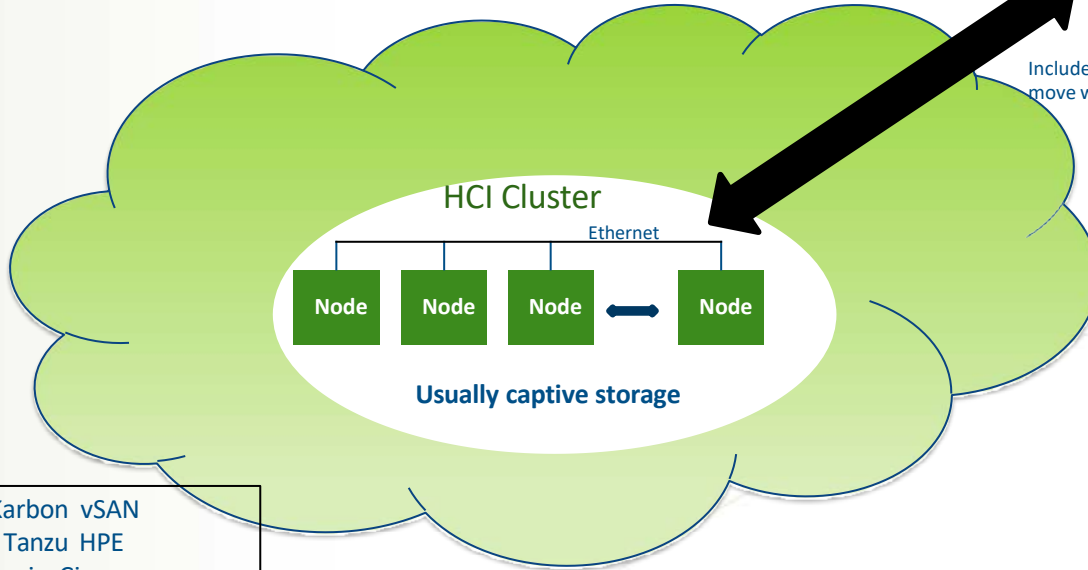


# General View - Container Environments



# HCI as Building Block

## Hybrid Cloud Infrastructure



Included software to  
move workloads/data

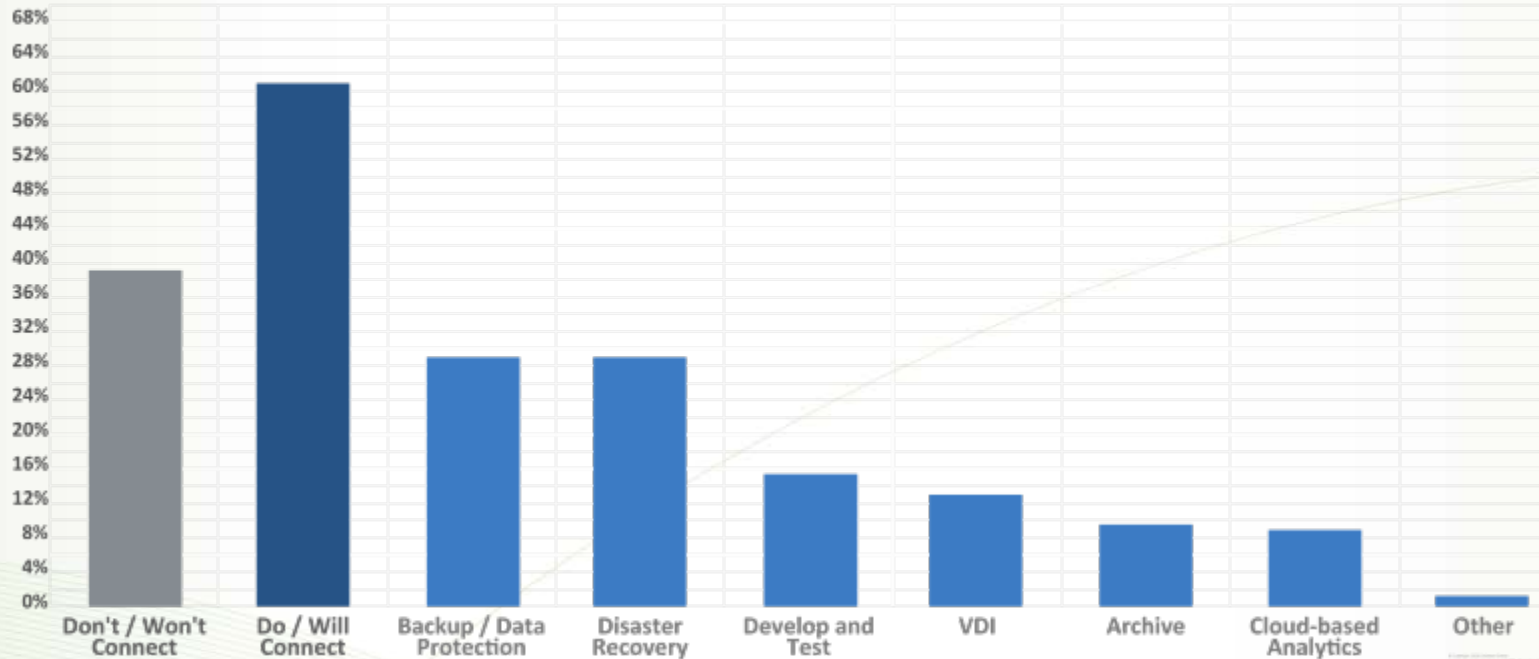
### Issues:

- Scale – practical cluster size
- Networking – cost of connectivity, bandwidth required
- Difficulty to change vendors, solutions
- Limited compute to storage ratio – inflexible scaling (Disaggregated storage in some cases)
- Primarily VM focused - HCI solutions either do not handle containers or support is very recent

Nutanix with Karbon vSAN  
solutions with Tanzu HPE  
Simplivity/Nutanix Cisco  
HyperFlex  
NetApp HCI  
Dell PowerFlex with OpenShift, etc.  
others

# Connecting to the Cloud

Which of the following applications or use cases does / will your company run with HCI connected to the public cloud?





# The HCI and CI Players

## > Leaders:

- > VMware vSAN & Dell EMC VxRail & Ready Nodes
- > Nutanix (w/ Dell, HPE, Lenovo)

## > Followers

- > Cisco HyperFlex
- > NetApp HCI
- > HPE dHCI, Simplivity
- > AzureStack HCI

## > Niche

- > Scale Computing – SMB
- > Pivot3 – Video Surveillance
- > Stormagic – ROBO
- > Starwind
- > DataCore

... And more

## > CI Players

- > Dell PowerOne
- > NetApp FlexPod
- > IBM VersaStack
- > Hitachi Adaptive Solutions
- > HPE ConvergedSystem

EvaluScale:

<https://www.evaluatorgroup.com/hciecm/>



# Reviews, Comparisons, Analysis

<https://www.evaluatorgroup.com/coverage/hci-integrated/>



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