



Committee Secretary
Standing Committee on Industry, Innovation, Science and Resources
PO Box 6021
Parliament House
Canberra ACT 2600

iisr.reps@aph.gov.au

Dear Madam/Sir,

Submission by Skykraft Pty Ltd to the House of Representatives Standing Committee on Industry, Science and Resources Inquiry into the development of Australia's space industry

Skykraft is pleased to provide this submission to the House of Representatives Standing Committee on Industry, Innovation, Science and Resources enquiry into and report on developing Australia's space industry.

About Skykraft.

Skykraft is a Canberra-based space services company that designs, manufactures and operates spacecraft (more specifically, Small Satellites). The Company was spun out of University of New South Wales' *Canberra Space* campus. Through a step-by-step approach, Skykraft will ultimately own and operate SmallSat constellations for the delivery of global services.

Skykraft's capabilities include conceptualizing, designing, building, testing and operating bespoke SmallSat constellations for a wide variety of applications, such as, defence, Internet of Things (IoT), Air Traffic Management, maritime surveillance and border protection, agricultural monitoring and communications.

Through significant reductions in launch costs, plus advances in energy collection, storage and on-board processing, Skykraft can replicate the services and solutions that were previously only achievable through large and cost prohibitive single satellites. Constellations of much smaller and cost effective SmallSats that are also more robust and resilient to denial of services, now offer the same level of service that is required for global commercial activities.

Skykraft is working closely with Airservices Australia to develop a proof of concept demonstration of space based Air Traffic Management. Skykraft expects Airservices Australia to be the first customer of their sovereign designed and built global constellation of small satellites providing global space based surveillance and communication services. Skykraft has designed and built its first satellite for launch in 2021.

Skykraft is in the pre-revenue startup phase with in-kind support and limited capital provided to it by the founding shareholders. The Company was awarded a AUD\$1 million grant which is supported by the ACT Government through its *Priority Investment Program*. The Company has also secured an \$880,000 Space Agency International Space Investment grant.



The Need.

Australia needs a sovereign space eco-system consisting of all the constituent parts of launch platforms, launch systems (rockets), space systems (satellites) and ground support systems (mission control, frequency management, communications, etc) to assure that Australia retains access to space and space services. These systems should be sovereign with the ability to provide rapid access to space should it be required. The latter is of significant importance for Defence.

The Problem.

The Australian space eco-system is fragile with a number of companies developing capability to expand the industrial base and provide systems to Australia, government and defence. Companies like ELA and Southern Launch are developing launch facilities, companies such as Gilmour and Black Sky are developing launch systems, companies like Skykraft are developing the satellites and infrastructure to provide services from space, and companies such as Myriota and Fleet are procuring foreign cubesats to deliver services.

However, these companies need investment to grow, survive and compete in an internationally competitive market. The Australian space investment landscape is limited and companies like Skykraft have struggled to obtain investment. While the grants from Government, both federal and state, are welcome they do not match the investment required to actually grow a space capability which are in the millions of dollars. Government support for essential infrastructure such as launch platforms, launch capabilities and space systems is desperately required. This support could take the form of activities that encourage export potential, early contracts that would encourage investors or tax concessions for investment in priority sovereign industrial capabilities.

However, private investment is essential for growth and for companies to become commercially successful. Companies cannot rely solely on government grants. Unfortunately, whilst some incentives such as the SmartSat CRC may appear appealing, some of their organisational features, in particular the IP terms, hinder cash injection by investors into the space ecosystem thus limiting the opportunities for small space companies to leverage their smart ideas into the market place.

A critical stumbling block for Australian innovators is the high cost and substantial delay to obtain flight heritage. Without flight heritage, small companies and new players are not taken seriously in the Australian or export markets and, quite rightly, find it very difficult to raise funds. An affordable means through which new players and innovators can develop their system, equipment or software with their own resources and then rapidly gain flight heritage is an ideal means to accelerate growth in the Australian Space sector by providing a globally competitive advantage. This has the advantage of providing a hand-up rather than a hand-out, accelerating growth and increasing the probability of business success. Such a scheme requires the new companies and players develop their offering with their own funding, but rewards their efforts with support on a ride for flight heritage that is centrally funded by the Australian Space Agency. The flight should include ground testing (for example at AITC Mt Stromlo) to qualify the payload for flight and then a hosted ride, preferably on an Australian satellite operator. It is critical that these rides are frequent with flexibility to ensure systems gain flight heritage quickly.

The Future.

The work of the Australian Space Agency over the last two years has been good, however there has been too much focus on international agreements and logos. We need a space agency that drives an Australian Space vision. That vision needs to be very clearly articulated like John F Kennedy's famous "We choose to go to the moon" speech on 12Sep62. It needs to rally the Australian people around a dream that can be



achieved. It may be to put an Australian man or woman on Mars in 2050 or to make Australia the Launch Capital for the world (we have the land and vacant space and cover from equator to the Antarctic) by 2040, whatever it is, it needs to raise the interest of the Australian public and be of suitable breadth and scale to grow the Australian space eco-system.

Support.

Skykraft is ready to support the Australian Governemnt in defining and developing the vision and support mechanisms to grow and develop a competitive, sovereign Australian space capability that can provide rapid and assured access to space for Australia.

Regards



Air Vice Marshal (retd) Mark Skidmore AM
Executive Chair
Skykraft



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