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Regulatory Release
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CODE : SOR

SOR Robotics and Electronic Inks Near Term Goals

Western Australia - November 2nd 2020 - Strategic Elements Ltd (ASX:SOR) is pleased to clarify short term goals for its innovation projects. The Company also notes that it in addition to these it is seeking further acquisitions in Australian innovation.

Over the remainder of 2020 the Company intends to:

1. Scale up fabrication of a printable Battery Ink to 1 litre, enough capacity to print over 1000 self-charging battery cells.
2. Test the Nanocube Memory for its potential in flexible, transparent, brain-inspired (neuromorphic) computing.
3. Expand on the collaboration with Fortune 100 US Company Honeywell and the WA Department of Justice for Autonomous Security Vehicles.
4. Enter agreements to integrate leading technologies into the AxV autonomous robotics platform.
5. Launch early adopter program (non-corrections) for the Autonomous Security Vehicle.

Pooled Development Fund Business

The Australian Federal Government has registered Strategic Elements as a Pooled Development Fund with a mandate to back Australian innovation. Strategic Elements operates as a 'venture builder' where it generates high risk-high reward ventures and projects from combining teams of leading scientists or innovators in the technology or resources sectors. The aim of the Pooled Development Fund (PDF) program is to increase the supply of capital to Australian small and medium-size enterprises (SMEs).

Self-Charging Battery Charging

The self-charging battery technology is being developed under a collaboration with the University of New South Wales and CSIRO partially funded by the Federal Government[1] . The Battery cells generate electricity from humidity in the air or skin surface to self-charge themselves within minutes. No manual charging or wired power is required. They are created with a printable ink and are ideally suited for use in Internet of Things (IOT) devices.

Strong potential competitive advantages exist over lithium based batteries that suffer from flexibility, dimension, weight and safety issues whilst needing a constant power supply to recharge. The global battery market for IOT was worth USD 8.7 billion in 2009 and forecast to be USD 15.9 billion in 2025[2] .

Near Term Results

- The team is fast-tracking ink scale up to achieve 1 litre of ink. Knowledge gained through develop of the Company's memory ink is enabling the Company to significantly reduce development time. To provide perspective, 1 litre of Battery Ink has the capacity to produce more than 2000 printable battery cells.
- **Results are expected to be available in November 2020.**

Ultra-Low Power Printable Memory

The Company is developing ultra-low power flexible circuits to operate an array of Nanocube Memory Ink cells. The nanoscale circuits enable smaller memory cells and larger density of memory arrays to operate on a flexible device. Increased memory potential is designed to be achieved whilst still using less than 1.5 Volts. The circuits are fabricated with a printable ink that contains wires with diameters 100 times smaller than a human hair (nanowires).

A recent patent filing[3] also covered a Nanowire Ink and memory array design for potential use in other flexible electronic devices such as OLED devices, sensor devices and neuromorphic computing devices.

Near Term Results

- The Nanocube Memory structure and operation allows it to combine computing and memory in one place in a way similar to how biological neurons operate. The Company will test the Nanocube Memory for its potential in flexible, transparent, brain-inspired (neuromorphic) computing. A series of significant synaptic functions will be emulated.
- **Results are expected to be available in December 2020.**

Autonomous Robotic Platform

The Company is developing an Autonomous Security Vehicle (ASV) for perimeter security. The Global Perimeter Security Market is forecast to be growing quickly at CAGR of 12.0% over the forecast period 2020-2026 (reaching USD 282.26 Billion by 2025)[4]. The Company is exclusively collaborating with giant **US Fortune 100 Company Honeywell**[5] to build autonomous security vehicles for the correctional justice sector. The parties are working with the **WA Department of Justice** to build a fully autonomous robotic security vehicle for the Eastern Goldfields Regional Prison in Kalgoorlie to inspect, test and confirm the integrity of the secure perimeter.

Near Term Results

- The WA Department of Justice Autonomous Security Vehicle has been deployed to the prison where live testing will occur on site. An intensive customer care process has commenced.
- As announced[6] Stealth is seeking to partner with other companies and research groups to integrate their advanced technologies with the AxV Platform.
- **In November** the Company will commence an Early Adopter Program for the ASV in non-correctional sectors such as mining and transport. Stealth is seeking to work closely with early adopters to deeply understand their use case, solve their problems and continuously upgrade and improve the ASV.

Company Comment

Charles Murphy, MD of Strategic Elements, *said "the whole Company has been working incredibly hard for quite some time to ensure we progress forward. With the recent capital raising we will be able escalate again. The collaboration with Honeywell remains our priority and to pass user acceptance testing recently was a great achievement for the development team. The Autonomous Security Vehicle has a very large market opportunity in the perimeter security sector, which is experiencing rapid growth in the face of Covid-19 and increasing government regulations".*

Strategic Elements Background

- Investors in SOR potentially **pay no tax on capital gains from selling their SOR shares** as the Company operates under a Federal Government program setup to encourage investment into innovation.
- The Australian Federal Government has registered Strategic Elements as a Pooled Development Fund with a mandate to back Australian innovation.
- Strategic Elements operates as a 'venture builder' where it generates high risk-high reward ventures and projects from combining teams of leading scientists or innovators in the technology or resources sectors.
- The Company is listed on the ASX under the code "SOR". More information on the Pooled Development Program should be read on the Company's website at www.strategicelements.com.au

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

[1] *Announced to the ASX on 30/10/2020.*
[2] *https://www.marketsandmarkets.com/Market-Reports/battery-iot-market-153084557.html*
[3] *Announced to the ASX on 280/10/2020.*
[4] *Announced to the ASX on 16/09/2019*
[5] *https://dataintelo.com/report/perimeter-security-market/*
[6] *Announced to the ASX on 19/10/2020.*