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The Future of Data Infrastructure

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Forward-Looking Statements

Safe Harbor | Disclaimers

This presentation contains forward-looking statements that involve risks and uncertainties, including, but not limited to, statements regarding our data center products and technologies, expectations regarding data usage and storage, our business strategy, growth opportunities, and demand and market trends. Forward-looking statements should not be read as a guarantee of future performance or results, and will not necessarily be accurate indications of the times at, or by, which such performance or results will be achieved, if at all. Forward-looking statements are subject to risks and uncertainties that could cause actual performance or results to differ materially from those expressed in or suggested by the forward-looking statements.

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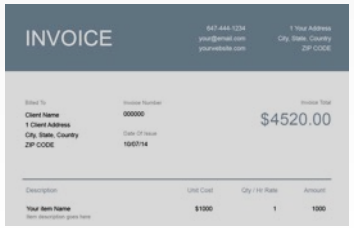
The Evolving Role of Data

Creating the data-driven economy

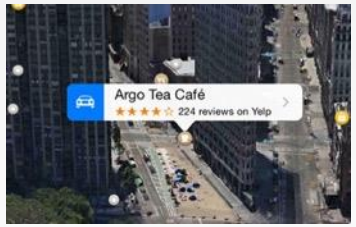
Richness

Data as a record



Data as communication

Data as efficiency



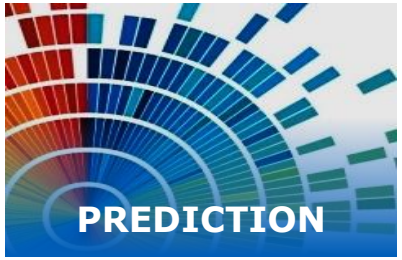
Data as currency

Value

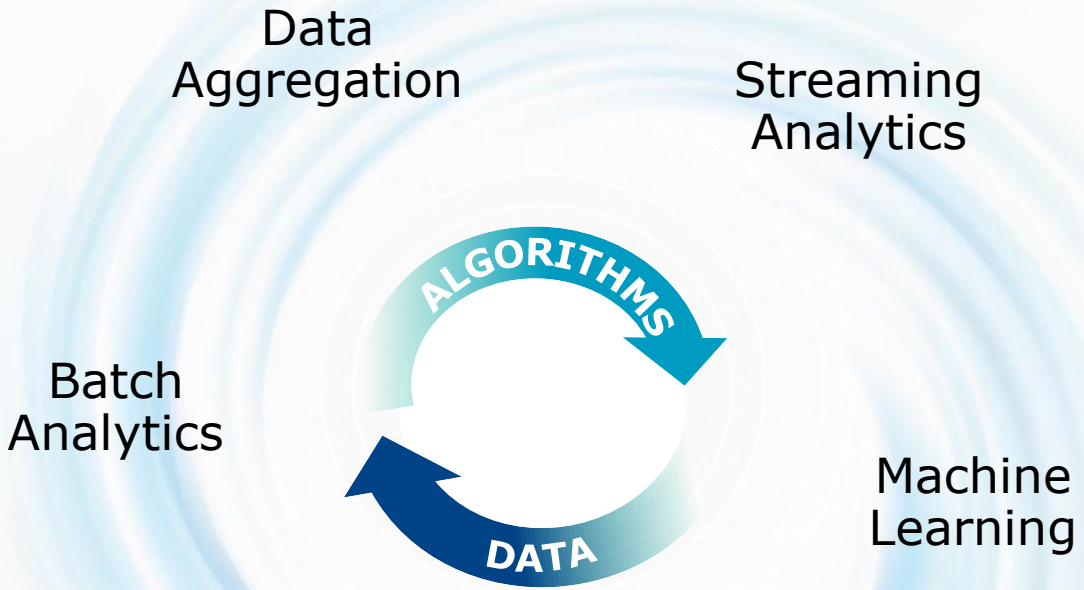
Diverse and Connected Data Types

Tight coupling between Big Data and Fast Data

Big Data



Scale



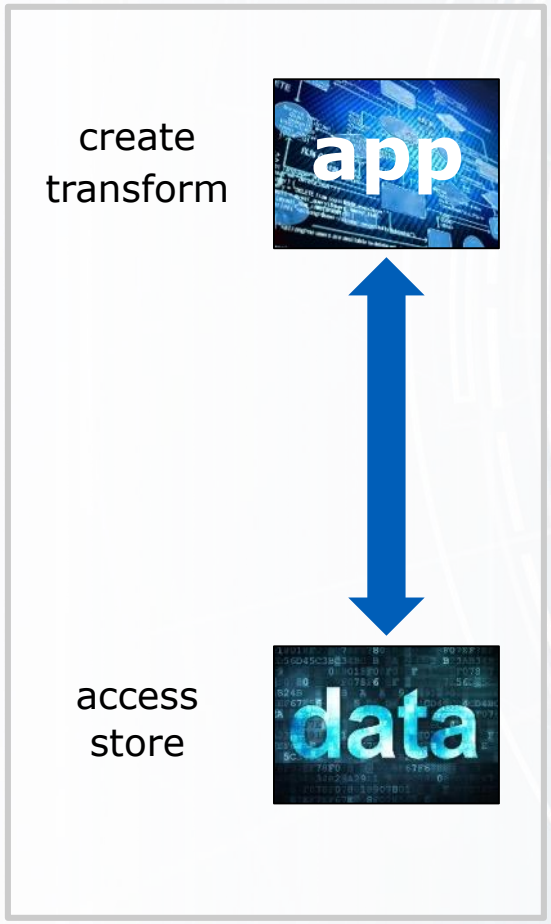
Fast Data

Performance

The Changing Nature of Data Interaction

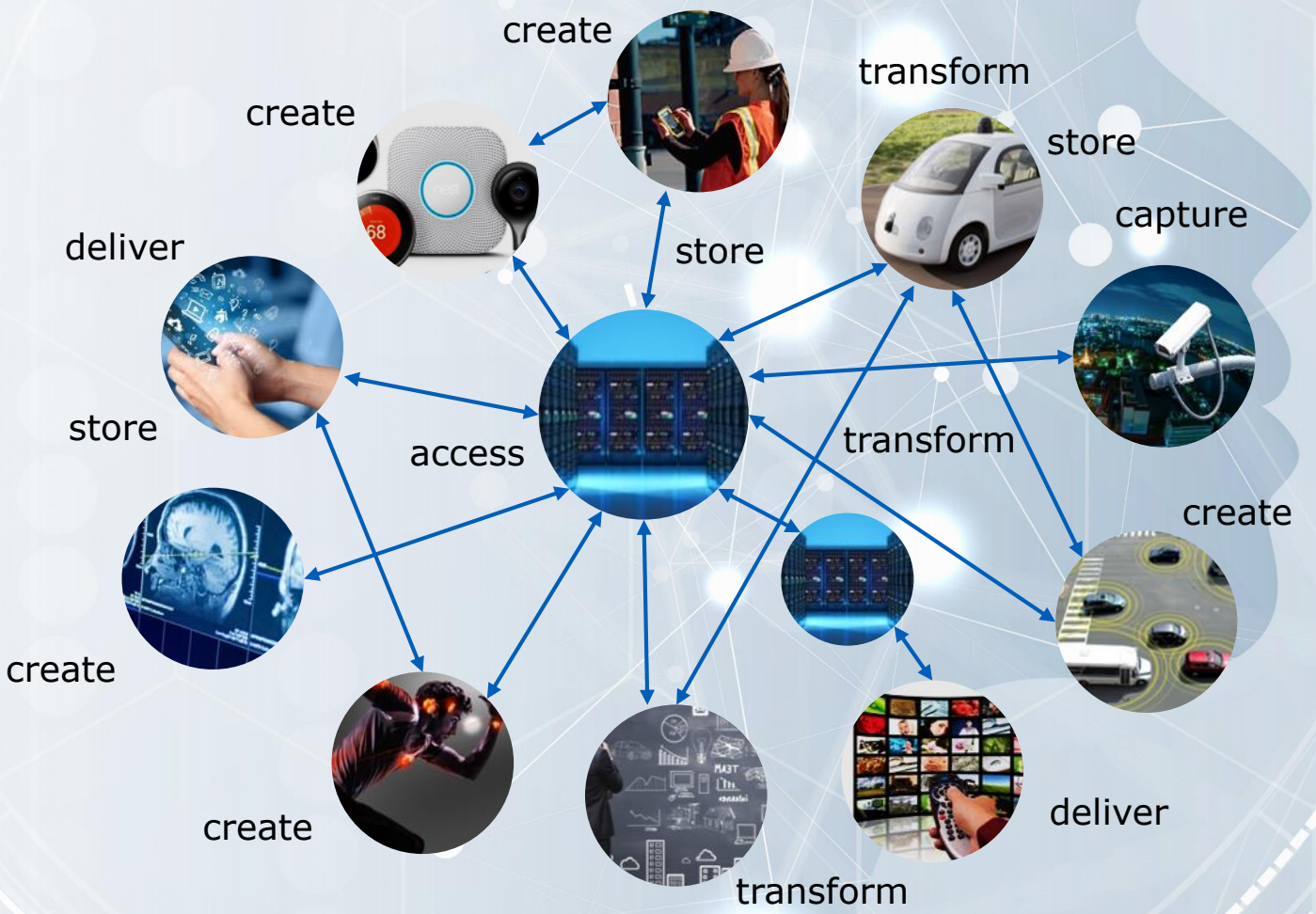
Past

Data Held Captive by Single Application



Current and Future

Data Pooled and Shared by Multiple Applications



Increasingly Dynamic Workloads

A survey of mid-sized and large-enterprise IT users found…

45%

of compute hours and storage capacity are utilized

70%

report inefficiencies in the time required to provision compute and storage resources

IDC Analyze the Future

Source: IDC White Paper, sponsored by Hewlett Packard Enterprise, Quantifying Datacenter Inefficiency: Making the Case for Composable Infrastructure, Doc #US42318917, Mar 2017

