

April, 2017
Houston, Texas

Dear Minister,

As an Australian with 23 years of professional NASA astronaut experience including four space shuttle flights, I am writing to urge you to seize a unique moment for Australia through strategic investments in the emerging space-related economy. There are two thoughts I want to leave you with that make this particularly relevant today:

Firstly, the world-wide space industry is a \$B350 per year activity growing at an annual rate of about \$B10 per year. And for a developed country, it is staggering that Australia accesses less than 1% of this huge industry. We are missing out on a rich opportunity for innovation, employment and accessing potential export markets.

Secondly, space related businesses on the international arena are going through transformational and disruptive changes, as launch services are now being provided by commercial entities, rather than conventional government contracting. So, we see the rise of companies like SpaceX and others that are really shaking up the market place. Further, there has been an exploitation of electronic miniaturization that is also shaking up the conventional business model. Satellite providers are no longer constrained by the multi-billion dollar investments of the past. Now useful satellite data can be obtained on a device that costs less than a million dollars.

These times create a real opportunity for Australia to make strategic investments in this transformative industry leading, potentially, to thousands of high-tech blue collar and white collar jobs. And I am unashamedly pro South Australia in this since it meshes and overlaps so well with existing local defense industries, especially undertakings such as the submarine build.

However, it cannot be overemphasized that if Australia is really to be a player in this arena, then to avoid starting from scratch, we need to work with, and form international partnerships to take advantage of what other countries have already done. We need to play in their arena in terms those countries understand and that means having a recognized national space agency. We cannot be a serious player in this international field if our representatives are buried in some obscure government policy unit or some obscure arm of a national lab. We need a national agency that speaks for the country and with ministerial authority. Without that Australia is doomed to be forever dependent on other nations for its space-related security, its space-related economy, its space-related defense and its space-related environmental assessments. We cannot afford to let that happen. We need a centralized office that can advance Australia's interests with a firm and respected voice. Only the authority of a national space agency can do that. It is the language other international players work within and it is the forum they expect.

A counter argument you may be hearing is that the existing space activities are too small in Australia to justify establishing an agency at this time. I find this argument at best myopic, but at worst it is often a disguise for promoting alternative special interests, and not the national interests. To those who press that point of view, I would say existing space activities will forever

remain small and we will never get our share of the space market just because we don't have a national agency.

It is time for Australia to enter the 21st century and seize the opportunities a national space agency participating in this sector will open up. It will change the future of the country in unimaginable ways, and all for the better. It is a winner for everyone, especially the Australian people and the Australian economy.

I would be happy to offer any guidance or further discussion in this matter. I would also be happy to meet with you to discuss this further during one of my frequent trips to Australia.

Yours sincerely,

Andrew Thomas, Ph.D, AO
NASA Astronaut (Retired)