

# Q4 Fiscal 2021 Earnings Call

PREPARED REMARKS | NOVEMBER 18, 2021



**MICHAEL SULLIVAN** | Corporate Vice President, Investor Relations

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Good afternoon everyone and thank you for joining Applied's fourth quarter of fiscal 2021 earnings call. Joining me are Gary Dickerson, our President and CEO, and Bob Halliday, our Chief Financial Officer.

Before we begin, I'd like to remind you that today's call contains forward-looking statements which are subject to risks and uncertainties that could cause our actual results to differ. Information concerning the risks and uncertainties is contained in Applied's most recent Form 10-Q and 8-K filings with the SEC. Today's call also includes non-GAAP financial measures. Reconciliations to GAAP measures are found in today's earnings press release and in our quarterly earnings materials, which are available on the IR page of our website at [appliedmaterials.com](http://appliedmaterials.com).

And now, I'd like to turn the call over to Gary Dickerson.

**GARY DICKERSON** | President and Chief Executive Officer

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## INTRODUCTION

Thank you, Mike.

I'd like to start by thanking our employees for delivering the best year in Applied Materials' history while navigating a dynamic and challenging environment. Demand for semiconductors and wafer fab equipment remains very strong and, in fiscal 2021, we generated \$23B of revenue, which represents 34% annual growth. In fiscal Q4, we hit the midpoint of our earnings guidance despite larger-than-expected supply constraints. These constraints worsened in the last few weeks of the quarter as we experienced delayed shipments from several suppliers.

Without these supply shortages, we estimate that our Q4 revenues would have been at least \$300M higher. We expect supply chain headwinds to persist into fiscal 2022 and mitigating them remains our top priority. For this reason, I'll begin today's call by providing some additional details about the industry's supply dynamics – both near-term and longer-term. Next, I'll describe the demand outlook, which is very strong and broad-based. I'll then talk about the progress we're making against our growth strategy and how Applied Materials is positioned to outperform the market over the coming years.

I am also happy to welcome Bob back to the CFO seat, while we conduct the search for our next CFO. Later in the call, Bob will share his perspective on the state of the business and provide color on our financial performance.

## SUPPLY DYNAMICS

So, let me start with the supply-side of the equation. Applied has made – and continues to make – strategic investments in our own global manufacturing infrastructure, so factory capacity is not a limiting factor for us. Like many in the industry, the primary challenge we face today is availability of certain silicon components. For Applied, our issues are relatively narrow, and we are proactively collaborating

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with our suppliers, and directly with the chip companies, to find solutions and work around bottlenecks. I deeply appreciate their partnership and teamwork as we navigate these unprecedented circumstances together. Looking further ahead, I believe we will see permanent changes in the way supply chains are designed and operated.

In the semiconductor industry and beyond, there is a shift from a 'Just-In-Time' to a 'Just-In-Case' approach which will require higher levels of inventory, more built-in redundancy, and more burst capacity. Because the economic value of capturing upside opportunities far outweighs pure efficiency savings, we're also seeing changes in supply agreements across the eco-system as companies place a premium on having preferential access to capacity. In addition, our customers are providing us with longer-term visibility, and we are collaborating more closely than ever when it comes to capacity planning.

On top of that, the strategic importance of semiconductors is now recognized at a national level. Over the next few years – as incentive programs become available in the US, Europe and Asia – we expect to see a trend towards regionalized supply chains that are more resilient, but also increase capital intensity.

## DEMAND DYNAMICS

Now, I'll characterize the demand environment, which is extremely healthy. The pandemic has accelerated the digital transformation of the economy fueling semiconductor consumption and driving the need for next generation silicon technologies. As a result, we see wafer fab equipment spending for calendar 2021 up around 40% year-on-year – in other words in the mid-\$80B range – and constrained by supply, not demand.

There is still a long way to go before supply and demand is balanced, especially as demand drivers continue to grow. We therefore expect wafer fab equipment spending to be up again in 2022. While we're currently focused on resolving near-term challenges, it's important to recognize we're only at the beginning of major technology and market inflections that will play out over the next decade.

As everything gets smarter – from our phones to our cars to our homes – we see a combination of unit growth and increasing silicon content per unit. For example, if you look at this year's high-end smartphones – by dollar value, the application processor semiconductor content is up about 20% compared to last year's models, and RF content increased at twice that rate and, in data center applications, the average DRAM and NAND content per server is also growing at a 20% compound annual growth rate.

