## Investor Update

Manish Bhatia EVP, Global Operations

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#### **Safe Harbor Statement**

During the course of this meeting, we may make projections or other forward-looking statements regarding future events or the future financial performance of the Company and the industry. We wish to caution you that such statements are predictions and that actual events or results may differ materially. We refer you to the documents the Company files from time to time with the Securities and Exchange Commission, specifically the Company's most recent Form 10-K and Form 10-Q. These documents contain and identify important factors that could cause the actual results for the Company to differ materially from those contained in our projections or forward-looking statements. These certain factors can be found at http://www.micron.com/certainfactors. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, levels of activity, performance, or achievements. We are under no duty to update any of the forward-looking statements after the date of the presentation to conform these statements to actual results.





## **Manish Bhatia**

**Executive Vice President Global Operations** 



## Agenda

Market strategy
Operational excellence
Results







# Our markets are strong Our position is getting stronger

Strong secular demand

TAM growth outpacing industry

Product leadership & cost competitiveness

Supply discipline



# Memory & Storage Industry Revenue

2000-2007 \$38B PC / Internet Era

2008-2016 \$62B Mobile Era

2017-2019 \$134B Data Economy

**Future Opportunity** 

Growth of data is driving healthy demand for memory and storage

Memory & storage revenue bars represent average annual total DRAM, NAND, NOR and SSD revenue over time period. HDD revenue excluded

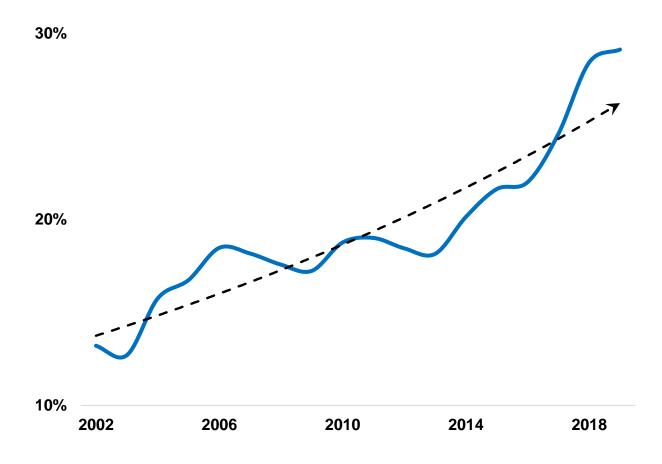
PC/Internet Era: 2000 to 2007, Mobile Era: 2008 to 2016, Data Economy: calendar year 2017 to 2019, Source: Gartner and IDC.

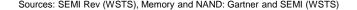
#### DRAM & NAND revenue as % of Semiconductor TAM

(Last three years moving average)

# DRAM & NAND Revenue

**Growing faster than the semiconductor industry** 







## Product & Solutions Leadership

#### Only company with DRAM, NAND & 3DXP

#### **DRAM**

- Most power efficient Low Power DRAM
- High-quality high-density server modules

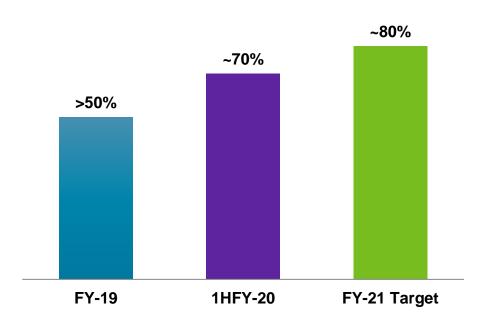
#### **NAND**

- Broadening SSD portfolio
- Growing managed NAND/MCP share

#### 3DXP

World's fastest SSD

High-Value NAND % of Total NAND Bits





High-value solutions calculations based on managed NAND, enterprise NAND, and SSD product share of total Trade NAND shipments.

