

Ticking off a crucial development step

Adisyn (ASX:AI1) is developing a graphene disposition technology that, once fully developed, is intended to be used to build interconnects in computer chips, i.e. the nanoscale wires that connect individual transistors.

We have written extensively about why the use of graphene to build semiconductor interconnects is potentially game-changing for the semiconductor industry. [Please refer to our research on this topic here!](#)

Creating uniform wafer surfaces

On 17 November 2025 the company announced that its semiconductor IP development subsidiary, 2D Generation (2DG), had successfully validated an important sub-process in the pre-cleaning stage of the larger manufacturing process 2DG is developing.

Using its newly installed Beneq Atomic Layer Deposition (ALD) tools, 2DG has been able to pre-treat wafer surfaces to achieve uniform and smooth wafer surfaces, i.e. without too much variation in height. This uniform surface is a prerequisite to ensure uniform graphene deposition conditions and to minimise contaminants on the wafer surface. Being able to validate this pre-cleaning step works as expected is a big tick in the development box, in our view.

Starting with the actual graphene deposition process

In the next several months we expect more news flow around 2DG's actual graphene deposition trials in which a number of different carbon-ring precursors will be tested. Testing different precursors will help 2DG figure out the best options for its purposes of creating uniform graphene layers with the best electrical and other characteristics.

2DG will also be working on process optimisation and characterisation of the films it has been depositing on wafers, i.e. around the quality of the deposited graphene films and where these can be improved upon.

We reiterate our valuation of A\$0.29 per share

Based on 2DG adhering to its development roadmap as laid out earlier in 2025, we reiterate our valuation for Adisyn of A\$0.29 per share. This valuation uses a Sum-of-the-Parts for its two businesses: \$0.22 for 2D Generation and \$0.07 for the legacy business.

We see potential for the company to re-rate from the current share price level as it continues the development of its graphene deposition technology. Meeting the next major milestone of having a demo prototype towards the end of 2026 will be crucial and the recent validation of the pre-clean stage is an important step in the right direction, in our view.

Share Price: A\$0.068

ASX:AI1

Sector: Technology

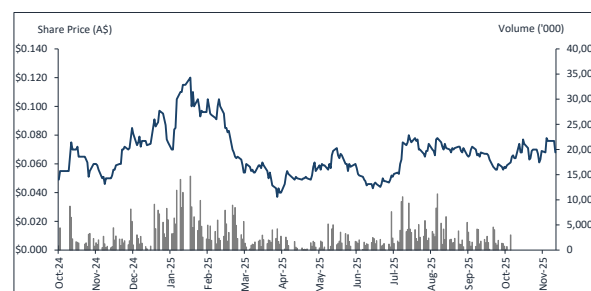
19 November 2025

Market cap. (A\$ m)	49.2
# shares outstanding (m) ¹	724.1
# shares fully diluted (m)	1,121.6
Market cap ful. dil. (A\$ m)	76.3
Free float	100%
52-week high/low (A\$)	0.12/0.036
Avg. 12M daily volume ('1000)	2,822
Website	www.2dgeneration.com www.adisyn.com.au

Source: Company, Pitt Street Research

¹ Includes shares in escrow

Share price (A\$) and avg. daily volume (k, r.h.s.)



Source: Refinitiv Eikon, Pitt Street Research

Sum-of-the-Parts Valuation	
Valuation 2D Generation (A\$)	0.22
Valuation Services business (A\$)	0.07
Overall Adisyn valuation (A\$)	0.29

Source: Pitt Street Research

Analysts: Marc Kennis, Nick Sundich

Tel: +61 (0)4 3483 8134

marc.kennis@pittstreetresearch.com

nick.sundich@pittstreetresearch.com

Disclosure: Pitt Street Research directors own shares in Adisyn.



