

A nighttime cityscape with light trails from traffic and construction cranes. A large green diagonal overlay covers the top-left portion of the image.

vmware®

Global STAC Live 2021

Unbounding the “Memory-Bound”

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VMware Disclaimer

VMware 2021

This presentation may contain product features or functionality that are currently under development.

This overview of new technology represents no commitment from VMware to deliver these features in any generally available product.

Features are subject to change, and must not be included in contracts, purchase orders, or sales agreements of any kind.

Technical feasibility and market demand will affect final delivery.

Pricing and packaging for any new features/functionality/technology discussed or presented, have not been determined.

This information is confidential.

VMware Delivers the Digital Foundation

Build, Run, Manage, Connect and Protect Any App on Any Cloud on Any Device

Any Device



Any Application



Traditional

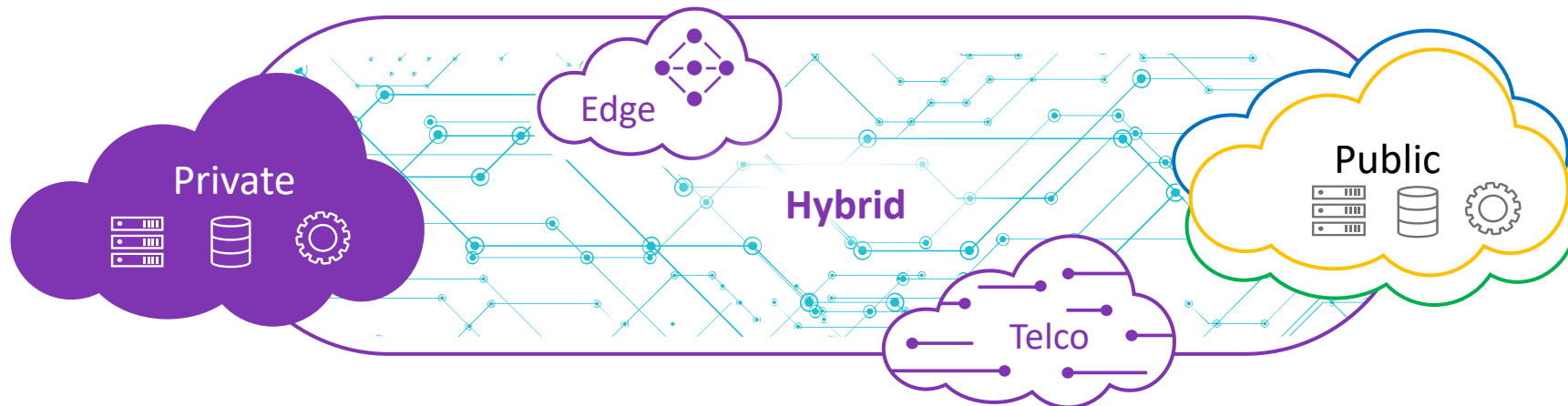


Cloud Native



SaaS

Any Cloud



Intrinsic Security

Intel and VMware: 15+ Years of Collaboration

VMware and Intel solutions combine co-engineered building blocks, reference designs, and tools to enable digital transformation



MODERNIZE YOUR CLOUD

- **Unify management** of compute, storage, and network resources with hyperconverged infrastructure
- Optimize **VM density and data performance** with Intel® architecture (IA)
- **Improve user experience** with faster data access and support for memory-intensive workloads with Intel® Optane™ storage & memory technology



INTEGRATE MULTI-CLOUD

- **Deploy software-defined data centers** to leverage hybrid clouds
- Leverage **agile building blocks** to optimize total cost of ownership (TCO)
- **Quickly deploy** best of breed designs, optimized for containers, to public clouds
- **Only multi-cloud platform** available on all major cloud providers



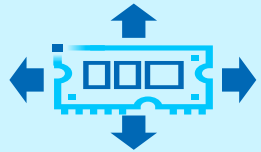
VIRTUALIZE CLOUD NETWORKS

- Protected, **any-to-any** connectivity
- Seamlessly **extend workloads** from on-prem to multi-cloud
- Experience cloud-like elastic **scalability**
- **Accelerate** packet processing and encryption performance with IA
- **Reduce CapEx and OpEx costs** by consolidating network functions on Intel-based servers

