2021 INVESTOR MEETING

APRIL 6, 2021
Forward-Looking Statements and Other Information

Today's presentations contain forward-looking statements, including those regarding anticipated growth and trends in our businesses and markets, industry outlooks and demand drivers, technology transitions, our business and financial performance and market share positions, our capital allocation and cash deployment strategies, our investment and growth strategies, our development of new products and technologies, our business outlook for fiscal 2021 and beyond, strategic acquisitions and investments, and other statements that are not historical facts. These statements and their underlying assumptions are subject to risks and uncertainties and are not guarantees of future performance.

Factors that could cause actual results to differ materially from those expressed or implied by such statements include, without limitation: the level of demand for our products; global economic and industry conditions; the effects of regional or global health epidemics, including the severity and duration of the ongoing COVID-19 pandemic; global trade issues and changes in trade and export license policies, including the recent rules and interpretations promulgated by the U.S. Department of Commerce expanding export license requirements for certain products sold to certain entities in China; consumer demand for electronic products; the demand for semiconductors; customers' technology and capacity requirements; the introduction of new and innovative technologies, and the timing of technology transitions; our ability to develop, deliver and support new products and technologies; the concentrated nature of our customer base; acquisitions, investments and divestitures; changes in income tax laws; our ability to expand our current markets, increase market share and develop new markets; market acceptance of existing and newly developed products; our ability to obtain and protect intellectual property rights in key technologies; our ability to achieve the objectives of operational and strategic initiatives, align our resources and cost structure with business conditions, and attract, motivate and retain key employees; the variability of operating expenses and results among products and segments, and our ability to accurately forecast future results, market conditions, customer requirements and business needs; our ability to ensure compliance with applicable law, rules and regulations; and other risks and uncertainties described in our SEC filings, including our recent Forms 10-Q and 8-K. All forward-looking statements are based on management's current estimates, projections and assumptions, and we assume no obligation to update them.

Today's presentations also contain non-GAAP financial measures. Reconciliations to GAAP measures are contained in the appendix to the presentations.

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UPCOMING INVESTOR EVENTS

MASTER CLASSES

- **APRIL 6**
  - 2021 Investor Meeting

- **May 5**
  - Memory

- **June 16**
  - Logic

- **Second Half 2021**
  - Specialty semiconductors
  - Heterogeneous design and advanced packaging
  - Inspection and process control
CHAPTER 1

Market and Growth Outlook
TAKEAWAY Messages

1. ‘AI era’ = **Secular growth** and accelerated innovation
2. Applied = The **PPACt enablement** company
3. Shifting more business to **subscription-style** revenues and integrated solutions
4. Optimizing portfolio for **growth and free cash flow**
5. Operating model = Grow **EPS** 1.7x to 2x revenue

* Free cash flow = operating cash flow – net capital expenditures
** Non-GAAP adjusted EPS
Market Outlook = Innovation and Secular Growth

Applied = PPACt Enablement Company

- Unit process leadership and broadest portfolio
- Unique combinations of technologies
- Actionable insight / time to market acceleration
- Subscription style revenue growth
- Synergistic materials engineering business with high FCF

High ROI Financial Model + Attractive Shareholder Returns
VIBRANT MARKET SHAPED BY FIVE CONCURRENT INFLECTIONS

INFLECTION 1
Macro
Digital transformation of economy

INFLECTION 2
Computing
AI era

INFLECTION 3
Semiconductor Roadmap
Moore’s Law 2D scaling to new PPACt playbook

INFLECTION 4
Sustainability
Responsible growth

INFLECTION 5
Business Models
Products → outcomes
DIGITAL TRANSFORMATION

Impacts all areas of economy
(including semiconductor industry)

Redefines vectors of competition
(therefore adoption is non-discretionary)

Accelerated by pandemic

Built upon semiconductor innovation
### Data Generation By Category (ZB)

<table>
<thead>
<tr>
<th>Year</th>
<th>Human</th>
<th>Automotive</th>
<th>Industrial IoT</th>
<th>Home IoT</th>
<th>Machine</th>
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<td>0.1</td>
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<td>0.8</td>
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<td>2017</td>
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<td>2018</td>
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<td>2019</td>
<td>157</td>
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</table>

#### Source:
Applied Materials

**SEMI GROWTH NO LONGER LIMITED BY HUMAN CONSUMPTION**
<table>
<thead>
<tr>
<th>Semi content per unit</th>
<th>2015</th>
<th>2020</th>
<th>2025F</th>
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<tbody>
<tr>
<td>HIGH END SMARTPHONE</td>
<td>$100</td>
<td>$170</td>
<td>$275</td>
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<tr>
<td>AUTO (GLOBAL AVERAGE)</td>
<td>$310</td>
<td>$460</td>
<td>$690</td>
</tr>
<tr>
<td>DATACENTER SERVER (CPU + ACCELERATOR)</td>
<td>$1,620</td>
<td>$2,810</td>
<td>$5,600</td>
</tr>
<tr>
<td>SMARTHOME (GLOBAL AVERAGE)</td>
<td>$2</td>
<td>$4</td>
<td>$9</td>
</tr>
</tbody>
</table>

**SILICON CONTENT GROWING AS EVERYTHING GETS SMARTER**

Source: Applied Materials
SMARTER DEVICES BUILT UPON MORE ADVANCED AND SPECIALIZED SILICON

High-end Smartphone Silicon Content ($)

5G driving richer mix of high-end phones and more leading-edge and specialty Si content per handset

Source: Counterpoint and Applied Materials

Applied Materials External Use
<table>
<thead>
<tr>
<th>Semi $ per capita</th>
<th>2015</th>
<th>2020</th>
<th>2025F</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>1x</td>
<td>1.5x</td>
<td>2.5x</td>
</tr>
<tr>
<td>China</td>
<td>0.4x</td>
<td>0.6x</td>
<td>1.1x</td>
</tr>
<tr>
<td>India</td>
<td>0.1x</td>
<td>0.3x</td>
<td>0.5x</td>
</tr>
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</table>

**STILL IN THE EARLY INNINGS OF GLOBAL BUILD OUT**

Source: Applied Materials. Based on fixed FX as of March 2021
AI ERA WILL BE BIGGEST AGE OF COMPUTING

Semiconductor Industry Revenue ($B)

- **ERA 1: Mainframe**
- **ERA 2: PC + Internet**
- **ERA 3: Mobility**
- **ERA 4: AI**

- **1980**
  - Global PC sales surpass 25M units
  - Semi revenue = $50B
- **1990**
  - Semi revenue = $141B
- **2002**
  - First Blackberry smartphone introduced
- **2018**
  - Machine generated data surpasses human generated data
  - Semi revenue = $466B
- **2025F**
  - Semi forecast = $1T
- **2030**
  - Semi forecast = $1T

Source: SEMI, VLSI, Applied Materials
Explosion of data generation

Faster, higher-bandwidth communications to move data around

AI computing to make sense of all the data and create value

AI = ACTIONABLE INSIGHT
AI DRIVING NEW COMPUTE TECHNOLOGY LANDSCAPE

- **Extreme low power digital and analog**
- **State of the art mobile CPU, GPU, ASIC**
- **State of the art CPU, accelerators (e.g. GPU, FPGA)**
- **New ASICs and architectures (TPUs, etc.)**

*Source: Applied Materials*
<table>
<thead>
<tr>
<th>ENABLED BY</th>
<th>EXAMPLE INFLECTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>New architectures</td>
<td>▪ New ASICs and accelerators</td>
</tr>
<tr>
<td></td>
<td>▪ New memory / in-memory compute</td>
</tr>
<tr>
<td></td>
<td>▪ Specialty, CIS, power</td>
</tr>
<tr>
<td>New structures / 3D</td>
<td>▪ 3D NAND</td>
</tr>
<tr>
<td></td>
<td>▪ 3D DRAM</td>
</tr>
<tr>
<td></td>
<td>▪ GAA transistors</td>
</tr>
<tr>
<td>New materials</td>
<td>▪ Contact RC</td>
</tr>
<tr>
<td></td>
<td>▪ BEOL RC</td>
</tr>
<tr>
<td></td>
<td>▪ New channel</td>
</tr>
<tr>
<td>New ways to shrink</td>
<td>▪ EUV-enablement</td>
</tr>
<tr>
<td></td>
<td>▪ Materials-enabled patterning</td>
</tr>
<tr>
<td></td>
<td>▪ New layer-alignment approaches</td>
</tr>
<tr>
<td>Advanced packaging</td>
<td>▪ 2.5D / 3D packaging</td>
</tr>
<tr>
<td></td>
<td>▪ Heterogeneous integration / chiplets</td>
</tr>
<tr>
<td></td>
<td>▪ HBM / memory stacking</td>
</tr>
</tbody>
</table>

INDUSTRY ADOPTING NEW PPACt PLAYBOOK
Cloud Revenues Comparison ($B)

EXAMPLE OF ‘THE VALUE OF \( t \)’

