



# OCP SUMMIT

March 20-21  
2018  
San Jose, CA

**OPEN. FOR BUSINESS.**

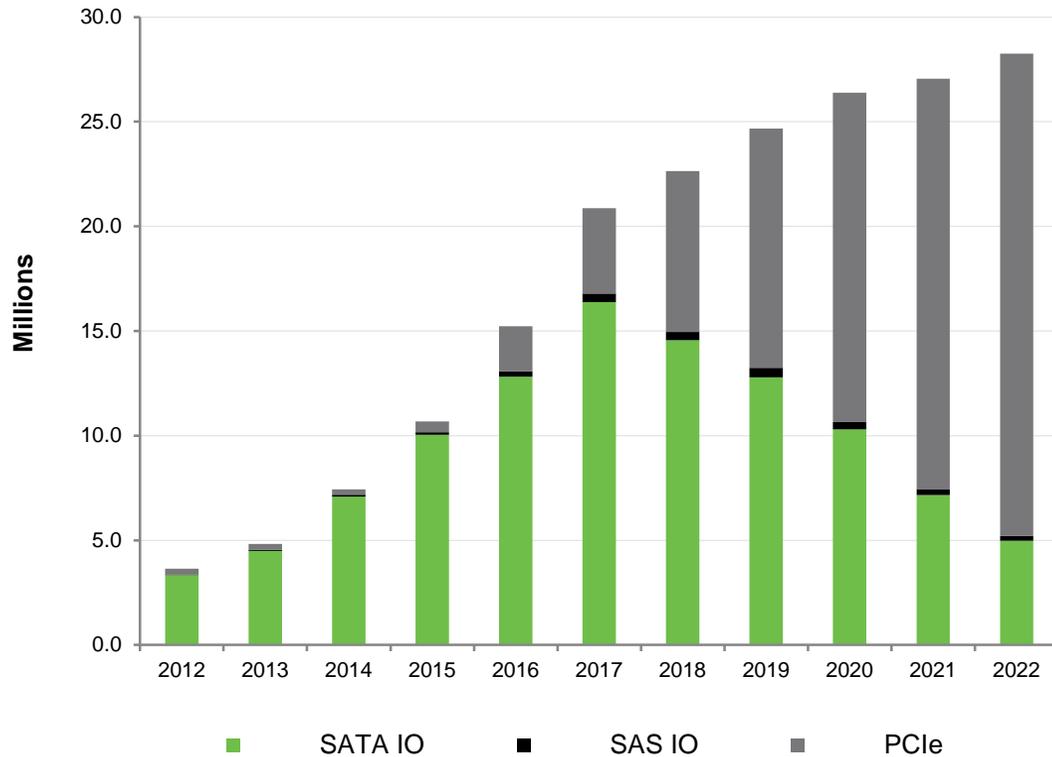
# Innovative Next Gen NVMe Features

David Allen / NVMe™ Board Member and Senior  
Dir. Product Marketing / Seagate

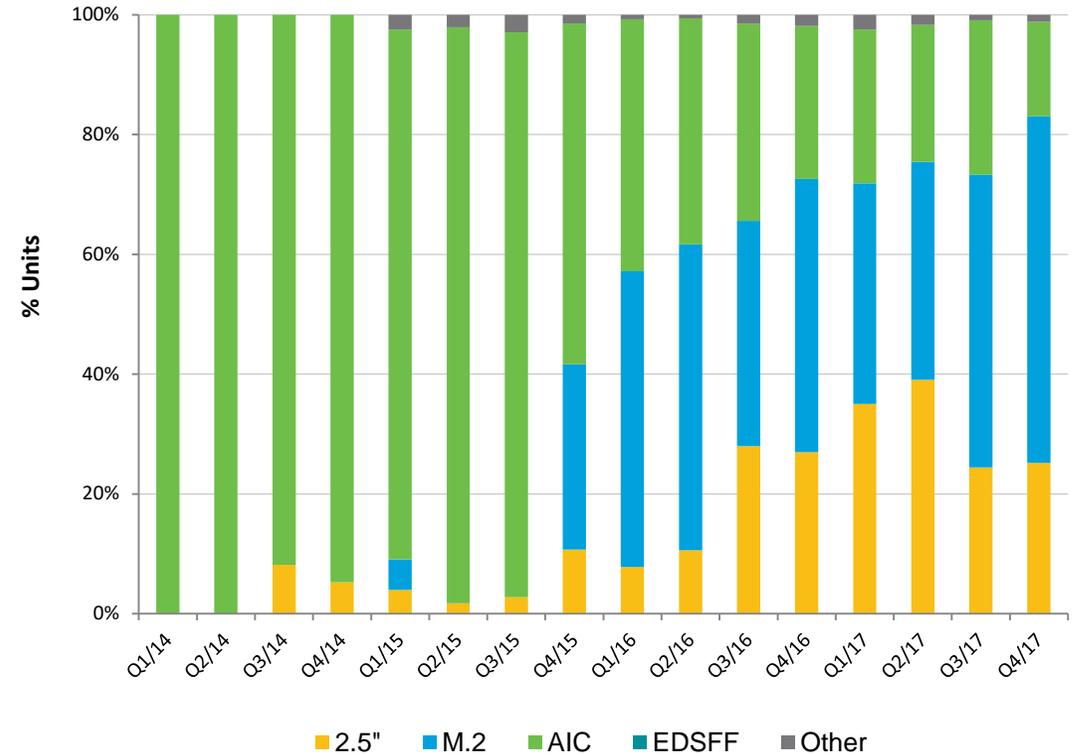
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# NVMe Trends

Server-attached SSD Units



PCIe SSD Form Factor Mix



Source: Forward Insights, March 2016



