



Silvaco Announces Partnership with Dassault Systèmes to Advance First-Time-Right Semiconductor Manufacturing

August 18, 2026

Companies will develop connected digital twin workflows that help semiconductor manufacturers achieve first-time-right process development, accelerate yield ramps, and make better manufacturing decisions before committing costly fab resources

SANTA CLARA, Calif., Aug. 18, 2026 (GLOBE NEWSWIRE) -- Silvaco Group, Inc. (Nasdaq: SVCO) ("Silvaco"), a provider of TCAD, EDA software and semiconductor IP solutions, today announced its partnership with Dassault Systèmes to develop interoperable digital twin workflows for semiconductor manufacturing.

The collaboration brings together complementary simulation technologies spanning equipment-scale plasma simulation, feature-scale semiconductor process modeling, and structural analysis. By connecting these domains through integrated workflows, the companies aim to help semiconductor manufacturers better understand how equipment conditions influence wafer-level outcomes, enabling more informed engineering decisions and accelerating progress toward first-time-right process development.

Addressing a Critical Industry Challenge

Semiconductor manufacturers continue to face increasing pressure to shorten development cycles, improve yields, accelerate technology ramps, and reduce overall development costs. As device architectures become more complex and process windows become narrower, understanding cause-and-effect relationships across equipment, process, and structural domains has become increasingly important.

The Silvaco and Dassault Systèmes partnership is intended to help customers build a more connected digital representation of semiconductor manufacturing processes, giving engineering teams broader visibility into how upstream manufacturing decisions can influence downstream process and structural outcomes. By improving interoperability between complementary simulation technologies, customers can investigate interactions across multiple scales, identify potential issues earlier in development, and make decisions with greater confidence.

Partnership Focus

Reactor Scale to Feature Scale

The companies intend to connect plasma simulation capabilities within Dassault Systèmes' SIMULIA applications with Silvaco Victory™ Process feature-scale semiconductor process simulation. This workflow is designed to support multiscale studies of advanced plasma-based etch and deposition processes and help customers better understand the relationship between equipment conditions and wafer-level feature evolution.

Feature Scale to Structural Analysis

The companies plan to enable transfer of structures and material information generated within Silvaco process simulation workflows into Dassault Systèmes' SIMULIA structural analysis environments. This capability is intended to support stress, deformation, and related structural analyses that are increasingly important for advanced semiconductor technologies.

Interoperable Digital Twin Workflows

The partnership will focus on developing interfaces and workflow definitions that allow engineering data to move efficiently between complementary simulation technologies while preserving the information required by downstream analyses. These connected workflows are expected to provide an important foundation for broader semiconductor manufacturing digital twin initiatives.

Customer Benefits

The new workflows are intended to provide customers with several important advantages:

- Enable more informed engineering decisions through a clearer understanding of relationships between equipment conditions, process behavior, and structural outcomes.
- Support first-time-right manufacturing objectives by allowing engineers to evaluate more alternatives virtually before expensive experimentation in the fab.
- Reduce manual handoffs and repeated reconstruction of geometry, material, and process information across simulation environments.
- Improve traceability between upstream process inputs and downstream manufacturing outcomes.
- Accelerate learning cycles and process optimization through more connected multiphysics analysis.
- Establish a stronger digital foundation for advanced manufacturing digital twin deployments.

Walden C. Rhines, Chief Executive Officer, Silvaco:

"The semiconductor industry is facing unprecedented manufacturing complexity, and our customers increasingly need predictive technologies that help them understand the impact of manufacturing decisions before costly experiments are performed in the fab. By combining Silvaco's expertise in feature-scale semiconductor process simulation with Dassault Systèmes' SIMULIA leadership in multiphysics simulation, we believe this partnership

can help customers move closer to first-time-right manufacturing, accelerate yield ramps, reduce development risk, and advance the adoption of digital twin methodologies across the semiconductor industry. Ultimately, our goal is to help engineering teams make better decisions earlier, bringing new semiconductor technologies to production faster and with greater confidence."

Accelerating the Future of First-Time-Right Semiconductor Manufacturing

The initial focus of the partnership is practical interoperability between complementary simulation technologies. Over time, the companies believe these connected workflows can help advance first-time-right semiconductor manufacturing by enabling more predictive, data-driven engineering decisions earlier in the development cycle. By improving the flow of information across simulation domains, customers can evaluate more alternatives virtually, identify issues sooner, reduce development risk, and accelerate progress toward high-volume production.

By linking equipment-scale physics, feature-scale process simulation, and structural analysis within connected workflows, customers can create more comprehensive digital representations of manufacturing processes to support engineering analysis, optimization, and operational decision-making. These digital twin capabilities are intended to help engineering teams better understand cause-and-effect relationships across manufacturing stages, accelerate yield ramps, and bring new semiconductor technologies to production with greater confidence.

About Silvaco

Silvaco is a provider of AI-enabled TCAD and EDA solutions, and SIP solutions that enable semiconductor design and digital twin modeling through AI software and innovation. Silvaco's solutions are used for semiconductor and photonics processes, devices, and systems development across display, power devices, automotive, memory, high performance compute, foundries, photonics, internet of things, and 5G/6G mobile markets for complex SoC design. Silvaco is headquartered in Santa Clara, California, and has a global presence with offices located in North America, Europe, Brazil, China, Egypt, Japan, Korea, Singapore, Taiwan, and Vietnam. Learn more at [silvaco.com](https://www.silvaco.com).

Safe Harbor Statement

This press release contains forward-looking statements based on Silvaco Group, Inc.'s current expectations. The words "believe", "estimate", "expect", "intend", "anticipate", "plan", "project", "will", and similar phrases as they relate to Silvaco Group, Inc. are intended to identify such forward-looking statements. These forward-looking statements reflect the current views and assumptions of Silvaco Group, Inc. and are subject to various risks and uncertainties that could cause actual results to differ materially from expectations.

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