‘Area Between the Curves’ worth $78B of incremental revenue to date

TIME-TO-MARKET ADVANTAGE WORTH $BILLIONS

Yr1 defined as first year revenues passed $100M

Source: Applied Materials
145k tCO₂-e
Applied’s Operations

50M tCO₂-e
Semi Industry’s Operations

900M tCO₂-e
Global Electronics

1x

100x

10,000x

Source: Applied Materials
Applied Materials External Use
<table>
<thead>
<tr>
<th>Applied’s Operations</th>
<th>Semi Industry’s Operations</th>
<th>Global Electronics</th>
</tr>
</thead>
<tbody>
<tr>
<td>1x</td>
<td>100x</td>
<td>10,000x</td>
</tr>
</tbody>
</table>

**Applied’s Operations**

- On-track for **100% renewable energy** in US by 2022 and globally by 2030
- Assessments underway to support science-based targets and TCFD by 2022
- Embedding ‘Culture of Inclusion’ across the company

**Semi Industry’s Operations**

- Significant momentum and broad engagement with **SuCCESS2030** supply chain initiative
- Strong collaboration with leading customers on **3x30 sustainability upgrades** and new product features

**Global Electronics**

- PPACt engagements across ecosystem focus on energy-efficient devices and computing

**LATEST 3rd PARTY RATINGS**

- CDP Climate: B-
- CDP Supplier Engagement: B
- MSCI: AA
- Sustainalytics: TOP RATED
Applied = PPACt Enablement Company

Unit process leadership and broadest portfolio
MATERIALS CREATION, MODIFICATION, REMOVAL, ANALYSIS

Unique combinations of technologies
INTEGRATED MATERIALS SOLUTIONS (IMS), PACKAGING

Actionable insight / time to market acceleration
ACTIONABLE INSIGHT ACCELERATOR (AI\textsuperscript{x}™), APPLIED GLOBAL SERVICES
CHAPTER 2

PPAC$t$Enablement
Applied = PPACt Enablement Company

- Unit process leadership and broadest portfolio
  - MATERIALS CREATION, MODIFICATION, REMOVAL, ANALYSIS

- Unique combinations of technologies
  - INTEGRATED MATERIALS SOLUTIONS (IMS), PACKAGING

- Actionable insight / time to market acceleration
  - ACTIONABLE INSIGHT ACCELERATOR (AI²™), APPLIED GLOBAL SERVICES
Right Time, Big Industry Need for PPAC$t$ Solutions

**REQUIREMENTS**
- Lower power (P) consumption
- Higher performance (P)
- Smaller size/area (A)
- Lower cost (C)
- Faster time-to-market (t)

**PPAC$t$ = Power, Performance, Area-Cost, Time-to-Market**
NEW INDUSTRY PLAYBOOK
FOUNDERATION IS MATERIALS ENGINEERING

ENABLED BY

- New architectures
- New structures / 3D
- New materials
- New ways to shrink
- Advanced packaging

NEW INDUSTRY PLAYBOOK FOUNDATION IS MATERIALS ENGINEERING
# Future Device Inflections Enabled by PPACt Playbook

<table>
<thead>
<tr>
<th>Category</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>New architectures / New devices</strong></td>
<td>CMOS image sensors, Power, MRAM, Analog compute-in-memory</td>
</tr>
<tr>
<td><strong>New structures / 3D</strong></td>
<td>3D NAND, 3D GAA Logic, 3D DRAM, Buried/backside power Rail</td>
</tr>
<tr>
<td><strong>New materials</strong></td>
<td>Low R wiring for Logic, HKMG for DRAM periphery, Low R contact for Logic</td>
</tr>
<tr>
<td><strong>New ways to shrink</strong></td>
<td>New hard mask + hard mask open, Multi-patterning, EUV, Self-alignment</td>
</tr>
<tr>
<td><strong>Advanced packaging</strong></td>
<td>HBM DRAM, CMOS bonded array NAND, 2.5D logic, Logic chiplets</td>
</tr>
</tbody>
</table>

**Abbreviations:**
- CMOS = Complementary metal-oxide-semiconductor
- GAA = Gate All Around
- HKMG = High-k Metal Gate
- HBM = High Bandwidth Memory
## Playbook and Growth Drivers

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<th>Category</th>
<th>Description</th>
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<td>New architectures/ New devices</td>
<td>Specialty devices, mature nodes (IoT), custom ASIC</td>
</tr>
<tr>
<td>New structures/3D</td>
<td>Future 3D devices favoring our served markets</td>
</tr>
<tr>
<td>New materials</td>
<td>Low resistance metals, high-speed DRAM periphery</td>
</tr>
<tr>
<td>New ways to shrink</td>
<td>Materials-enabled patterning, EUV enablement</td>
</tr>
<tr>
<td>Advanced packaging</td>
<td>Fine-pitch interconnect for multi-chip system integration</td>
</tr>
<tr>
<td>Accelerate time-to-market</td>
<td>Actionable insight: e-Beam, sensors + metrology + AI/ML</td>
</tr>
</tbody>
</table>

### ‘20 to ‘24
- Rev oppt. +$7B
- Rev CAGR 13%
- WFE CAGR 8 to 9%

IoT = Internet of Things  
ASIC = Application-specific Integrated Circuit  
eBeam = Electron Beam  

Applied Materials External Use
Applied = PPACt Enablement Company

- Unit process leadership and broadest portfolio
- Unique combinations of technologies
- Actionable insight / time to market acceleration
Unique Product Portfolio

**CREATE**
Materials deposition
- Epitaxy
- Metals deposition
- Dielectrics deposition
- Plating
- ALD
- Selective deposition

**SHAPE**
Materials removal
- Etch
- Planarization
- Selective removal

**MODIFY**
Materials modification
- Implant
- Thermal
- Treatments

**ANALYZE**
Materials analysis
- Optical inspection
- Defect review
- eBeam inspection
- CD-SEM

Only company with
- Process + metrology
- Full flow chip lab
- Full flow packaging lab
- META R&D accelerator

**Notes:**
Unique Product Portfolio + Integrated Solutions

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<tr>
<th>SOLUTIONS &amp; CONNECTED PRODUCTS</th>
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<tr>
<td>ICAPS</td>
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</table>

Only company with Process + metrology
Full flow chip lab
Full flow packaging lab
META R&D accelerator

Unique combinations
Breadth enables linking capabilities in new ways
# Unique Product Portfolio + Integrated Solutions

**CREATE**
Materials deposition

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<th>Epitaxy</th>
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**SOLUTIONS & CONNECTED PRODUCTS**

<table>
<thead>
<tr>
<th>ICAPS</th>
<th>IMS</th>
<th>Packaging</th>
<th>Applied AIX™</th>
</tr>
</thead>
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*Only company with*
Process + metrology
Full flow chip lab
Full flow packaging lab
META R&D accelerator

*Unique combinations*
Breadth enables linking capabilities in new ways

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*Applied AI™ is a registered trademark of Applied Materials*
### Materials Engineering Leadership

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<td><strong>Packaging</strong></td>
</tr>
<tr>
<td><strong>Applied AI</strong>†</td>
</tr>
</tbody>
</table>

#1 Foundry/Logic
#1 DRAM
#2 NAND
#1 Packaging

For non-litho process peers

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Integrating solutions, transistor, interconnect, memory, packaging
Enabling the Transistor Roadmap

Selective Epi

High-k Metal Gate

FinFET

Advanced FinFET

Gate-All-Around

2002

2007

2012

2020

2023

Unit Process Leadership

Epi
Implement
Metal Gate
RTP Anneal
CMP
Selective Removal

Integrated Materials Solutions Leadership
Gate-All-Around: More Complex Transistor Fabrication

FinFET → GAA (value gains):
- ↓ leakage/power (geometry)
- ↑ drive current/speed (stacking)
- ↑ density (narrower sheet width)
- ↓ variability (epi defined vs. litho/etch)
- ↓ 25-30% power; ↑ 10-15% performance

### KEY NEW MODULE STEPS

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
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<tbody>
<tr>
<td>1</td>
<td>Super lattice epitaxy</td>
</tr>
<tr>
<td>2</td>
<td>Selective removal</td>
</tr>
<tr>
<td>3</td>
<td>S/D stressors (etch, epitaxy)</td>
</tr>
<tr>
<td>4</td>
<td>Metal gate between nanosheets</td>
</tr>
<tr>
<td>5</td>
<td>Inner spacer (sel. removal, dep)</td>
</tr>
<tr>
<td>6</td>
<td>Super lattice metrology</td>
</tr>
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### REQUIREMENTS

<table>
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<tr>
<th>Step</th>
<th>Requirement</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>Sharp interfaces, thickness control</td>
</tr>
<tr>
<td>2</td>
<td>Etch selectivity, no nanosheet collapse</td>
</tr>
<tr>
<td>3</td>
<td>Controlled recess &amp; growth</td>
</tr>
<tr>
<td>4</td>
<td>New materials + void-free gapfill</td>
</tr>
<tr>
<td>5</td>
<td>Controlled lateral recess, gapfill</td>
</tr>
<tr>
<td>6</td>
<td>Buried defect detection, measurement</td>
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</table>

New process steps + increased complexity of existing steps

~ $1B TAM opportunity*

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*SAFE - Samsung Advanced Foundry Ecosystem, Oct 2020

100K WSPM S/D = Source / Drain

# - 25-30% power; ↑ 10-15% performance

---

Applied Materials External Use
Applied’s eBeam Inspection and Metrology Leadership

Unique challenges with 3D structures
- eBeam inspection
- Finding buried defects in 3D structures
  - 5X faster
- SiGe remain
- Gate-All-Around

