STRATEGIC ELEMENTS

ASX Code : SOR
Market Capitalisation : $180M
Cash at Bank : Approx. $6M.

Investor Presentation: March 4th, 2021
Managing Director: Charles Murphy

The Company

Strategic Elements generates 100% owned ventures from combining teams of leading scientists or innovators in the technology and resources sectors.

1. **The Australian Federal Government has registered Strategic Elements as a Pooled Development Fund with a mandate to back Australian innovation.**

- The aim of the Pooled Development Funds programme is to increase the supply of capital to Australian small and medium-size enterprises (SMEs).
- PDFs are venture capital funds registered 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.

"Universities are facing a $16bn funding blackhole by 2023 due to Covid-19 and the loss of international student revenue'– The Guardian[1]

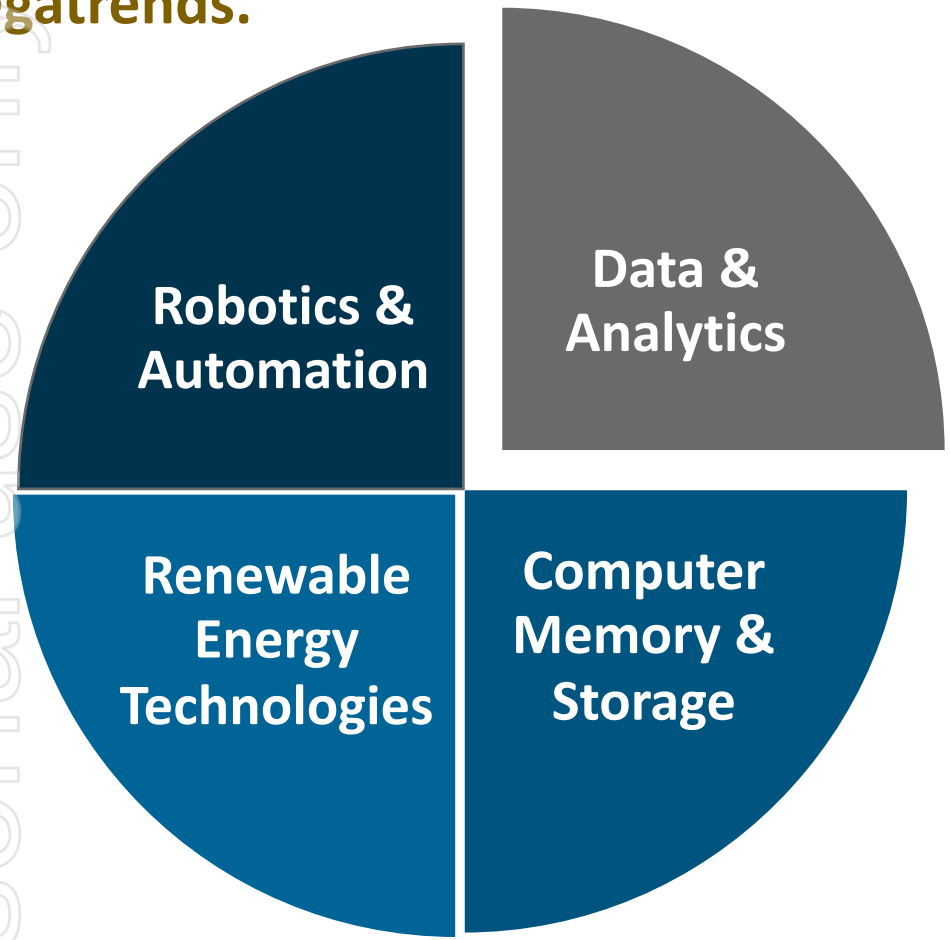
2. **However the Company does not operate like a typical venture fund.**

- The Company does not seek to hold a large portfolio of investments minority 10-20% stakes. Instead it seeks to venture generate 100% owned companies in collaboration with teams of leading scientists or innovators.
- Access to $50M+ of institutional technical infrastructure and equipment, government grants and R&D cash back $$ significantly reduces up front expenditure.
- SOR sole funds initial development of each subsidiary whilst remaining open to a 'strategic investor'.
- SOR seeks returns through a trade sale or listing of a subsidiary, a licensing deal or income generated from a subsidiary.

High risk – high reward resources and technology innovation

Sector Focus

The Company is developing technologies being driven by four of the largest megatrends.



1. **Robotics and automation** technology for mining, security, agriculture, transport. Collaboration with Fortune 100 Company 'Honeywell' for Autonomous Security Vehicles[1]. Further agreements with UWA and CSIRO.
2. **Self-charging battery** technology in collaboration with the UNSW and CSIRO[2]. Uses humidity in air to generate electricity. Extremely small, thin, light weight flexible battery cells.
3. **Transparent flexible memory** technology working with the UNSW, CSIRO[3] and VTT (Finland). Enabling flexible plastic and glass surfaces to store and process data instead of needing silicon chips.
4. **Data related** technology acquisition/development has been noted by the Company as its next potential area for venture generation.

The technologies are 100% owned and held in subsidiary companies.

[1]*Announced 16/10/2020*
[2]*Announced 1/12/2020*
[3]*Announced 30/07/2020*

STEALTH TECHNOLOGIES

In July 2019 100% owned Stealth Technologies commenced development of an automated robotics software and hardware platform **adaptable to various sizes** of vehicles and physical tasks

The **Autonomous Robotic Vehicle Platform (AxV)** combines the capabilities of autonomous driving, computer vision, purpose built robotics and artificial intelligence into an integrated hardware and software platform.