As more and more smart devices are connected at the edge, they are driving exponential growth in machine-generated data that must be stored, moved and processed. Then – to create value from these vast volumes of data – new AI computing approaches are being developed, fueling further demand for current and next-generation semiconductors. When I talk with customers, their message is clear and consistent. They are investing strategically to be in the best position to capture value as these long-term secular trends accelerate.

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In our core market, foundry-logic is about 60% of wafer fab equipment spending in 2021 and we expect it to remain at this level or higher over the next several years. Within foundry-logic, the spending mix is relatively balanced between the most advanced nodes – where we see a fierce battle for leadership playing out – and ICAPS. ICAPS nodes serve the fast-growing IoT, Communications, Automotive, Power electronics and Sensors markets. In memory, supply and demand fundamentals remain healthy and we expect investments to be up next year, although not as much as foundry-logic.

Finally, capital intensity is also providing an important tailwind. With the deceleration of traditional Moore's Law scaling and the transition to the new PPACT™ playbook, complexity is increasing. Simply put, more innovation is needed to get from one node to the next and this higher complexity translates to higher capital intensity.

## APPLIED'S PERFORMANCE AND PROGRESS

Against this backdrop, I'll now describe Applied's performance and progress towards our strategic goals. In fiscal 2021, we grew semiconductor equipment revenues almost \$5B, or 43% year-on-year, outpacing the market growth rate during that period. However, as I described earlier, we were unable to fully meet demand in our fourth quarter due to component shortages, and we expect to remain supply-constrained going into fiscal 2022. As a result, we have grown our backlog – at a company-level – to \$11.8B which is up 77% compared to the same period last year.

Our near-term results do not fully reflect the underlying strength in our business or the progress we're making against our long-term strategy. As a reminder, our strategy has three pillars. First, to be the PPACT Enablement Company™ and provide the foundation for customers' Power, Performance, Area, Cost and Time-to-Market roadmaps. Second, to shift more of our business to subscriptions and, third, to generate incremental free cash flows and profitability from our businesses in adjacent markets.

We've aligned our organization and investments around these critical focus areas and are demonstrating strong momentum. Applied's PPACT-enablement strategy is built upon three differentiated elements. We have the broadest and most enabling portfolio of unit process solutions, we can co-optimize and integrate these technologies in unique and highly enabling ways, and we are focused on time-to-market acceleration with our AI<sup>x</sup>™ – or actionable insight accelerator – data platform.

Starting with our unit process tools:

Demand in our traditional leadership areas is very strong. Our epi and thermal businesses both grew 70% this fiscal year, and CMP grew more than 60% and in our targeted growth areas, we expect our Process Diagnostics and Control revenues to be up more than 60% in calendar 2021. Packaging is another very exciting area for us. Our equipment revenues are up more than 55% year-on-year and we're on track to exceed \$800M for calendar 2021. We are also bringing highly-enabling future technologies to market through a combination of organic R&D and strategic partnerships.

Moving to our co-optimized and integrated products, the customer pull for these solutions is strong and increasing for future nodes. Co-optimization allows us to see and solve higher-value problems for

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customers, speed up commercialization of new innovations, and capture more of the available opportunity. One example is dielectric materials where we are driving parallel innovations in materials deposition, modification, and removal. Our CVD group has more than 15 new materials either in development or recently released. These enable new structures or manufacturing techniques in both foundry-logic and memory. The revenue opportunity we've opened up for the co-optimized etch and CMP steps is almost twice as large as the market for the standalone deposition equipment.

Another example is advanced patterning where we are co-optimizing CVD, ALD and CMP with our Sym3<sup>®</sup> etch enabling us to gain more than five points of share in patterning this year. Integrated Materials Solutions – or IMS – go one step beyond co-optimization by combining multiple processes with customized metrology and sensors in a single system, typically under vacuum. With IMS, we can target the most complex and valuable challenges in the new PPACT playbook.

For example, this year we delivered five new 'Low-R', or low resistance metallization, integrated solutions to customers that address next generation applications in foundry-logic, DRAM and NAND. This included our Copper Barrier Seed IMS that combines seven different process technologies in one system under vacuum: ALD, PVD, CVD, copper reflow, surface treatment, interface engineering and metrology. This enables a 50% reduction in interconnect resistance at the most advanced foundry-logic nodes and creates a multi-billion-dollar opportunity for Applied over the next five years.