Full wafer statistics needed
- eBeam metrology
- Enabling millions of data points to provide full-wafer actionable data
- In-device CD and overlay

Driving revenue growth
- Imaging + Process Control
- FY'13-FY'16: 1.0x
- FY'17-FY'20: 1.4x
- FY'21-FY'24F: 2.6x

Actionable insights. PPACt acceleration.
**Future 3D Devices Favoring Our Served Markets**

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### 3D DRAM

- Conductor materials deposition and etch
- More steps in our leadership areas: selective removal, implant, anneals, CMP, PVD, eBeam
- Materials enable 3D scaling path

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### Buried/Backside power distribution

- New steps in buried power rails, TSV and backside processing: PVD, CMP, CVD, selective removal, etch
- #1 in interconnect
- Materials/DTCO enable up to 30% area savings

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**Source:** Mayberry, IITC 2020
Applied = PPAC$t Enablement Company

- Unit process leadership and broadest portfolio
- Unique combinations of technologies
- Actionable insight / time to market acceleration
Going Beyond Unit Process Tools to Deliver Solutions

UNIT PROCESS LEADERSHIP + BRODEST PORTFOLIO

CO-OPTIMIZATION OF PROCESSES / TOOLS

INTEGRATED MATERIALS SOLUTIONS

ACTIONABLE INSIGHT ACCELERATION

FASTER TIME TO MARKET, HIGHER VALUE, STICKIER

~40% of our products now co-optimized

~30% of our products now integrated

SENORS + eBeam + AI / ML

~40% of our products now co-optimized

~30% of our products now integrated
Zooming in on Server DRAM Capacitors

Critical and challenging process module
30nm size cylinder ~ 1/250th blood cell
16 billion capacitors in 65mm² area*

*16Gb DRAM
RDIMM = Registered Dual In-Line Memory Module
Capacitor Etch Profile Variability: Showstopper for Scaling

Shrink + geometry change = High AR

Need taller mask for patterning

Higher etch variability and defects

AR = Aspect Ratio

CD = Critical Dimension
Innovations to Enable Low Variability High AR Etch Process

Draco™: New hard mask material (Higher modulus and selectivity)

New high temp etch technology (Better profile and CD uniformity)

Unique metrology (Faster and better sampling error)

Tunable film properties for selectivity
Unique precursor chemistry

Industry leading >200°C capability
Higher conductance Sym3® design

Non-destructive, bottom imaging with actionable measurements

*CD = Critical Dimension
Variability and Defect Reduction with Co-optimization

Thinner mask with lower AR + New etch

- Enabling improved CD uniformity and defect performance
- Local CD uniformity improved
- Bridging defects substantially reduced

N = Nitride

AR = Aspect Ratio
CD = Critical Dimension
Extending the Capacitor Roadmap

$1B$ cumulative TAM opportunity

>4X annual revenue growth

<table>
<thead>
<tr>
<th>Year</th>
<th>FY’20</th>
<th>FY’24F</th>
</tr>
</thead>
</table>

Breaking tradeoffs: area, capacitance, variability

Innovative technologies + acceleration with co-optimization + acceleration with metrology

Delivering node-over-node PPACt gains

↑performance, ↑yield, ↓area

DTOR / PTOR at major DRAM customers

DTOR = Development Tool of Record
PTOR = Production Tool of Record
Zooming in on Smartphone Chip Interconnects that Power Transistors

Processor chip: 88mm² size 8.57 mm x 10.23 mm

>15 layers stacked copper interconnects

Microscope cross section view of chip Source: Tech Insights

>10 billion copper interconnect via connections

3D model of a chip

11.8 billion transistors

Source: Apple
Interconnect Resistance: A Major Scaling Roadblock

Resistance (R) escalates at small dimensions

Source: G. Yeap, IEDM 2019

Higher resistance = higher dynamic power loss
>1/3rd of chip power is consumed in interconnects

Interfaces contribute >50% of resistance

More than 5 interfaces at narrow via-line connections
Atomic-level nucleation and termination of interfaces critical
Applied’s Unique Solution Lowers Interconnect Resistance

**THEN**
- **Cu LINE**
- **VIA**
- 60nm
- 3
- 2
- conventional
- bulk films
- plating

**NOW**
- **Cu LINE**
- 15nm
- 7
- 4
- selective
- interfaces
- reflow
- critical width
- # process steps
- # materials
- processes
- properties
- narrow wire fill

1/2000th human hair

~50% ↓ via R
>1B vias
5 critical levels

= scaled power savings

**Source:** G. Yeap, IEDM 2019

**Normalized via resistance**

- (single via)
- (via per layer)
- (# of layers)
- (net gains)
All 7 steps in vacuum
Unique to Applied

1. Surface Preparation
2. Interface Engineering
3. Selective ALD Deposition
4. Integrated On-Board Metrology
5. Material Modification Treatment
6. Liner Deposition
7. Copper Reflow
INTEGRATED SOLUTIONS

1. Surface Preparation
2. Interface Engineering
3. Selective ALD Deposition
4. Integrated On-Board Metrology
5. Material Modification Treatment
6. Liner Deposition
7. Copper Reflow

All 7 steps in vacuum
Unique to Applied
Enabling the Interconnect Roadmap

>2X process step growth
>3X TAM growth

>30 years of PVD market leadership
>25,000 Endura® installed base chambers

Breakthrough technologies + new materials + unique combinations + interface engineering

Delivering node-over-node PPACt gains
↓ R, ↓ power, ↑yield, ↑reliability, ↓ area
Advanced Packaging: PPAC \textit{t} Value and Requirements

Parallel, shorter interconnects
- Higher I/Os
- Reduced latency
- Lower power

3D stacking
- Tighter integration
- Many chips per package
- High bandwidth

Chiplets
- Customization
- More good chips per wafer
- Higher yield

- On-chip like interconnect
- High process complexity
- Requires broad product portfolio + combinations

*Source: Samsung HBM whitepaper 2018
\text{I/O} = \text{Input / Output}  \hspace{1cm} \text{GPU} = \text{Graphic Processing Unit}
\text{HBM} = \text{High Bandwidth Memory}  \hspace{1cm} \text{GDDR} = \text{Graphic Double Data Rate}
Advanced Packaging: System Interconnect Roadmap

- **Bump to PCB**
  - IO density: < 100 IO / mm²
  - Power: <0.5 pJ / bit

- **Microbumps**
  - IO density: < 1,000 IO / mm²
  - Power: > 0.1 pJ / bit

- **Through Silicon Via**
  - IO density: < 10,000 IO / mm²
  - Power: < 0.1 pJ / bit

- **Hybrid bonding**
  - IO density: 10,000 ~ 1,000,000 IO / mm²
  - Power: < 0.05 pJ / bit

Power efficiency (Lower interconnect length)

- Better power efficiency with finer pitch, shorter lengths
- Hybrid bonding reduces lengths to micron scale
- Future integration: Logic + Memory + PMIC

**New!**

Hybrid bonding (chiplet stacking)

**IO = Input / Output**
**PCB = Printed Circuit Board**
**PMIC = Power Management Integrated Circuit**
Hybrid Bonding: Unique Portfolio + Solutions + Partnership

<table>
<thead>
<tr>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td><strong>Dielectric stack</strong> (Nitride, Oxide) CVD</td>
<td>Surface preparation</td>
</tr>
<tr>
<td><strong>Producer® CVD</strong></td>
<td>Pick-&amp;-place, attach (D2W or W2W)</td>
</tr>
<tr>
<td><strong>Producer® Etch</strong></td>
<td><strong>Mustang™</strong></td>
</tr>
<tr>
<td><strong>Endura®</strong></td>
<td><strong>Anode and finish bonding</strong></td>
</tr>
<tr>
<td><strong>Damasene RDL / pad formation Etch</strong></td>
<td><strong>Barrier / Seed PVD</strong></td>
</tr>
<tr>
<td><strong>Cu pad fill ECD</strong></td>
<td><strong>CMP, with tuned dishing control</strong></td>
</tr>
<tr>
<td><strong>Reflexion® LK</strong></td>
<td><strong>Substrate</strong></td>
</tr>
</tbody>
</table>

**Producer® CVD**

**Producer® Etch**

**Endura®**

**Mustang™**

**Reflexion® LK**

**Surface preparation**

**Pick-&-place, attach (D2W or W2W)**

**Anode and finish bonding**

---

**CVD** = Chemical Vapor Deposition  
**RDL** = Redistribution Layer  
**PVD** = Physical Vapor Deposition  
**ECD** = Electrochemical Deposition  
**CMP** = Chemical Mechanical Planarization  
**D2W** = Die to Wafer  
**W2W** = Wafer to Wafer  
**JDA** = Joint Development Agreement
 Positioned for Growth in Packaging

Early innings of multi-year growth

Year | FY'20 | FY'24F
--- | --- | ---

~$500M

#1 in bond-pad, bump and TSV

Broad product portfolio + full-flow lab

Key eco-system partnerships

Delivering system level PPACt gains

↓ R, ↓ power, ↓ area, ↑ performance

TSV = Through Silicon Via
Industry Enabling PPAC$t$ Programs in Pipeline

Koomey’s law on compute power efficiency

Year

1.0E+06
1.0E+09
1.0E+12
1.0E+15
1.0E+18
1.0E+21

Computations per kWh

1970
1980
1990
2000
2010
2020
2030
2040

- 3D architecture | NAND stack, DRAM, logic GAA
- Transistor performance | EOT scaling for FinFET & GAA
- Low R material | contact, interconnect, bitline, wordline
- High-aspect ratio | hardmask deposition, hardmask open
- Advanced patterning | square-spacer, EUV, multi-color, alignment
- Packaging | hybrid bonding, Low R, 3D integration

Sources:

D. Hutcheson, SPIE Advanced Lithography, February 2018

GAA = Gates All Around
EOT = Equivalent Oxide Thickness
FinFET = Fin Field-effect Transistor
EUV = Extreme Ultraviolet Lithography
Applied = PPACt Enablement Company

- Unit process leadership and broadest portfolio
- Unique combinations of technologies
- Actionable insight / time to market acceleration

Applied AI\textsuperscript{X}™
Case studies
What is Actionable Insight?

