



SOR Strategic Elements June Quarter Update

Strategic Elements Ltd (ASX: SOR) provides the following update to accompany the Appendix 4C lodged for the quarter ending 30 June 2023. Australian Advanced Materials (100% owned) is working with a University of New South Wales team to convert moisture into electrical energy. Development of the Energy Ink™ technology was the priority focus during the quarter. The Company ended the quarter with a strong cash position of \$7.98M and no debt.

AAM Highlights:

- Completed nano-engineering of previous fundamental discoveries into electronic ink.
- Completed ink formula optimisation enabling ultra-thin cells of approx. 200 micrometres
- Energy Ink™ cells to achieve peak power density of >20mW per cm² – development commenced.
- Energy Ink™ 'Cube' to supply energy for battery storage - preliminary design completed
- Intellectual Property portfolio - extensively updated and enhanced

Electronic Skin Patch

The Energy Ink™ has rapidly advanced through multiple successful breakthroughs in cells designed to provide power for sensors and patches. Challenges in improving the material's efficiency, durability, and other performance characteristics were overcome by manipulating the fundamental properties of materials. Electrical charge capacity increased from microamps to milliamp-hours and ampere-hours, and from hours to days and months. During the quarter, a focused work program was conducted to nano-engineer a range of previous discoveries in fundamental moisture-to-energy mechanisms into an electronic ink formula.

During the quarter, the ink formula was also significantly altered to enable ultra-thin layers to be screen printed. This presented a technical challenge as ultra-thin layers in a cell are liable to suffer from short circuit. However, an innovative method reduced the thickness of the graphene oxide functional layer to just ~20 microns without short-circuiting the approx. 200-micrometre cell. An ultra-thin power supply is highly regarded by device manufacturers as it enables their electronic devices to be even thinner. An upgraded Energy Ink™ cell for electronic skin patches incorporating the above enhancements is under fabrication.

Renewable Energy

During the quarter, AAM also commenced the development of a prototype Energy Ink™ cell designed for renewable energy generation. Potential market entry is focused on where solar or grid energy is impractical or too expensive. The Company is working with experts from specialised areas to identify applications that best leverage specific advantages of the Energy Ink™.

Power density is highly desirable in renewable energy technology because more power can be generated from a given space. Power density is also used to predict the potential power output of renewable energy systems scaled up over a larger area or volume. The short-term goal of the current program is to develop a prototype cell demonstrating a peak power density of >20mW per cm² (exceeding solar) in **Q3, 2024**.

The power density investigation is part of a broader program of development to test the upper energy generation limits of the technology. This program includes stacking ultra-thin cells into an **Energy Ink™ 'Cube'**. As with the cell for sensors, the team will seek to rapidly advance initial low efficiency, durability, and other performance characteristics by material selection and manipulating different fundamental properties. Challenges in connecting large numbers of cells will also no doubt need to be overcome. However, as the technology advances and economies of scale are achieved, the potential to surmount these challenges increases.

The initial application of coupling an Energy Ink™ Cube with a 3rd party battery, allows renewable energy to be stored and released (or dispatched) on demand. Further information on the **Energy Ink™ 'Cube'** will be released during **Q3 2023**.

Notwithstanding the normal technology investment risks associated with breakthrough discoveries, the Company believes the potential benefits of the Energy Ink™ are too great to ignore. The Energy Ink™ generates energy from moisture, a green, readily available source and uses safe, non-flammable, and environmentally friendly materials. Importantly, Energy Ink™ cells do not require sunlight and can generate energy indoors or at night. As they are ultra-thin and light, there is the potential to layer many cells vertically (as opposed to than single-layers like solar panels), dramatically increasing the energy generated from a much smaller footprint, and creating the potential for mobility.

Stealth Technologies (100%)

Stealth engineers have continued to work closely with AAM and UNSW by performing additional testing on devices at the Perth laboratory and developing power management solutions to work with the prototype Energy Ink™ cells. Multiple Stealth staff have PhD and Masters level qualifications as well as industry experience in electronic engineering, electronic devices, EV charging and AI. During the quarter, AAM formally commenced a broader collaborative working relationship with UNSW and Stealth Technologies.

During the quarter, Stealth also continued to develop an AI-powered solution to increase mine throughput and productivity. The prototype was developed with support from a major mining company with data collected live underground from operational mining environments. Stealth will seek to validate both hardware and software that contains significantly enhanced features during **Q4, 2023**.

Stealth also continued to progress collaboration in late-stage broadacre weed detection technology with the Australian Herbicide Resistance Initiative which is a global leader in herbicide resistance and its management in cropping systems. Data from previous field testing was analysed with hardware on harvester installations and algorithms enhanced for longer-duration usage. New hardware and enhanced algorithms will be deployed in the field and tested in **Q3 and Q4 2023**.

Stealth has an agreement with global software-industrial company Honeywell to progress the commercialisation of Autonomous Security Vehicles (ASVs) for perimeter security. Under the agreement, Honeywell is responsible for identifying, engaging, and maintaining customer relationships, procuring access to customer facilities, processing fees and entering into and maintaining agreements with customers to facilitate ASV Pilot Deployments.