The final component of our PPACT enablement strategy is time-to-market acceleration. New digital tools that accelerate R&D, technology transfer, and High-Volume Manufacturing are a major focus area for our customers. In the coming years, these technologies will have a huge impact on productivity and innovation-to-commercialization speed. They will also play a key role in making regional supply chains economically competitive and sustainable. Our AI<sup>x</sup> platform, brings together process tools, sensors, metrology with data analytics and machine learning. We currently have 25 AI<sup>x</sup> R&D acceleration engagements with leading customers, and we now expect that number to triple over the next 12 months.

Another highlight for 2021 is the progress we're making with subscription revenues. In our service business, we have already converted a significant percentage of our spares and service revenue from 'on-demand' to 'Long Term Service Agreements'. We now have nearly 15 thousand installed base tools covered by these agreements – up 12% year-on-year. The tenure of these agreements has grown from 1.9 years at the end of 2020 to 2.3 years today and our renewal rate is about 90%. Several customers have highlighted how these long-term agreements have allowed them to better manage disruptions in parts supply and technical support during the pandemic.

## SUMMARY

Before I hand the call over to Bob, I'll quickly summarize:

As the digital transformation of the economy accelerates, demand for semiconductors continues to grow and is significantly outpacing supply. We expect supply-shortages of certain silicon components to persist in the near-term, meaning that we don't expect to fully meet demand in Q1. Managing these constraints in partnership with our suppliers and chipmakers is our top priority.

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Looking beyond the near-term disruptions, I feel very positive about the future. Longer-term secular trends are driving the semiconductor and wafer fab equipment markets structurally higher and, at Applied, we are making significant progress towards our strategic plans. We are in the best position to accelerate our customers' PPACT roadmaps and grow significantly faster than our markets over the next several years.

Now, I'll hand the call over to Bob.

**BOB HALLIDAY** | Corporate Vice President, Chief Financial Officer

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Thanks Gary.

I want to begin by saying I'm very happy for the opportunity to work with all of you again.

I have three main messages today. Number one, demand is very strong and growing, and I think it's likely to remain strong in 2022 and beyond. Number two, supply chain constraints are impacting our ability to meet all of our demand in the near term. Number three, Applied Materials is making very good progress toward our financial targets, and we're in a great position to return capital to shareholders. I'll cover each of these topics in order and give you our guidance and then Gary, Mike and I will help with your questions.

## DEMAND

I'll begin by giving you more detailed insights than we typically share about the demand for our products and its sustainability into 2022. Specifically, our Semi Systems revenue grew by 43% in 2021. Our Semi Systems orders grew by 78% for the year. In fact, our Semi Systems orders grew in every quarter. In Q4, they were up 136% year-over-year. Looking ahead, we currently expect our orders to be higher in the first half of fiscal 2022 than in the second half of 2021 across Semi Systems, AGS and also Display. In short, the demand environment is very strong.

## DEMAND DRIVERS

What's happening on the demand side is that all of the trends Gary and I talked about years ago are playing out in an even bigger way than we imagined. First, semiconductor demand is higher because we're designing more intelligence into practically everything that gets built and sold. Second, equipment capital intensity is higher. We don't have wafer size increases anymore and the industry has wrung out a number of efficiencies including fab automation, industry consolidation, and the foundry model. Used equipment is now scarce, so even in the ICAPS markets, customers are buying new equipment and spending more.

The industry is adding more wafer capacity to keep up with demand, particularly in foundry-logic, and we believe spending will remain strong. Specifically, the industry grew foundry-logic wafer starts by around 40% over the past five years alone. At the end of our fiscal year, overall fab utilization for the industry increased to the highest level of the past decade.



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We see foundry-logic continuing to grow as a proportion of the industry's mix. Five years ago, foundry-logic represented around 53% of WFE spending. As of 2021, it's grown to 60% of WFE, and we see it being even higher into the future. Even with higher wafer capacity and high utilization, we have a global semiconductor shortage that's affecting a wide range of industries including our own. Industry wide, we are tracking 59 fab projects with available and announced expansion capacity of 3.5 million wafer starts. These projects represent potential equipment spending of around \$300B in future years. All of this data leads me to believe that demand is likely to remain strong.