Security - Defence - Transport - Resources - Agriculture.

From the ground up, the AxV platform has been built to operate in **outdoor environments**, that are often subjected to harsh and variable weather conditions.

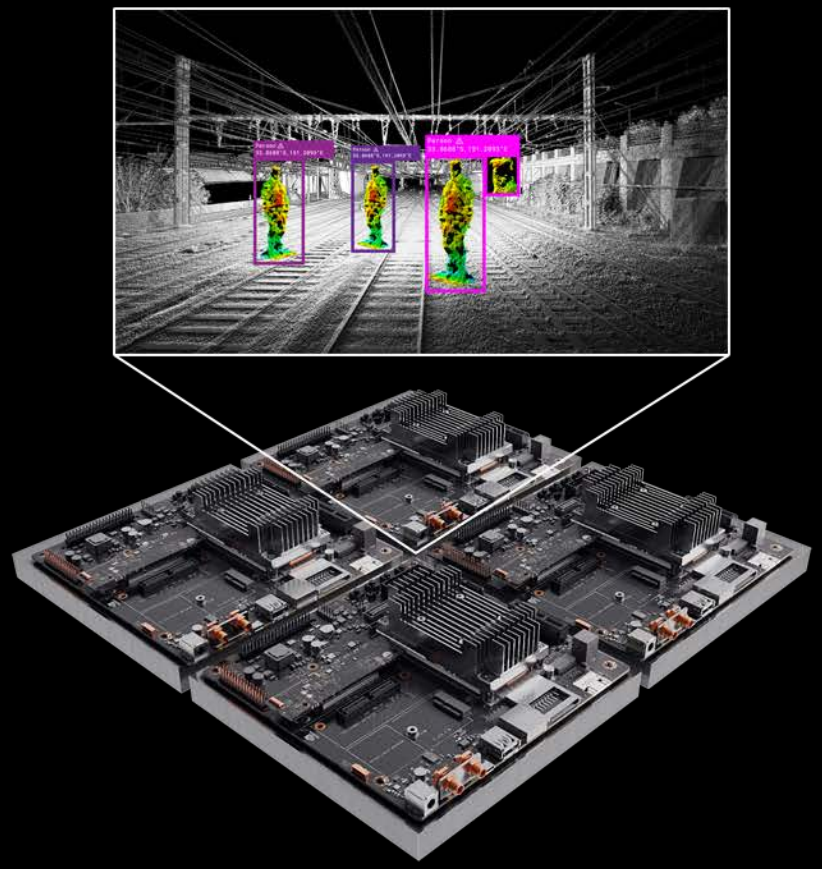
Stealth Technologies AxV Platform

”Purpose built for outdoor environments and all weather conditions”

“Scalable to any size”

STEALTH AUTODRIVE HARDWARE

Autonomous vehicle technology scalable to multiple vehicle sizes



STEALTH OS SOFTWARE

Sensor Fusion

Computer Vision

AI and Neural Networks

“Adaptable to any physical task”

STEALTH CUSTOM ROBOTICS

Purpose built robotics adaptable to meet industry specific use cases

STEALTH TECHNOLOGIES

STEALTH TECHNOLOGIES

➤The first release from the AxV Platform is an autonomous robotic security vehicle (ASV) for Perimeter Security.

"The security industry is ripe for disruption by way of robotics. The industry itself is quite mature yet has remained reliant upon manual efforts. Innovation in the field of robotics is leading the effort to evolve the security industry" – United States Security Industry Association

Perimeter Intrusion Detection Systems

Perimeter intrusion detection systems (PIDS) are used to detect the presence of an intruder attempting to breach a perimeter. Examples include sophisticated sensors on fences and beams above/below ground. Tens of thousands of facilities globally use PIDS to secure a perimeter.

1. The Problem

Perimeter Intrusion Detection Systems (PIDS) testing is a **manual** process required to be completed regularly to ensure PIDS are functioning properly and will detect intrusion attempts. It is a **mundane and repetitive task that can consume significant human resources** leaving facilities with untested and potentially faulty perimeter security systems. It can also cause significant damage and generate unreliable testing accuracy and quality.

2. The Solution - Automating Testing of PIDS

Stealth has developed **custom robotics** built on top of its platform to solve these problems, enabling fully automated PIDS testing 365 days a year, 24 hours a day including at night. This enables the testing of multiple sophisticated technologies used in PIDS.

Government regulations, pandemic and terrorist activities are providing **lucrative growth opportunities**. PIDS are an important part of an overall security solution, especially for **critical locations**.

The Global Perimeter Security Market is forecast to be growing quickly reaching **USD 282.26 Billion** by 2025[1].

