

# Strategic Elements Ltd

AGM Presentation 2023



# Forward looking statements and disclosures

- **Risks and Forward-Looking Statement** The Company's future success depends on its venture companies' successful development. The Company has had initial success with the development of Energy Ink™ technology. However, given it is still an early-stage technology, it is susceptible to risks associated with early-stage R&D, such as the uncertainty of material science development, intellectual property risks, materials engineering challenges, competition, fabrication challenges, access to required laboratory equipment and problems scaling up lab-based methods. There can be no guarantee that the assumptions and contingencies on which any forward-looking statements, opinions and development timeline estimates contained in materials published by the Company are based will ultimately prove to be valid or accurate. The forward-looking statements, opinions and estimates depend on various factors, including known and unknown risks, many of which are outside the control of the Company. Actual performance of The Company may materially differ from forecast performance. Whilst early results may be promising, significant hurdles exist for the Energy Ink™ to reach technical feasibility in high-power cells, including a) efficiency, achieving high energy conversion efficiency to make the technology competitive; b) stability: ensuring consistent performance over time, without significant degradation and c) scalability: transitioning from small, laboratory-scale prototypes to a more extensive, integrated system. This presentation has been prepared by Strategic Elements Limited ("SOR"). The information contained in this presentation is a professional opinion only and is given in good faith. Certain information in this document has been derived from third parties and though SOR has no reason to believe that it is not accurate, reliable or complete, it has not been independently audited or verified by SOR. Any forward-looking statements included in this document involve subjective judgement and analysis and are subject to uncertainties, risks and contingencies, many of which are outside the control of, and may be unknown to, SOR. In particular, they speak only as of the date of this document, they assume the success of SOR's strategies, and they are subject to significant regulatory, business, competitive and economic uncertainties and risks. Actual future events may vary materially from the forward-looking statements and the assumptions on which the forward-looking statements are based. Recipients of this document (Recipients) are cautioned not to place undue reliance on such forward-looking statements. SOR makes no representation or warranty as to the accuracy, reliability or completeness of information in this document and does not take responsibility for updating any information or correcting any error or omission which may become apparent after this document has been issued.
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- This announcement has been approved for release by the Board of Strategic Elements.