“Finding the needle in a haystack”
“Meaningless data” >> actionable data
(for a given context)

High data variety
Actionable data
Scaling actionable data
Insight & results

Goal = fast, massive, affordable actionable data

Applied proprietary sensors, modeling, in-vacuum and eBeam metrology

Faster
Better

Applied AI™ platform
Big data & AI/ML

eBeam = Electron Beam
Making every stage faster and better: R&D, ramp and HVM

2X faster with 30% better process window

**Applied AI**™ **Actionable Insight Accelerator**

**real-time ability to see into the process** with innovative sensors, in-vacuum metrology

- >10,000 process possibilities per tool
- >1,000,000 possibilities per integrated flow

**massive actionable data** with unique metrology

- PROVision®
- 100X faster
- 50% higher resolution

**AI**™ **analytics platform** across all Applied tools

- ChamberAI™ ML algorithms
- AppliedPRO™
- Digital twin models
- Integrated controls

HVM = High Volume Manufacturing
Actionable Insight: Draco™ Hard Mask Case Study

Identifying actionable data (Bottom mask CD)

Scaling with unique PROVision® metrology (Spatial signatures)

Faster insights and results (Better process variability)

Integrated solutions + eBeam leadership + Applied AIx™ = Unique to Applied

- TEM in each plane
- Actionable bottom CD Draco™
- Mask top CD
- Mask bottom CD
- Final bottom CD
- Traditional SEM
- PROVision®
- 10X sampling
- 5X improvement within-wafer CDU
- 1nm range
- 0.2nm range
- CD = Critical Dimension
- TEM = Transmission Electron Microscope
- CDU = Critical Dimension Uniformity
- eBeam = Electron Beam
- Mold
- Hard Mask
- SiN
- Nitride
- Final bottom CD
ExtractAI™: A New Playbook for Process Control

**Problem**
Distinguishing defects from “noise”

**Solution**
AI technology to quickly classify defects, remove noise

- **Problem Diagram**:
  - Defect size vs. Process node
  - Red circles: Noise
  - Green triangles: Killer defect

- **Solution Diagram**:
  - Optical scan wafer map with $10^6$ unclassified potential defects
  - Actionable map of $10^3$ yield-killing defects

- **Technologies**:
  - Enlight®
  - ExtractAI
  - SEMVision®
**Applied AI<sup>X</sup>™ Accelerated R&D: Etch Process**

**Etch process complexity**
- >100 process knobs
- >10,000 combinations
- Ultra-fast pulsing (kHz)
- Transient effects
- Real-time chamber conditions
- Incoming variations

**Process recipe development time**
(Unique metrology + AppliedPRO™)

**Clean recipe development time**
(Unique ChamberAI™ sensors)

- Conventional
- Metrology
- Metrology + AppliedPRO

- Conventional
- ChamberAI

- Hard mask open etch
- Polymerizing chemistries

- 3X
- 5X
AppliedPRO: Expanding Process Windows → Higher Yield

- **Process parameters**: RF, Chemistry, Pressure, Temperature, Bias, Time
- **On-wafer metrics**: CD, Defectivity, Tilt, Composition, Stress, Ellipticity
- **Spatial signatures**: Few → many actionable data
- **Process tradeoffs**: Multi-dimensional optimum
- **Defect windows**: Process space maps
- **Recipe prediction**: Predictability & control
- **Matching across tool fleet**: PROVision®, Enlight®, on-board metrology

RF = Radio Frequency
CD = Critical Dimension
Semi Systems Growth Outlook

4-year average revenue & operating margin*

- FY’13-FY’16: $5.9B, 26.1%
- FY’17-FY’20: $10.1B, 32.8%
- FY’21-FY’24F: $16.5B, High 30s

PPACt enablement is highly valuable

- Uniquely positioned to accelerate PPACt
  - Leadership positions
  - Unique product portfolio
  - Unique combinations of technologies
  - Actionable insight acceleration

Multiple inflections, huge opportunities
Unit processes → solutions expands growth

*Non-GAAP adjusted Operating margin. For reconciliation of GAAP to non-GAAP measures, see appendix of this presentation.
CHAPTER 3
Subscription Style Revenue
Market Outlook = Innovation and Secular Growth

Applied = PPACt Enablement Company

- Unit process leadership and broadest portfolio
- Unique combinations of technologies
- Actionable insight / time to market acceleration

Synergistic materials engineering business with high FCF

Subscription style revenue growth

High ROI Financial Model + Attractive Shareholder Returns
Market Outlook = Innovation and Secular Growth

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- Unique combinations of technologies
- Actionable insight / time to market acceleration
- Subscription style revenue growth
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High ROI Financial Model + Attractive Shareholder Returns
Going Beyond Unit Process Tools to Deliver Solutions

- UNIT PROCESS LEADERSHIP + BROADEST PORTFOLIO
- CO-OPTIMIZATION OF PROCESSES / TOOLS
- INTEGRATED MATERIALS SOLUTIONS
- ACTIONABLE INSIGHT ACCELERATION

FASTER TIME TO MARKET, HIGHER VALUE, STICKIER

~40% of our products now co-optimized

~30% of our products now integrated

New

SENSORS + eBeam + AI / ML

~40% of our products
~30% of our products
INDUSTRY 1.0
Mechanization, steam power, weaving loom
1784

INDUSTRY 2.0
Mass production, assembly line, electrical energy
1870

INDUSTRY 3.0
Automation, computers and electronics
1969

INDUSTRY 4.0
Cyber Physical Systems, internet of things, networks
TODAY
SUBSCRIPTION STYLE
Revenue

- Traditional On-demand Spares and Services
- Upgrades Refurbs
- Long-term Service Agreements
- Integrated Solutions
- AIX™

- Established
- In progress
AGS Services and Spares Average Revenue

FY'13-16
- TRANSACTIONS
- SUBSCRIPTIONS

FY'17-20
- TRANSACTIONS
- SUBSCRIPTIONS
PPAC$ Acceleration Driving Demand for Subscription Services

<table>
<thead>
<tr>
<th>R&amp;D ACCELERATION</th>
<th>TRANSFER / RAMP ACCELERATION</th>
<th>HIGH VOLUME MANUFACTURING ACCELERATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applied Site</td>
<td>Customer Site</td>
<td></td>
</tr>
</tbody>
</table>

Reducing the area between the curves is worth $Bs

*Time to Output / Yield = Higher Rev / Profit*

WINNING PPAC$ RACE IS WORTH $BILLIONS TO CUSTOMERS AND ECOSYSTEM

BY 2024, CUSTOMERS WILL SPEND >$20B ANNUALLY TO MANAGE APPLIED INSTALLED BASE

STRONG DEMAND FOR SUBSCRIPTION-LIKE SERVICES TO ENABLE PPAC$ ACCELERATION

Source: Applied Materials
Strategy: From Transactions to Subscriptions

Largest installed base >40K tools

Created a new class of digital services to accelerate PPACt and HVM cost, output and yield

Moving from transactions to outcome-based subscriptions

2020: >14K tools under subscription, >90% renewal rate
Growth Impact of Shifting to Subscriptions

AGS Revenue Growth
11% CAGR

- $2.0B in FY13
- $4.2B in FY20
- Largest recurring revenue ~90%
  - Grew >2X rate of installed base
  - Revenue per tool up 1.4X

Subscriptions
- >60% of recurring revenue, up from ~40%
- Grew 1.5X rate of overall AGS

Accelerated digital services offerings
- >4K tools connected to Applied servers, up 35% in 2020
2020 Services Revenue: Company-Reported vs. VLSI*

Top 5 SPE Companies

- Company A: $1.3B (87%)
- Company B: $4.0B (56%)
- Company C: $3.2B (78%)
- Company D: $4.2B (87%)
- Applied AGS: $4.2B (92%)

APPLIED IS #1 in services revenue as reported by VLSI

Applied AGS has highest recurring services revenue among peers

*VLSI 2020 Total Service & Support Revenues

Applied Materials External Use
Accelerating Digital Service Technology

**CUSTOMER SITE**
- Applied Unique Metrology & Sensors
- Applied Server
- Applied On-Site Expert
- 100s of tools, chambers, integrated platforms
- 1,000s of processes
- >1PB of data generated per year

**REMOTE CONNECTION**
- Secure Protocols
- Expert / Remote AR Support
- Auto-Dispatch Expert / High Yield Parts
- Benchmarking
- Analytics & Digital Services

