



Applied Materials Unveils \$5 Billion EPIC Center in Silicon Valley to Accelerate Semiconductor Innovation for the AI Era

October 12, 2026

- *\$5 billion investment creates the world's largest semiconductor equipment and process technology R&D facility*
- *Purpose-built to accelerate the path from breakthrough innovation to high-volume manufacturing of next-generation chipmaking technologies*
- *Leading chipmakers, systems companies, equipment partners and research universities have committed to develop inside EPIC*

SUNNYVALE, Calif., Oct. 12, 2026 (GLOBE NEWSWIRE) -- Applied Materials, Inc., the leader in materials engineering for the semiconductor industry, today unveiled its Equipment and Process Innovation and Commercialization (EPIC) Center, a \$5 billion capital investment* to build the world's largest facility dedicated to collaborative semiconductor process technology and manufacturing equipment R&D. Inside the EPIC Center, leading chipmakers, systems companies, equipment partners and university researchers will work side by side with Applied's scientists and engineers to accelerate the pace of chip innovation for the AI era.

"As AI infrastructure scales, the demands of high-performance computing are driving unprecedented complexity across the chipmaking roadmap," said Gary Dickerson, President and CEO of Applied Materials. "To win the race for AI leadership, our industry must rethink and re-engineer how we collaborate to develop and commercialize the next generation of semiconductor technologies. At EPIC, the world's leading chipmakers, system designers, equipment partners and researchers will work side by side with our teams to accelerate the path from breakthrough materials innovation to high-volume manufacturing faster than ever before."

Purpose-Built to Accelerate Innovation and Commercialization

Unveiled today at Applied's Sunnyvale, California, campus, the EPIC Center represents one of the most complex R&D construction projects in the world. The 600,000-square-foot structure houses nearly four acres of advanced cleanroom space and required more than six million construction hours to complete. Its foundation holds enough concrete to fill 34 Olympic-sized swimming pools, and its steel-reinforced structure holds enough steel to build two Eiffel Towers. Thirty-four roof trusses cover the cleanrooms, each spanning nearly 300 feet in length and weighing as much as 12 school buses.

EPIC is designed to reinvent the R&D model the industry has relied on for decades. In the traditional model, foundational materials research happens in one environment, equipment and process development in another, and process integration and pilot production in a third, with a careful handoff at every phase. The EPIC Center is designed to remove these handoffs, putting the people who invent the materials, build the equipment, and make the chips together in a state-of-the-art facility purpose-built for commercialization.

EPIC is founded on a simple conviction: the technologies the AI era demands are too complex and too consequential for any one company to invent alone. The EPIC Center opens with a founding roster that spans the AI technology stack. Founding partners TSMC, Intel, SK hynix, Micron and Samsung Electronics are joined by innovation partners Broadcom, Advantest, SCREEN, KIOXIA, and Besi; and by research partners Arizona State University, Rensselaer Polytechnic Institute, Stanford University, UC Berkeley, and UCLA Samueli School of Engineering. Each partner brings its own roadmap challenges and engineers into the facility, working in tight, secure learning cycles alongside Applied teams. Over time, additional companies and organizations are expected to join the EPIC ecosystem.

Leaders from many of the EPIC Center partner companies attended the unveiling event, getting a first glimpse inside the facility. The day started with a summit hosted by Dr. Prabu Raja, President of the Semiconductor Products Group at Applied Materials, where R&D leaders from top semiconductor design, manufacturing and equipment companies discussed key challenges facing growth and progress in the global chip industry.

"Materials innovation has outgrown serial development – at today's atomic-scale dimensions, many materials and materials interfaces behave in entirely new ways, and making them work at industry scale demands coordinated development and integrated solutions," said Dr. Prabu Raja. "EPIC is the only place where materials, process technology and equipment will be innovated in parallel, which increases the success rate of new materials and technologies. Because our customers' own engineers help optimize the technology before it ever reaches their factory, what leaves EPIC arrives at the fab ready to ramp to high performance and high yield sooner."

Applied expects the EPIC operating model to deliver returns on both sides of the partnerships. Chipmakers gain earliest access to next-generation materials and equipment, shorter learning cycles and a faster path to volume production. Applied gains visibility across several generations of emerging technology challenges, informing where the company directs its R&D investments to create value for customers and have its systems and services designed in.