NVMe innovation is driving its growth including its rich feature set and form factors.



Seagate Empowers  
Customers to Unlock the Bits

## New NVMe 1.4 Features

**Seagate Nytro<sup>®</sup> Q-Boost<sup>™</sup> features**

**IO Determinism**

**Streams**

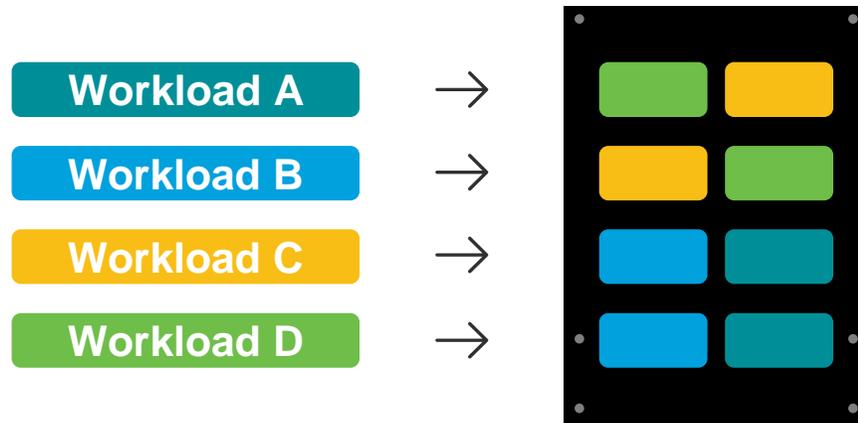


# I/O Determinism

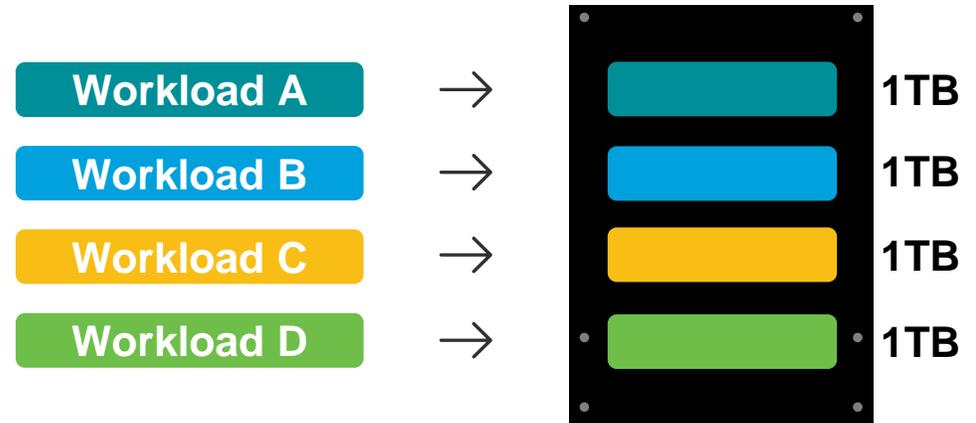
Enable hosts to treat a SSD as many small sub-SSDs and process I/O parallel in each small-sub SSD