# >1.5x Industry Rate of Cost Reduction

In both DRAM and NAND 2016 to 2019

**Industry-leading technology nodes** 

**Faster yield ramps** 

Increased economies of scale

Faster transition of production mix to advanced nodes

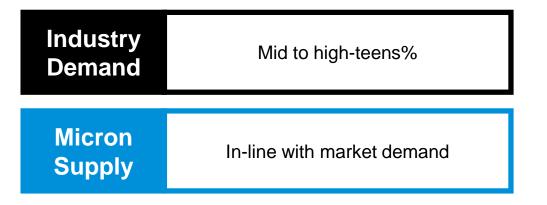


## **Supply Discipline**

Micron supply growth in-line with market demand

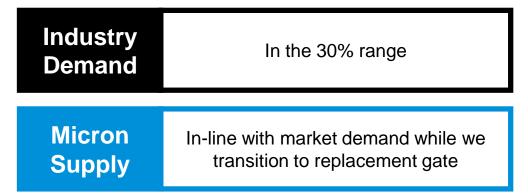
#### DRAM

CY19 to CY23 CAGR



#### **NAND**

CY19 to CY23 CAGR

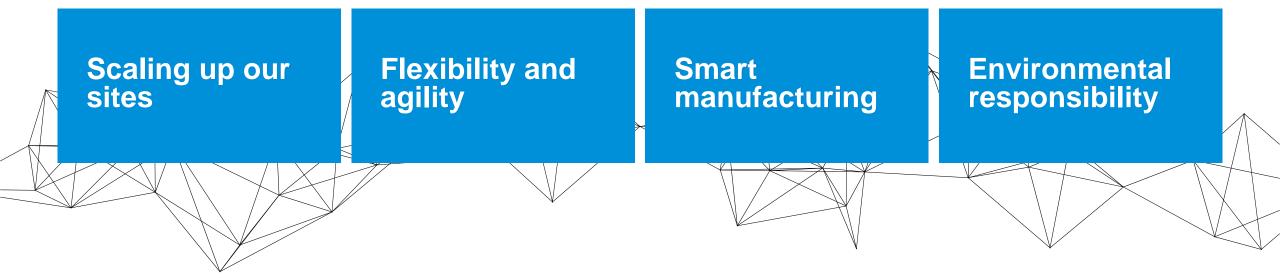


Utilizing tech node transitions to meet demand growth with no net wafer start additions





# Best-in-Class Manufacturing Practices for Competitive and Sustainable Operations





## Enhancing Our Fab Network

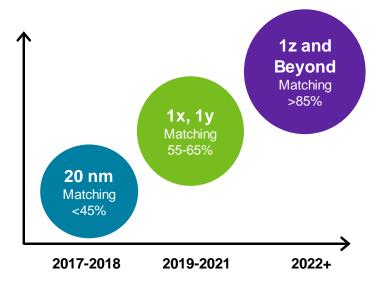
# Investing in Cleanroom Space

Enabling node transitions while maintaining stable wafer capacity

#### FY20 CapEx for cleanroom space 1.5-2x of normal

- Higher capital asset utilization
- Increased flexibility and agility
- EUV-ready cleanrooms