Secure Foundation For Your Cloud

HCI Customers Share ‘Memory-Bound’ Concerns

WORKLOADS DEMAND MORE MEMORY



Bigger



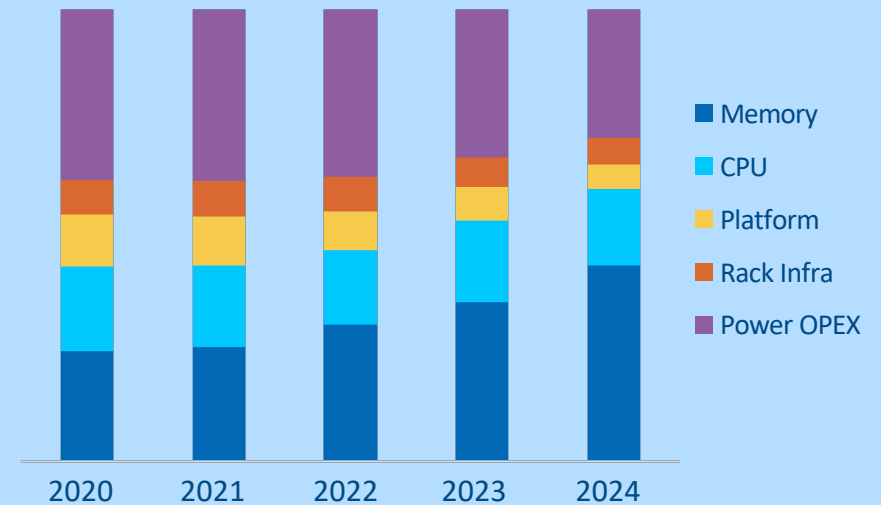
Faster



Mission-Critical

memory squeeze

MEMORY COSTS DOMINATE TCO¹

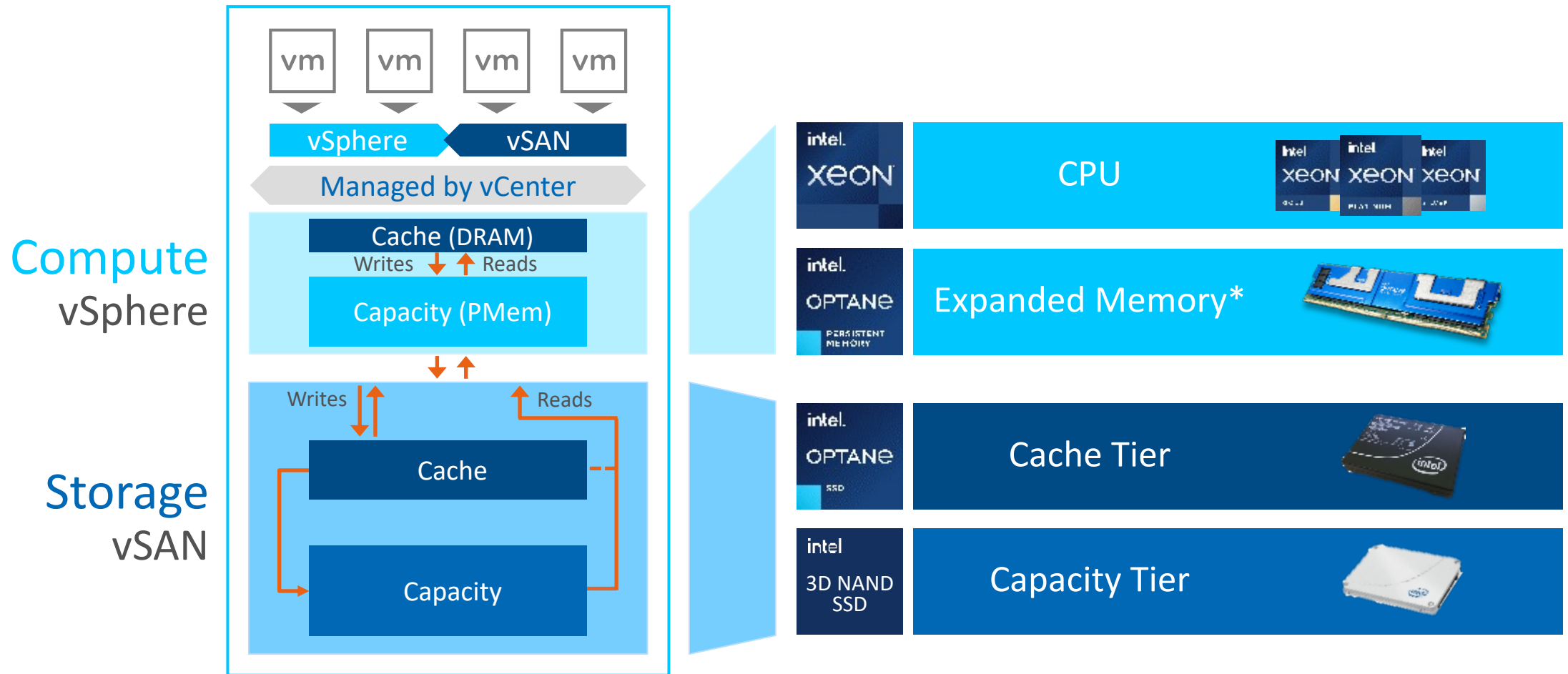


“PC DRAM prices to rise 13-18% in 2Q21, says TrendForce”

[DigiTimes](#), March 2021

1. Source: Internal Intel estimates – based on large scale deployments and does not include software costs. Your costs and results may vary.