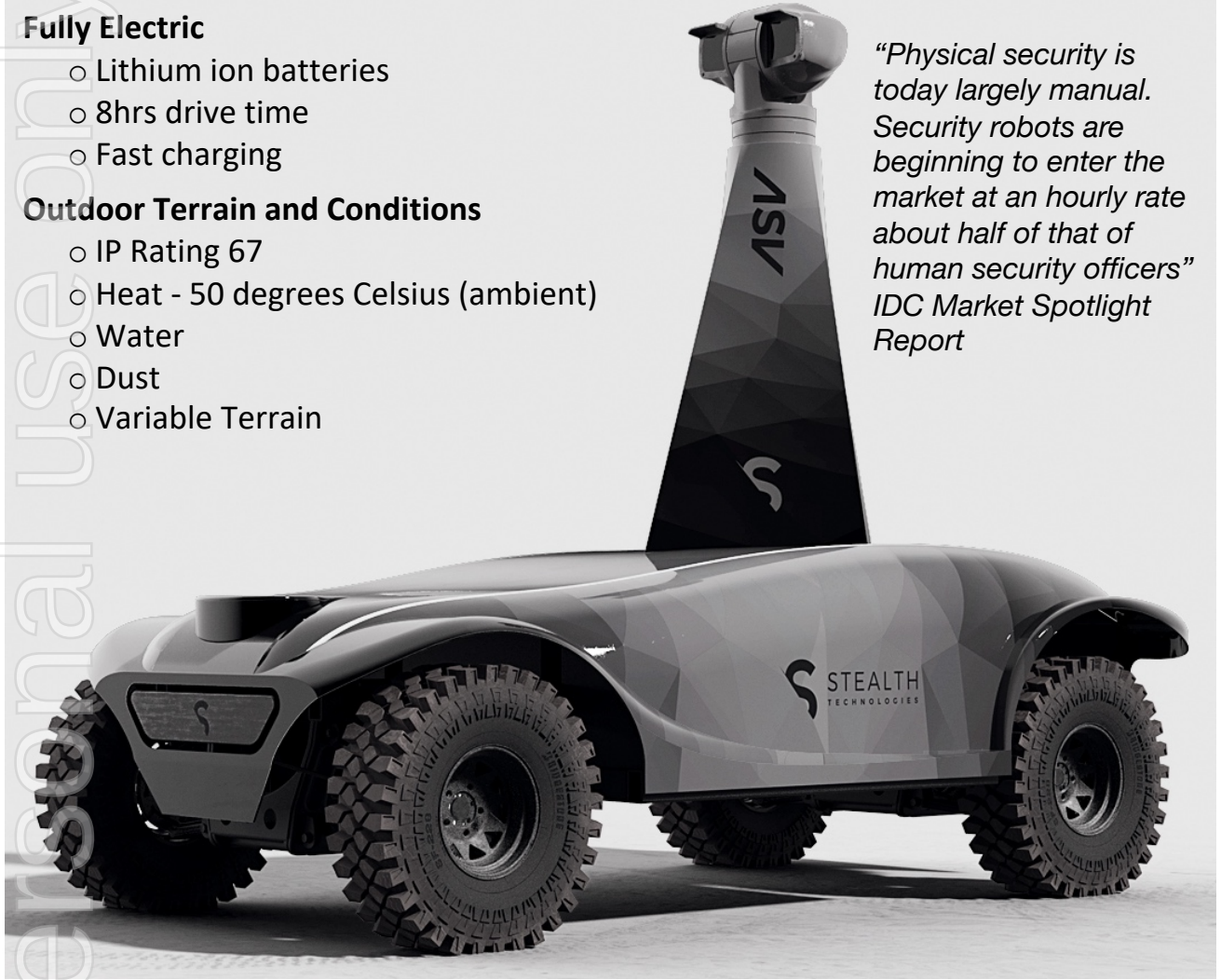
[1] *https://bit.ly/30bmVhf*

➤The first release from the AxV Platform is an autonomous robotic security vehicle (ASV) for Perimeter Security.

The ASV vision is to deliver an order of magnitude increase in the accuracy and precision of perimeter security for less than the annual cost of a fulltime (24/7 shift) security guard.

Fully Electric
- Lithium ion batteries
- 8hrs drive time
- Fast charging

Outdoor Terrain and Conditions
- IP Rating 67
- Heat - 50 degrees Celsius (ambient)
- Water
- Dust
- Variable Terrain



"Physical security is today largely manual. Security robots are beginning to enter the market at an hourly rate about half of that of human security officers" IDC Market Spotlight Report

1. **Autonomous Perimeter Security Patrol & Surveillance**
   - 24*7 365 Day Operational Capability - Day and Night Vision
   - Collision Avoidance System
   - Autonomous Navigation Between Map Points
   - Emergency Braking System
   - Imposing Physical Presence
2. **Autonomous Perimeter Intrusion Detection System Testing**
   - Perimeter fence sensor testing - Microphonic and Fibre Optic (Purpose Built Robotic Actuators)
   - Microwave sensor testing
   - Photo electric sensor testing (PE)
   - Electro magnetic sensor testing (EM)
3. **On Board Surveillance Features**
   - Autonomous Object Tracking System
   - Incident Alert Lighting
   - Live Military Grade Video Feed
   - High Definition 30x Camera Zoom
   - Day and Night Vision Surveillance Distance: 400m
   - Two-Way Intercom
4. **System Integration**
   - Fully Integrated Into Honeywell's EBI Platform (DVM)
   - Capable of Operating within Secure Isolated Networks
   - Capable of Advanced Computer Vision – Facial and Number Plate Recognition

➤The Company is collaborating with USD 100 Billion Company Honeywell to build Autonomous Security Vehicles for corrections.

➢ Honeywell Autonomous Security Vehicle Collaboration

Stealth has formed a collaboration with US Company 'Honeywell' to build experimental autonomous robotic vehicles for the Correctional Justice sector (primarily prisons).[1]

Honeywell is a Fortune 100 technology company that delivers industry specific solutions that include aerospace products and services; control technologies for buildings and industry; and performance materials globally.

Honeywell operates total asset and facility management operations globally across a range of market segments including Justice, Commercial, Health, Defence and Hospitality.

➢ Honeywell EBI Integration

Through the year development was conducted to enable real-time integration with Honeywell Enterprise Buildings Integrator. The EBI helps connect, monitor and manage core building functions and is a solution with thousands of EBI systems deployed globally.

