

## Q3 FY2019 Activities Update

*Achieves key technical parameters; moves closer to production fab transfer;  
builds commercial & research partnerships*

### Key highlights for Q3

- **Formed partnership with Silvaco to create ReRAM models & tools**
- **Demonstrated excellent test results ahead of move to 300mm wafers at 28nm**
- **Extended commercial agreement with Leti into artificial intelligence**
- **Collaborations with leading research institutes Technion and Politecnico di Milano**
- **Dr Nissan-Cohen to provide additional services as Weebit prepares to transfer its technology to a production fab and progress discussions with potential partners.**

30 April, 2019 – Weebit Nano Ltd (ASX: WBT) is pleased to provide an update for the quarter ending 31 March 2019, along with its Appendix 4C cash flow results.

### Development Program Partnership with Silvaco

In January, Weebit Nano formed a Development Program Partnership with Silvaco – a leading global provider of software, IP and services for designing chips and electronic systems for semiconductor companies.

The two companies will work together to develop a Technology Computer-Aided Design (TCAD) solution to accurately model the electrical behavior of Weebit's ReRAM devices. The models, based on Weebit's physical samples and data, will be the basis for creating a Silvaco TCAD solution for joint customers employing ReRAM technology.

Silvaco's TCAD simulation will dramatically speed up the design, fabrication and commercial use of ReRAM technology through the elimination of expensive and time-consuming experimental wafers during technology adoption by OEMs.

### Excellent test results ahead of move to 300mm wafers

Weebit demonstrated successful endurance results of its ReRAM cells in January, at levels competitive to production non-volatile memories. Reaching these technical parameters is a key step towards moving to 300mm wafers at 28nm.

Weebit performed the tests with its partner Leti, the French research institute recognised as a global leader in the field of micro-electronics, which demonstrated Array-level endurance above 100,000 cycles – on par with expectation in the storage memory market, and a significant improvement over flash memories.



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In addition to technical parameter improvements, Weebit created a more flexible manufacturing base, ensuring the SiOx ReRAM layer will be compatible with different tools and technologies used by different production fabs. This is crucial for transferring Weebit's technology to different commercial manufacturers.

### **Extended commercial agreement with Leti into artificial intelligence**

During the reporting period, Weebit extended its existing partnership with Leti, the French research institute recognised as a global leader in the field of micro-electronics, to develop a system which will demonstrate artificial intelligence algorithms implemented using silicon oxide (SiOx) ReRAM.

The new agreement will combine Weebit's SiOx ReRAM technology and Leti's development of state-of-the-art artificial intelligence technologies and architectures to build an advanced neuromorphic demonstration system. The system will be based on a Spiking Neural Network (SNN) test vehicle for implementing synapses, which will showcase the capabilities of the technology by performing precise object recognition tasks in an energy-efficient manner.

The system will demonstrate revolutionary technology, disrupting the state-of-the-art object recognition models currently being used.

### **Collaborations with leading research institutes Technion & Politecnico di Milano**

During the quarter, Weebit partnered with leading research institutes Politecnico di Milano (Polimi) and the Technion (Israel Institute of Technology) on ReRAM projects.

In January, Weebit launched a joint Neuromorphic ReRAM project with Politecnico di Milano in Italy to test, characterise and implement its developed algorithms using Weebit's ReRAM chips to demonstrate the capability of ReRAM-based hardware in neuromorphic and artificial intelligence applications.

The research at Polimi, one of the leading European universities for Industrial and Information Engineering, Technology and Industrial Design, will be led by Professor Daniele Ielmini. He is a Fellow of the IEEE (Institute of Electrical and Electronics Engineers), has held visiting positions at Intel and Stanford University, and received the Intel 2013 Outstanding Researcher Award.

In February, Weebit and the Technion agreed to examine the possible use of ReRAM memories in a novel computing architecture that could speed up processing, memory transfer rate and memory bandwidth, and decrease processing latency – while using much less power.

Weebit and the Technion will perform characterisation and implementation of logic operations using Weebit's SiOx ReRAM test chips, demonstrating basic logic operations on a ReRAM array using the Technion's MAGIC (Memristor Aided Logic) technique implementing 'Real Processing in Memory', or Real PIM. Research at the Technion will be led by Professor Shahar Kvatinsky, a pioneer in the field of circuits and architectures with emerging memory technologies and design of energy-efficient architectures.



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### **Agreement with Dr Yoav Nissan-Cohen & share consolidation**

During the reporting period, Weebit Executive Director Dr Yoav Nissan-Cohen agreed to increase his time commitment with the company. Dr Nissan-Cohen will be providing additional services as Weebit prepares to transfer its technology to a production fab, along with progressing discussions with potential partners, delaying the need to hire a Vice President of Research and Development.

In line with the increase in his time commitment, consideration paid to Dr Nissan-Cohen's consulting company, Nicohy Ltd, under the Consulting Agreement dated 1 January 2018, increased from NIS20,000 to NIS40,000 per month.

In February, Weebit Nano underwent a share consolidation at a ratio of 25:1. The consolidation improves the company's investment proposition to partner prospects as it moves closer to commercialisation.

### **Looking ahead**

In collaboration with research partner Leti, Weebit Nano continues to improve the baseline parameters of its SiOx ReRAM technology, and is moving closer to producing 300mm wafers at 28nm.

Weebit continues to progress discussions with potential customers/partners, while the company also explores other emerging applications for its ReRAM technology, such as Neuromorphic Computing and Real PIM. The assistance of Executive Director Dr Yoav Nissan-Cohen is invaluable in advancing these negotiations and preparing for the move to a production fab.

