Next-Gen Storage and the Mobile Computing Ecosystem

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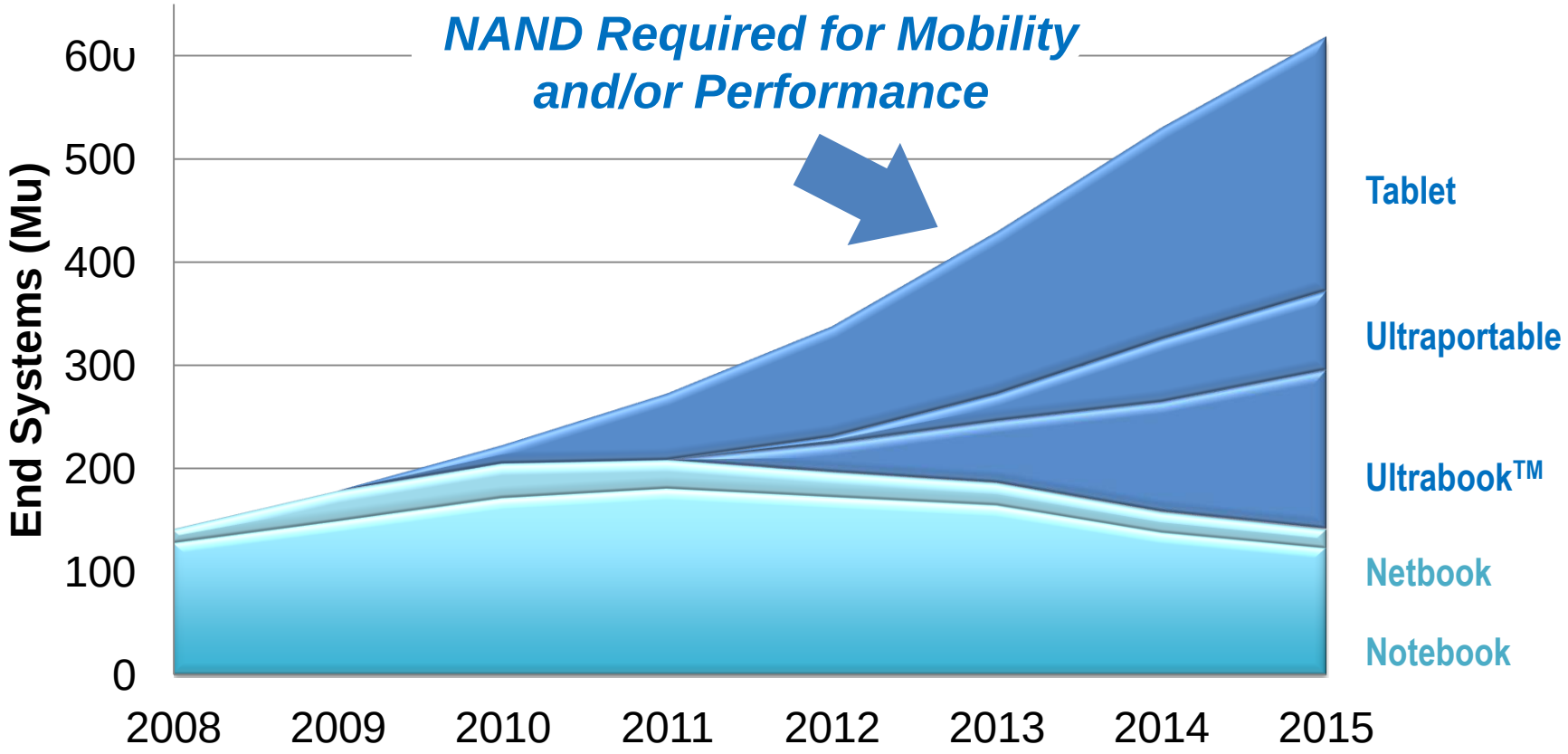
Flash Memory Summit 2012
Santa Clara, CA

Overview

- Mobile Computing Market
- Segment Trends
- Impact on Storage
- Summary

Mobile Computing Market Growth (*excluding Smartphones*)