#### Tool Standardization Across DRAM Fabs

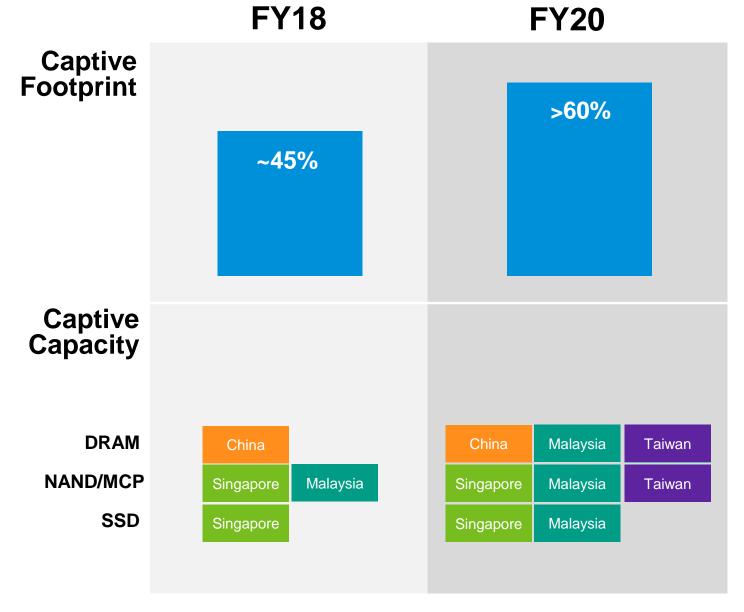




# Enhancing Assembly & Test Footprint

More captive capacity and geographic diversity

Improves our cost competitiveness, agility and quality





### **Smart Manufacturing**

Al, Image Analysis, IoT all providing tremendous value now and, in the future

	Productivity	Quality	Yield
Use Case	Al to improve factory efficiency	Real-time monitoring of production line metrics to improve product quality	Yield improvement through advanced analytics and auto diagnostics
Technologies Applied	Machine vision, pattern recognition, automated diagnostics	Deep learning for object detection and anomaly classification	Automated pattern recognition and response
Current Impact	>20% reduction in tool idle time	~10% reduction in product deviations	~20% improvement in cycles of learning for yield ramp



## **Environmental Responsibility**

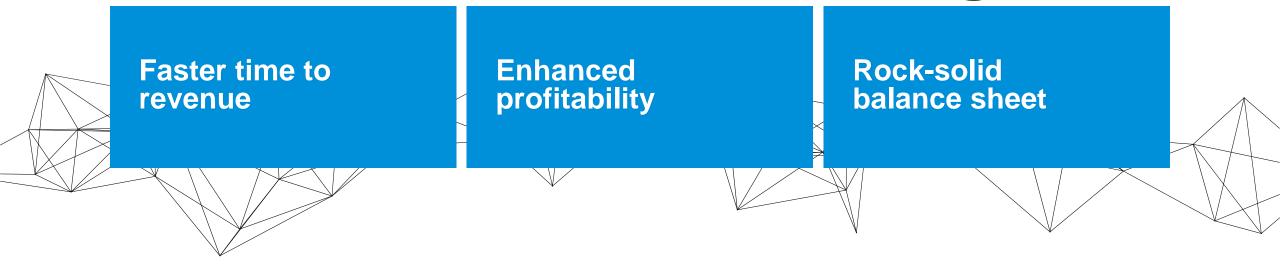
Micron plans to spend ~2% of CapEx on future sustainability programs

	Focus Areas
Emissions	Process Green House Gas Abatement Heat Transfer Efficiency Improvement
Energy	Energy Efficient Facilities Smart Control Systems
Water	Enhanced Water Filtration Systems Engagement in Water Restoration Projects
Waste	Enhanced Waste Recovery Systems Improve Waste Stream Segregation





## Our Business Continues to Get Stronger



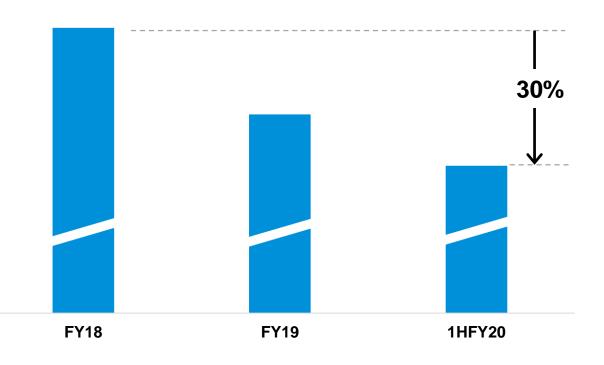


# Time to Customer Qualification

Reduced time to qualify new products with customers by 30% in two years

- Early customer engagement
- Close collaboration throughout qualification
- Product delivery execution