**APPLIED MATERIALS**
- >4,000 connected tools (35% growth in 2020)
- >400 application services
- Experts and consulting engineers + data scientists

1PB DATA → ACTIONABLE INSIGHTS → OUTCOMES
ACTIONABLE INSIGHTS: DAYS → HOURS → MINUTES → REAL-TIME
Subscription Drivers = R&D and Ramp Acceleration, HVM Services

TIME TO OUTPUT / YIELD = HIGHER REV / PROFIT

R&D ACCELERATION

TRANSFER / RAMP ACCELERATION

HIGH VOLUME MANUFACTURING ACCELERATION

Phase 1 of Digital Services Strategy

STRONG CUSTOMER PULL FOR FASTER AND BETTER R&D → RAMP → PPAC → SUCCESS

HVM AGREEMENTS AT ALL ADVANCED NODES AND ICAPS CUSTOMERS
Accelerating HVM – Improve Yield, Output and Cost

Applied HVM Services Case Studies

**FOUNDRY Yield**
- Before
- Applied Services
- ~6X fewer defects
- HVM

**DRAM Output**
- Before
- Applied Services
- +7%

**NAND Output and Yield**
- Before
- Applied Services
- Output and process margin both up
- >4%

**ACCELERATING BETTER OUTCOMES**

>14K tools under long-term agreements

HVM agreements at all advanced nodes and ICAPS customers

>90% subscription renewal rate

Connected tools +35% in 2020
Subscription Drivers = R&D and Ramp Acceleration, HVM Services

Phase 1 of Digital Services Strategy

STRONG CUSTOMER PULL FOR FASTER AND BETTER R&D → RAMP → PPAC → SUCCESS

HVM AGREEMENTS AT ALL ADVANCED NODES AND ICAPS CUSTOMERS
Accelerating Ramps

2X Faster and 30% Better Process Margins* (Drive Improved Yield)

CVD Hardmask Example

61% better process margin delivers higher yield and 36% output increase

STRONG CUSTOMER PULL FOR FASTER AND BETTER RAMPS
DUE TO INCREASING COMPLEXITY AND FAB COSTS (> $20B COST FOR 5NM LOGIC FAB)

* Average of last 50 ramp acceleration projects

Applied Materials External Use
Subscription Drivers = R&D and Ramp Acceleration, HVM Services

STRONG CUSTOMER PULL FOR FASTER AND BETTER R&D → RAMP → PPAC→SUCCESS
HVM AGREEMENTS AT ALL ADVANCED NODES AND ICAPS CUSTOMERS
Accelerating R&D (Faster and Better)

Applied Digital Services
75% Faster R&D + Higher Yield

- Time Savings
  - Baseline: 75%
  - Digital Services: 75%

- Uniformity Improvement
  - Baseline: 50%
  - Digital Services: 50%

Applied Surface Engineering
4X ↓ particles → Higher Yield + 5% ↑ Output

- 4x Fewer Particles
  - Standard Coating: 50%
  - Applied Advanced Coating: 50%

R&D ACCELERATION TO WIN PPAC t RACE
INCREASED SERVICES PENETRATION BY 4X
Profitable Growth by Accelerating PPAC

AGS 4 Year-Averages

FY’13-FY’16
$2.3B 25%

FY’17-FY’20
$3.7B 28%

FY’21-FY’24
$5.4B Low 30s%

Revenue Targets

FY’20 → FY’24 Targets

Grow revenue by ~$2B, >45%
Grow OP* by >3pts
Grow subscriptions to ~70% of recurring revenue
Grow revenue per tool by another 20%

LARGEST INSTALLED BASE, 90% RECURRING REVENUE
UNIQUE DIGITAL SERVICES + GLOBAL NETWORK OF FAB EXPERTISE

*Non-GAAP adjusted operating margin and operating profit. For reconciliation of GAAP to non-GAAP measures, see appendix of this presentation.

Applied Materials External Use
SUBSCRIPTION STYLE
Revenue

- Traditional On-demand Spares and Services
- Upgrades Refurbs
- Long-term Service Agreements
- Integrated Solutions
- AIX™

Outcomes:
- Established
- In progress

Transactions

Value Delivery

Subscriptions

Value Capture
<table>
<thead>
<tr>
<th>Company</th>
<th>Service ($B)</th>
<th>Service Rank</th>
<th>Systems ($B)</th>
<th>Systems Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>APPLIED MATERIALS</td>
<td>3.82</td>
<td>1</td>
<td>12.54</td>
<td>1</td>
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<tr>
<td>COMPANY A</td>
<td>3.60</td>
<td>2</td>
<td>11.76</td>
<td>2</td>
</tr>
<tr>
<td>COMPANY B</td>
<td>2.50</td>
<td>3</td>
<td>8.37</td>
<td>4</td>
</tr>
<tr>
<td>COMPANY C</td>
<td>2.20</td>
<td>4</td>
<td>9.72</td>
<td>3</td>
</tr>
<tr>
<td>COMPANY D</td>
<td>1.20</td>
<td>5</td>
<td>4.20</td>
<td>5</td>
</tr>
</tbody>
</table>

#1 IN SYSTEMS AND SERVICES REVENUE

Source: VLSI 2020 Total Service & Support Revenues
CHAPTER 4
Synergistic FCF Business
Market Outlook = Innovation and Secular Growth

Applied = PPACt Enablement Company

- Unit process leadership and broadest portfolio
- Unique combinations of technologies
- Actionable insight / time to market acceleration

Subscription style revenue growth

Synergistic materials engineering business with high FCF

High ROI Financial Model + Attractive Shareholder Returns
LCD Emergence and Growth

1991: Applied Materials enters market

CRT

1930s

1990s/2000s

LCD

2020

2030+

Mobile

OLED

TV/IT

Future
<table>
<thead>
<tr>
<th>PPAC$t</th>
<th>In Displays</th>
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<tbody>
<tr>
<td>POWER</td>
<td>Power efficiency</td>
</tr>
<tr>
<td>PERFORMANCE</td>
<td>Front-of-screen experience</td>
</tr>
<tr>
<td>AREA-COST</td>
<td>Lifetime</td>
</tr>
<tr>
<td>TIME-TO-MARKET</td>
<td>Form factor</td>
</tr>
<tr>
<td></td>
<td>Screen size</td>
</tr>
<tr>
<td></td>
<td>Cost</td>
</tr>
<tr>
<td></td>
<td>Time-to-market</td>
</tr>
</tbody>
</table>
OLED Wave Drives Higher Display Fab Equipment (DFE)

- CRT (1991) - Applied Materials enters market
- LCD (Average DFE 2000-15 $9B)
- OLED (Average DFE 2016-21 $15B)
- Mobile OLED
- TV/IT OLED

Future:
- Micro LED
- Natural 3D displays

- 2020
- 2030+
Applied SAM Increases with New Technologies

**Applied SAM*: Mobility**

- **Growth Multiplier**
  - LCD: 10
  - Rigid OLED: 18
  - Flex OLED: 27
  - Adv. Flex OLED: 34

- **~# of CVD / PVD tools per Fab***
  - LCD
  - Rigid OLED
  - Flex OLED
  - Adv. Flex OLED

**OLED ADOPTION**
(Source: DSCC)
~52% in '24 vs. 39% in '21

**NEW FACTORIES**
(2021-2024)
~13

**FY24 EXPECTED REVENUE**
~$1B

**AREA GROWTH**
(2021-2024)
~6% CAGR

**NEW FACTORIES**
(2021-2024)
~12

**FY24 EXPECTED REVENUE**
~$1B

**OLED AREA GROWTH**
(2021-2024)
~62% CAGR

**NEW FACTORIES**
(2021-2024)
~1.5

**FY24 EXPECTED REVENUE**
>$200M

* Deposition products only; Mobility fab size is 30K/month; TV and IT fab size is 60K/month

Applied Materials External Use
### PPAC$t$ in Displays

<table>
<thead>
<tr>
<th>PPAC$t$</th>
<th>In Displays</th>
<th>EXAMPLES OF Our IMS Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>POWER</td>
<td>Power efficiency</td>
<td>LTPO IMS</td>
</tr>
<tr>
<td>PERFORMANCE</td>
<td>Front-of-screen experience</td>
<td>OLED high-perf. backplane</td>
</tr>
<tr>
<td></td>
<td>Lifetime</td>
<td>TFE</td>
</tr>
<tr>
<td>AREA-COST</td>
<td>Form factor</td>
<td>ALD, HDP</td>
</tr>
<tr>
<td></td>
<td>Screen size</td>
<td>Gen 10, MoX IMS</td>
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<tr>
<td></td>
<td>Cost</td>
<td>Substrate scaling</td>
</tr>
<tr>
<td>TIME-TO-MARKET</td>
<td>Time-to-market</td>
<td>Yield management</td>
</tr>
</tbody>
</table>
Display has contributed increasing operating margin

EXPECT CONTINUED GROWTH

* Non-GAAP adjusted operating profit and margin. For reconciliation of GAAP to non-GAAP measures, see appendix of this presentation.
CHAPTER 5

High ROI Financial Model
Market Outlook = Innovation and Secular Growth

Applied = PPACt Enablement Company
- Unit process leadership and broadest portfolio
- Unique combinations of technologies
- Actionable insight / time to market acceleration
- Subscription style revenue growth
- Synergistic materials engineering business with high FCF