# Company overview



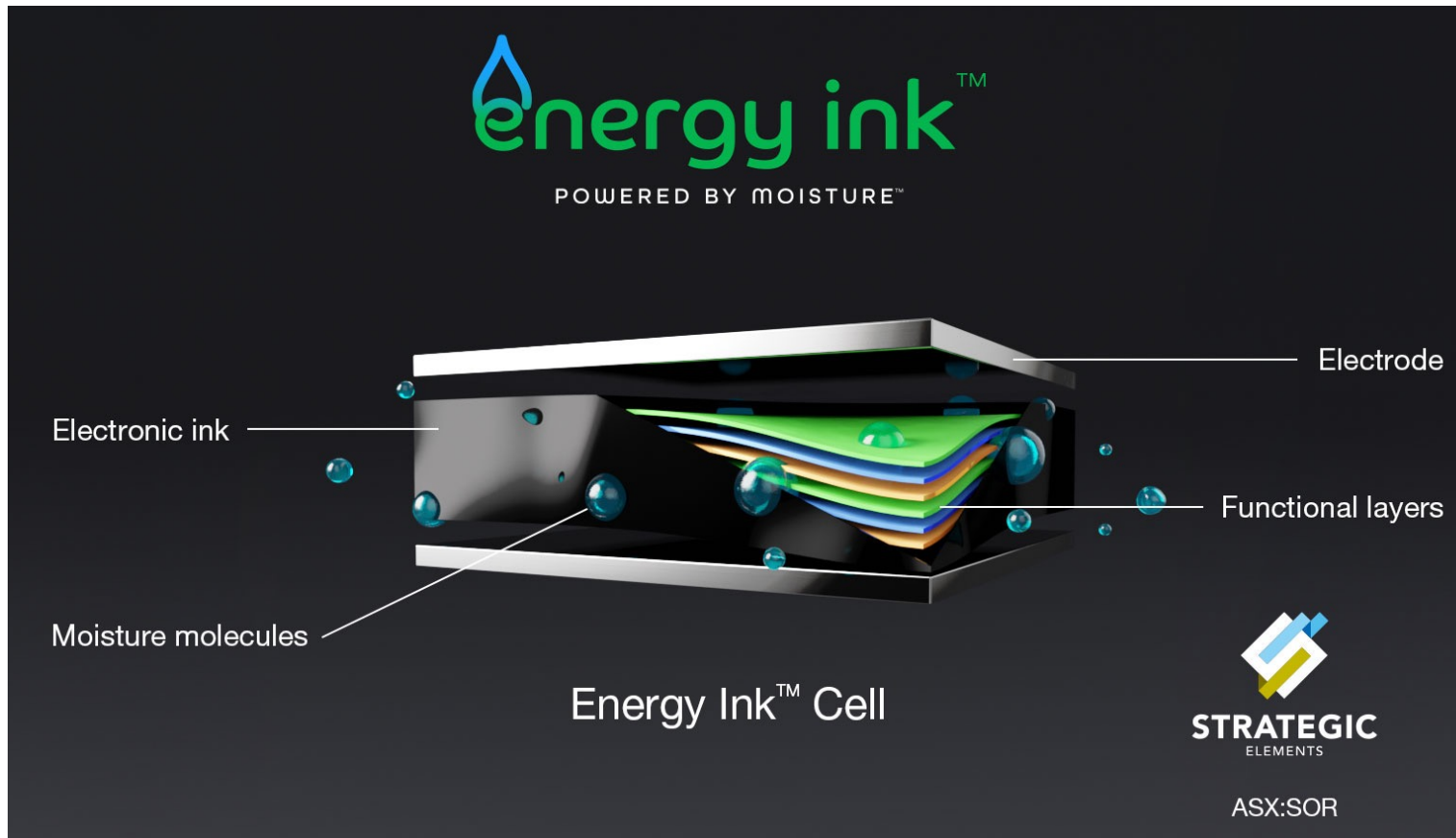
**Registered by Australian Government as a Pooled Development Fund with a mandate to back Australian innovation.**

- Focuses on early-stage ventures combining teams of leading Australian scientists or innovators.
- SOR funds initial development whilst seeking a key commercialisation partner.
- Access to \$100M+ of institutional technical infrastructure and equipment, government grants and R&D cash back \$\$ significantly reduces up front expenditure.
- SOR seeks returns through a trade sale or listing or licensing deal in a subsidiary.
- PDFs are venture capital funds under the Pooled Development Funds Act 1992
- PDFs and their shareholders receive tax benefits on the capital gains and income derived from their investment.
- This is to help compensate for the higher risk of investing in SMEs.



# The Energy Ink™ technology

100% owned world-leading moisture energy technology partnered with UNSW with funding from the Australian Research Council.