Honeywell Building Technologies is a global business with more than 23,000 employees and creates products, software and technologies found in more than 10 million buildings worldwide.

➢ Autonomous Perimeter Security and Surveillance – Outside Honeywell Collaboration

Under the collaboration Stealth has provided Honeywell with exclusivity for the correctional justice sector. Stealth however can market independently to sectors such as transport, energy, defence, government and utilities providing critical services. Opportunities for Stealth include **PIDS testing and patrol and surveillance**.

[1]*Announced 16/10/2020*

STEALTH TECHNOLOGIES

- **Stealth is collaborating to build a fully autonomous security vehicle with Honeywell and the WA Department of Justice for the Eastern Goldfields Regional Prison[1].**

1. Completes 3x fully autonomous missions a day around the perimeter of the facility
2. Complete **automated testing** of the facilities inner and outer perimeter security systems (zone by zone)
   - Microphonics Sensor testing
   - Microwave Beam testing
   - Photo Electric Beam testing (PE)
   - Electro Magnetic Field testing (EM)
3. Report back in real time to the Honeywell Security Manager System via Enterprise Buildings Integrator (EBI). Testing outcomes. Status of mission. ASV diagnostics. Undertake surveillance. Administer ASV via Patrol Control Centre.

[1]*Announced 16/10/2020*

➤Along with US Company ‘Honeywell’ the Company has a number of key technical collaborations.

- Collaboration to allow Autonomous Drones to launch and land autonomous surveillance flights from a **moving** ASV platform[1].
- World leader in autonomous drone launch and land technologies.
- Technology being used by US DoD, Homeland Security and others.

- Early Adopter license for Wildcat SLAM technology[2].
- Technology allows robot teaming and autonomy for robotic vehicles in GPS-denied environments – won DARPA Subterranean Challenge.
- Collaboration to enable ‘robot perception’, allowing robots to perceive, comprehend and reason about the surrounding environment.

- Collaboration through the Renewable Energy Vehicle Project – Autonomous and Electric Vehicles[3].
- Funded by the Australian Federal Government.
- Professor Thomas Bräunl – automotive and robotics experience (DaimlerChrysler/Mercedes-Benz, BMW and others).

[1]Announced 04/11/2020
[2]Announced 12/11/2020
[3]Announced 29/04/2020

Stealth is conducting development on multiple aspects of its Autonomous Robotic Vehicle platform across different security, agriculture and mining applications

1. Initial ASV Currently in Site Acceptance Testing

- Currently working to complete site acceptance testing of ASV ar the Eastern Goldfields Regional Prison. Seeking a 'land and expand' strategy to other WA facilities.
- Additional correctional facilities in Australia will then be targeted for deployment of the ASV.

Seeking to complete site acceptance testing in Q1 2021.

3. ASV Early Adopter Program

- Deploy an Autonomous Security Vehicle into multiple non-correctional organizations obtaining insight into robotic automation.
- Market test and validate perimeter security use cases within multiple critical infrastructure market sectors.

Seeking to enter first EAP agreement for ASV in Q2 2021.

GOVERNMENT ENERGY COMMS UTILITIES DEFENCE TRANSPORT

2. Use of AxV Platform in Agriculture

- Currently collaborating with Australian Herbicide Resistance Initiative on applying Autonomous technologies to farm weed management systems.

Next update on initial results in Q1 2021.

4. Use of AxV Platform in Mining

- Currently in discussions with mining companies to collaborate on applying the Autonomous Robotic Vehicle Platform (AxV) to mining.

Seeking initial agreement for AxV Platform in Q2 2021.

➤The 100% owned subsidiary is developing revolutionary electronic ink technologies for the battery and computer memory sectors.

➤ The Company is developing printable computer memory and self-charging battery technologies with an international team of world leading development partners.

1. What is printed electronics?

Printed electronics has the potential to transform the electronics industry whereby electronic devices are printed onto surfaces such as plastic and glass using traditional printing methods and advanced functional inks rather than on rigid silicon.

2. Thin, lightweight, flexible

Printed electronics is based on the combination of new materials and cost-effective, large-area production processes to enable new applications which are not possible to create with (only) conventional silicon electronics.

3. Markets for Printed – Flexible – Transparent - Sensors

Printed, flexible and organic electronics will grow from **$31.7 Billion in 2018 to $77.3 billion in 2029[1].**

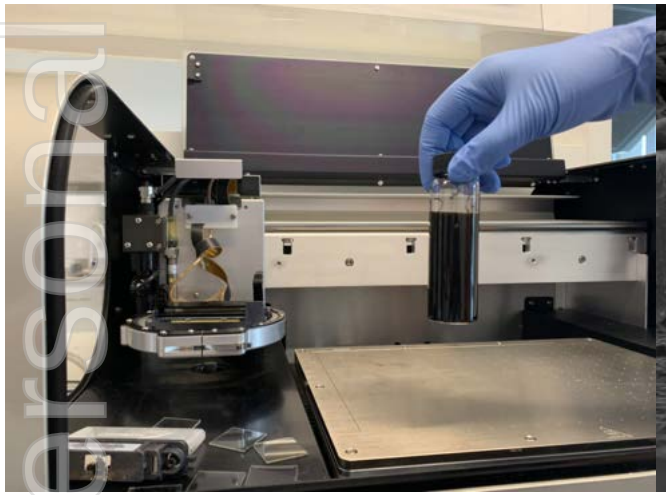
A key advantage of printed electronics is the ability to make thin, lightweight, flexible, and robust electronic products.