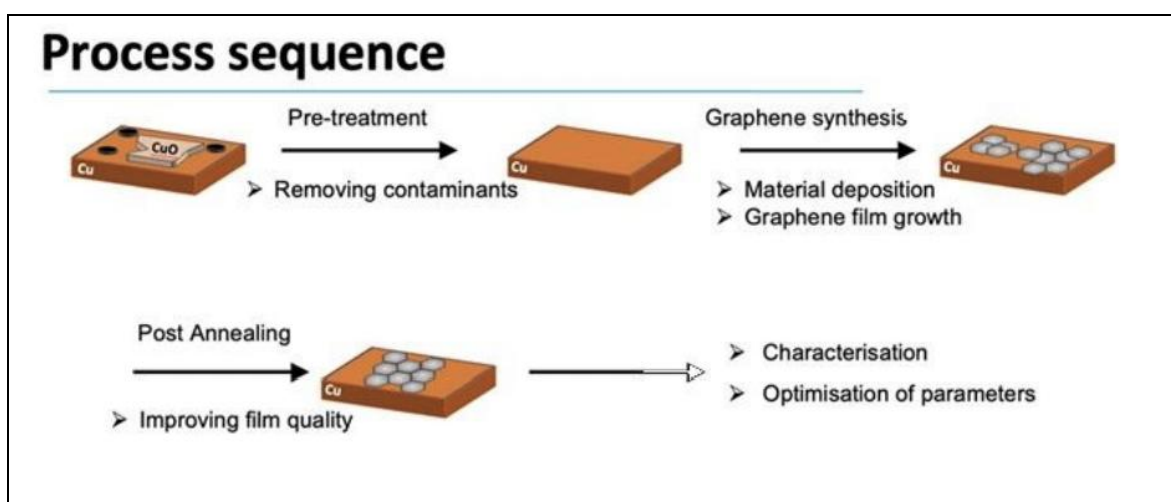
*Clean and uniform substrates
improve performance
characteristics and yield.*

Starting with a clean slate

As illustrated in Figure 1, growing a graphene film, or any film for that matter, on a semiconductor substrate is done in a number of different steps. And the cleaner and more uniform the surface of the substrate is at the beginning of the process, the higher the quality of the film will be. In other words, it improves the performance of the eventual interconnects, and hence the chip, and will also result in higher yields, i.e. good chips per wafer..

In order to achieve the best starting point ahead of graphene deposition, 2DG has been pre-treating to smoothen out the substrate surface and to minimise contaminants of that surface. This process uses ionised gases to remove contaminants without leaving chemical residues, which is crucial for preventing defects and improving chip reliability. It can also activate surfaces to improve adhesion.

Figure 1: The graphene deposition process sequence



Source: Company

Next steps in the development process

With the first process step validated, 2DG will now move on to deposition of graphene to grow graphene films on the semiconductor substrate. We have described this process in our [research initiation of Adisyn dated 14 January 2025](#).

This trial-and-error process will run for a number of months and involves:

- Using varying precursors,
- Testing different gas pressures, flow rates, temperatures, power etc.

With respect to the precursors, 2DG will be trying out various carbon-ring based precursor compounds. A carbon ring is structure of 6 connected carbon atoms that form a ring. There are many different potential compounds available, but 2DG has already patented several high-potential precursor candidates for this purpose. So, unless there are major setbacks, we believe the company should be able to settle on one or several good candidate precursors relatively quickly.

We expect 2DG will be able to communicate initial results late in 1Q26 or early in 2Q26. At the same time, it will continue to optimise the pre-clean stage.

***We reiterate our valuation for
Adisyn of A\$0.29 per share.***

Sum-of-the-Parts valuation of A\$0.29 per share

We reiterate our valuation for Adisyn of A\$0.29 per share under the current number of shares on issue. Of this, A\$0.22 per share is attributable to 2D Generation and A\$0.07 per share to Adisyn's legacy business. Please see our research initiation on Adisyn for more detail around our valuation.

Potential share price catalysts

We see the following share price catalysts:

- We expect 2D Generation will have regular news flow around its graphene deposition development work in the near to medium term.
- Positive progress reports around the company's work with imec and the ConnectingChips collaboration.
- Possible announcements of additional semiconductor industry collaborations in the near to medium term.
- Delivery of Demo Prototype of graphene interconnects using ALD, expected in 2026.
- The legacy services business becoming profitable within the next 18 months.
- Potential takeover/divestment of either Adisyn's existing data centre business and/or 2D Generation in due course.

Risks

We see the following key risks to our investment thesis:

- **Funding risk:** Adisyn/2D Generation will require significant funding to realise its development and commercial ambitions. An inability to secure financing on favourable terms, or failure to secure funding at all, could be catastrophic for the company.
- **Technology risk:** There is the risk that the company may not move fast enough to keep pace with the competition. Additionally, in case 2D Generation's patents are infringed, there is no guarantee that the company can defend these patents in court given the substantial financial burden this would involve.
- **Cyber/Infrastructure risk:** A failure or interruption of the company's cyber systems or infrastructure systems could cause significant problems for the company's development program.
- **Commercial risk:** There is the risk that the company may fail to execute its commercial objectives for a variety of reasons including competition and lack of acceptance by the market.
- **Key personnel risk:** There is the risk the company may lose key personnel and may be unable to replace them and/or their contribution to the business



Appendix I – Analysts’ qualifications

Marc Kennis has been an equities analyst since 1996.

