

**ASX Announcement**

**17 July 2025**

## **Atomic Layer Deposition System (ALD) Successfully Commissioned Facility Upgrades Complete**

### **Highlights:**

- **Current generation Atomic Layer Deposition ('ALD') system successfully installed, tested and commissioned at AI1's state-of-the-art research facility**
- **Major infrastructure upgrades for the Beneq TFS 200 ALD system complete, enabling industry leading graphene research and development**
- **ALD system secured by AI1 at Tel Aviv University, enabling parallel testing**
- **Significant process capability gains over legacy development system in process parameters, precision control, speed and throughput**
- **Focused on creating low temperature graphene solution for interconnect semiconductor technology to advance the next generation high performance chips**



**Figure 1:** Successfully commissioned Atomic Layer Deposition system at 2DG lab at Yakum Industrial Park, Israel

Adisyn Ltd (ASX: AI1) ("Adisyn" or "the Company") is pleased to advise that the installation, commissioning and successful calibration of its newly acquired Beneq TFS 200 Atomic Layer Deposition (ALD) system<sup>1</sup> has been completed by wholly owned subsidiary, 2D Generation ('2DG').

ALD machines are widely used in the semiconductor industry to deposit extremely thin layers (down to an atom thickness) of material on to chips. ALD systems are found in most advanced

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<sup>1</sup> ASX announcement dated 10 June 2025

semiconductor fabs around the globe and 2DG has specifically selected a model customised by Beneq.

2DG has ordered an ALD with specific benefits, including<sup>2</sup>:

- Plasma options for wafer surface treatments and potential introduction of reactive gases that catalyse graphene growth
- Semi-automatic Load lock enables room-temperature sample exchange, reducing heating/cooling times.
- Reaction chamber suitable for wafer-scale processing: The system features enhanced process control, wider operational temperature thresholds, and significantly higher throughput compared to previously used equipment.

These capabilities are essential for advancing the Company's proprietary low-temperature graphene deposition process, which aims to overcome existing performance barriers in semiconductor interconnects.

This system will operate in tandem with the Beneq TFS 200 system located at Tel Aviv University's Jan Koum Center for Nanoscience and Nanotechnology<sup>3</sup>. Together, the dual-system configuration will allow 2DG to run concurrent testing and accelerate the validation of graphene films across various substrates, layer structures and operating conditions.

The commissioning follows the successful completion of a substantial infrastructure upgrade at the 2D Generation facility, including environmental control systems and high-specification electrical works to support the precision demands of ALD-based research.

With both ALD systems now operational, the Company will commence with validating previous technical results while broadening our understanding of the building blocks for a robust, scalable process.

The Company will also be providing an update on its development roadmap in the Q1 FY26.

**Adisyn Chairman Kevin Crofton said:**

"Commissioning this new ALD system represents a major operational leap for Adisyn. The precision, flexibility, and throughput of this platform enables us to rigorously test our graphene interconnect solution under real-world semiconductor conditions. Used in parallel with the ALD system at Tel Aviv University, we now have a powerful dual-platform setup to accelerate development, validate performance, and build a strong foundation for commercial application."

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<sup>2</sup> Refer to ASX Announcements dated: 11 November 2024 & 10 June 2025

<sup>3</sup> Refer to ASX Announcement dated: 27 March 2025



**Figure 2:** 2DG Process Room featuring Beneq TFS 200 ALD system and associated glove box (Yakum Industrial Park, Israel)

This announcement has been approved for release by the Board of Adisyn Ltd.

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**About 2D Generation**

2D Generation is a high-tech company specialising in graphene-based solutions for the semiconductor industry. Founded by Arye Kohavi, the company is dedicated to overcoming current technological limitations by developing faster, stronger, and more energy-efficient computer processing solutions.

These advancements will support the next generation of AI, data storage, telecommunications, cybersecurity, mobile devices, and more.

### **About Adisyn**

Adisyn is a leading provider of managed technology solutions, primarily serving the SME market. The Company leverages cutting-edge technologies, including artificial intelligence and cybersecurity, to deliver bespoke solutions. Through its wholly owned subsidiary, **2D Generation**, Adisyn is advancing graphene-based semiconductor technologies to overcome industry limitations and drive innovation across sectors including AI, telecommunications, and data storage.

### **Forward-looking statements:**

Statements contained in this release, particularly those regarding possible or assumed future performance, revenue, costs, dividends, production levels or rates, prices, or potential growth of Adisyn Ltd are, or may be, forward-looking statements. Such statements relate to future events and expectations and as such, involve known and unknown risks and uncertainties. These forward-looking statements are not guarantees or predictions of future performance and involve known and unknown risks, uncertainties, and other factors, many of which are beyond the Company's control, and which may cause actual results to differ materially from those expressed in the statements contained in this release.

The Company cautions shareholders and prospective shareholders not to put undue reliance on forward-looking statements, which reflect the Company's expectations only as of the date of this announcement. The Company disclaims any obligation to update or revise any forward-looking information, whether as a result of new information, future events or otherwise, except as required by law.