For further information, contact:

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#### **About Weebit Nano Limited**

Weebit Nano is a leader in the development of next generation computer memory technology, and plans to become the new industry standard in this space. Its goal is to address the growing need for a significantly higher performance and lower power computer memory technology. Weebit Nano's ReRAM technology is based on fab-friendly Silicon Oxide, allowing the company to rapidly execute, without the need for special equipment or preparations. The company secured several patents to ensure optimal commercial and legal protection for its ground-breaking technology.

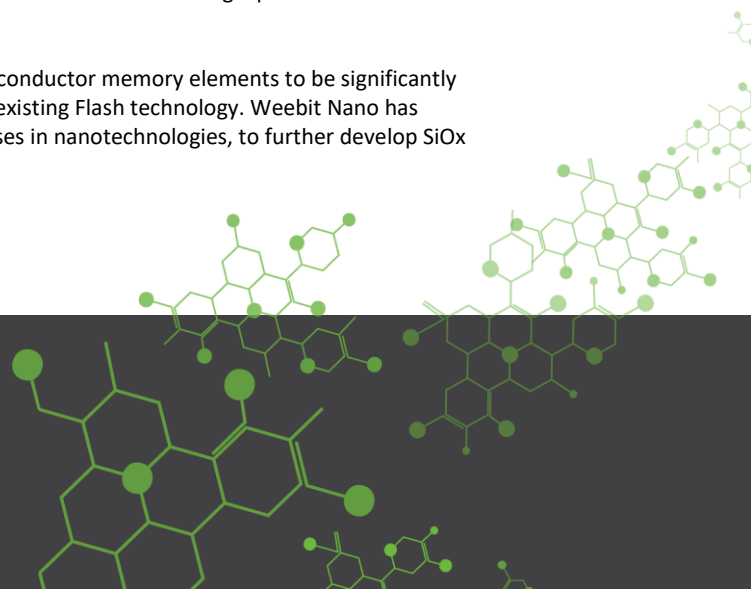
Weebit Nano's technology enables a quantum leap, allowing semiconductor memory elements to be significantly cheaper, faster, more reliable and more energy efficient than the existing Flash technology. Weebit Nano has signed an R&D agreement with Leti, an R&D institute that specialises in nanotechnologies, to further develop SiOx ReRAM technology.

For more information please visit: <http://www.weebit-nano.com/>



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## 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**

Weebit Nano Limited (ASX: WBT)

**ABN**

15 146 455 576

**Quarter ended ("current quarter")**

31 March 2019

Consolidated statement of cash flows	Current quarter \$A'000	Year to date ( 9 months) \$A'000
<b>1. Cash flows from operating activities</b>		
1.1 Receipts from customers	-	-
1.2 Payments for		
(a) research and development	276	(2138)
(b) product manufacturing and operating costs	-	-
(c) advertising and marketing	(13)	(94)
(d) leased assets	(34)	(118)
(e) staff costs	(363)	(867)
(f) administration and corporate costs	(312)	(1440)
1.3 Dividends received (see note 3)	-	-
1.4 Interest received	2	8
1.5 Interest and other costs of finance paid	(4)	(6)
1.6 Income taxes paid	-	-
1.7 Government grants and tax incentives	-	-
1.8 Other: Former activities (Exploration)	-	-
<b>1.9 Net cash from / (used in) operating activities</b>	<b>(448)</b>	<b>(4,655)</b>

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

<b>3.</b>	<b>Cash flows from financing activities</b>		
3.1	Proceeds from issues of shares	-	4,374
3.2	Proceeds from issue of convertible notes	-	-
3.3	Proceeds from exercise of share options	-	-
3.4	Transaction costs related to issues of shares, convertible notes or options	(18)	(365)
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>(18)</b>	<b>4,009</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	3,376	3,357
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(448)	(4,655)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	-	
4.4	Net cash from / (used in) financing activities (item 3.10 above)	(18)	4,009
4.5	Effect of movement in exchange rates on cash held	35	234
<b>4.6</b>	<b>Cash and cash equivalents at end of quarter</b>	<b>2,945</b>	<b>2,945</b>

<b>5.</b>	<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	<b>Current quarter</b> <b>\$A'000</b>	<b>Previous quarter</b> <b>\$A'000</b>
5.1	Bank balances	2,945	3,376
5.2	Call deposits	-	-
5.3	Bank overdrafts	-	-
5.4	Other (provide details)	-	-
<b>5.5</b>	<b>Cash and cash equivalents at end of quarter (should equal item 4.6 above)</b>	<b>2,945</b>	<b>2,945</b>

<b>6.</b>	<b>Payments to directors of the entity and their associates</b>	<b>Current quarter</b> <b>\$A'000</b>
6.1	Aggregate amount of payments to these parties included in item 1.2	283
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	

<b>7. Payments to related entities of the entity and their associates</b>	<b>Current quarter \$A'000</b>
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	

<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.		

<b>9. Estimated cash outflows for next quarter</b>	<b>\$A'000</b>
9.1 Research and development	539
9.2 Product manufacturing and operating costs	-
9.3 Advertising and marketing	111
9.4 Leased assets	42
9.5 Staff costs	199
9.6 Administration and corporate costs	333
9.7 Other*	(1,497)
<b>9.8 Total estimated cash (inflows)</b>	<b>(273)</b>

\* The company expects to receive a R & D tax credit refund of approximately \$1,497,000 during the June 2019 quarter.

<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:  .....  
(Director/Company secretary)

Date: .....30 April 2019.....

Print name: .....Adam Sutherland.....

**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.