- Marc obtained an MSc in Economics from Tilburg University, Netherlands, in 1996 and a postgraduate degree in investment analysis in 2001.
- Since 1996, he has worked for various brokers and banks in the Netherlands, including ING and Rabobank, where his focus has been on the technology sector, including the semiconductor sector.
- After moving to Sydney in 2014, he worked for several Sydney-based brokers before setting up TMT Analytics Pty Ltd, an issuer-sponsored equity research firm.
- In July 2016, with Stuart Roberts, Marc co-founded Pitt Street Research Pty Ltd, which provides issuer-sponsored research on ASX-listed companies across the entire market, including technology companies.

Nick Sundich is an equities research analyst at Pitt Street Research.

- Nick obtained a Bachelor of Commerce/Bachelor of Arts from the University of Sydney in 2018. He has also completed the CFA Investment Foundations program.
- He joined Pitt Street Research in January 2022. Previously he worked for over three years as a financial journalist at StockHead.
- While at university, he worked for a handful of corporate advisory firms.

General advice warning, Disclaimer & Disclosures

Terms & Conditions

The information contained herein ("Content") has been prepared and issued by Pitt Street Research Pty Ltd ACN 626365615 ("Pitt Street Research"), an Authorised Representative (no: 1265112) of BR Securities Australia Pty Ltd. ABN 92 168 734 530, AFSL 456663. All intellectual property relating to the Content vests with Pitt Street Research unless otherwise noted.

Disclaimer

Pitt Street Research provides this financial advice as an honest and reasonable opinion held at a point in time about an investment's risk profile and merit and the information is provided by the Pitt Street Research in good faith. The views of the adviser(s) do not necessarily reflect the views of the AFS Licensee. Pitt Street Research has no obligation to update the opinion unless Pitt Street Research is currently contracted to provide such an updated opinion. Pitt Street Research does not warrant the accuracy of any information it sources from others. All statements as to future matters are not guaranteed to be accurate and any statements as to past performance do not represent future performance.

Assessment of risk can be subjective. Portfolios of equity investments need to be well diversified and the risk appropriate for the investor. Equity investments in a listed or unlisted company yet to achieve a profit or with an equity value less than \$50 million should collectively be a small component of an individual investor's equity portfolio, with smaller individual investment sizes than otherwise. Investors are responsible for their own investment decisions, unless a contract stipulates otherwise.

Pitt Street Research does not stand behind the capital value or performance of any investment. Subject to any terms implied by law and which cannot be excluded, Pitt Street Research shall not be liable for any errors, omissions, defects or misrepresentations in the information (including by reasons of negligence, negligent misstatement or otherwise) or for any loss or damage (whether direct or indirect) suffered by persons who use or rely on the information. If any law prohibits the exclusion of such liability, Pitt Street Research limits its liability to the re-supply of the Information, provided that such limitation is permitted by law and is fair and reasonable.

General advice warning

The Content is General Financial Advice but has been prepared for general information purposes only and is not (and cannot be construed or relied upon as) Personal Financial Advice nor as an offer to buy/sell/subscribe to any of the financial products mentioned herein. No investment objectives, financial circumstances or needs of any individual have been taken into consideration in the preparation of the Content.

Financial products are complex, entail risk of loss, may rise and fall, and are impacted by a range of market and economic factors, and you should always obtain professional advice to ensure trading or investing in such products is suitable for your circumstances, and ensure you obtain, read and understand any applicable offer document.

Disclosures

Pitt Street Research has been commissioned to prepare the Content. From time to time, Pitt Street Research representatives or associates may hold interests, transact or hold directorships in, or perform paid services for, companies mentioned herein. Pitt Street Research and its associates, officers, directors and employees, may, from time to time hold securities in the companies referred to herein and may trade in those securities as principal, and in a manner which may be contrary to recommendations mentioned in this document.

Pitt Street Research receives fees from the company referred to in this document, for research services and other financial services or advice we may provide to that company. The analyst has received assistance from the company in preparing this document. The company has provided the analyst with communication with senior management and information on the company and industry. As part of due diligence, the analyst has independently and critically reviewed the assistance and information provided by the company to form the opinions expressed in the report. Diligent care has been taken by the analyst to maintain an honest and fair objectivity in writing this report and making the recommendation. Where Pitt Street Research has been commissioned to prepare Content and receives fees for its preparation, please note that NO part of the fee, compensation or employee remuneration paid will either directly or indirectly impact the Content provided.