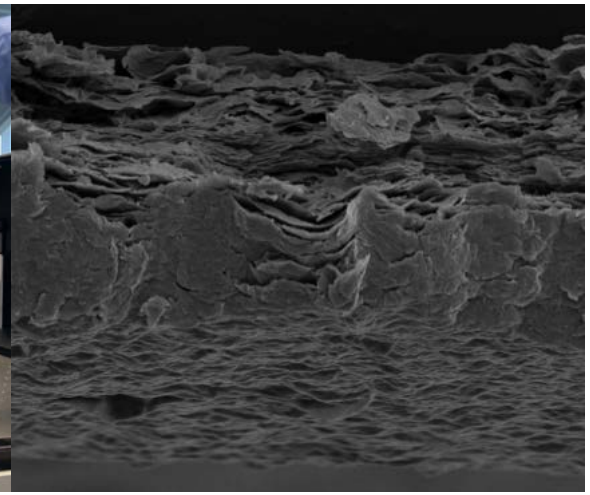
[1] *https://bit.ly/3uTzFqS*

➤The printable self-charging battery ink contains tens of thousands of nanosheets of graphene oxide

Battery Ink Technology

1. The company is developing a battery technology that generates electricity from humidity (55-75%) in the air and self-charges within minutes.
2. Self-charging feature removes the need for manual charging or wires for power.
3. Battery cells are extremely thin and light. Lighter than a single rain drop and thinner than a human hair.
4. Being designed to be flexible and cheaply printed onto plastic.
5. Battery cells created with a printable ink that contains millions of sheets of a graphene oxide material.
6. Graphene oxide is a cheaper and more readily available derivative of graphene.
7. Battery Ink materials are environmentally friendly.
8. The technology is being designed to be a hybrid electric generator – a battery cell printed onto glass or plastic.





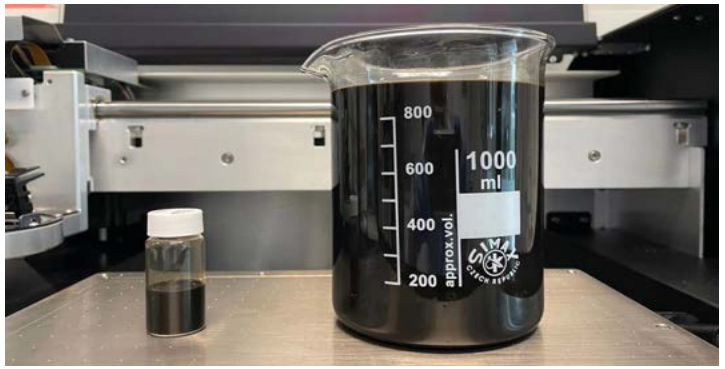
- Initial **market focus** is on wearables and IOT related devices as they have lower power requirements.
- Development underway to enable battery to be used in more complex devices with increased power.

➤The Company has a collaboration with UNSW and CSIRO partially funded by the Federal Government.

Federal Government Funding

- The Battery Ink is being developed under collaboration with the University of New South Wales and CSIRO and is part funded by an Australian Research Council Linkage grant.
- The collaboration is developing new electronic materials for a wide range of uses in flexible electronics and significant advances in energy efficient devices. **This can include memory, all types of sensors, batteries and other flexible electronics.**
- The team has access to state of the art facilities, including the Australian National Fabrication Facility Node, Australian Synchrotron and Pawsey Supercomputer Centre.
- UNSW School of Materials Science and Engineering is ranked #1 in Australia for material science. UNSW have a number of partnerships and collaborate with leading companies such as Boral, Hitachi Chemical, One Steel and many more.

100% of intellectual property and commercialisation rights remain with the Company.



CSIRO

UNSW AUSTRALIA

➤Current solutions are still relatively bulky and require manual charging or replacement of battery cells

1. IOT Battery Sector

Initial market focus is on wearables and IOT related devices such as **skin patches**, connected sensors, environmental and health monitoring devices (e.g. diabetes or cardiovascular).

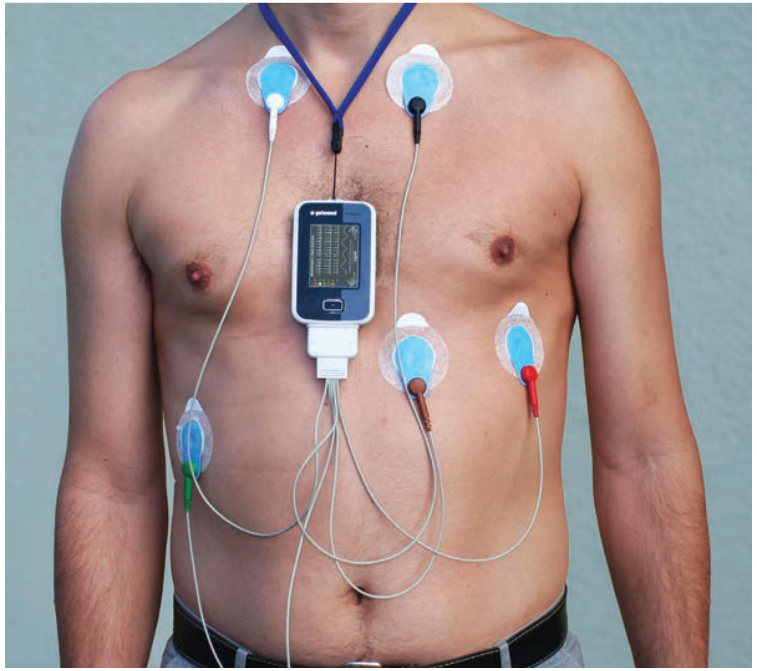
- **Battery Ink** cells have strong potential to provide a **flexible, light, self-charging power source.**
- The IOT battery market today is worth USD$9.2 billion and expected to reach **USD $15.9 billion by 2025**[1]
- Batteries used for IOT sensors are bulky and rigid and require **replacement** when they run out of power. The IOT sector is actually being held back by batteries.