## SUPPLY CHAIN SITUATION

Now I'll give you more insights into our own supply situation. In Q4, our Semi Systems backlog was at record levels and growing quickly. In our guidance for Q4, we targeted modest Semi Systems revenue growth. We also widened our overall guidance range due to our concerns about the supply chain. Toward the end of Q4, we experienced later than expected deliveries of the components we needed to complete and ship our build plan by the end of the quarter. The reason for the delays is that our suppliers couldn't get enough parts from their own suppliers, which include chipmakers and distributors. The supply issues are directly related to the semiconductor shortage, particularly in logic, power and analog ICs. Not all of our semi businesses were affected in Q4. Our process control, CMP, etch and packaging businesses beat our revenue targets. Yet our overall Semi Systems revenue was \$293M below the midpoint of our expectation. The full semiconductor revenue impact of the shortages during the quarter was well above \$300M.

In Q1, we are guiding for sequential growth of around 3%. We have the internal capacity to easily ship several hundred million dollars more of semi equipment, but we are planning for only modest supply increases. Looking ahead, I believe WFE spending will be up again in calendar 2022 and will remain strong particularly for foundry-logic both at the leading edge and ICAPS nodes. I also believe Applied's business will be higher in the first half of calendar 2022 than in the second half of calendar 2021 both in Semi Systems and AGS.

## FINANCIAL PROGRESS

Next, since it's the end of our fiscal year, it's a good time to assess the progress we're making toward our 2024 financial model.

In April, we outlined targets to grow our revenue, profitability and earnings in a variety of WFE scenarios, including a base case of \$85B and a high case of \$100B. With everything we're seeing in the industry today, our high scenario of \$100B is increasingly likely. One year into the long-term plan, we've made good progress, increasing revenue by 34%, non-GAAP gross margin by 240 basis points, non-GAAP operating margin by 540 basis points and non-GAAP EPS by 64%.

We believe our Semi Systems group is well on track to its growth targets based on our strong product roadmaps and the deep customer engagements Gary described. We believe AGS can exceed the growth implied in our model after growing by 21% this year alone. In fact, AGS had record backlog of over \$4.33B at the end of the year. 72% of the Q4 backlog was subscription business with terms of 1 – 3 years and 65% of new subscription bookings were multiyear.

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While our focus is on recurring revenue, AGS also includes our 200-millimeter equipment business. Our 200-millimeter business has been growing along with the rest of the ICAPS market, approaching \$650M in WFE revenue in calendar 2021.

Turning to our profitability metrics, we expect to achieve our non-GAAP gross margin target of 48.5% once the near-term material and logistics cost headwinds subside. We also feel confident in our non-GAAP operating margin targets. The Semi Systems group increased its operating margin by 590 basis points this year while AGS delivered record operating margin of 31% in Q4. A major focus for us is increasing the Display group's margin to between 25% and 30%, and we plan to be in that range by the second half of 2022.

## CAPITAL RETURNS

Another of our targets is to return 80% to 100% of free cash flow to shareholders. In fiscal 2021, we generated a record \$4.77B in free cash flow, and we returned 96%, mainly through stock buybacks. We ended the year with over \$5B remaining in buyback authorization and given the strong demand outlook and our view of the intrinsic value of the company, we expect to continue to be aggressive with the program.

## Q1 GUIDANCE

Now I'll share our Q1 business outlook. Given the supply chain challenges, we expect to modestly increase revenue to \$6.16B, plus or minus \$250M or up around 19% year-on-year. We expect non-GAAP EPS to be around \$1.85, plus or minus \$0.07 or up around 33% year-on-year.

Within this outlook, we expect Semi Systems revenue of around \$4.46B, up 25% year-over-year. We project AGS revenue of around \$1.33B, up 15% year-over-year. We expect Display revenue to be around \$350M in Q1 and higher as we progress through the year.

Applied's non-GAAP gross margin should decline to around 47.4% primarily due to higher near-term cost headwinds. We plan to increase non-GAAP OpEx to \$970M which is around 15.8% of revenue -- below our long-term model target of 16%. Our guidance also assumes a 12% non-GAAP tax rate.

## SUMMARY

Finally, along with Gary, I'd like to thank all of our teams and partners for their hard work in a challenging environment.

Now Mike, let's begin the Q&A.