Maria Resources (100%)

Maria focuses on applying innovative, scientific geological models to unexplored terrains. It is currently focused on the underexplored Madura Province (Nullarbor, WA) seeking critical metals (e.g. Rare Earths, Nickel, Copper, Gold, PGE) used in batteries and other advanced technologies.

During the quarter, Maria reviewed the Leviathan Project, where a large unexplained gravity anomaly is surrounded by a field of up to 100 inferred volcanic pipes¹. Maria is targeting the gravity anomaly for rare earths, copper, or gold related to an alkaline system (carbonatite, IOCG).

Maria is collaborating with Dr Franco Pirajno, who has 11 peer-reviewed publications specifically on carbonatites and rare earths. In the last 25 years, he has worked extensively in Western Australia's Proterozoic terranes with GSWA. He is responsible for identifying a carbonatite complex in Western Australia and instrumental in discovering a new large Australian igneous province.

Dr Pirajno was nominated as a top 1% highly cited researcher globally in 2019. He has 246 published peer-reviewed publications, is a sole author of 4 geology books and has presented 69 unpublished industry papers. In industry, Dr Pirajno has worked in mining and exploration with Anglo-American Corp of South Africa for 19 years in Africa, Australia, SW Pacific and New Zealand and was an Exploration Manager for Anglo-American Corporation of South Africa Ltd in the South West Pacific.

With funds received from the WA government Exploration Incentive Scheme and other incentives packaged into the project, Maria has successfully reduced the potential net drilling cost from \$480,000 to approx. \$160,000. The highly underexplored Madura Province is experiencing increased activity from leading companies, including Rio Tinto, BHP Nickel West, Chalice Gold Mines (under JV with Sensore) and WA1 Resources. Maria will drill a reconnaissance hole to test the geology of the gravity anomaly in **Q4 2023**. Post-drilling the reconnaissance hole, partnering may be the optimal strategy, enabling a priority focus on the Energy Ink technology.

Strategic Elements Ltd

The Company ended the quarter with a strong cash position of \$7.98M and no debt. Across the group, net expenditure was \$691k; this included all corporate costs, research and development expenditure, internal costs incurred in operating the ASX-listed entity and direct costs in providing management assistance to investee companies, principally Australian Advanced Materials (Energy Ink technology) Stealth Technologies (robotics and artificial intelligence) and Maria Resources (technology metals frontier exploration).

Direct costs of \$300k were attributable to Strategic Elements, this included all corporate costs, internal costs incurred in operating the ASX-listed entity and direct costs in providing management assistance to investee companies. Payments of \$176k to related parties and their associates are reported at item 6.1 of the accompanying Appendix 4C. These payments comprise director's fees for Directors and salaries for Executive Directors.

AAM incurred expenditure of \$95k related to R&D development undertaken at UNSW, consultants and other costs incurred in research and managing AAM's IP portfolio. AAM received an additional \$98k in grant funding during the quarter. Stealth incurred \$200k in direct expenses related to staff, consultants and R&D development costs across projects. Cognition Engines incurred net expenditure of \$29k for early technology evaluation costs. Maria incurred \$58k in costs associated with its battery metal projects exploration projects. Strategic Materials incurred \$4k in permit and consulting fees for holding the Golden Blocks permit in New Zealand.

The Australian Federal Government has registered Strategic Elements as a Pooled Development Fund with a mandate to back Australian innovation. The Company supports leading Australian scientists and innovators in high-risk-high reward ventures. SOR majority funds the initial development of each Venture whilst seeking a major strategic investor/partner able to assist commercialisation.

More Information:

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This announcement was authorised for release by the Strategic Elements' Board of Directors.

¹ASX Announcement 31/9/2022

Appendix 4C

Quarterly cash flow report for entities subject to Listing Rule 4.7B

Name of entity

Strategic Elements Limited

ABN

47 122 437 503

Quarter ended ("current quarter")

30 June 2023

Consolidated statement of cash flows	Current quarter \$A'000	Year to date (12 months) \$A'000
1. Cash flows from operating activities		
1.1 Receipts from customers	-	15
1.2 Payments for		
(a) research and development	(207)	(1,002)
(b) product manufacturing and operating costs	-	-
(c) advertising and marketing	(21)	(73)
(d) leased assets	-	-
(e) staff costs	(408)	(1,809)
(f) administration and corporate costs	(115)	(636)
1.3 Dividends received (see note 3)	-	-
1.4 Interest received	60	88
1.5 Interest and other costs of finance paid	-	(2)
1.6 Income taxes paid	-	-
1.7 Government grants and tax incentives	-	721
1.8 Other	-	-
1.9 Net cash used in operating activities	(691)	(2,698)
2. Cash flows from investing activities		
2.1 Payments to acquire or for:		
(a) entities	-	-
(b) businesses	-	-
(c) property, plant and equipment	(3)	(3)
(d) investments	-	-
(e) intellectual property	-	-
(f) other non-current assets	-	-