3. Electronic Skin Patch Segment

- Skin patches are wearables products that have integrated electronics such as sensors attached to the the skin to relay vital information about the body.
- The high **humidity** of the human skin makes the electronic skin patch sector a natural fit for the battery ink technology.

2. Further Market Sectors

- A supercapacitor is being developed to assist energy storage and regulation for use in more complex devices with increased power requirements.



- The electronic skin patch market is a large market with USD 10 billion in 2019 forecasted to grow to USD 40 billion by 2030[2]

[1] *https://bit.ly/2O23pkR*
[2] *https://bit.ly/2MLq5W4*

➤Currently working to demonstrate significant features of the technology

1. Scaling Down Battery Cell Size

- Smaller batteries enable development of much smaller electronic devices to replace current bulky devices (i.e electronic skin patch devices)
- Smaller batteries allow greater energy to be generated from a specific area.
- Demonstrate potential to make battery ink cells smaller by reducing battery cell size from $1cm^2$ to $0.25cm^2$
- **Initial results due in Q1 2021**

2. Battery Cell Flexibility

- Flexibility is a key form factor to enable wearables that need non-rigid materials to significantly improve user comfort and experience.
- Development of battery ink cells on a flexible textile material and subject to 500 bending cycles to simulate flexing of the device.
- **Initial results due in Q1 2021**

3. Renewable and Environmentally Friendly Energy

- Moisture is one of the most abundant green energy sources and remains to be utilised for energy harvesting to generate electricity
- The battery ink technology is based on graphene oxide, a **cheaper and more readily available** graphene derivative
- Materials used in the battery ink are potentially environmentally friendly unlike those used in traditional batteries with toxic chemicals.
- **Toxicity testing on the material within the Battey Ink results due Q2 2021**

Further development strategy is currently being finalised with UNSW.

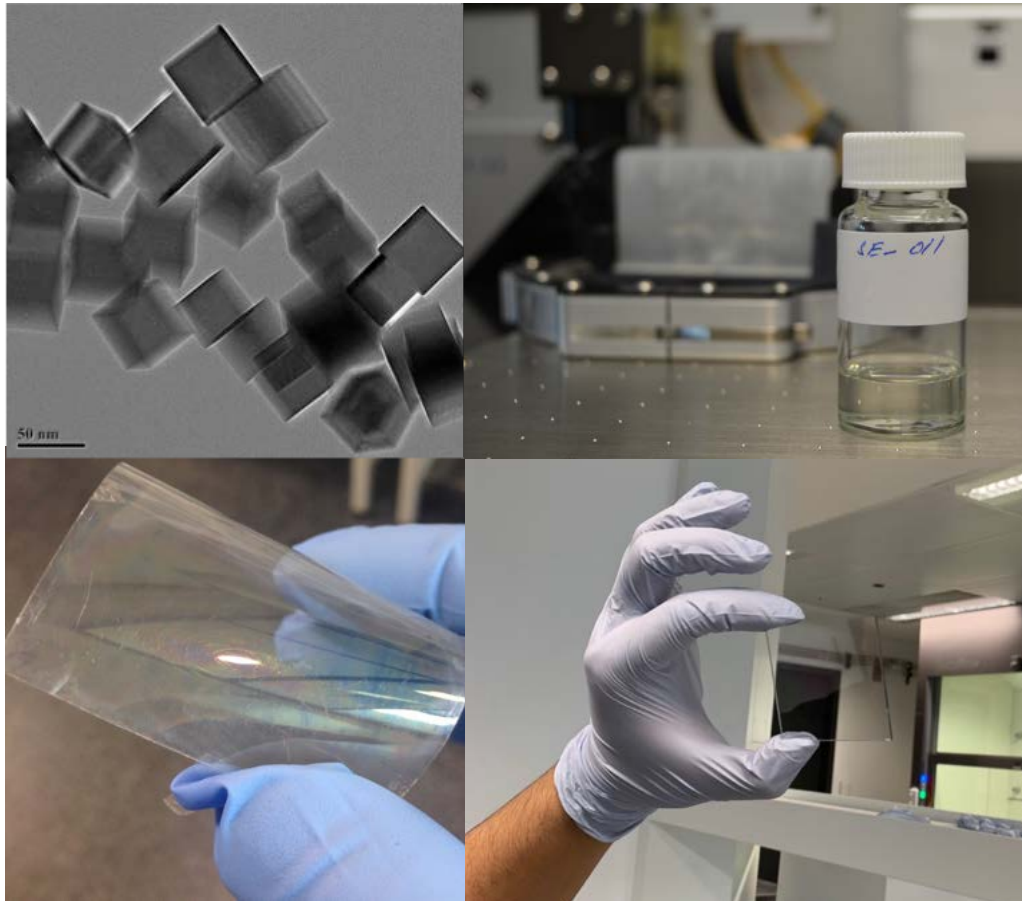
➤More advanced printed memory can provide the 'brain' for more sophisticated smarter Printed Electronics.

