

## Just one small step for Australia's space industry when a giant leap is needed

Written by Andrew Dempster, Director, Australian Centre for Space Engineering Research; Professor, School of Electrical Engineering and Telecommunications, UNSW

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An expert review of the Australian space industry's capabilities to participate in a global market [was announced last week](#)

by the Minister for Industry, Innovation and Science, Arthur Sinodinos. He said the aim is to “develop a long-term plan to grow this important and exciting sector” and report in March 2018.

Interestingly, the words “space agency” do not appear in the announcement, but this was addressed later when the minister [spoke to the media](#) .

The space community had been expecting an announcement of this sort for some time. Many expected one to be made for maximum impact at or near the International Astronautical Congress ( [IAC](#) ) to be held in Adelaide in September, when Australia's space community will be on show to the world.

## Another failure to launch

Many also expected that the announcement would be of the establishment of an agency, rather than yet another committee and review of the industry. There seems to be at least one of these every year, with the past year alone seeing the [Space Activities Act review](#) , the [Space Industry Association of Australia \(SIAA\) white paper](#) and the annual [State of Space report](#)

That frustration was voiced by the Shadow Minister for Innovation, Industry, Science and Research, Labor Senator [Kim Carr](#) , when he said Australia “desperately” needed to move towards having its own space agency.

This is a little rich, as Labor had the opportunity to go to the last election with a comprehensive space policy that included an agency, but failed to do so ( [like every major party](#) ). The 2016 NSW Labor Party Conference event asking if Australia should have a space program (at which I presented) did not lead to substantive action.

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In commissioning a review that will not report until next March, the federal government has effectively ensured that there will be no Australian space policy of any merit to discuss at September's IAC conference.

Australia will not have a space agency, or even a plan for one, when the eyes of the space world are on us. When all that international attention has disappeared next year, the idea could be shelved yet again.

That all sounds rather negative, and may imply an expectation that nothing substantial will happen as a result of this new review.

I have been in the space sector in some capacity since the 1980s and, despite there being many strong reasons ( [at least 10](#) ) to support an agency, I've seen this type of thing happen over and over again without result.

### Reasons to act now

But this time around there are real grounds to expect that things should be different. So what are they?

First, there is what you might call the "[Rocket Lab](#)" effect. When a company started preparing to [launch rockets from New Zealand](#), the logical reaction from the government there was to create an agency, effectively trying to build an industry around this project. In other words, the innovators forced a response from government.

Arguably, this effect is stronger in Australia. Several startup companies are effectively putting the same type of pressure on the Australian government. Two that recently achieved early funding are [Fleet](#) in South Australia (doing the "internet of things" from space) and [Gilmour Space Technologies](#) in Queensland (launching small satellites). There are at least a dozen others.

Second, an Australian space agency makes more sense now than ever before, with the

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emergence of what has been called “Space 2.0”. The old paradigm of big, expensive satellites and big, clunky agencies has been disrupted by easier access to space and the increasingly commercial use of space. Australia can leapfrog the old way of doing things, because most local start-ups are working on Space 2.0 applications.

The small satellite market causing this disruption is growing at more than [20% per year](#) and will be worth about US\$7 billion by 2020. Nanosatellites or “cubesats” are fundamental to this growth.

Recently, three cubesats deployed from the International Space Station were the first Australian-built satellites in [15 years](#). The [story](#) of my team establishing contact with two of them after they were initially silent was a great feat of engineering.

So Australia is already participating in Space 2.0 – we have active nano-satellites launched and innovative companies funded.

Third, the committee appointed by Sinodinos has a healthy number of members not aligned with traditional agency thinking. These include [David Williams](#) from CSIRO. He set up the UK agency, which is [a good model for Australia to follow](#) given it is focused on industry growth.

Also on the committee are local entrepreneurs Jason Held ( [Saber Astronautics](#) ) and Flavia Tata Nardini ( [leet](#) ), who run small companies with new approaches to space. E

The absence of large multinationals has been lamented by some commentators, but not by me. The Communications Alliance is a voice for Australian’s communications industry, including those involved in the satellite industry, and its chief executive John Stanton was quoted in a Communications Day newsletter saying the review was “remarkably light on industry participants”.

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In any case, large companies are represented by Michael Davis of the Space Industry Association of Australia (SIAA), which [lists almost 400 Australian organisations](#) as members.

Fourth, most of the case for an agency has already been made by the SIAA in its recent [white paper](#). This does much of the new review committee's work for it, and allows it to use the time between now and March to try to define the role and structure that any agency will take.

Fifth, the current government has already shown a willingness to facilitate growth in the sector by [reforming the Space Activities Act](#). Although the Act is primarily regulatory, and its reform is an exercise in removal of red tape, the move will genuinely make it easier to run space businesses in Australia.

Finally, this industry attracts innovators like almost no other - [Elon Musk's efforts to get to Mars](#) are only one high-profile example.

There is a groundswell of activity right here, right now, with a critical mass of brilliant young minds developing a 21st-century space industry, but needing supportive infrastructure to make it happen.

In other words, the environment and timing are right for the establishment of an Australian space agency. This review is just one small step towards that goal. At least it's in the right direction, but is it necessary at all?

With Labor's only complaint being that an agency is not being launched soon enough, bipartisanship on the issue seems assured. So why not take the giant leap?

*Andrew Dempster receives funding from the Australian Research Council. He is on the Advisory Committee of the Space Industry Association of Australia.*

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