#### **Time to Customer Qualification**





# **Enhancing Our Profitability**

>\$9B

# Structural operating profit gains from FY16 to FY19

Delivering on our 2018
Analyst Day commitment
2 years ahead of schedule

>2500 basis points of EBITDA margin improvement relative to the industry since FY16

#### Micron LTM EBITDA Margin <sup>1</sup>



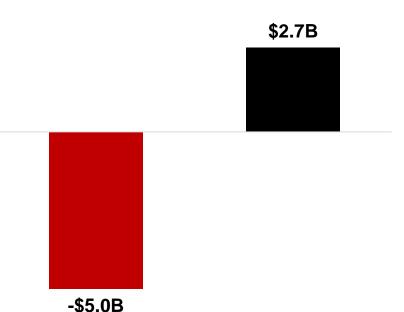
#### Source: Micron

 EBITDA is a non-GAAP measure defined as GAAP net income plus interest, taxes, depreciation and amortization of intangible assets. EBITDA Margin as % of revenue. A reconciliation of non-GAAP measures is included in the section titled Non-GAAP Reconciliations



# **Investment Grade Balance Sheet**

Liquidity > \$10B Net cash \$2.7B Investing for high ROIC



**Net Cash** 

FQ4-16 FQ2-20





### The New Micron



Memory & storage are more relevant than ever



We strive for Product Leadership & Operational Excellence



Our cross-cycle financial performance continues to improve





## Non-GAAP Reconciliations



#### LTM EBITDA Margin Reconciliation

Amount in millions	FY-02	FY-03	FY-04	FY-05	FY-06	FY-07	FY-08	FY-09	FY-10	FY-11
LTM EBITDA										
Net income (loss)	\$(907)	\$(1,273)	\$157	\$188	\$415	\$(209)	\$(1,665)	\$(1,993)	\$1,900	\$190
Interest (income) expense, net	(35)	18	21	15	(76)	(92)	39	160	160	101
Income tax provision (benefit)	(91)	73	75	11	18	30	18	1	(19)	203
Depreciation of property, plant, and equipment and amortization	1,177	1,209	1,216	1,262	1,310	1,739	2,056	2,114	1,922	2,105
LTM EBITDA	\$144	\$27	\$1,469	\$1,476	\$1,667	\$1,468	\$448	\$282	\$3,963	\$2,599
Revenue	\$2,589	\$3,091	\$4,404	\$4,880	\$5,272	\$5,688	\$5,841	\$4,803	\$8,482	\$8,788
LTM EBITDA Margin	6%	1%	33%	30%	32%	26%	8%	6%	47%	30%



#### LTM EBITDA Margin and Net Cash Reconciliation

Amount in millions	FY-12	FY-13	FY-14	FY-15	FY-16	FY-17	FY-18	FY-19	LTM FQ2-20
LTM EBITDA									
Net income (loss)	\$(1,031)	\$1,194	\$3,079	\$2,899	\$(275)	\$5,090	\$14,138	\$6,358	\$2,352
Interest (income) expense, net	171	217	329	336	395	560	222	(77)	(26)
Income tax provision (benefit)	(17)	8	128	157	19	114	168	693	12
Depreciation of property, plant, and equipment and amortization	2,141	1,804	2,103	2,667	2,980	3,861	4,759	5,424	5,437
LTM EBITDA	\$1,264	\$3,223	\$5,639	\$6,059	\$3,119	\$9,625	\$19,287	\$12,398	\$7,775
Revenue	\$8,234	\$9,073	\$16,358	\$16,192	\$12,399	\$20,322	\$30,391	\$23,406	\$19,599
LTM EBITDA Margin	15%	36%	34%	37%	25%	47%	63%	53%	40%

Amount in millions	FQ4-16	FQ2-20
Debt	\$(9,910)	\$(5,425)
Cash	4,140	7,118
Short-term investments	258	363
Long-term investments	414	586
Restricted cash	122	53
Net Cash (Debt)	\$(4,976)	\$2,695