1. What is the Nanocube Memory Ink?

- The Nanocube Memory Ink is a transparent ink containing billions of nanometre scale particles. When printed onto a glass or plastic surface and assembled with electrodes they operate as computer memory.
- The Nanocube technology is based on a new type of resistive random-access memory (RRAM) using tiny metal oxide Nanocubes developed by the University of New South Wales.

2. Memory is largest traditional sector

- The **memory** component is the heart of all electronics and is the largest sector of the traditional silicon semiconductor sector.
- Even though Printed Electronics is experiencing significant growth, it is being held back by lack of ongoing development of printed memory.
- Printed, flexible and organic electronics will grow from $31.7 Billion in 2018 to $77.3 billion in 2029[1].



➢ The Nanocube Memory Ink is being designed to be printable, transparent, flexible and low power.

[1] https://bit.ly/3uTzFqS

➤Collaboration formed to develop new electronic materials for a wide range of uses in flexible electronics.

The underlaying technology was licensed from UNSW and is now owned 100%

World Leading Development Team

- UNSW is globally recognised as a leading research institution in Materials Science and Engineering. Dr Chu, co-inventor, is recognised for his contribution to oxide nanoelectronics, including RRAM and TFT.
- Research and development work in collaboration with teams from VTT Finland. Recognised global leader in development and production of printed electronics.
- AAM is also a member of PrintoCent a select consortium of approx 40 global printed electronics companies. Participation in potential end customer collaborations and networking with large global companies.

Federal Gov Funded Collaboration with UNSW and CSIRO

- The Company, University of New South Wales and CSIRO, formed a collaboration into new electronic materials for a wide range of uses in flexible electronics and significant advances in energy efficient data storage devices.
- This include memory, all types of sensors, batteries and other flexible electronics.
- The collaboration was awarded $1M in cash and support from the Australian Research Council and University of New South Wales[1]

UNSW SYDNEY CSIRO VTT PrintoCent

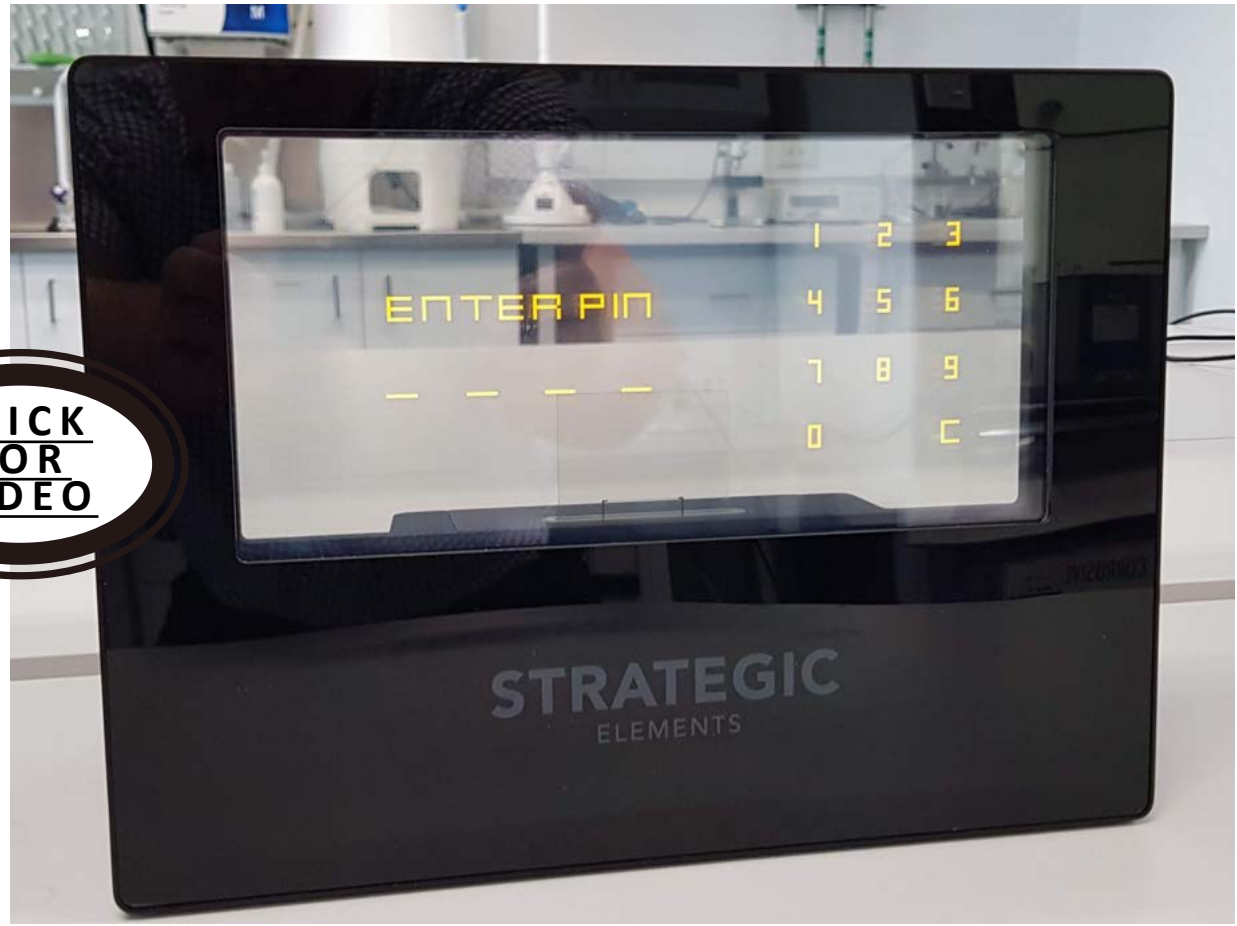
*Announced 30/07/2020

➤ **Demonstrated the capabilities of Printed Electronics materials by bringing together touch, display and data storage onto glass.**