- Increase Read I/Ops and reduce max latency
- Read strict QoS profile

Non I/O Determinism



With I/O Determinism



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## New NVMe 1.4 Features

### Seagate Nytro<sup>®</sup> Q-Boost<sup>™</sup> features

IO Determinism

Nytro Q-Boost Demo



**7x**

reduced average read latency

Streams

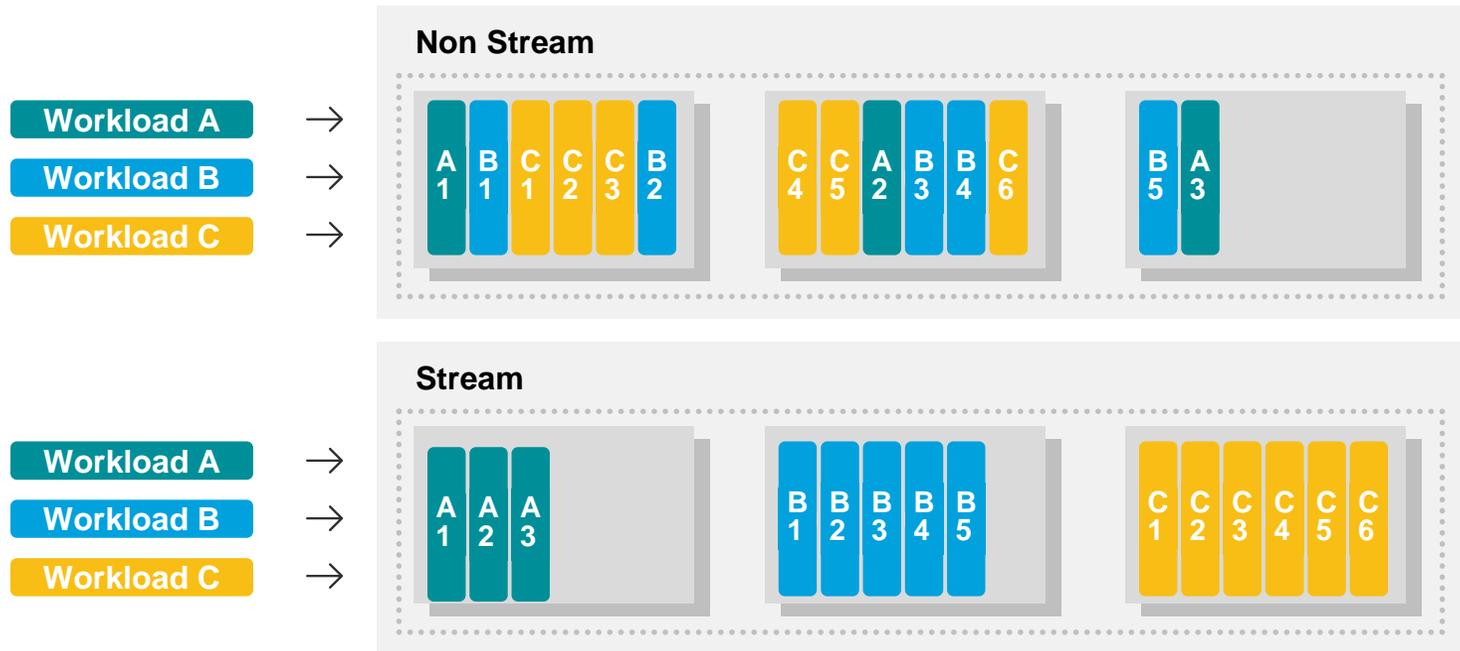


**16x**

reduced max read latency



# Streams



**Data is groups according to a stream**

- Minimize garbage collection
- Reduced Write Amplification



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## New NVMe 1.4 Features