Driving New Demands on Data Infrastructure

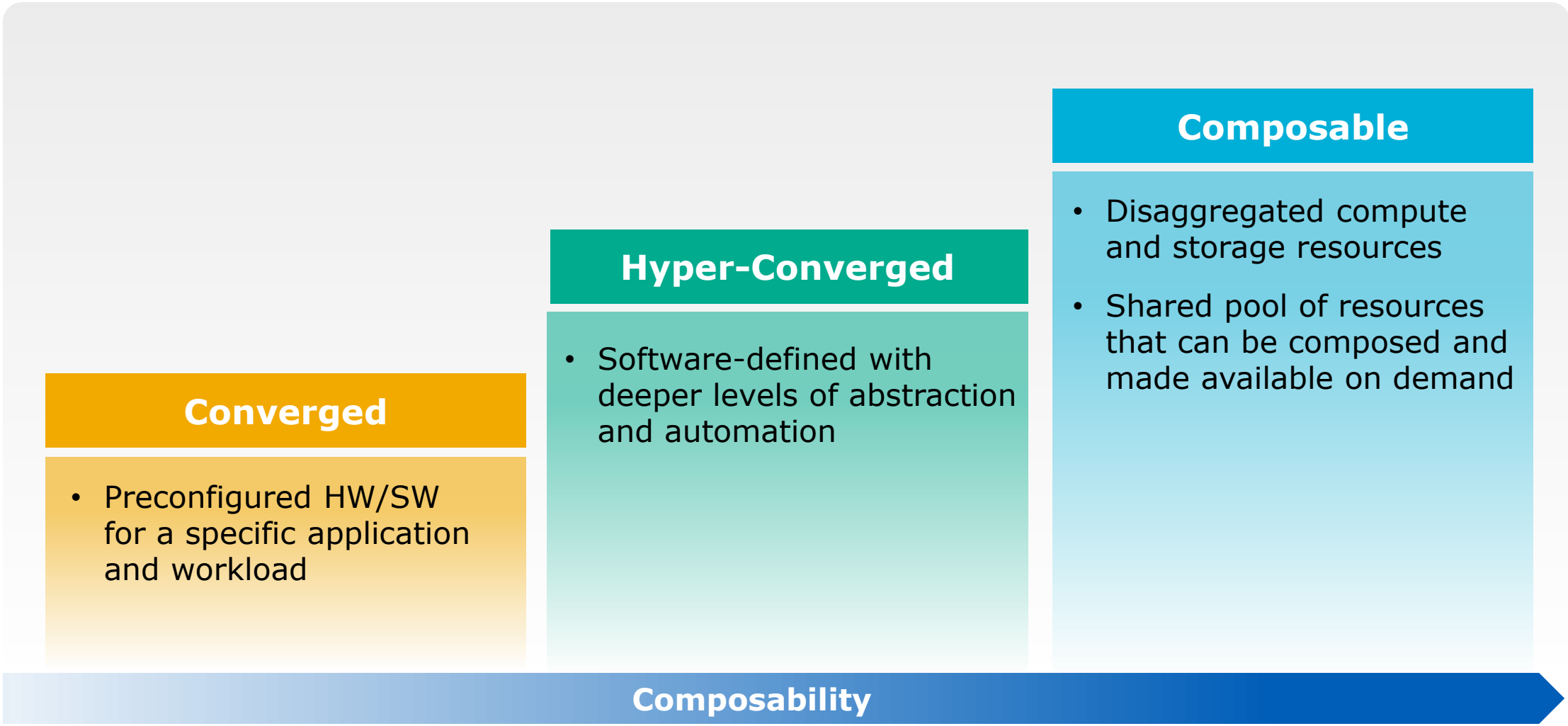
Scalability

Efficiency

Agility

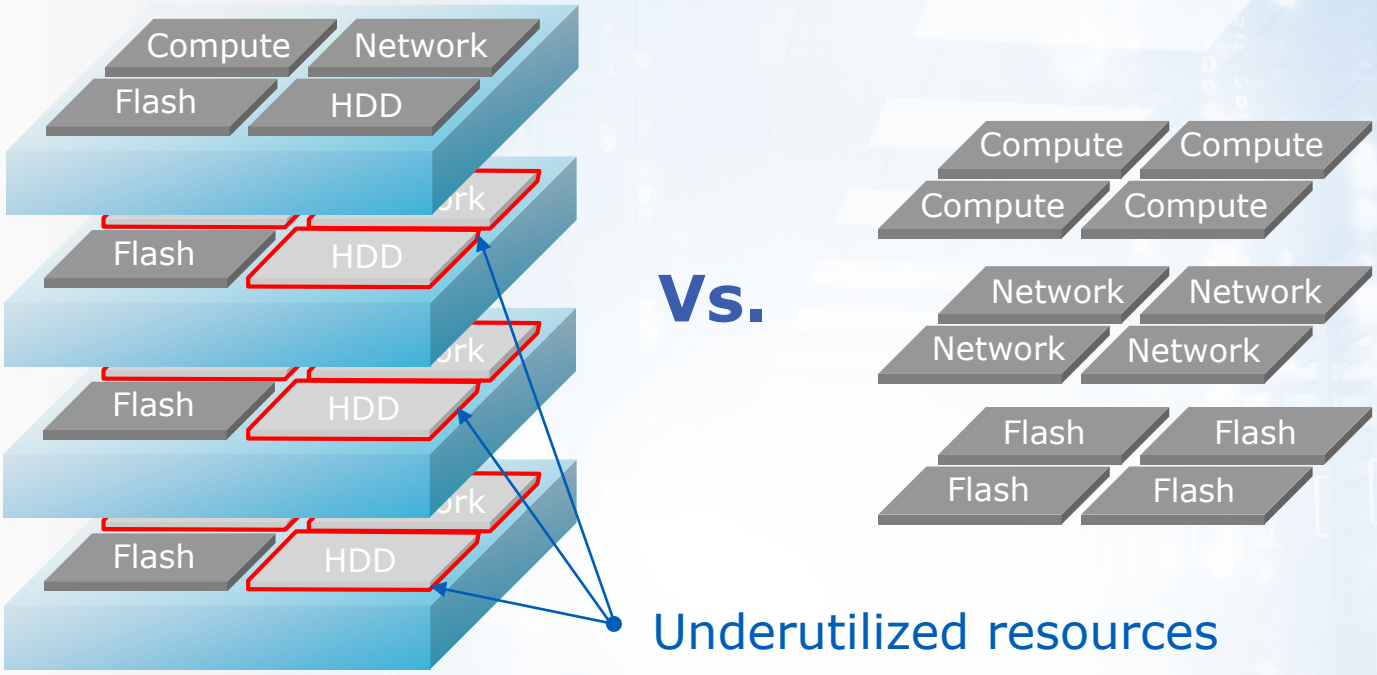
Performance

The Data Infrastructure (R)evolution



Hyperconverged vs. Composable

Flash Intensive Workload



Scalability

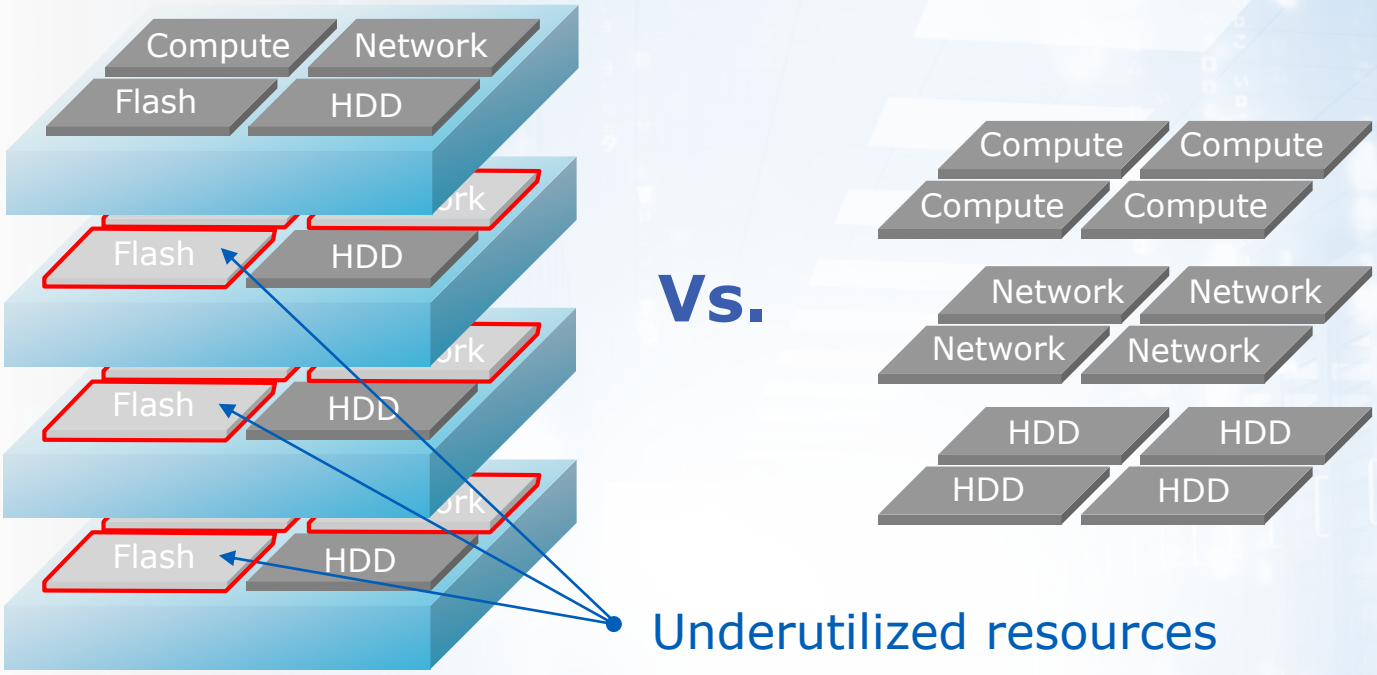
Efficiency

Agility