➢ **The Nanocube technology was hand-picked to be one of only approx. 20 technologies to demonstrate at the world's premier Printed Electronics event 'IDtechEX' in Berlin May 2020.**

- Fabricated with UNSW and VTT Finland to highlight the unique transparent benefits of the Nanocube Printable Memory Ink in a control system.
- Transparent display and touch sensor component with the transparent Nanocube Memory Ink and custom application logic developed by the team.
- Is a fully printed storage technology for transparent surfaces. Physically deployed on glass and not hosted by a silicon storage technology
- The initial version showcases the transparent nature of the Nanocube Memory and the ability to print functional memory onto glass.
- Future versions with different functions to security.

Could store a range of information or images directly on glass.
Could be combined with sensors and other computer vision technologies.



CLICK FOR VIDEO

➤Initial applications for the Nanocube Ink will be in smart packaging and printed sensors

Delivering data storage on glass and plastic for transparent and/or flexible electronics. Freedom of design forces a re-think of new product applications and categories.

1. Smart packaging refers to packaging systems with embedded sensor technology to relay information such as product freshness (e.g foods, pharmaceuticals)

- Current smart packaging technologies utilise RFID tags for data storage for inventory management and product tracking.
- However RFID tags only store limited data and are a less secure than a printed sensor that is integrated with a printed memory.
- The smart packaging market was valued at USD$ 38.16 billion in 2020, and is expected to reach USD$ 48.72 billion by 2026[1].

2. Printed sensors refers to integration of multiple sensors on a device such as temperature, humidity, pressure.

- Current printed sensors do not contain data storage technology. Therefore they cannot store multiple sets of sensor data.
- Edge applications requiring compute and data storage as a result of more processing at the edge. Enhanced Security.
- The printed sensor market was valued at USD $8.63 billion in 2020 and expected to reach USD $12.6 billion by 2026[2].

Key Developments	Market Sectors	Estimated Timeline
Printed memory integrated with thin film transistor architecture	Smart packaging and printed sensors	**Q2 2021** - 1 Megabit demonstrator application
Printed memory integrated with printed crossbar circuitry and printed selector architecture.	Wearable technologies and IOT sensors (environmental)	**Q3 2021** -Demonstrator application using memory selector architecture

[1]https://bit.ly/3qhWHnP [2]https://bit.ly/38otRwj

Summary

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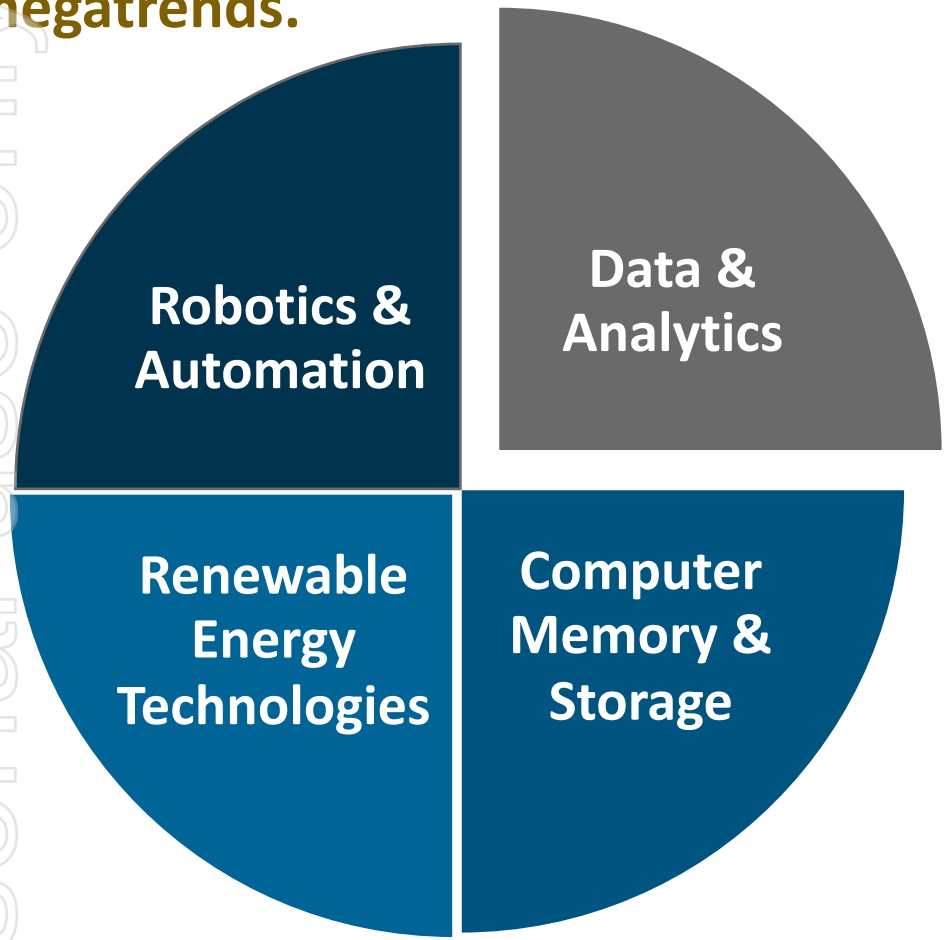

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