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (12 months) \$A'000
2.2	Proceeds from disposal of:		
	(a) entities	-	
	(b) businesses	-	-
	(c) property, plant and equipment	-	-
	(d) investments	-	-
	(e) intellectual property	-	-
	(f) 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 used in investing activities	(3)	(3)

3.	Cash flows from financing activities		
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)	-	5,886
3.2	Proceeds from issue of convertible debt securities	-	-
3.3	Proceeds from exercise of options	-	-
3.4	Transaction costs related to issues of equity securities or convertible debt securities	-	(20)
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 financing activities	-	5,866

4.	Net increase/(decrease) in cash and cash equivalents for the period		
4.1	Cash and cash equivalents at beginning of period	8,683	4,824
4.2	Net cash used in operating activities (item 1.9 above)	(691)	(2,698)
4.3	Net cash used in investing activities (item 2.6 above)	(3)	(3)
4.4	Net cash from financing activities (item 3.10 above)	-	5,866

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (12 months) \$A'000
4.5	Effect of movement in exchange rates on cash held	-	-
4.6	Cash and cash equivalents at end of period	7,989	7,989

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	1,392	2,082
5.2	Term deposits	116	116
5.3	60 Day Notice	6,500	6,500
5.4	Other (credit card)	(19)	(15)
5.5	Cash and cash equivalents at end of quarter (should equal item 4.6 above)	7,989	8,683

6.	Payments to related parties of the entity and their associates	Current quarter \$A'000
6.1	Aggregate amount of payments to related parties and their associates included in item 1	176
6.2	Aggregate amount of payments to related parties and their associates included in item 2	-
<i>Note: if any amounts are shown in items 6.1 or 6.2, your quarterly activity report must include a description of, and an explanation for, such payments.</i>		

7.	Financing facilities <i>Note: the term "facility" includes all forms of financing arrangements available to the entity.</i> <i>Add notes as necessary for an understanding of the sources of finance available to the entity.</i>	Total facility amount at quarter end \$A'000	Amount drawn at quarter end \$A'000
7.1	Loan facilities	-	-
7.2	Credit standby arrangements	-	-
7.3	Other (please specify)	-	-
7.4	Total financing facilities	-	-
7.5	Unused financing facilities available at quarter end		-
7.6	Include in the box below a description of each facility above, including the lender, interest rate, maturity date and whether it is secured or unsecured. If any additional financing facilities have been entered into or are proposed to be entered into after quarter end, include a note providing details of those facilities as well.		

8.	Estimated cash available for future operating activities	\$A'000
8.1	Net cash used in operating activities (item 1.9)	(692)
8.2	Cash and cash equivalents at quarter end (item 4.6)	7,989
8.3	Unused finance facilities available at quarter end (item 7.5)	-
8.4	Total available funding (item 8.2 + item 8.3)	7,989
8.5	Estimated quarters of funding available (item 8.4 divided by item 8.1)	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">11.54</div>
<i>Note: if the entity has reported positive net operating cash flows in item 1.9, answer item 8.5 as "N/A". Otherwise, a figure for the estimated quarters of funding available must be included in item 8.5.</i>		
8.6	If item 8.5 is less than 2 quarters, please provide answers to the following questions:	
8.6.1	Does the entity expect that it will continue to have the current level of net operating cash flows for the time being and, if not, why not?	
	Answer: n/a	
8.6.2	Has the entity taken any steps, or does it propose to take any steps, to raise further cash to fund its operations and, if so, what are those steps and how likely does it believe that they will be successful?	
	Answer: n/a	
8.6.3	Does the entity expect to be able to continue its operations and to meet its business objectives and, if so, on what basis?	
	Answer: n/a	
<i>Note: where item 8.5 is less than 2 quarters, all of questions 8.6.1, 8.6.2 and 8.6.3 above must be answered.</i>		

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.

Date: 31-Jul-2023.....

Authorised by: Matthew Howard.....
(Name of body or officer authorising release – see note 4)

Notes

1. This quarterly cash flow report and the accompanying activity report provide a basis for informing the market about the entity's activities for the past quarter, how they have been financed and the effect this has had on its cash position. An entity that wishes to disclose additional information over and above the minimum required under the Listing Rules is encouraged to do so.
2. If this quarterly cash flow 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 cash flow 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.
4. If this report has been authorised for release to the market by your board of directors, you can insert here: "By the board". If it has been authorised for release to the market by a committee of your board of directors, you can insert here: "By the [name of board committee – eg Audit and Risk Committee]". If it has been authorised for release to the market by a disclosure committee, you can insert here: "By the Disclosure Committee".
5. If this report has been authorised for release to the market by your board of directors and you wish to hold yourself out as complying with recommendation 4.2 of the ASX Corporate Governance Council's *Corporate Governance Principles and Recommendations*, the board should have received a declaration from its CEO and CFO that, in their opinion, the financial records of the entity have been properly maintained, that this report complies with the appropriate accounting standards and gives a true and fair view of the cash flows of the entity, and that their opinion has been formed on the basis of a sound system of risk management and internal control which is operating effectively.