Performance

Hyperconverged vs. Composable

Capacity Intensive Workload



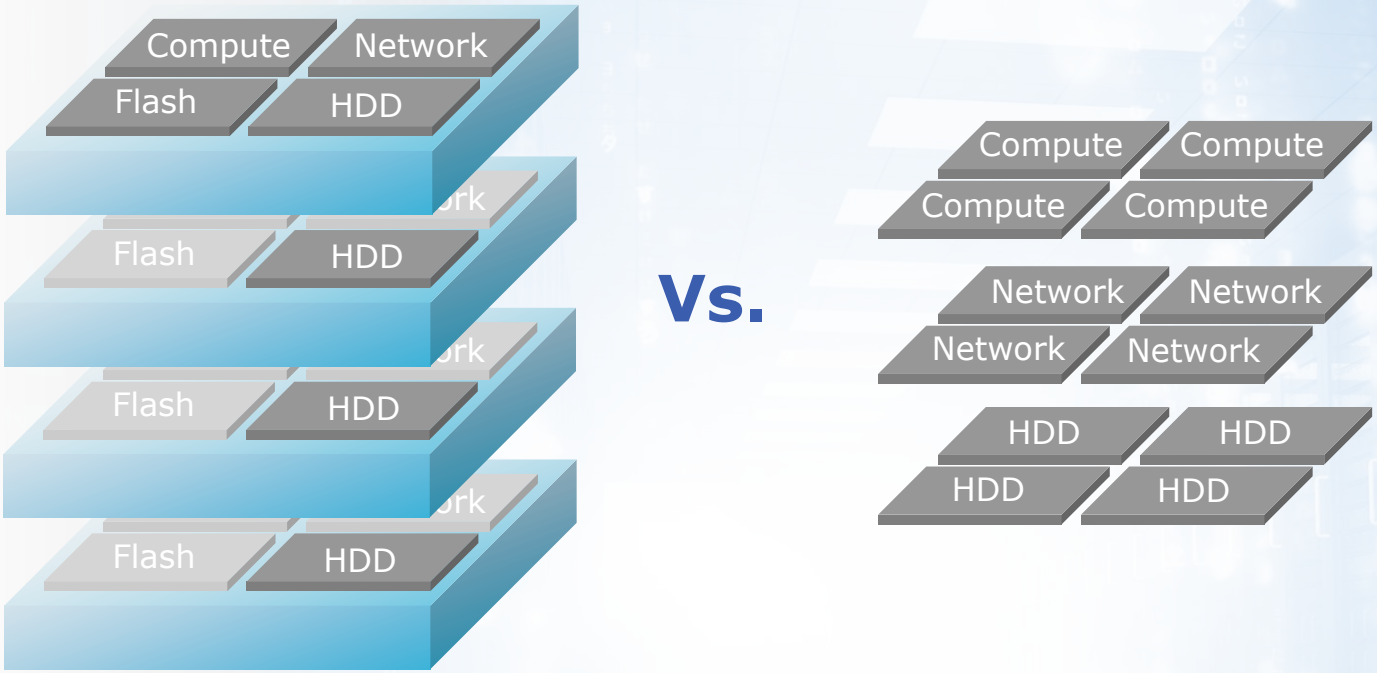
Scalability

Efficiency

Agility

Performance

The Benefits of Composability



Greater economics, agility, efficiency and simplicity at scale

Applicable to all environments – virtual, containers, bare metal – and applications