High ROI Financial Model + Attractive Shareholder Returns
Historical WFE

- **1990 – 2000**: Equipment industry grows with Semi
- **2000 – 2013**: No growth cyclical / transition to 300mm
- **2013 – 2020**: Equipment industry grows with Semi

Source: Gartner, VLSI, Applied Materials
Historical WFE Intensity

WFE / Semi Revenue

- **2000-2013:**
  - 300mm productivity
  - Greater automation
  - Customer consolidation
  - Foundry model

- **2014-2020:**
  - More demand drivers
  - Increasing complexity
  - Slowing of 2D scaling
  - No 450mm wafer

Source: Gartner, VLSI, SIA
2009 excluded from data as outlier due to financial crisis

Applied Materials External Use
Strong Secular Growth

2 Year Combined WFE

Source: Gartner, VLSI, Applied Materials

~$57B
'12'+13, '13'+14, '14'+15, '15'+16, '16'+17, '17'+18, '18'+19, '19'+20, '20'+21E, '21E'+22F

~$113B

Annual WFE

>120%

$28B
2013, 2020

HIGHER HIGHS AND HIGHER LOWS
AI ERA WILL BE BIGGEST AGE OF COMPUTING

Source: SEMI, VLSI, Applied Materials

Applied Materials External Use
Market Evolution
Layers of Demand Drivers

PRESENTED IN
2017 Analyst Day

Entering a NEW ERA of growth

PC + Internet Era

Mobile + Social Media Era

A.I. + Big Data Era

“A.I. related growth will boost global GDP by $16T by 2030”
– The Economist / PwC

“Data is to this century what oil was to the last one: a driver of growth and change”
– The Economist

2000 2010 2017 2020
CUSTOMER PROFITABILITY GROWING EVEN FASTER THAN INVESTMENTS

- Healthy markets
- Diversification of demand
- Rational investments
- Sustainable profitability outlook

Device % splits are Applied Materials estimates
Top 3 Customers include Intel, Samsung and TSMC for Foundry & Logic; Hynix, Micron and Samsung for Memory
Market Outlook = Innovation and Secular Growth

Applied = PPACt Enablement Company

- Unit process leadership and broadest portfolio
- Unique combinations of technologies
- Actionable insight / time to market acceleration
- Subscription style revenue growth
- Synergistic materials engineering business with high FCF

High ROI Financial Model + Attractive Shareholder Returns
Creating Significant Shareholder Value

FY’12 to FY’20 Growth

- Growing profitability significantly faster than revenue
- While investing to drive future growth

*Non-GAAP adjusted operating profit and EPS. For reconciliation of GAAP to non-GAAP measures, see appendix of this presentation.
Accelerating Revenue Growth

- Outperforming the market
- Driving product momentum
- Increasing recurring revenue
- Delivering strong execution

$8.7B  $10.8B  $17.2B
FY'12  FY'16  FY'20

+97%
Expanding Margins

Gross Margin*

- FY'12: 40.9%
- FY'16: 43.2%
- FY'20: 45.1%

Operating Margin*

- FY'12: 15.8%
- FY'16: 21.7%
- FY'20: 26.3%

- Innovative solutions
- Differentiated products
- Optimized portfolio
- Flexible operating footprint
- Disciplined execution

*Non-GAAP adjusted gross margin and operating margin. For reconciliation of GAAP to non-GAAP measures, see appendix of this presentation.
Investing for Growth

- Enable PPACt playbook
- Develop differentiated products
- Accelerate customer roadmaps

R&D Expenses*

- *Non-GAAP adjusted R&D and operating expenses (Opex). For reconciliation of GAAP to non-GAAP measures, see appendix of this presentation.

~55% of Opex*

~70% of Opex*

FY'12

FY'16

FY'20

~80%
Significant Momentum Across Device Types

BALANCED PORTFOLIO = AGNOSTIC TO MIX

Source: Gartner, VLSI, Applied Materials
Historical WFE Mix

- **Foundry / Logic vs. Memory mix consistent over time**
  - 10-year and 20-year averages: Foundry / Logic >55%
  - Foundry / Logic > Memory in 17 of past 20 years

Source: Gartner, VLSI, Applied Materials
All Segments Driving Strong Profitable Growth

**Semi Systems**
- 4 Year Avg. Revenues: $5.9B, $10.1B, $16.5B
- Operating Margin: 26.1%, 32.8%
- 4 Year Avg. Operating Margin: High 30s

**Services**
- 4 Year Avg. Revenues: $2.3B, $3.7B, $5.4B
- Operating Margin: 25.0%, 28.1%
- 4 Year Avg. Operating Margin: Low 30s

**Display**
- 4 Year Avg. Revenues: $0.9B, $1.9B, $2.2B
- Operating Margin: 20.6%, 23.5%
- 4 Year Avg. Operating Margin: High 20s

*Non-GAAP adjusted operating margin. For reconciliation of GAAP to non-GAAP measures, see appendix of this presentation.*
### 2024 Financial Model

<table>
<thead>
<tr>
<th></th>
<th>FY’20</th>
<th>FY’24 MODEL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>LOW</td>
<td>BASE</td>
</tr>
<tr>
<td><strong>Revenue</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semi Systems</td>
<td>$11.4B</td>
<td>$16.2B</td>
</tr>
<tr>
<td>Services</td>
<td>$4.2B</td>
<td>$5.6B</td>
</tr>
<tr>
<td>Display</td>
<td>$1.6B</td>
<td>$1.6B</td>
</tr>
<tr>
<td><strong>GM%</strong></td>
<td>45.1%</td>
<td>47.5%</td>
</tr>
<tr>
<td><strong>OP%</strong></td>
<td>26.3%</td>
<td>30.6%</td>
</tr>
<tr>
<td><strong>EPS</strong></td>
<td>$4.17</td>
<td>$7.00</td>
</tr>
</tbody>
</table>

2024 model assumes non-GAAP adjusted tax rate of 12.0% and weighted average shares of 875M.

*Assumes non-GAAP adjustments as applicable for future periods. For reconciliation of GAAP to non-GAAP measures, see appendix of this presentation.
## 2024 Financial Model

<table>
<thead>
<tr>
<th></th>
<th>FY'20</th>
<th>FY'24 MODEL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Revenue</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semi Systems</td>
<td>$11.4B</td>
<td>$18.4B</td>
</tr>
<tr>
<td>Services</td>
<td>$4.2B</td>
<td>$6.1B</td>
</tr>
<tr>
<td>Display</td>
<td>$1.6B</td>
<td>$2.2B</td>
</tr>
<tr>
<td><strong>GM%</strong></td>
<td>45.1%</td>
<td>48.5%</td>
</tr>
<tr>
<td><strong>OP%</strong></td>
<td>26.3%</td>
<td>32.4%</td>
</tr>
<tr>
<td><strong>EPS</strong></td>
<td>$4.17</td>
<td>$8.50</td>
</tr>
</tbody>
</table>

### Applied Materials 2024 Model
- **BASE**
  - Revenue: $26.7B (Applied growth >55%)
  - Semi Systems: $18.4B (Semi Systems growth >60%)
  - Services: $6.1B (Services growth >45%)
  - Display: $2.2B (Display growth >35%)
  - GM%: 48.5%
  - OP%: 32.4%
  - EPS: $8.50 (EPS growth >2x)

*Expanding margins, strong operating leverage while investing for growth.*

**EPS Growth Assumptions:**
- 2024 model assumes non-GAAP adjusted tax rate of 12.0% and weighted average shares of 875M.
- Assumes non-GAAP adjustments as applicable for future periods. For reconciliation of GAAP to non-GAAP measures, see appendix of this presentation.

*NON-GAAP ADJUSTED*
Earnings Growth Drivers

FY’20 to FY’24F GROWTH

Revenue  >55%
OP$       >90%
EPS       >100%

* Buyback includes minimal contribution from interest & tax
** Non-GAAP adjusted gross margin (GM), operating profit (OP) and EPS. For reconciliation of GAAP to non-GAAP measures, see appendix of this presentation. Bridge calculation uses forecasted average tax rate and weighted average shares.
Revenue Growth Drivers

FY'20 to FY'24F GROWTH
- Total AMAT >55%
- Semi >60%
- Services >45%
- Display >35%
Semi Revenue Growth Drivers

Core

<table>
<thead>
<tr>
<th></th>
<th>FY'20</th>
<th>FY'24F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Growth</td>
<td>$4.8B</td>
<td>$4.8B</td>
</tr>
<tr>
<td></td>
<td>&gt;30%</td>
<td>&gt;30%</td>
</tr>
</tbody>
</table>

PPAC\text{tEnablement}

<table>
<thead>
<tr>
<th></th>
<th>FY'20</th>
<th>FY'24F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Growth</td>
<td>$6.5B</td>
<td>$6.5B</td>
</tr>
<tr>
<td></td>
<td>&gt;80%</td>
<td>&gt;80%</td>
</tr>
</tbody>
</table>

Growth Drivers

- Enabling new architectures, structures and devices
- DRAM leadership with new materials
- ICAPS\text{*}
- Advanced packaging solutions
- Broadest portfolio including e-beam and on-board metrology

UNIQUE INTEGRATED MATERIALS SOLUTIONS AND AI\text{x}™ – ACTIONABLE INSIGHT ACCELERATOR

\*Internet of Things, Communications, Automotive, Power, Sensors
Margin Expansion Continues

Gross Margin*

<table>
<thead>
<tr>
<th>Year</th>
<th>FY'12</th>
<th>FY'16</th>
<th>FY'20</th>
<th>FY'24F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Margin</td>
<td>40.9%</td>
<td>43.2%</td>
<td>45.1%</td>
<td>48.5%</td>
</tr>
</tbody>
</table>

Operating Margin*

<table>
<thead>
<tr>
<th>Year</th>
<th>FY'12</th>
<th>FY'16</th>
<th>FY'20</th>
<th>FY'24F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Margin</td>
<td>15.8%</td>
<td>21.7%</td>
<td>26.3%</td>
<td>32.4%</td>
</tr>
</tbody>
</table>

*Non-GAAP adjusted gross margin and operating Margin. For reconciliation of GAAP to non-GAAP measures, see appendix of this presentation.

