

ASX RELEASE

11 April 2019

Appendix 4C and Company Update

4DS Memory Limited (ASX:4DS) (**4DS** or the **Company**) is pleased to provide its Quarterly Report for the quarter ended 31 March 2019, along with a Company update.

imec Collaboration

During the quarter, the Company made a number of significant announcements in relation to the progress the Company has been making with its development partner, imec.

In late January 2019, 4DS announced that imec had fabricated functional 300mm wafers on the same multi-million dollar state-of-the-art production equipment used by high volume manufacturers of memory. The wafers were subsequently relocated to 4DS's facilities in Silicon Valley where they underwent extensive analysis.

On 20 February 2019, 4DS announced that imec had produced 23 testable 300mm wafers, with minor changes in process conditions for each wafer so as to identify the impact of such changes on the desired memory characteristics for Storage Class Memory. Wafer "D17" demonstrated the best characteristics with respect to endurance and retention – two core characteristics for Storage Class Memory on which the testing and analysis was focussed.

- **Endurance analysis has shown that the Company can cycle its Interface Switching ReRAM memory cells into the millions of cycles, a first for the Company; and**
- **Retention analysis has shown the best retention results the Company has been able to produce outside of its own facilities.**

This was a significant achievement for the Company as it was the first time the Company had been able to replicate and improve certain characteristics on the same multi-million dollar state-of-the-art production equipment used by high volume/high density manufacturers of memory.

On 2 April 2019, 4DS announced that imec had commenced the processing of the next lot of 300mm wafers, being variations of wafer D17. The speed with which 4DS and imec have been able to determine the process conditions for this next lot of wafers, and commence their manufacture, is due to the invaluable data obtained from previous iterations.

Processing of this next lot of wafers remains on track and results from their analysis will be available in Q2 2019, as previously reported.

In addition, members of 4DS' management and technical team are planning to be in Belgium during the week beginning 27 May 2019 for meetings with imec.

ENDS

Contact information

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About 4DS

4DS Memory Limited (ASX: 4DS), with facilities located in Silicon Valley, is a semiconductor development company of non-volatile memory technology, pioneering Interface Switching ReRAM (Non-Filamentary ReRAM), for next generation gigabyte Storage Class Memory. Established in 2007, 4DS owns a patented IP portfolio, comprising 20 granted US patents and 3 patents pending, which has been developed in-house to create high density Storage Class Memory. 4DS has a joint development agreement with Western Digital subsidiary HGST, a global storage leader, which accelerates the evolution of 4DS' technology. 4DS also collaborates with imec, the world's #1 independent semiconductor development institute.

For more information, please visit www.4dsmemory.com.

About imec

imec is the world-leading research and innovation hub in nanoelectronics and digital technologies. The combination of our widely acclaimed leadership in microchip technology and profound software and ICT expertise is what makes us unique. By leveraging our world-class infrastructure and local and global ecosystem of partners across a multitude of industries, we create ground breaking innovation in application domains such as healthcare, smart cities and mobility, logistics and manufacturing, energy and education.

As a trusted partner for companies, start-ups and universities we bring together close to 3,500 brilliant minds from over 75 nationalities. Imec is headquartered in Leuven, Belgium and also has distributed R&D groups at a number of Flemish universities, in the Netherlands, Taiwan, USA, China, and offices in India and Japan. In 2016, imec's revenue (P&L) totalled 496 million euro. Further information on imec can be found at www.imec-int.com.

imec is a registered trademark for the activities of IMEC International (a legal entity set up under Belgian law as a "stichting van openbaar nut"), imec Belgium (IMEC vzw supported by the Flemish Government), imec the Netherlands (Stichting IMEC Nederland, part of Holst Centre which is supported by the Dutch Government), imec Taiwan (IMEC Taiwan Co.) and imec China (IMEC Microelectronics (Shanghai) Co. Ltd.) and imec India (Imec India Private Limited), imec Florida (IMEC USA nanoelectronics design center).

For more information, please visit www.imec.be.