~40% lower TCO than traditional HCI architectures[1]

~50% savings in initial CapEx investment[1]

[1]TCO and CapEx estimates based on internal analysis, utilization estimates and component pricing as of July 2018.

Our Composable Infrastructure Vision

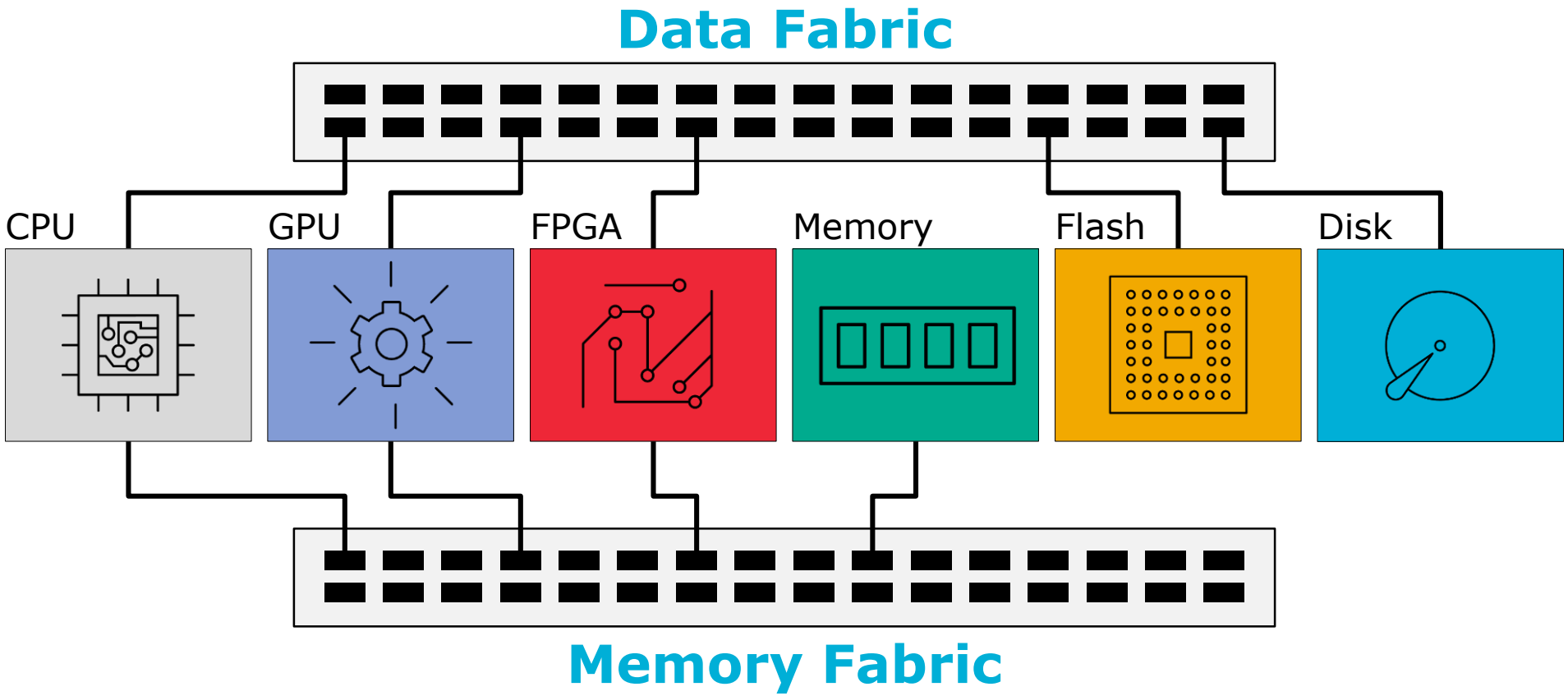
1 **Open**

2 **Scalable**

3 **Disaggregated**

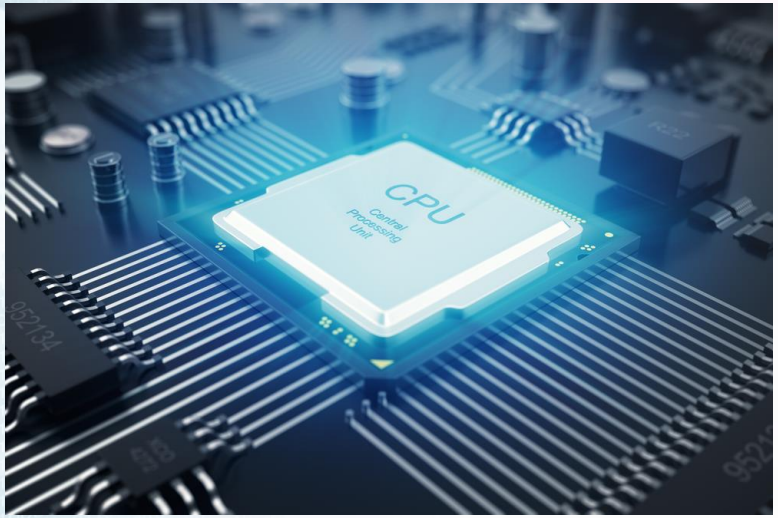
4 **Extensible**

Enabling Composable Infrastructure



- No physical systems – only composed systems
- No established hierarchy – CPU doesn't 'own' the GPU or the Memory
- All elements are peers on the network and they communicate with each other