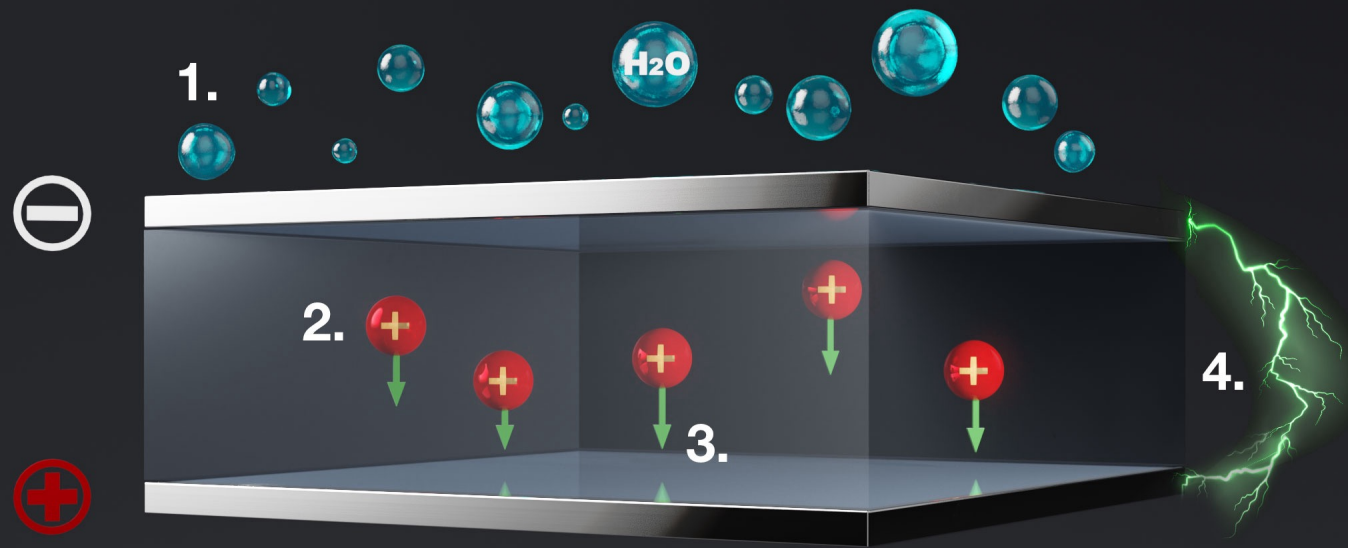


## Potential Benefits

- 1. Generate clean energy day or night**  
Not restricted to daytime use  
Complement sources like solar
- 2. Controllable energy source**  
Host within a humidity-controlled unit  
Potentially removes intermittency
- 3. Indoors or outdoors**  
Flexible installation options
- 4. Stack cells vertically**  
Scale power by adding vertical layers  
Fit into rooms and garages
- 5. Green, light, thin and safe**  
Environmentally friendly materials  
Flexibility, mobility and safety

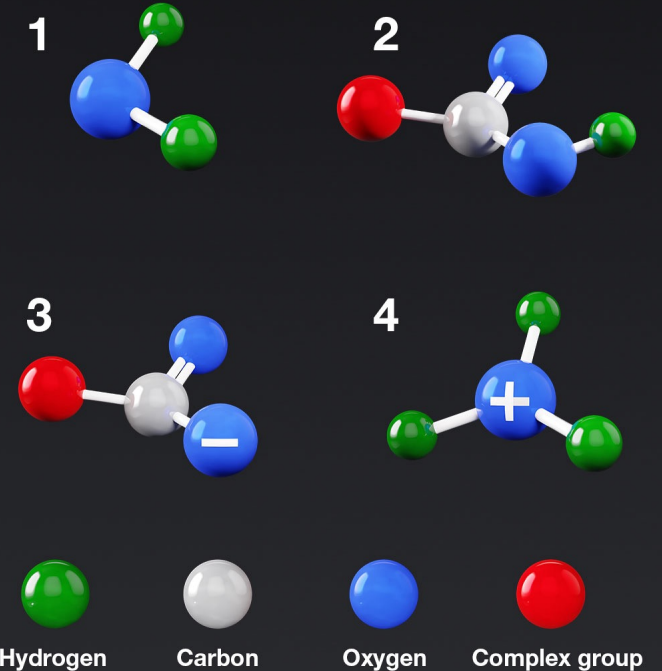


# Energy Ink™ - Simplified ELECTRICITY GENERATION



1. Moisture from the air enters the moisture energy generator (MEG).
2. Mobile positively charged ions are produced through ion dissociation.
3. The mobile ions migrate to the bottom electrode causing an electrical potential or field to be formed between the electrodes.
4. The electric field can be used to cause electrons to flow through an external circuit, powering an electrical device.