Disclaimer

This release contains certain forward looking statements that are based on the Company's management's beliefs, assumptions and expectations and on information currently available to management. Such forward looking statements involve known and unknown risks, uncertainties, and other factors which may cause the actual results or performance of 4DS to be materially different from the results or performance expressed or implied by such forward looking statements. Such forward looking statements are based on numerous assumptions regarding the Company's present and future business strategies and the political and economic environment in which 4DS will operate in the future, which are subject to change without notice. Past performance is not necessarily a guide to future performance and no representation or warranty is made as to the likelihood of achievement or reasonableness of any forward looking statements or other forecast. To the full extent permitted by law, 4DS and its directors, officers, employees, advisers, agents and intermediaries disclaim any obligation or undertaking to release any updates or revisions to information to reflect any change in any of the information contained in this release (including, but not limited to, any assumptions or expectations set out in the release).

You should not place undue reliance on these forward- looking statements. Except as required by law or regulation (including the ASX Listing Rules) we undertake no obligation to update these forward- looking statements.

Appendix 4C

Quarterly report for entities subject to Listing Rule 4.7B

Introduced 31/03/00 Amended 30/09/01, 24/10/05, 17/12/10, 01/09/16

Name of entity

4DS MEMORY LIMITED (4DS)

ABN

43 145 590 100

Quarter ended ("current quarter")

31 March 2019

| Consolidated statement of cash flows | Current quarter \$A'000 | Year to date (9 months) \$A'000 |
|--|------------------------------------|--|
| 1. Cash flows from operating activities | | |
| 1.1 Receipts from customers | | |
| 1.2 Payments for | | |
| (a) research and development | (876) | (2,552) |
| (b) business development | (44) | (135) |
| (c) advertising and marketing | (10) | (22) |
| (d) leased assets | - | - |
| (e) staff and board remuneration | (64) | (110) |
| (f) administration and corporate costs | (154) | (481) |
| 1.3 Dividends received (see note 3) | - | - |
| 1.4 Interest received | 4 | 14 |
| 1.5 Interest and other costs of finance paid | - | - |
| 1.6 Income taxes paid | - | - |
| 1.7 Government grants and tax incentives | - | - |
| 1.8 Other (provide details if material) | - | - |
| 1.9 Net cash (used in) operating activities | (1,144) | (3,286) |

| | | |
|--|---|------|
| 2. Cash flows from investing activities | | |
| 2.1 Payments to acquire: | | |
| (a) property, plant and equipment | - | (95) |
| (b) businesses (see item 10) | - | - |
| (c) investments | - | - |
| (d) intellectual property | - | - |
| (e) other non-current assets | - | - |

| Consolidated statement of cash flows | | Current quarter \$A'000 | Year to date (9 months) \$A'000 |
|---|---|------------------------------------|--|
| 2.2 | Proceeds from disposal of: | | |
| | (a) property, plant and equipment | - | - |
| | (b) businesses (see item 10) | - | - |
| | (c) investments - shares | - | - |
| | (d) intellectual property | - | - |
| | (e) other non-current assets | - | - |
| 2.3 | Cash flows from loans to other entities | - | - |
| 2.4 | Dividends received (see note 3) | - | - |
| 2.5 | Other (provide details if material) | - | - |
| 2.6 | Net cash from investing activities | - | (95) |

| | | | |
|-------------|---|------------|--------------|
| 3. | Cash flows from financing activities | | |
| 3.1 | Proceeds from issues of shares | 125 | 3,276 |
| 3.2 | Proceeds from issue of convertible notes | - | - |
| 3.3 | Proceeds from exercise of share options | 100 | 663 |
| 3.4 | Transaction costs related to issues of shares, convertible notes or options | (10) | (238) |
| 3.5 | Proceeds from borrowings | - | - |
| 3.6 | Repayment of borrowings | - | - |
| 3.7 | Transaction costs related to loans and borrowings | - | - |
| 3.8 | Dividends paid | - | - |
| 3.9 | Other (provide details if material) | - | - |
| 3.10 | Net cash from / (used in) financing activities | 215 | 3,701 |