NVMf Fabric Devices

Flash	Disk	Compute
		

The New World of NVMf Fabric Devices

Simpler building blocks

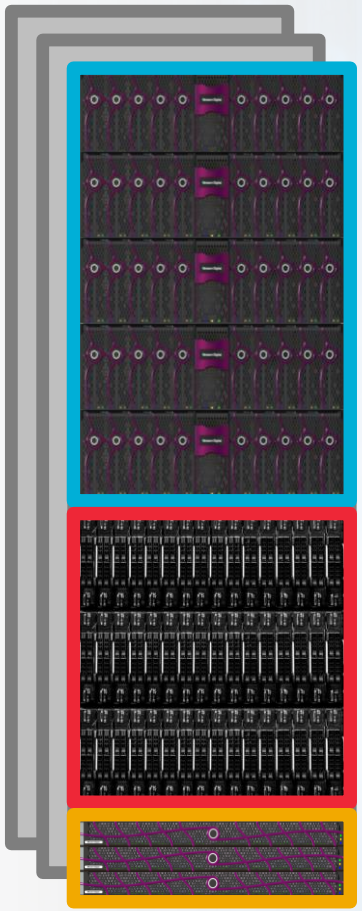
Maintains multiple paths to the device

Network matched to media performance

Faster Time-to-Market of innovation

Purpose-Built Disaggregated Infrastructure

Rack Option A:
More Flash

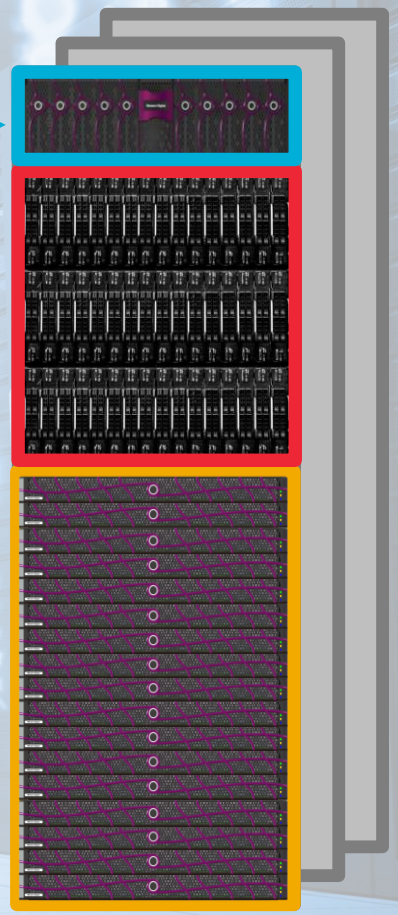


Flash Enclosure

Compute Enclosure

Disk Enclosure

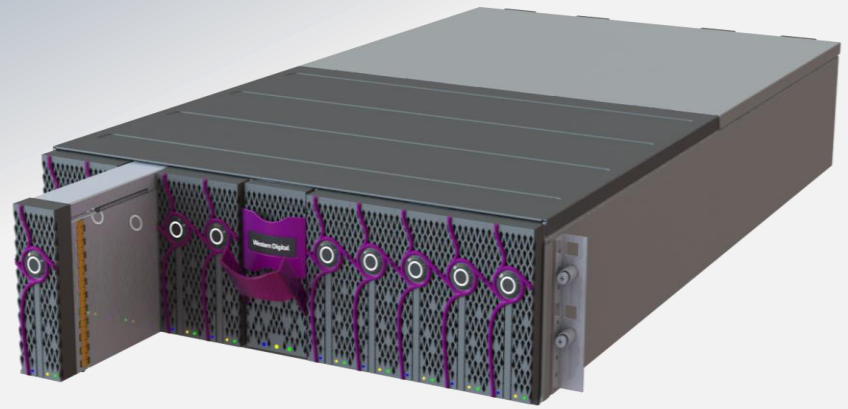
Rack Option B:
More Disk



Introducing OpenFlex™

Open standards enable vendor-neutral solutions

OpenFlex™ F3000 Fabric Device and E3000 Fabric Enclosure

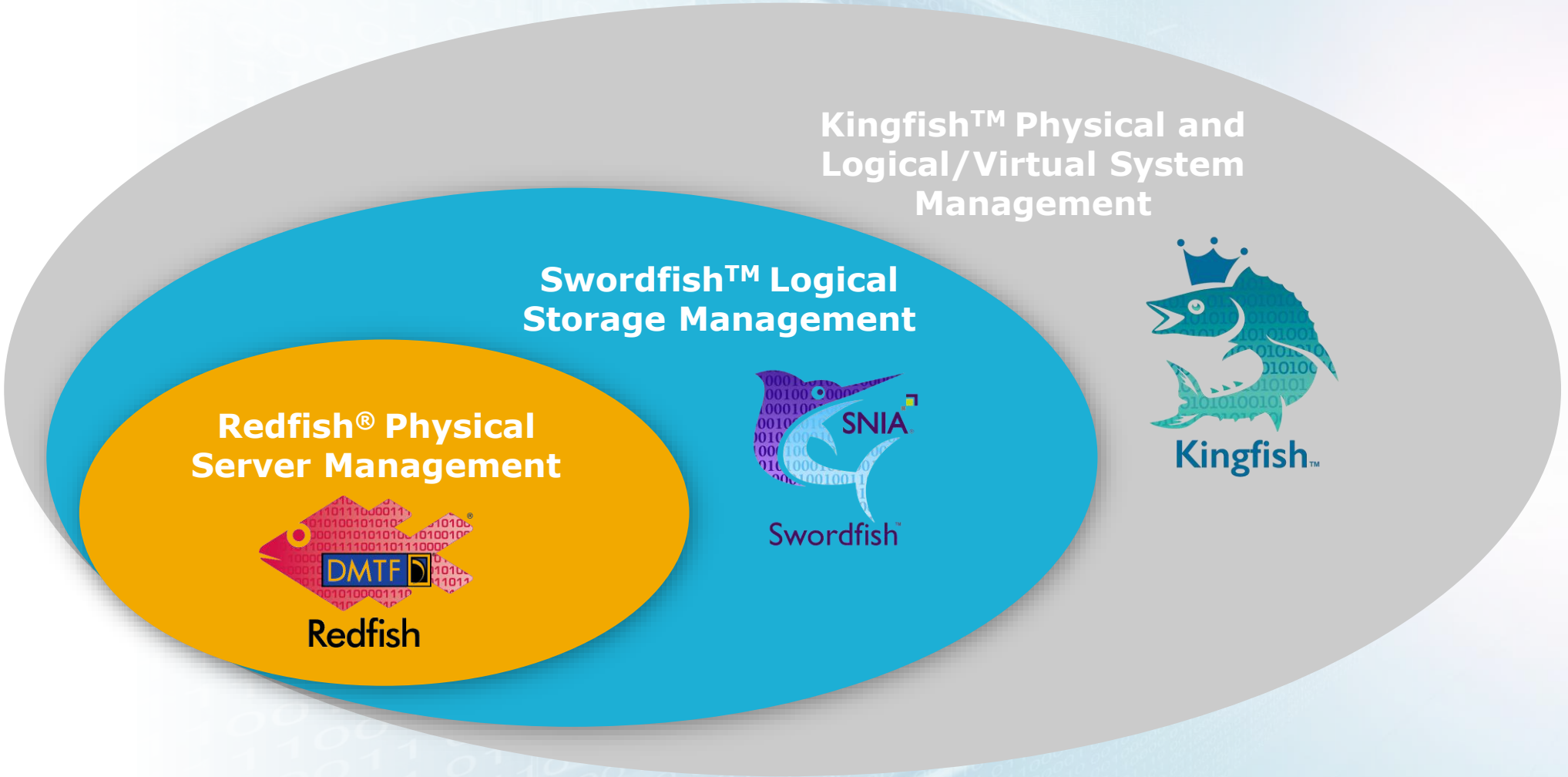


High-performance, low-latency fabric device for Fast Data: AI, real-time analytics, IoT