Supporting Quotes from Industry and Academic Leaders

"For three decades, TSMC and Applied Materials have grown together – pushing the boundaries of semiconductor technology through every major transition. Thirty years ago, the leading-edge production node was 350 nanometers. Today, it is 2 nanometers. Working hand-in-hand with the industry, we have shrunk features 175-fold. As chipmaking complexity grows exponentially, our partnership is more vital than ever. Beyond 2nm, collaborating with Applied gives us early access to the disruptive equipment technologies that define the future. This fast-tracks the leap from R&D to high-volume

manufacturing for the energy-efficient AI architectures of tomorrow – including new architecture, low-resistance wiring, and advanced packaging. We are proud to be a founding partner of EPIC, accelerating the innovations that will power AI from the data center to the edge.” – **Dr. C.C. Wei, Chairman and CEO of TSMC**

“AI is creating a multi-trillion-dollar opportunity for the semiconductor industry. To capture it, we need continued innovation in transistors, interconnects and advanced packaging. At Intel, we see a path to more than a trillion transistors in a package by 2030. As architectures become more complex and R&D costs continue to rise, we need to move faster and work more closely with our equipment partners. EPIC gives our teams the opportunity to work side by side with Applied on materials and process innovation – helping us accelerate development, improve R&D efficiency and bring new technologies to market faster.” – **Lip-Bu Tan, CEO, Intel**

“Data-intensive AI workloads are driving massive demand for high-performance memory and storage, and innovation in materials and process technology is a critical enabler of next-generation memory. As a founding partner of EPIC, Micron will work side by side with Applied Materials to accelerate innovation and bring next-generation memory technologies from research to high-volume manufacturing at scale.” – **Sanjay Mehrotra, Chairman and CEO, Micron Technology**

“The defining challenge of AI computing is moving data fast enough to keep increasingly powerful processors fully utilized, and meeting that challenge requires memory with far greater bandwidth, speed and capacity. At EPIC, SK hynix and Applied will bring together our leadership in advanced memory with Applied’s leadership in materials engineering and semiconductor manufacturing technology to address major inflections across HBM, DRAM and NAND, and accelerate memory innovation for the AI era.” – **Nohjung Kwak, President and CEO of SK hynix**

“Samsung takes an end-to-end view of AI-era computing – across leading-edge logic, memory and advanced packaging. Applied Materials brings uniquely broad process equipment leadership across all three domains, and at EPIC together we will develop, iterate and deploy breakthrough technologies faster than ever, at the pace AI scaling demands.” – **Jaihyuk Song, Chief Technology Officer (CTO) of Device Solutions Division, Samsung Electronics**

“The next frontier of AI will be defined by how seamlessly the industry can integrate vast amounts of compute, memory and connectivity into high-performance systems, and that depends on breakthrough advances in advanced packaging. As an innovation partner at EPIC, Broadcom can engage earlier with Applied’s foundational technologies and manufacturing capabilities, connecting future system requirements to the packaging innovations needed to realize them and accelerating the path from concept to commercialization.” – **Charlie Kawwas, Ph.D., President of Semiconductor Solutions Group, Broadcom**

“Future performance improvements will depend on advanced 3D architectures and heterogeneous integration. As these technologies converge, it becomes increasingly important to connect insights from front-end process development with those from back-end test and measurement. EPIC breaks down these traditional barriers by bringing together Applied Materials’ leadership in materials engineering and process control with Advantest’s leadership in semiconductor test and measurement, including capabilities enabled through the Advantest Innovation Center. Together, we are helping the world’s leading semiconductor manufacturers improve yield, accelerate production ramps, and bring next-generation AI systems to market faster.” – **Doug Lefever, Representative Director and Group CEO, Advantest Corporation**

“At EPIC, we have a unique opportunity to co-optimize the critical wet and dry processes behind next-generation chip architectures. We can together accelerate the innovations required to master increasingly complex 3D devices and advanced packaging structures. By driving tighter process integration with materials engineering, we can help chipmakers unlock higher yields, faster production ramps, and the manufacturing scale required for the AI future.” – **Masato Goto, President and CEO, SCREEN Holdings Co., Ltd.**

“AI is making the world increasingly data-driven, and future breakthroughs will depend on memory, logic, and interconnect technologies working seamlessly within integrated systems. We believe the EPIC Center provides a powerful platform for collaboration across technology domains. By working closely with Applied Materials engineers and other partners, we can accelerate the development of next-generation memory technologies.” – **Hideshi Miyajima, Ph.D., Managing Executive Officer and Chief Technology Officer, KIOXIA Corporation**

“The future of AI depends not only on more powerful chips, but on the chip-to-chip interconnects that drive performance, bandwidth and power efficiency. Besi and Applied recognized early that hybrid bonding would be foundational to next-generation AI systems, and by combining Besi’s leadership in precision die-to-wafer bonding with Applied’s leadership in front-end processing, we are advancing hybrid bonding technology to enable future high-performance 3D integrated devices. EPIC extends that model of high-velocity co-innovation across the ecosystem, accelerating the technologies that will shape future AI systems.” – **Richard Blickman, President and CEO, BE Semiconductor Industries (Besi)**