| | | | |
|------------|--|--------------|--------------|
| 4. | Net increase/(decrease) in cash and cash equivalents for the period | | |
| 4.1 | Cash and cash equivalents at beginning of quarter/year to date | 4,231 | 2,932 |
| 4.2 | Net cash (used in) operating activities (item 1.9 above) | (1,144) | (3,286) |
| 4.3 | Net cash (used in) investing activities (item 2.6 above) | - | (95) |
| 4.4 | Net cash from financing activities (item 3.10 above) | 215 | 3,701 |
| 4.5 | Effect of movement in exchange rates on cash held | (20) | 30 |
| 4.6 | Cash and cash equivalents at end of quarter | 3,282 | 3,282 |

| 5. Reconciliation of cash and cash equivalents at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts | Current quarter \$A'000 | Previous quarter \$A'000 |
|--|----------------------------|-----------------------------|
| 5.1 Bank balances | 3,282 | 4,231 |
| 5.2 Call deposits | - | - |
| 5.3 Bank overdrafts | - | - |
| 5.4 Other (provide details) | - | - |
| 5.5 Cash and cash equivalents at end of quarter (should equal item 4.6 above) | 3,282 | 4,231 |

6. Payments to directors of the entity and their associates

- 6.1 Aggregate amount of payments to these parties included in item 1.2
- 6.2 Aggregate amount of cash flow from loans to these parties included in item 2.3
- 6.3 Include below any explanation necessary to understand the transactions included in items 6.1 and 6.2

| Current quarter \$A'000 |
|----------------------------|
| 159 |
| - |

Salary paid to Managing Director and salary and bonus paid to the Executive Director.

7. Payments to related entities of the entity and their associates

- 7.1 Aggregate amount of payments to these parties included in item 1.2
- 7.2 Aggregate amount of cash flow from loans to these parties included in item 2.3
- 7.3 Include below any explanation necessary to understand the transactions included in items 7.1 and 7.2

| Current quarter \$A'000 |
|----------------------------|
| - |
| - |

None

| 8. Financing facilities available <i>Add notes as necessary for an understanding of the position</i> | Total facility amount at quarter end \$A'000 | Amount drawn at quarter end \$A'000 |
|--|--|---|
| 8.1 Loan facilities | - | - |
| 8.2 Credit standby arrangements | - | - |
| 8.3 Other (please specify) | - | - |
| 8.4 Include below a description of each facility above, including the lender, interest rate and whether it is secured or unsecured. If any additional facilities have been entered into or are proposed to be entered into after quarter end, include details of those facilities as well. | | |

None

| 9. Estimated cash outflows for next quarter | \$A'000 |
|--|--------------|
| 9.1 Research and development | 881 |
| 9.2 Product manufacturing and operating costs | - |
| 9.3 Advertising and marketing | 38 |
| 9.4 Leased assets | - |
| 9.5 Staff board remuneration | 209 |
| 9.6 Administration and corporate costs | 100 |
| 9.7 Other | - |
| 9.8 Total estimated cash outflows | 1,228 |

| 10. Acquisitions and disposals of business entities (items 2.1(b) and 2.2(b) above) | Acquisitions | Disposals |
|--|--------------|-----------|
| 10.1 Name of entity | - | - |
| 10.2 Place of incorporation or registration | - | - |
| 10.3 Consideration for acquisition or disposal | - | - |
| 10.4 Total net assets | - | - |
| 10.5 Nature of business | - | - |

Compliance statement

- 1 This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
- 2 This statement gives a true and fair view of the matters disclosed.

Sign here: 
(Company secretary)

Date: 11 April 2019

Print name: Peter Webse

Notes

1. The quarterly report provides a basis for informing the market how the entity's activities have been financed for the past quarter and the effect on its cash position. An entity that wishes to disclose additional information is encouraged to do so, in a note or notes included in or attached to this report.
2. If this quarterly report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, *AASB 107: Statement of Cash Flows* apply to this report. If this quarterly report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standard applies to this report.
3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.