Optane Technologies **Work Together** in VMware



Improve user experience with faster data access and support for memory-intensive WLS

* Supported by VMware in specific configurations; please contact VMware for more information

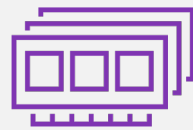
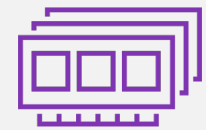
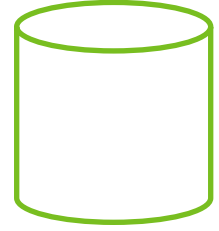
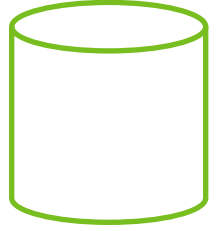
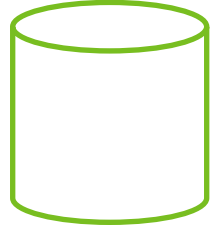
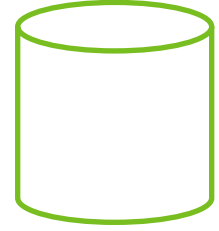
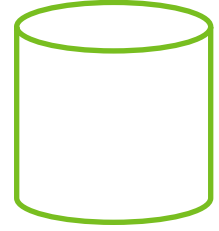
Unbound your resources with VMware vSphere DRS™



VMware vCenter® and VMware vSphere® Distributed Resource Scheduler™ (DRS)



PMem
Data Store



Intel Optane PMem

Intel Optane PMem

Intel Optane PMem

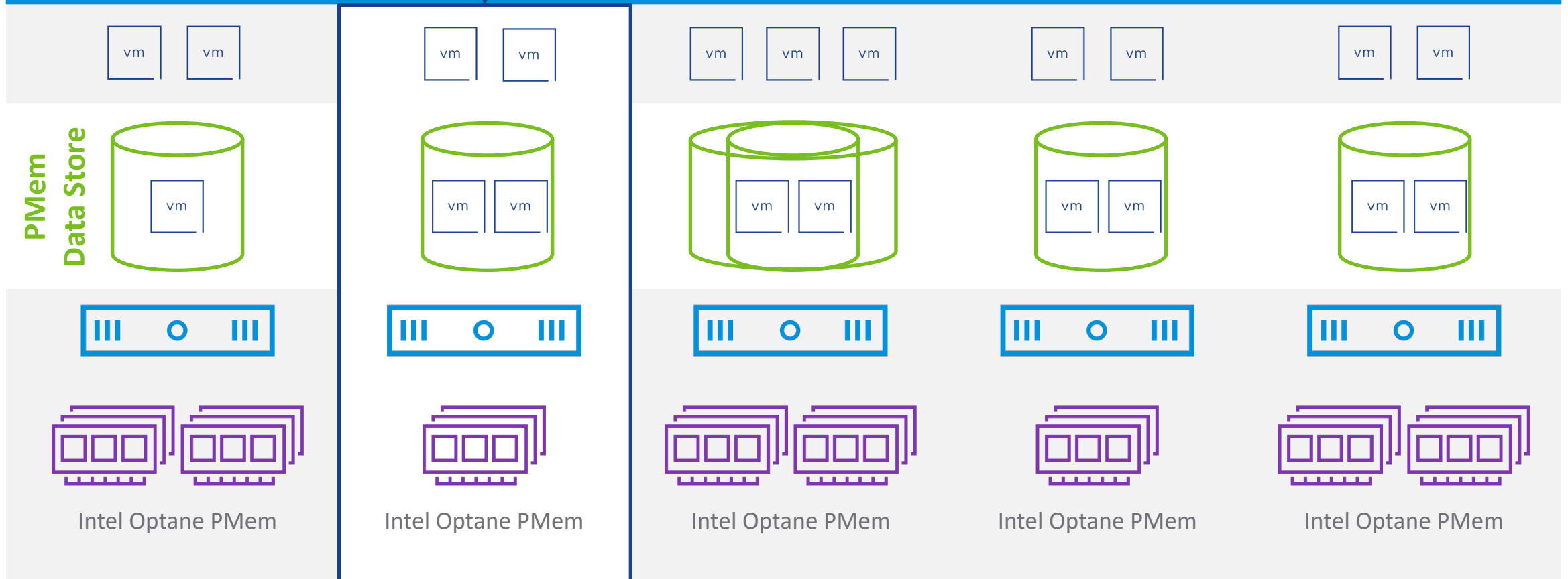
Intel Optane PMem

Intel Optane PMem

Agility and Mobility with VMware vSphere vMotion™

Enter maintenance mode (also vacate powered-off VMs)