Source: Gartner, Micron Marketing

Platform Convergence

ARM-x86/Windows 8 OS based Platforms

ARM/Android or Proprietary OS based Platforms

Mobile

Thin & Light

Tablets

Ultrathin

Notebooks

Increasing Performance/Productivity

Increasing Mobility

Decreasing Power/Weight/Form Factor/Storage Capacity

Mobile Computing Ecosystem Convergence

Mobile: Increasing Performance & Productivity

Email, Music → Apps → Multitasking Apps, Video → Productivity Apps

ARM-based

x86-based

Desktop PCs → Laptops → Netbooks → Ultrabooks

PC: Trend Towards Mobility

Impact on Storage

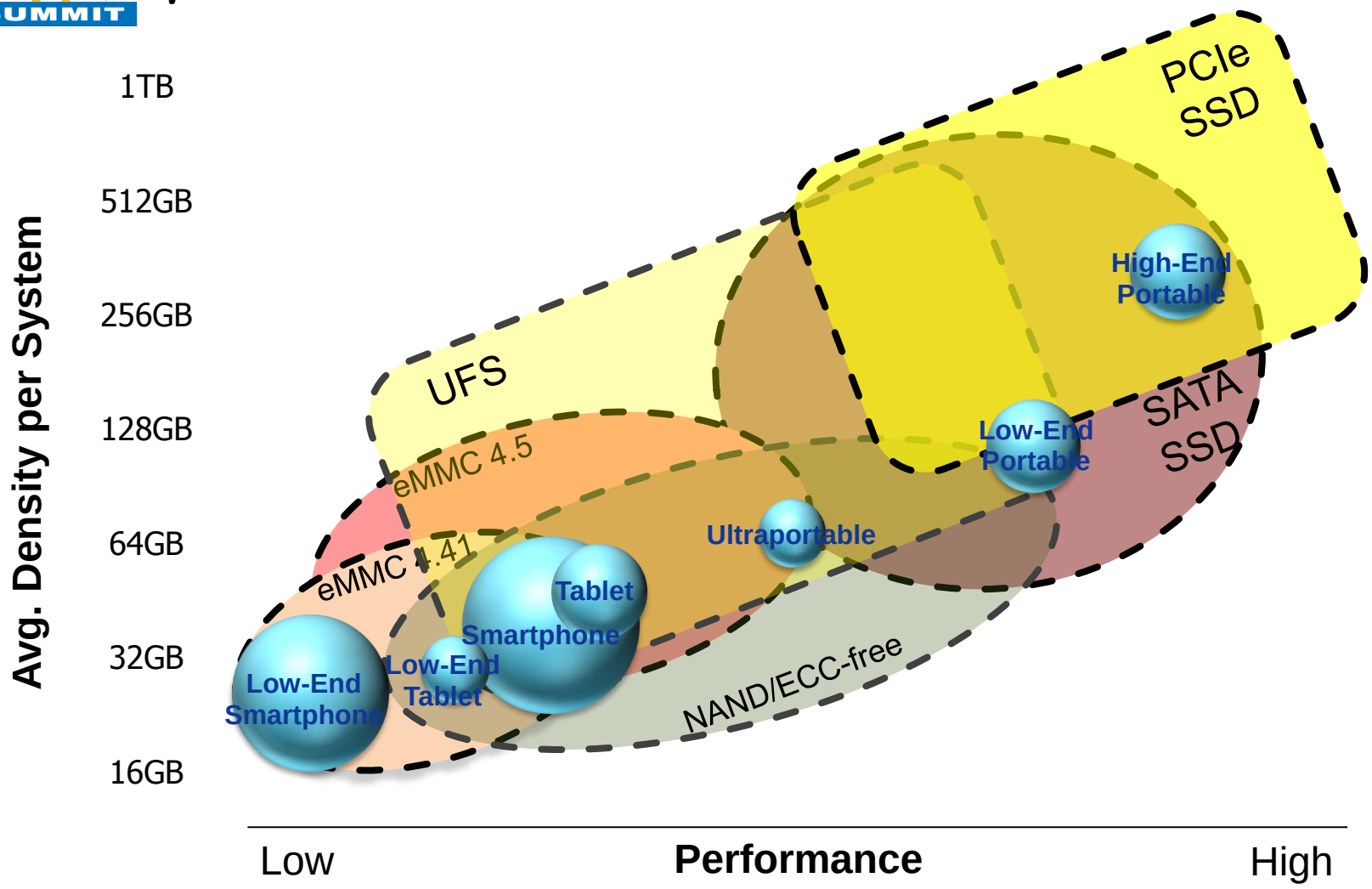
Mobile Computing Storage Requirements

- Thin Form Factor
- High performance
- Low power
- Secure

NVM Form Factor Trends

	System Z-Height	2012	2013	2014
Module	Notebooks Ultrathins PC Tablets 17 - 24mm	mSATA, Slim Lite, Custom	mSATA, **mSATA Mini, NGFF**	
Embedded	Ultrathins PC Tablets <18mm	eMMC, ECC-Free NAND, µSSD	eMMC, ECC-Free NAND, µSSD, **UFS**	
	Media Tablets <8mm	Raw NAND, eMMC, ECC-Free NAND		Raw NAND, eMMC, ECC-Free NAND, **UFS**