## ION DISSOCIATION



Positively charged mobile ions are generated via ion dissociation when: (1) moisture in the form of water molecules enters the MEG and reacts with (2) functional groups in the MEG (e.g. carboxyl) (3) and producing (4) mobile positively charged ions.

# 2023 breakthrough in power density

Technologies that use moisture as a high-power energy source have significant technical issues in low power density, short duration and material degradation.

## Prototype High-Power Energy Ink Cell

**The Energy Ink™ was successfully reengineered to achieve a significant 1000-fold increase in power density in under 12 months.**

- Average power density of 51 mW/cm<sup>2</sup>, peak power density of 61 mW/cm<sup>2</sup> and concluded with 32 mW/cm<sup>2</sup>.
- Greatly exceeds other published moisture technology significantly under 0.5 mW/cm<sup>2</sup>.
- Bell Labs launched the solar tech era in 1954 with a 6 mW/cm<sup>2</sup> cell initially used in space.
- In 2023, commercial panels average 20% efficiency (20 mW/cm<sup>2</sup>).

**This achievement challenges the conventional notion that moisture is limited to powering small devices.**

**In lab conditions, a 1cm<sup>2</sup> prototype high-power Energy Ink™ cell exceeded the power density of solar cells used in commercial solar panels.**

*Testing was conducted over three hours under a fixed resistive load without power management or humidity control.*

*Power density is expressed and compared in terms of milliwatts per centimetre squared.*

*Power density is a measure of how much power can be produced in a given area and is a crucial metric for comparing emerging technologies with established systems.*

# Demonstration of features

Focus for upcoming year is on powering practical applications to demonstrate the Energy Ink™ has potential as a new source of electrical energy.

## Potential Benefits

- Generate energy day or night
- Controllable energy source
- Indoors or outdoors
- Stack cells vertically
- Green, light, thin and safe

## Demonstrate through

**Generate clean energy from moisture in an apartment building parking bay overnight, store a small charge into an electric vehicle and drive away.**

## Real life Problem

- EV's to 60% of global car sales in 2030.
- 80% of owners want to charge at home
- 50% of people live in multi-unit dwellings e.g. apartment buildings.
- Significant cost and logistical barriers to home EV charging in existing multi-unit dwellings.
- Solar + home charging = lowest running costs for EV owners. However solar not practical for most multi-unit dwellings.