“ASU has developed a very strong working relationship with Applied Materials through the Materials-to-Fab Center at ASU Research Park, and we are excited to dig deeper into this partnership at the EPIC Center, where researchers, engineers and manufacturers converge to accelerate bold ideas from the lab to breakthroughs in the fab. EPIC will also serve as a cornerstone for the semiconductor talent pipeline and by working alongside Applied’s scientists and engineers, our students will gain the systems-level perspective needed to drive the future of AI innovation.” – **Michael Crow, President, Arizona State University**

“UC Berkeley has helped shape microelectronics from its earliest days, advancing the research and talent that continue to propel the semiconductor industry, and our collaboration with Applied Materials is a great example of how academia and industry must work together to meet the scale and opportunity of what’s ahead. The EPIC platform gives our researchers access to the same cutting-edge capabilities used by the world’s leading chipmakers, within a manufacturing-relevant environment, so ideas can be tested, refined and transformed much faster into the semiconductor breakthroughs that will advance the frontier of AI.” – **Rich Lyons, Chancellor, UC Berkeley**

“Many of the technologies powering today’s AI revolution began in university labs years, often decades, before they transformed the world. As computing demand increases, we must accelerate the pace at which new semiconductor materials, devices and integration technologies move from discovery to deployment. As an inaugural research partner at the EPIC Center, RPI’s students and researchers gain access to world-class experts and a direct pathway to test and validate academic advances in real-world production environments – a powerful blueprint for high-velocity industry-academia collaboration in the AI era.” – **Martin Schmidt, President of RPI**

“The explosive growth of AI is pushing semiconductor technology researchers to find new ways to increase energy efficiency of semiconductor chips. Opportunities abound in discovering new materials and inventing new devices. Experimentation demands faster cycles of innovation and closer collaboration across the ecosystem. Beyond the existing broad research engagement between Stanford faculty and Applied Materials, the EPIC

Center presents an additional opportunity that enables our students and researchers to engage directly with industry-scale tools and experts, accelerating discovery while gaining the industry-relevant experience needed to lead future advances in semiconductor manufacturing." – **H.S. Philip Wong, Willard R. and Inez Kerr Bell Professor in the School of Engineering, Stanford University**

"Accelerating semiconductor innovation in the new era of AI requires transformative collaboration between universities and industry partners more than ever before. UCLA has a long history of pioneering semiconductor research and innovation, and our collaboration with Applied Materials at the EPIC Center builds on that legacy by bringing together university research and industry expertise to advance the chip technologies that will define the future of computing while preparing the next generation of engineers." – **Ah-Hyung "Alissa" Park, Ronald and Valerie Sugar Dean of UCLA Samueli**

**Capital spending is expected to scale over time to approximately \$5 billion as customer projects commence.*

Forward-Looking Statements

This press release contains forward-looking statements, including those regarding Applied's investment and growth strategies, the development of new materials and technologies, industry outlook and technology requirements, the plans and expectations for the EPIC Center, 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 demand for semiconductors and customers' technology requirements; the ability to develop new and innovative technologies; the ability to obtain and protect intellectual property rights in key technologies; the ability to achieve the objectives of the EPIC Center; and other risks and uncertainties described in Applied's filings with the Securities and Exchange Commission, including Applied's most recent Forms 10-K, 10-Q and 8-K. All forward-looking statements are based on management's current estimates, projections and assumptions, and Applied assumes no obligation to update them.

About the EPIC Center

The EPIC Center (Equipment and Process Innovation and Commercialization) is Applied Materials' flagship R&D facility in Silicon Valley, designed to compress the timeline from early-stage materials research to high-volume semiconductor manufacturing. By bringing chipmakers, equipment partners and university researchers into the same building as Applied's scientists and engineers, EPIC enables parallel rather than sequential development of materials, equipment and process technology, shortening learning cycles and accelerating the commercialization of the innovations that will power the AI era. Learn more at www.appliedmaterials.com/us/en/epic.html.

About Applied Materials

Applied Materials, Inc. (Nasdaq: AMAT) is the leader in materials engineering solutions that are at the foundation of virtually every new semiconductor and advanced display in the world. The technology we create is essential to advancing AI and accelerating the commercialization of next-generation chips. At Applied, we push the boundaries of science and engineering to deliver material innovation that changes the world. Learn more at www.appliedmaterials.com.

Contacts:

Applied Materials

[Ricky Gradwohl](#) (editorial/media) 408.235.4676

[Mike Sullivan](#) (financial community) 408.986.7977

