



Australian Government



Australian
Space Agency

Joint Statement of Strategic Intent and Cooperation

between

Australian Space Agency

and

EM Solutions Pty Ltd



**EM SOLUTIONS PTY LTD.
STATEMENT OF STRATEGIC INTENT AND COOPERATION WITH
THE AUSTRALIAN SPACE AGENCY**

The Commonwealth of Australia as represented by the Australian Space Agency, part of the Department of Industry, Innovation and Science, hereinafter referred to as "**the Agency**" and represented by Dr Megan Clark AC, Head, Australian Space Agency,

and

EM Solutions Pty Ltd., hereinafter referred to as "**EM Solutions**" and represented by Dr Rowan Gilmore, Chief Executive Officer, EM Solutions Pty Ltd.;

Recalling that the Australian Civil Space Strategy 2019-2028 is a framework for the development and growth of the Australian space industry over ten years, underpinned by four strategic pillars: International; National; Responsible; and Inspire. Under these pillars the strategy endeavours to help realise opportunities and address challenges by opening doors internationally; increasing national space capability; promoting responsible regulation, risk and space culture; and building the future workforce. The Strategy sets a path for the Agency to triple the size of Australia's space sector to \$12 billion and create another 20,000 jobs by 2030;

Recalling that the Agency's purpose is to transform and grow a globally respected Australian space industry that lifts the broader economy, inspires and improves the lives of Australians – underpinned by strong international and national engagement;

Recalling that the Agency has seven National Civil Space Priority Areas including communications technologies and services; position, navigation and timing infrastructure; space situational awareness and debris monitoring; leapfrog research and development; Earth observation services; robotics and automation on Earth and in space; and access to space;

Recalling that the Agency's responsibilities include: whole-of-government coordination of Australia's civil space sector matters, providing primary civil space policy and strategic advice to the Australian Government, supporting the growth of our national space industry and the use of space across the broader economy, leading international civil space engagement, administering space activities legislation and completing our international obligations, and inspiring both the Australian community and the next generation of space entrepreneurs;

Recalling that EM Solutions is an Australian technology developer of innovative microwave and on-the-move radio and satellite products that help to deliver high speed telecommunications anywhere in the world. For over 20 years, EM Solutions has developed vertically integrated systems incorporating its own products and subsystems to deliver across the value chain;

Recalling that Electro Optic Systems acquired EM Solutions in October 2019, EM Solutions operates as a separately branded company within the EOS Communication Systems Division; while the merger provides an opportunity for long-term fusion and collaboration of world-leading communications technologies and space capabilities;

Acknowledging that the Agency and EM Solutions share the objective of enhancing the capability and competitiveness of Australian industry and promoting investments in space capabilities and capacities, that will support smart growth and highly qualified jobs as well as improving the day-to-day lives of all Australians through innovative products and services;

Acknowledging that the Agency as an Australian government agency that is committed to open, transparent and significant industry engagement;

Acknowledging that EM Solutions has experience working with international supply chains to develop and deliver flight hardware. For example, EM Solutions recently produced X band upconverters and Ka band transceivers for Space Flight Laboratories, Canada. This hardware is essential to provide broadband communications capability and services that new low Earth orbit satellite systems are intended to offer;

Acknowledging that EM Solutions has a proven history of delivering innovative and trusted radiofrequency (RF) and satellite communications (SATCOM) systems to a range of commercial customers, and that EM Solutions will leverage their experience in delivering these systems for the Australian space market, whether it be as flight hardware or ground station componentry, to support the Australian Space Agency's vision;

Acknowledging that EM Solutions has collaborated with Japan's National Institute of Information and Communications Technology on numerous SATCOM systems for research purposes;

Through this Statement, EM Solutions acknowledges the following current projects, areas of strategic interest and growth, potential new areas of collaboration and support for education and training which are of interest to the nation.

1. Growing space jobs, skills and expertise

EM Solutions is planning to employ at least 10 new engineers, technicians and assemblers in the next five years. With new and existing staff, EM Solutions will add to its ability to design, assemble and test space and SATCOM products.

2. Development of new space products

EM Solutions will develop and enhance its range of space products including communications technologies and services to enhance commercial capabilities, such as:

- Flight hardware such as transmitters and receivers, and subsystems such as upconverters and downconverters to be used in satellites;
- Sovereign capability in SATCOM on the move (SOTM) terminals for land and maritime applications. SOTM terminals will enable tracking and communicating with both traditional geostationary satellites, and 'new space' satellites in low and medium Earth orbits;
- Next generation flat panel and parabolic dish SOTM terminals to deliver enhanced communication capabilities to commercial users requiring mobile satellite communications, and;
- Wideband transmitters and receivers for use with commercial satellite constellations supporting maritime, land and in-flight aeronautical communications services.

3. Investment in space design manufacturing facilities

EM Solutions will expand the capabilities of its Brisbane facility with the construction of a new clean room in the next three years. The clean room will be designed to maintain extremely low levels of particulates, which will enable in-house assembly of electronics suitable for space applications.

4. R&D and participation in space research science platforms

EM Solutions is committed to ongoing R&D activities that will contribute to the strength of Australian capabilities and networks.

- EM Solutions will continue to collaborate on space and SATCOM products with a number of international research-focused companies such as University of Toronto's Space Flight Laboratories, Japan's National Institute of Information and Communications Technology, CSIRO, and the University of Queensland.
- EM Solutions is an active partner of the SmartSat CRC. EM Solution's ongoing investment and contributions to the SmartSat CRC will focus on enhancing space communications, developing test and certification procedures for space communications, and working with other Australian collaborators to test and prove space communications equipment and services.
- EM Solutions places a high importance on R&D with annual spending of \$2 million on new communications technologies and products.

5. Building the future workforce

By exposing interns and graduates to development and engineering of commercial space and SATCOM products and giving them valuable experience in the rapidly growing space industry, EM Solutions will continue to help grow technical skills in the Australian space economy.

- EM Solutions will continue its internship program which employs several engineering students each year, and provides interns with opportunities for ongoing graduate roles at the company.
- In the future, EM Solutions plans to host additional graduates on six month rotations.

This Statement constitutes the expression of both Parties' intention to continue discussions. This Statement does not create legal obligations between the Parties and does not establish the obligation to enter into a certain agreement.

This Statement was signed in two (2) copies in Canberra on 13 November 2019.

On behalf of
The Australian Space Agency



Dr Megan Clark AC
Head of the Australian Space Agency

On behalf of
EM Solutions Pty Ltd.



Dr Rowan Gilmore
Chief Executive Officer of EM Solutions Pty Ltd