

ASX RELEASE

30 April 2018

## Appendix 4C and Company Update

4DS Memory Ltd (ASX:4DS) is pleased to provide its Quarterly Report for quarter three of the 2017/2018 financial year along with a Company update.

Following the Company's ASX announcement in June 2017 that it had successfully tuned its Interface Switching ReRAM cell architecture for Storage Class Memory with read speeds comparable to DRAM without the need for speed-crippling error correction, 4DS announced in November 2017 that it had entered into a collaboration agreement with imec.

### Collaboration Objectives

The objectives of the collaboration agreement with imec are two-fold:

**(1) To develop a transferrable production-compatible process flow**

Prior to this collaboration agreement, the innovative 4DS memory cells were fabricated with R&D process tools that differ from the state-of-the-art 300mm process tools which producers of high-density high-volume memories use in production facilities.

As a world-leading research and innovation hub in nano-electronics and digital technologies, imec has the same state-of-the-art process tools for 300mm wafers that are used in high-density high-volume production facilities and engages in development with global makers of high-volume high-density memories.

Under this agreement, 4DS is collaborating with imec to develop a production-compatible process for the 4DS Interface Switching ReRAM technology to facilitate future transfer of the 4DS technology to any production facility.

**(2) To demonstrate this transferrable production-compatible process flow on imec's megabit test chip**

Megabit memories are the minimum size needed to collect statistically significant data on yield, endurance, speed and data retention. This information is essential for potential adopters or acquirers of new memory technologies to make informed decisions.

After developing the transferrable production-compatible process flow, 4DS and imec will demonstrate this production backend-of-line (BEOL) process on imec's proven megabit memory vehicle processed on 300mm wafers.

### Collaboration Status

The collaboration agreement is currently focused on the first goal: the development of a transferrable production-compatible process flow. To fabricate memory cells, the necessary films are first deposited and then etched into cells. Since 300mm production tools are different from R&D tools designed for smaller wafers, the deposition conditions are currently being tuned for the imec state-of-the-art 300mm equipment.

4DS and imec are seeking to achieve both of the above goals as soon as feasible without compromising the quality of the transferrable production-compatible process flow and the credibility of the statistical data collected from the megabit test chips for yield, endurance, speed and data retention.

Overall, the Company is very pleased with the progress of the collaboration, which is running on schedule and the Company expects to receive its first imec wafers later this year.

As with all new memory technologies which reach beyond NAND Flash silicon storage, the 4DS cells use materials (such as PCMO) that are currently not yet used in volume production facilities. When introducing new materials into a production facility, a rigorous study for possible contamination is performed.

4DS is pleased to report that imec has completed such a study and has fully qualified the use of all 4DS materials in its fabrication facility.

4DS will attend the yearly imec Technology Forum in May 2018 in Antwerp, Belgium. In addition, the next quarterly collaboration review meeting is scheduled in June 2018 at the imec facilities in Belgium.

The Company finished the quarter under budget with a cash balance of A\$3.8 million.

The Company will continue to inform shareholders when significant technical achievements are made.

## 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 19 granted US patents and 4 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](http://www.4dsmemory.com).

## 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 2018

<b>Consolidated statement of cash flows</b>	<b>Current quarter \$A'000</b>	<b>Year to date (9 months) \$A'000</b>
<b>1. Cash flows from operating activities</b>		
1.1 Receipts from customers	-	-
1.2 Payments for		
(a) research and development	(769)	(1,641)
(b) business development	(69)	(174)
(c) advertising and marketing	(10)	(35)
(d) leased assets	-	-
(e) staff and board remuneration	(22)	(80)
(f) administration and corporate costs	(176)	(421)
1.3 Dividends received (see note 3)	-	-
1.4 Interest received	8	17
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)	-	-
<b>1.9 Net cash (used in) operating activities</b>	<b>(1,038)</b>	<b>(2,334)</b>

<b>2. Cash flows from investing activities</b>		
2.1 Payments to acquire:		
(a) property, plant and equipment	-	(281)
(b) businesses (see item 10)	-	-
(c) investments	-	-
(d) intellectual property	-	-
(e) other non-current assets	-	-

<b>Consolidated statement of cash flows</b>		<b>Current quarter \$A'000</b>	<b>Year to date (9 months) \$A'000</b>
2.2	Proceeds from disposal of:		
	(a) property, plant and equipment	-	6
	(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)	-	-
<b>2.6</b>	<b>Net cash from investing activities</b>	<b>-</b>	<b>(275)</b>

<b>3.</b>	<b>Cash flows from financing activities</b>		
3.1	Proceeds from issues of shares	250	3,455
3.2	Proceeds from issue of convertible notes	-	-
3.3	Proceeds from exercise of share options	277	657
3.4	Transaction costs related to issues of shares, convertible notes or options	(12)	(234)
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)	-	-
<b>3.10</b>	<b>Net cash from / (used in) financing activities</b>	<b>515</b>	<b>3,878</b>

<b>4.</b>	<b>Net increase/(decrease) in cash and cash equivalents for the period</b>		
4.1	Cash and cash equivalents at beginning of quarter/year to date	4,350	2,576
4.2	Net cash (used in) operating activities (item 1.9 above)	(1,038)	(2,334)
4.3	Net cash from investing activities (item 2.6 above)	-	(275)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	515	3,878
4.5	Effect of movement in exchange rates on cash held	1	(17)
<b>4.6</b>	<b>Cash and cash equivalents at end of quarter</b>	<b>3,828</b>	<b>3,828</b>

5. <b>Reconciliation of cash and cash equivalents</b> 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	3,828	4,350
5.2 Call deposits	-	-
5.3 Bank overdrafts	-	-
5.4 Other (provide details)	-	-
<b>5.5 Cash and cash equivalents at end of quarter (should equal item 4.6 above)</b>	<b>3,828</b>	<b>4,350</b>

**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
108
-

Payment to Directors for Managing Director and the Chief Executive Officer.

**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

<b>8. Financing facilities available</b> <i>Add notes as necessary for an understanding of the position</i>	<b>Total facility amount at quarter end \$A'000</b>	<b>Amount drawn at quarter end \$A'000</b>
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.		

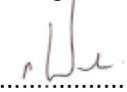
None

<b>9. Estimated cash outflows for next quarter</b>	<b>\$A'000</b>
9.1 Research and development	801
9.2 Product manufacturing and operating costs	-
9.3 Advertising and marketing	43
9.4 Leased assets	-
9.5 Staff board remuneration	72
9.6 Administration and corporate costs	132
9.7 Other	-
<b>9.8 Total estimated cash outflows</b>	<b>1,048</b>

<b>10. Acquisitions and disposals of business entities (items 2.1(b) and 2.2(b) above)</b>	<b>Acquisitions</b>	<b>Disposals</b>
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:  ..... Date: 30 April 2018 .....

(Director/Company secretary)

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.