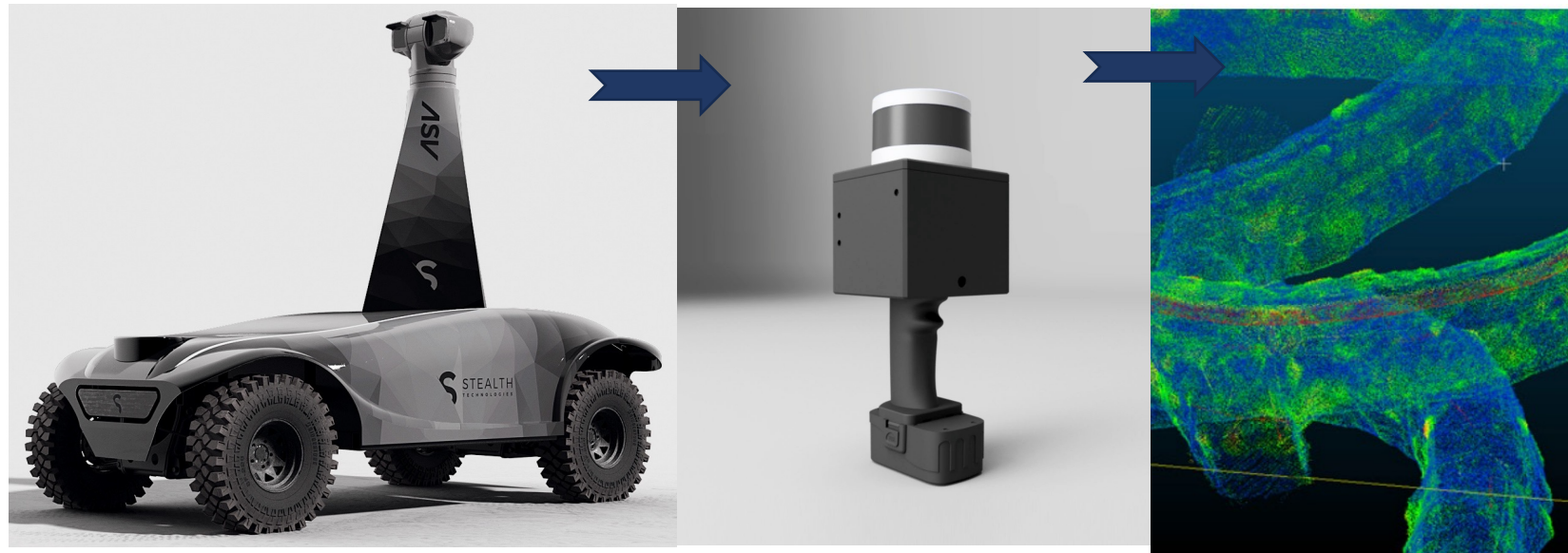
*Achieving the required power and duration of high-power cells, as well as upscaling fabrication of numerous cells and electrodes, are formidable challenges for the Energy Ink™ team.*

# Stealth Technologies

Stealth has an agreement with global software-industrial company Honeywell to progress the commercialisation of Autonomous Security Vehicles (ASVs) for perimeter security.

- The Stealth ASV **has completed thousands of successful** advanced Perimeter Intrusion Detection Systems operational tests at a Western Australian prison facility.
- Honeywell is responsible for identifying and maintaining customer relationships to facilitate ASV Pilot Deployments.

- ❖ **Stealth is systematically advancing key components of its ASV technology to develop new product applications outside of security.**
- ❖ **Stealth is collaborating with AAM and UNSW providing key electrical engineering and software expertise for the Energy Ink.**