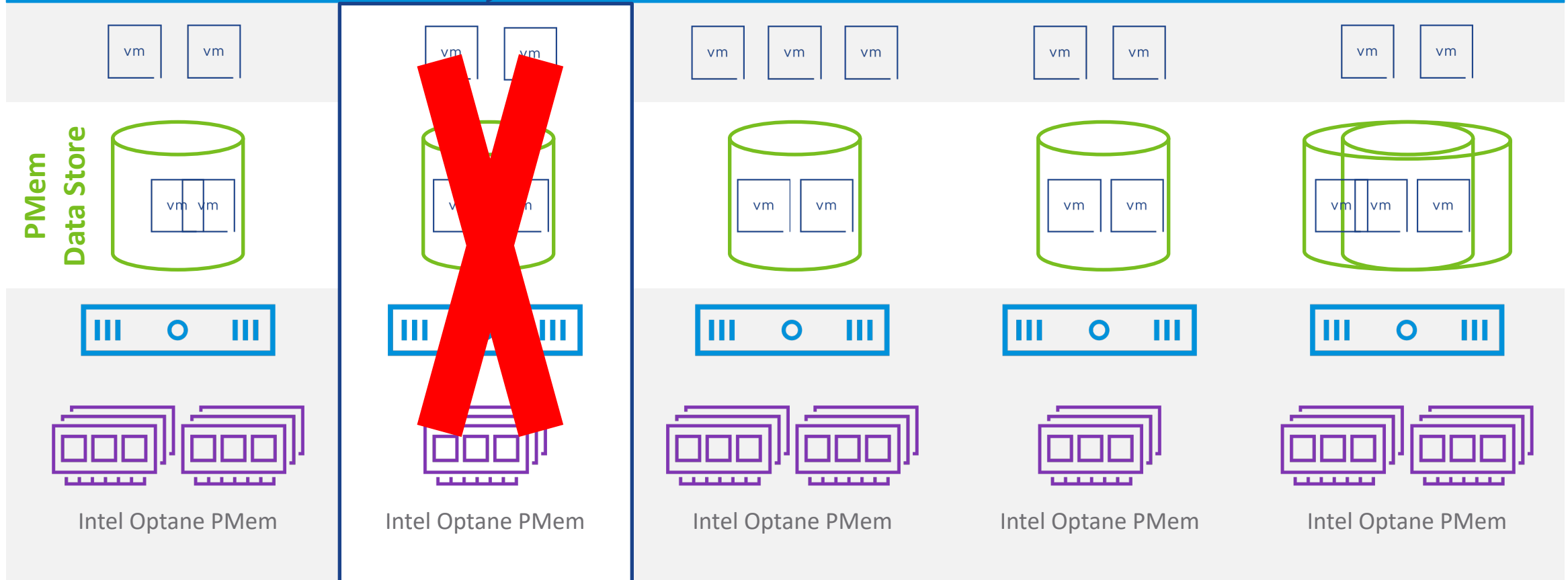
VMware vCenter® and VMware vSphere® Distributed Resource Scheduler™ (DRS)



Failure Recovery with VMware vSphere HA™

Host Failed → vSphere HA restart the VMs (fresh datastore created)

VMware vCenter® and VMware vSphere® Distributed Resource Scheduler™ (DRS)



VMware Solving Problems Today with Intel® Optane™

EXPAND MEMORY



25%

FASTER
start-up times¹

55%

FASTER
recovery times¹

SERVER CONSOLIDATION



3X

IMPROVEMENT
in VM capacity²

41%

REDUCTION
on infrastructure²

¹ Source – Telefonica. Intel does not control or audit third-party data. You should review this content, consult other sources, and confirm whether referenced data are accurate.

² Source – Intel. For more complete information about performance and benchmark results, visit <https://www.intel.com/content/www/us/en/customer-spotlight/stories/softbank-vm-customer-story.html>

Key Takeaways

1. **Larger datasets and real-time analytics** are driving the need for larger memory
2. **Memory is not cheap**—it's a large part of a bill of materials (BOM)
3. **Intel® Optane™ PMem and VMware vSphere®** are addressing various customer use cases
4. **Customers are getting real value now.** Customers and ISVs are encouraged to make use of the solution for their specific use cases!



Thank You