Continue optimized investment and execution

Valuable PPACt innovations
Fast growing ICAPS and packaging businesses
Fuel for Growth

- Accelerate new PPACt playbook
- Deliver unique solutions
- Solve **higher**-value problems
- Transition from products to outcomes

*Non-GAAP adjusted R&D and operating expenses (Opex). For reconciliation of GAAP to non-GAAP measures, see appendix of this presentation.*
Strong FCF Performance

PROFITABLE GROWTH YIELDS STRONG FCF

~280% growth from FY'12 to FY'24F
## Capital Allocation Priorities

<table>
<thead>
<tr>
<th>PRINCIPLES</th>
<th>PERFORMANCE (FY’13 to FY’20)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Invest in attractive growth opportunities</td>
<td>$14.0B R&amp;D and M&amp;A</td>
</tr>
<tr>
<td>Maintain strong and flexible balance sheet</td>
<td>$2.7B Capital Expenditures</td>
</tr>
<tr>
<td>Distribute excess cash through share repurchases and dividends</td>
<td>$13.0B Share Repurchase</td>
</tr>
<tr>
<td></td>
<td>$4.5B Dividends</td>
</tr>
</tbody>
</table>
Disciplined Capital Allocation

**Dividend Growth**
- 14% CAGR
- Q2’21 Declared: $0.24
- Q2’05 Initiated: $0.03

**Share Count Reduction**
- Q3’04 Peak: 1.70B
- Q1’21 Current: 0.92B
- 46% Reduction

**Commitment to Return 80% – 100% of FCF**

- $20B of shareholder distributions in past 10 years
- Increased dividend by 9% in March 2021
- Announced new $7.5B authorization in March 2021
In Summary

- Accelerating markets with increasing technical complexity
- Robust innovation pipeline fueling future growth
- Significantly outperforming markets
- Strong execution driving significant margin expansion, earnings growth and FCF generation
- Disciplined capital allocation

STRONG SHAREHOLDER VALUE CREATION
TAKEAWAY
Messages

1. ‘AI era’ = **Secular growth** and accelerated innovation

2. Applied = The **PPACt enablement** company

3. Shifting more business to **subscription-style** revenues and integrated solutions

4. Optimizing portfolio for **growth and free cash flow**

5. Operating model = Grow **EPS**$^{*}$ 1.7x to 2x revenue and **return 80 to 100% of FCF** to shareholders

---

* Non-GAAP adjusted EPS

Applied Materials External Use
## 2024 Financial Model

<table>
<thead>
<tr>
<th></th>
<th>FY'12</th>
<th>FY'16</th>
<th>FY'20</th>
<th>FY'24 MODEL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Revenue</strong></td>
<td>$8.7B</td>
<td>$10.8B</td>
<td>$17.2B</td>
<td>$26.7B</td>
</tr>
<tr>
<td>Semi Systems</td>
<td>$5.5B</td>
<td>$6.9B</td>
<td>$11.4B</td>
<td>$18.4B</td>
</tr>
<tr>
<td>Services</td>
<td>$2.2B</td>
<td>$2.6B</td>
<td>$4.2B</td>
<td>$6.1B</td>
</tr>
<tr>
<td>Display</td>
<td>$0.6B</td>
<td>$1.2B</td>
<td>$1.6B</td>
<td>$2.2B</td>
</tr>
<tr>
<td><strong>GM%</strong></td>
<td>40.9%</td>
<td>43.2%</td>
<td>45.1%</td>
<td>48.5%</td>
</tr>
<tr>
<td><strong>OP%</strong></td>
<td>15.8%</td>
<td>21.7%</td>
<td>26.3%</td>
<td>32.4%</td>
</tr>
<tr>
<td><strong>EPS</strong></td>
<td>$0.75</td>
<td>$1.75</td>
<td>$4.17</td>
<td>$8.50</td>
</tr>
</tbody>
</table>

2024 model assumes non-GAAP adjusted tax rate of 12.0% and weighted average shares of 875M.

*Assumes non-GAAP adjustments as applicable for future periods. For reconciliation of GAAP to non-GAAP measures, see appendix of this presentation.
APPENDIX

GAAP to Non-GAAP Reconciliations
Use of Non-GAAP Adjusted Financial Measures

Applied provides investors with certain non-GAAP adjusted financial measures, which are adjusted for the impact of certain costs, expenses, gains and losses, including certain items related to mergers and acquisitions; restructuring and severance charges and any associated adjustments; certain incremental expenses related to COVID-19; impairments of assets; gain or loss on strategic investments; loss on early extinguishment of debt; certain income tax items and other discrete adjustments. Reconciliations of these non-GAAP measures to the most directly comparable financial measures calculated and presented in accordance with GAAP are provided in the appendix to this presentation.

Management uses these non-GAAP adjusted financial measures to evaluate the company's operating and financial performance and for planning purposes, and as performance measures in its executive compensation program. Applied believes these measures enhance an overall understanding of its performance and investors' ability to review the company's business from the same perspective as the company's management and facilitate comparisons of this period's results with prior periods on a consistent basis by excluding items that management does not believe are indicative of Applied's ongoing operating performance. There are limitations in using non-GAAP financial measures because the non-GAAP financial measures are not prepared in accordance with generally accepted accounting principles, may be different from non-GAAP financial measures used by other companies, and may exclude certain items that may have a material impact upon our reported financial results. The presentation of this additional information is not meant to be considered in isolation or as a substitute for the directly comparable financial measures prepared in accordance with GAAP.
### UNAUDITED RECONCILIATION OF GAAP TO NON-GAAP ADJUSTED RESULTS

(In millions, except EPS and percentages)

#### Non-GAAP Adjusted Gross Profit

<table>
<thead>
<tr>
<th></th>
<th>FY2012</th>
<th>FY2016</th>
<th>FY2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reported gross profit - GAAP basis</td>
<td>$3,313</td>
<td>$4,511</td>
<td>$7,692</td>
</tr>
<tr>
<td>Certain items associated with acquisitions¹</td>
<td>253</td>
<td>167</td>
<td>37</td>
</tr>
<tr>
<td>Certain incremental expenses related to COVID-19²</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Restructuring charges and asset impairments</td>
<td>-</td>
<td>(2)</td>
<td>-</td>
</tr>
<tr>
<td><strong>Non-GAAP adjusted gross profit</strong></td>
<td>$3,566</td>
<td>$4,676</td>
<td>$7,752</td>
</tr>
<tr>
<td>Non-GAAP adjusted gross margin</td>
<td>40.9%</td>
<td>43.2%</td>
<td>45.1%</td>
</tr>
</tbody>
</table>

#### Non-GAAP Adjusted Operating Income

<table>
<thead>
<tr>
<th></th>
<th>FY2012</th>
<th>FY2016</th>
<th>FY2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reported operating income - GAAP basis</td>
<td>$411</td>
<td>$2,152</td>
<td>$4,365</td>
</tr>
<tr>
<td>Certain items associated with acquisitions¹</td>
<td>298</td>
<td>188</td>
<td>54</td>
</tr>
<tr>
<td>Acquisition integration and deal costs</td>
<td>81</td>
<td>2</td>
<td>80</td>
</tr>
<tr>
<td>Certain incremental expenses related to COVID-19²</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Impairment of goodwill and intangible assets</td>
<td>421</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Restructuring charges and asset impairments</td>
<td>168</td>
<td>(3)</td>
<td>-</td>
</tr>
<tr>
<td>Other gains, losses or charges</td>
<td>-</td>
<td>8</td>
<td>-</td>
</tr>
<tr>
<td><strong>Non-GAAP adjusted operating income</strong></td>
<td>$1,379</td>
<td>$2,347</td>
<td>$4,529</td>
</tr>
<tr>
<td>Non-GAAP adjusted operating margin</td>
<td>15.8%</td>
<td>21.7%</td>
<td>26.3%</td>
</tr>
</tbody>
</table>