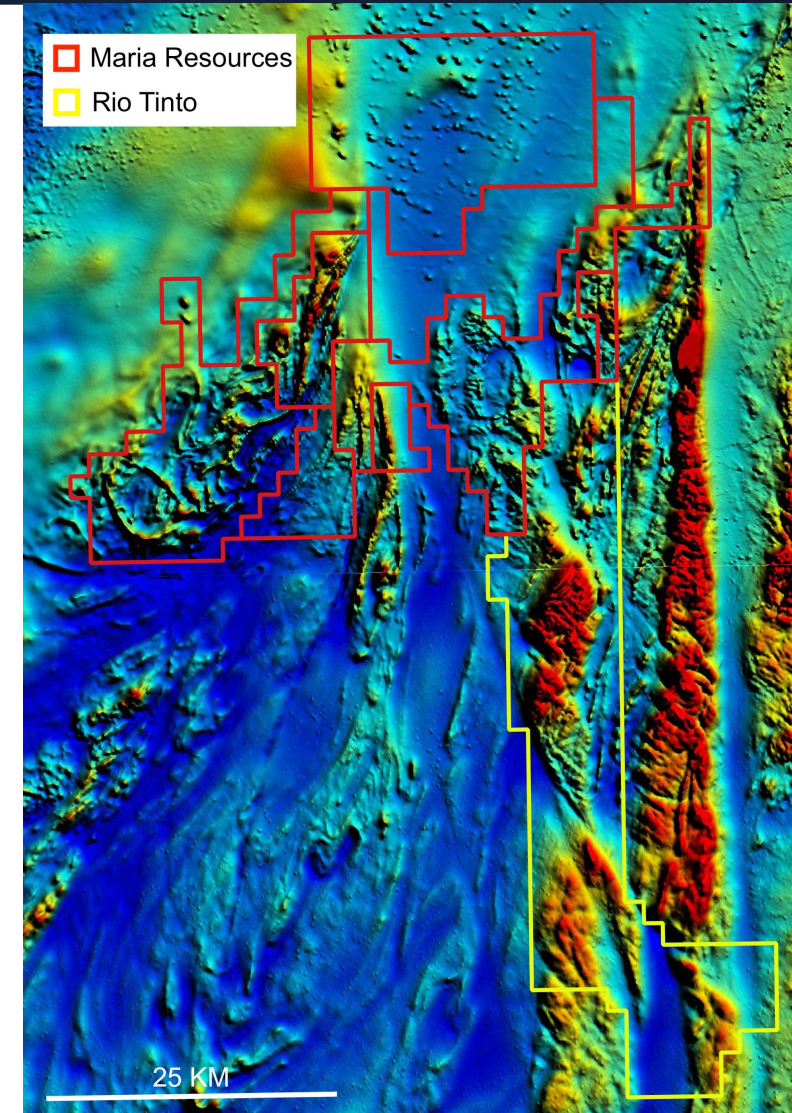


# Maria Resources

## **Applying innovative scientific geological models for critical metals to unexplored terrains.**

Collaborating with Dr Franco Pirajno formerly with Anglo-American Corp for 19 years and Exploration Manager in Southwest Pacific. Nominated a top 1% highly cited researcher globally in 2019.

- During the year Maria received an EIS drilling grant for the Cyclops Project, adjacent to the Leviathan Project in the remote Nullarbor region in WA.
- The Company has merged the Leviathan work into the Cyclops exploration program. Economics of a combined program significantly reduces the overall drilling cost, access issues and logistics for Cyclops and Leviathan.
- Gravity and magnetics data are currently being analysed by external consultants to complete targeting across the wider area.



# Moving forward

Focus for upcoming year is on powering practical applications to demonstrate the Energy Ink™ has potential as a new source of electrical energy.

- ❖ **The Energy Ink™ is still the first of its kind to demonstrate the potential to power small devices by powering a commercial skin patch and associated sensor/Bluetooth.**
- ❖ **In the near term, the small device Energy Ink™ cell will be significantly upgraded with technical innovations of the high-power Energy Ink™ cell. Integration of these developments and initial performance testing will be conducted in early 2024.**
- ❖ **In tandem, the Company is developing a forward plan for high-power Energy Ink™ development and will keep shareholders duly informed of any material developments.**

*“Achieving the required power and duration of high-power cells, as well as upscaling fabrication of numerous cells and electrodes, are formidable challenges for the Energy Ink™. Notwithstanding this, we have set an ambitious goal for the coming year. That is, to generate energy from moisture in an apartment building parking bay overnight, store a small charge into an electric vehicle and drive it away” - Charles Murphy, MD, Strategic Elements Ltd.*

# Strategically structured for 2024

The Company has strategically put in place the technology, team, funding and government backing during 2023 culminating in a technical breakthrough in power density. Whilst the general market for high-risk technology is flat, SOR is well positioned to push towards a large ambitious goal in 2024.

- **100% owned world-leading moisture energy technology**
- **Partnered with No. 1 moisture energy research group at UNSW**
- **Linkage grant from the Australian Research Council**
- **Fellowship grant from the Australian Research Council (TBA)**
- **Breakthrough year in 2023 for the Energy Ink technology**
- **Major catalyst in 2024 to demonstrate significant power from moisture**
- **Capital gain tax-free structure for eligible shareholders**
- **Three years of cash plus \$485K in cash back from every \$1M spent on R&D from Federal Government**



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# AGM 2023

**Our team thanks you for your support in 2023.**

## **References**

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