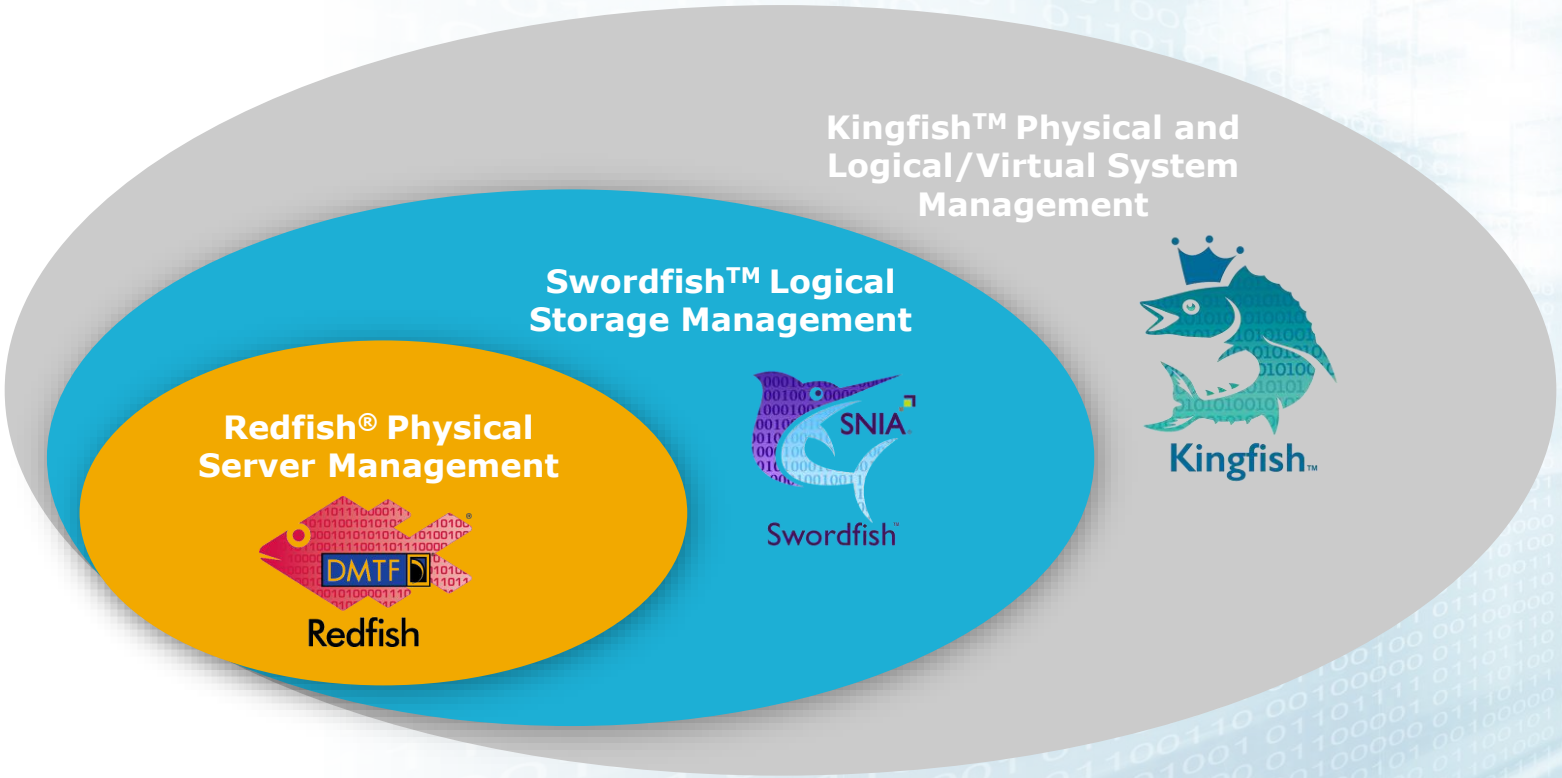
OpenFlex™ D3000 Series Fabric Device

High-capacity fabric device for Big Data: batch analytics, machine learning, predictive modeling

OpenFlex Management API



OpenFlex Management API



- Kingfish Open API builds on existing open standards
- Unified across entire data infrastructure for delivering simplicity at scale
- Providing APIs to the public to accelerate innovation and market adoption

Software Orchestration

Rapid composability

New instances in seconds

Optimize to the unique needs of an application or workload