### Seagate Nytro<sup>®</sup> Q-Boost<sup>™</sup> features

IO Determinism



**4x**

Improved WAF & NAND

Streams

Nytro Q-Boost Demo



**3x**

Faster performance



# Future Form Factors

For High Density Flash Expansion

## Modular high density 1U Flash storage platform +

### M.2 carrier

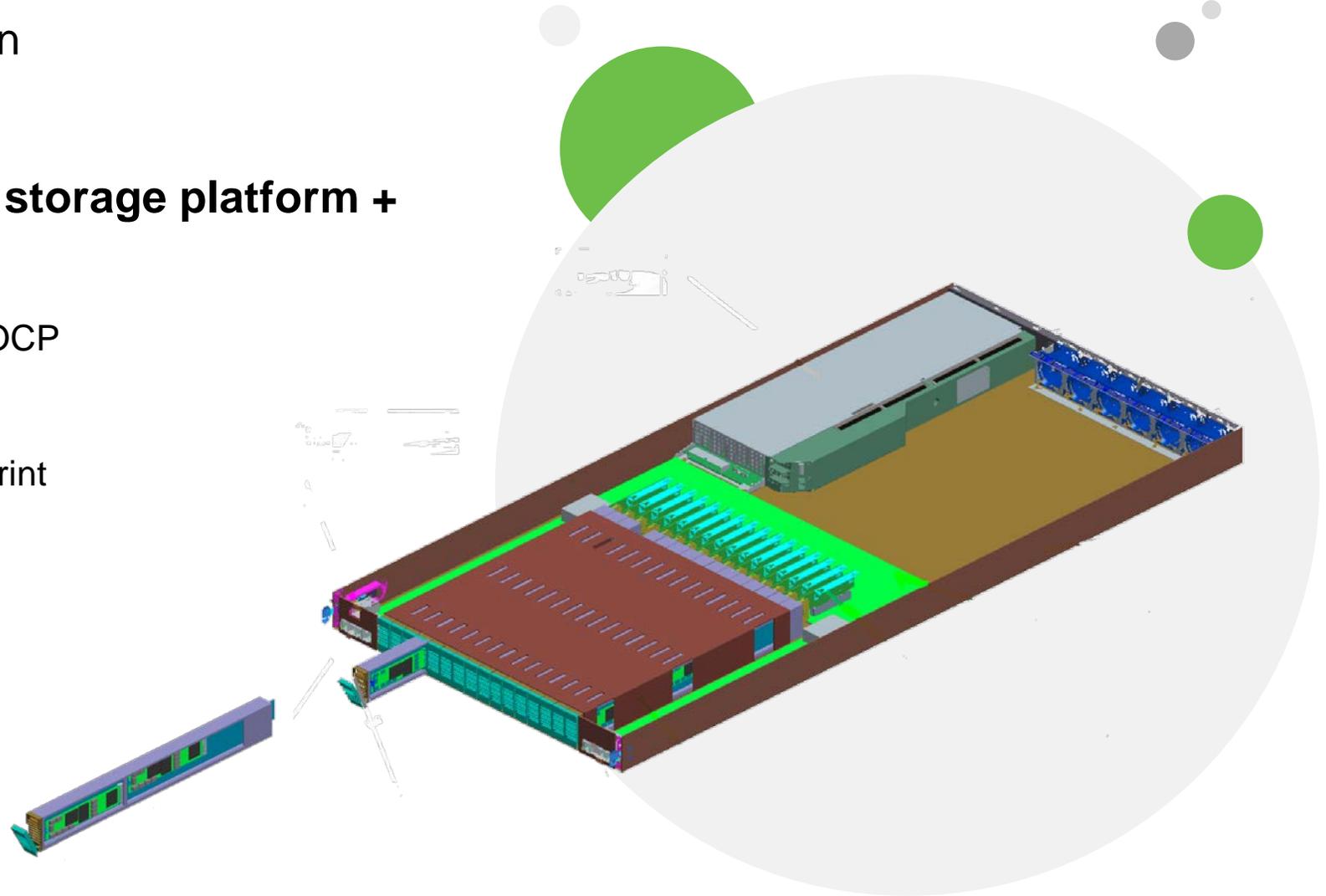
Enables flexible and modular design for OCP

### High density NVMe scalability

High capacity in an extremely small footprint

### Microsoft custom design

Seagate thought leadership



Questions?

**Data** is our **DNA.**



SEAGATE

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