#### Non-GAAP Adjusted Earnings Per Diluted Share

<table>
<thead>
<tr>
<th></th>
<th>FY2012</th>
<th>FY2016</th>
<th>FY2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reported earnings per diluted share - GAAP basis</td>
<td>$0.09</td>
<td>$1.54</td>
<td>$3.92</td>
</tr>
<tr>
<td>Certain items associated with acquisitions¹</td>
<td>0.19</td>
<td>0.16</td>
<td>0.05</td>
</tr>
<tr>
<td>Acquisition integration and deal costs</td>
<td>0.05</td>
<td>-</td>
<td>0.07</td>
</tr>
<tr>
<td>Certain incremental expenses related to COVID-19²</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Impairment of goodwill and intangible assets</td>
<td>0.33</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Restructuring charges and asset impairments</td>
<td>0.10</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Realized loss (gain) on strategic investments, net</td>
<td>0.01</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Unrealized loss (gain) on strategic investments, net</td>
<td>-</td>
<td>-</td>
<td>(0.01)</td>
</tr>
<tr>
<td>Loss on early extinguishment of debt</td>
<td>-</td>
<td>-</td>
<td>0.03</td>
</tr>
<tr>
<td>Other gains, losses or charges, net</td>
<td>-</td>
<td>0.01</td>
<td>-</td>
</tr>
<tr>
<td>Income tax effects related to intra-entity intangible asset transfers</td>
<td>-</td>
<td>-</td>
<td>0.12</td>
</tr>
<tr>
<td>Resolution of prior years' income tax filings and other tax items</td>
<td>(0.02)</td>
<td>0.04</td>
<td>(0.04)</td>
</tr>
<tr>
<td><strong>Non-GAAP adjusted earnings per diluted share</strong></td>
<td>$0.75</td>
<td>$1.75</td>
<td>$4.17</td>
</tr>
<tr>
<td>Weighted average number of diluted shares</td>
<td>1,277</td>
<td>1,116</td>
<td>923</td>
</tr>
</tbody>
</table>

¹. These items are incremental charges attributable to completed acquisitions, consisting of amortization of purchased intangible assets.

². Temporary incremental employee compensation during the COVID-19 pandemic.
### APPLIED MATERIALS, INC.  
**UNAUDITED RECONCILIATION OF GAAP TO NON-GAAP ADJUSTED RESULTS**  
**OPERATING EXPENSES**  
(In millions)  

<table>
<thead>
<tr>
<th></th>
<th>FY2012</th>
<th>FY2016</th>
<th>FY2020</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Reported operating expenses - GAAP basis</strong></td>
<td>$2,902</td>
<td>$2,359</td>
<td>$3,327</td>
</tr>
<tr>
<td>Certain items associated with acquisitions¹</td>
<td>(45)</td>
<td>(21)</td>
<td>(17)</td>
</tr>
<tr>
<td>Acquisition integration and deal costs</td>
<td>(81)</td>
<td>(2)</td>
<td>(80)</td>
</tr>
<tr>
<td>Certain incremental expenses related to COVID-19²</td>
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<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Restructuring charges and asset impairments</td>
<td>(168)</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Other gains, losses or charges</td>
<td>-</td>
<td>(8)</td>
<td>-</td>
</tr>
<tr>
<td><strong>Non-GAAP adjusted operating expenses</strong></td>
<td>$2,187</td>
<td>$2,329</td>
<td>$3,223</td>
</tr>
</tbody>
</table>

¹ These items are incremental charges attributable to completed acquisitions, consisting of amortization of purchased intangible assets.  
² Temporary incremental employee compensation during the COVID-19 pandemic.

### APPLIED MATERIALS, INC.  
**UNAUDITED RECONCILIATION OF GAAP TO NON-GAAP ADJUSTED RESULTS**  
**RESEARCH, DEVELOPMENT AND ENGINEERING (R&D) EXPENSES**  
(In millions)  

<table>
<thead>
<tr>
<th></th>
<th>FY2012</th>
<th>FY2016</th>
<th>FY2020</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Reported R&amp;D expenses- GAAP basis</strong></td>
<td>$1,237</td>
<td>$1,540</td>
<td>$2,234</td>
</tr>
<tr>
<td>Certain items associated with acquisitions¹</td>
<td>(4)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Acquisition integration and deal costs</td>
<td>(3)</td>
<td>-</td>
<td>(3)</td>
</tr>
<tr>
<td>Certain incremental expenses related to COVID-19²</td>
<td>-</td>
<td>-</td>
<td>(6)</td>
</tr>
<tr>
<td><strong>Non-GAAP adjusted R&amp;D expenses</strong></td>
<td>$1,230</td>
<td>$1,540</td>
<td>$2,225</td>
</tr>
</tbody>
</table>
## Applied Materials, Inc.
### Unaudited Reconciliation of GAAP to Non-GAAP Adjusted Results
#### Semiconductor Systems Operating Results

<table>
<thead>
<tr>
<th></th>
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<th></th>
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</thead>
<tbody>
<tr>
<td>Reported operating income - GAAP basis</td>
<td>$876</td>
<td>$1,391</td>
<td>$1,410</td>
<td>$1,807</td>
<td>$3,177</td>
<td>$3,441</td>
<td>$2,464</td>
<td>$3,714</td>
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<tr>
<td>Certain items associated with acquisitions</td>
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<td>172</td>
<td>178</td>
<td>184</td>
<td>184</td>
<td>183</td>
<td>43</td>
<td>41</td>
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<tr>
<td>Acquisition integration costs</td>
<td>(2)</td>
<td>2</td>
<td>-</td>
<td>-</td>
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<td>-</td>
<td>-</td>
<td>3</td>
</tr>
<tr>
<td>Certain incremental expenses related to COVID-19</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>20</td>
</tr>
<tr>
<td>Restructuring charges and asset impairments</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Non-GAAP adjusted operating income</td>
<td>$1,050</td>
<td>$1,565</td>
<td>$1,588</td>
<td>$1,991</td>
<td>$3,361</td>
<td>$3,624</td>
<td>$2,507</td>
<td>$3,778</td>
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<tr>
<td>Non-GAAP adjusted operating margin (% of net sales)</td>
<td>22.0%</td>
<td>26.2%</td>
<td>25.9%</td>
<td>29.0%</td>
<td>35.2%</td>
<td>34.3%</td>
<td>27.8%</td>
<td>33.2%</td>
</tr>
</tbody>
</table>

1. These items are incremental charges attributable to completed acquisitions, consisting of amortization of purchased intangible assets.
2. Temporary incremental employee compensation during the COVID-19 pandemic.

Starting in fiscal 2014, Display and Adjacent Markets segment balances included flexible coating systems and display upgrade equipment results. In prior periods, flexible coating systems results were included within the Energy and Environmental Solutions segment and display upgrade equipment results were included within the Applied Global Services segment.

Starting in fiscal 2018, balances reflect accounting under ASC 606 Revenue from Contracts with Customers. Prior periods were accounted for under ASC 605 Revenue Recognition.

Note: The reconciliation of GAAP and non-GAAP adjusted segment results above does not include certain revenues, costs of products sold and operating expenses that are reported within corporate and other and included in consolidated operating income.
## APPLIED MATERIALS, INC.
### UNAUDITED RECONCILIATION OF GAAP TO NON-GAAP ADJUSTED RESULTS
### APPLIED GLOBAL SERVICES OPERATING RESULTS

<table>
<thead>
<tr>
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<th></th>
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</thead>
<tbody>
<tr>
<td>Reported operating income - GAAP basis</td>
<td>$436</td>
<td>$538</td>
<td>$630</td>
<td>$682</td>
<td>$817</td>
<td>$1,102</td>
<td>$1,101</td>
<td>$1,127</td>
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<td>1</td>
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<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Acquisition integration costs</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>3</td>
<td>2</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Certain incremental expenses related to COVID-19</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>8</td>
</tr>
<tr>
<td>Restructuring charges and asset impairments</td>
<td>2</td>
<td>-</td>
<td>3</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Other gains, losses or charges</td>
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<td>-</td>
<td>(1)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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</tr>
<tr>
<td>Non-GAAP adjusted operating income</td>
<td>$443</td>
<td>$541</td>
<td>$633</td>
<td>$683</td>
<td>$821</td>
<td>$1,104</td>
<td>$1,101</td>
<td>$1,135</td>
</tr>
<tr>
<td>Non-GAAP adjusted operating margin (% of net sales)</td>
<td>21.9%</td>
<td>25.6%</td>
<td>25.9%</td>
<td>26.4%</td>
<td>27.2%</td>
<td>29.4%</td>
<td>28.6%</td>
<td>27.3%</td>
</tr>
</tbody>
</table>

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# Applied Materials, Inc.

**Unaudited Reconciliation of GAAP to Non-GAAP Adjusted Results**

**Display and Adjacent Markets Operating Results**

<table>
<thead>
<tr>
<th></th>
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<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Reported operating income - GAAP basis</strong></td>
<td>$74</td>
<td>$202</td>
<td>$191</td>
<td>$245</td>
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<td>$574</td>
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<td>-</td>
<td>-</td>
<td>1</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td><strong>Certain incremental expenses related to COVID-19</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td><strong>Non-GAAP adjusted operating income</strong></td>
<td>$80</td>
<td>$206</td>
<td>$194</td>
<td>$245</td>
<td>$590</td>
<td>$589</td>
<td>$307</td>
<td>$304</td>
</tr>
<tr>
<td><strong>Non-GAAP adjusted operating margin (% of net sales)</strong></td>
<td>14.9%</td>
<td>24.3%</td>
<td>20.6%</td>
<td>20.3%</td>
<td>28.9%</td>
<td>25.6%</td>
<td>18.6%</td>
<td>18.9%</td>
</tr>
</tbody>
</table>

---

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