Broad Ecosystem Support

Focused on software composability tools and interoperable hardware

Western Digital OpenFlex

Positioned to Accelerate Market Adoption

1 **Open**

Firm commitment to an open standards-based approach

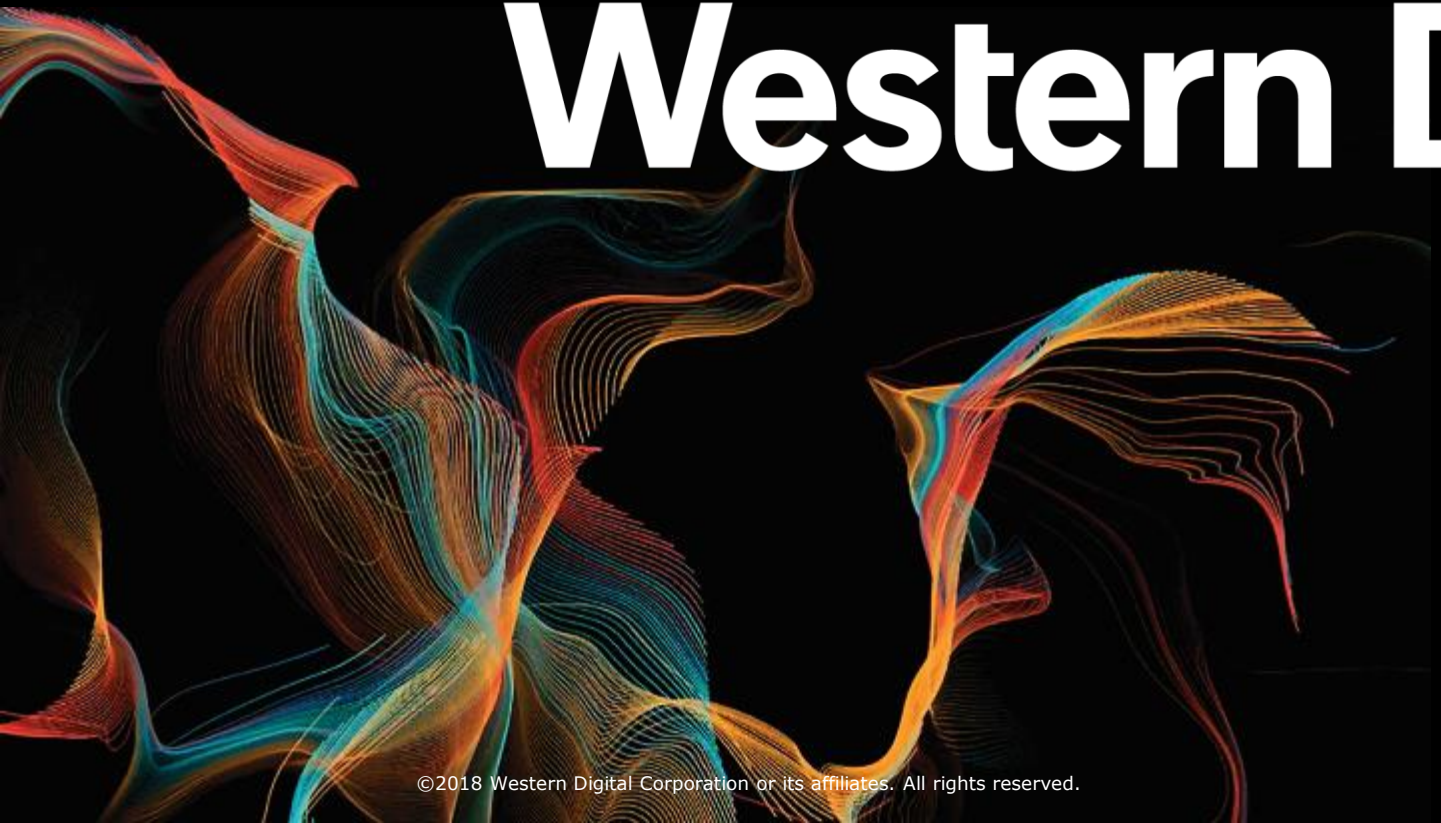
2 **Ecosystem**

Strategic position in the ecosystem to help accelerate market adoption

3 **Trust**

Trusted leader in data center products, technologies and infrastructure

Innovating for a Data-Centric World



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