Product Positioning for Client Markets



Source: Micron Marketing, Gartner, IDC, iSuppli, Forward Insights

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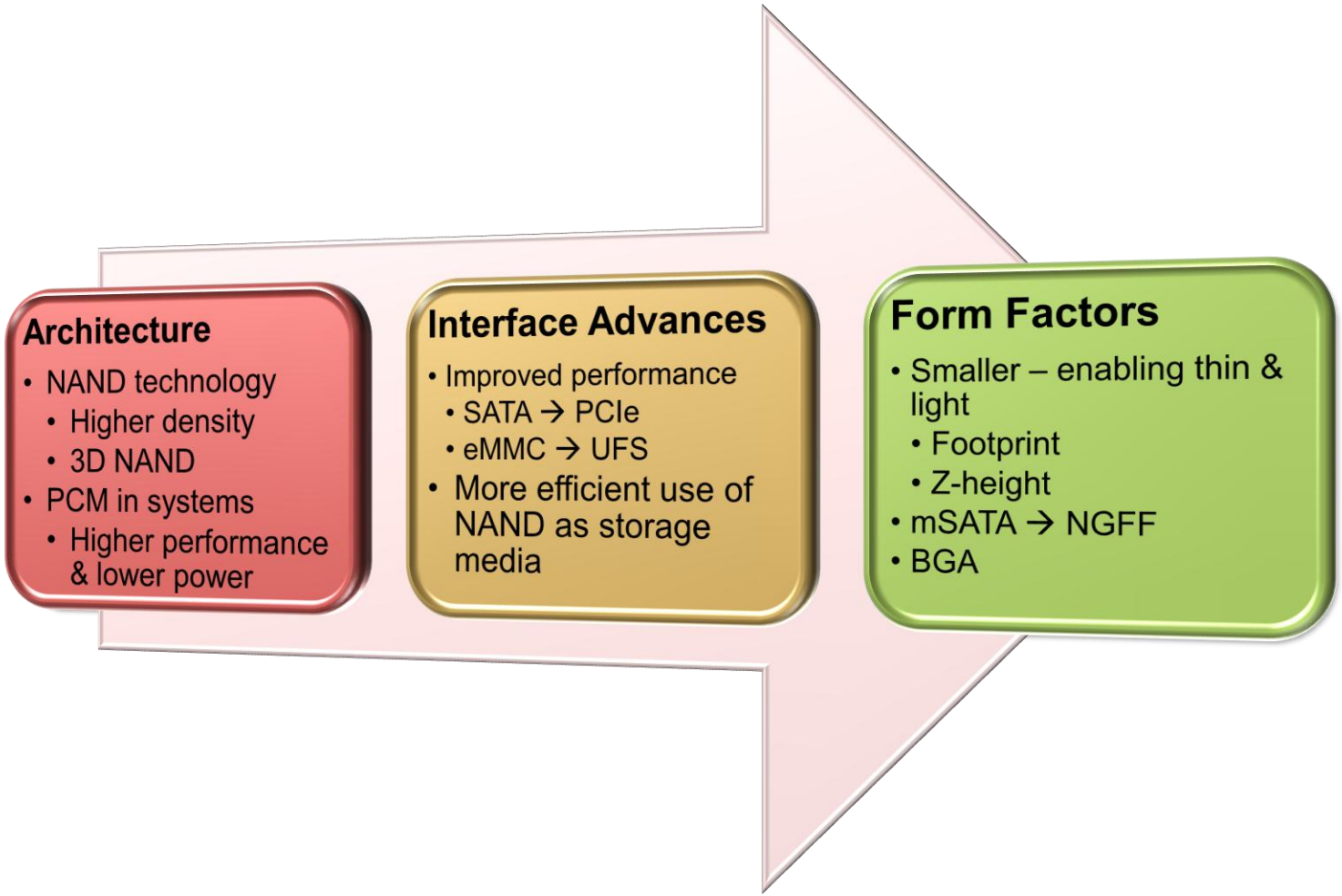
Size of application bubble = 2016 Market Size (end system units)

High/Low End Portable = Ultrathin/Notebook

NAND *Enables* Better Systems

Future Storage System Trends



Matching Storage Solution to Applications

Interfaces and architectures evolving to leverage NAND for storage

Computing Heritage
Performance Driven
SATA → PCIe

Wireless Heritage
Low Power
eMMC → UFS

Converging toward a single storage solution?