

# THE SATURDAY PAPER

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## NEWS

Thirty years late, and with a haste that surprised the industry, Malcolm Turnbull is taking Australia into space. By *Karen Middleton*.

## Last in space: our late agency plans

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On Friday a week ago, Adelaide-born astronaut Andy Thomas added his voice to more than three decades of calls for Australia to establish a national space agency.

Thomas was back in Adelaide to attend the International Astronautical Congress, which his home town was hosting the following week. Securing hosting rights had been considered a coup, given the bid was mounted not by governments but by the Space Industry Association of Australia. Industry aficionados were flying in from all over the world.

Addressing the South Australian Press Club, Thomas made some observations on Australia's failure to maintain any centrally co-ordinated space policy, especially since it had launched itself into the space industry at Woomera in South Australia in 1967 via a basic experimental research satellite packed into the nose cone of a discarded American rocket.

He was asked about the South Australian government's announcement the previous day that it would establish a space industry centre to encourage innovation and boost local start-ups.

"The time is right now to step back into that market," Thomas said on September 22. He described how it had changed dramatically in recent years and there was now an opportunity for Australia to build an industry "which could be for the benefit of all Australians".

“It’s a high-tech industry and it requires that you have a space agency,” Thomas said bluntly.

“This country needs a space agency. Every other OECD country has a space agency – Australia does not. It is time to make a space agency here in Australia, which can decide national policy, strategise and help develop the infrastructure of space, because space is the modern form of infrastructure. It is as important as railroads were to the early development of the country. There’s a lot of politics involved in the formation of a space agency. So I applaud what the South Australian government are doing – despite the federal policies – by establishing this office. It’s actually a surrogate space agency in a form.”

**“IT IS SO EXTRAORDINARY THAT NEW ZEALAND SHOULD HAVE A SPACE AGENCY AND WE DON’T. PERU’S GOT ONE AND NICARAGUA’S GOT ONE.”**

There is in fact one other OECD country that doesn’t have a space agency – Iceland. That Australia alone should stand alongside it has long been an embarrassment to those in the Australian space science and industry sector, who consider it should have been doing much more, much sooner.

Three days after Thomas’s address, at the opening of the congress, the Turnbull government announced it would, indeed, be establishing a national space agency.

Although the Turnbull Coalition government is not keen on its South Australian Labor counterpart getting credit for anything much, the agency commitment wasn’t just a one-upping exercise thrown together in three days.

But the decision to formally commit to it wasn’t much more than weeks in the planning. And it seems it did not go to cabinet.

In July, Industry Minister Arthur Sinodinos appointed an expert reference group to review Australia’s space industry – in which many companies are actively engaged, with no central co-ordination. Headed by former CSIRO chief Dr Megan Clark, it was to report back in March 2018.

The space sector was so enthusiastic, the review received 200 submissions almost immediately.

In August, it conducted round-table discussions with sector representatives and the message was clear: Australia needed a space agency.

A separate but related message was also being conveyed direct to the government: you have thousands of space experts from all over the world coming to Australia in September and after more than 30 years of unmet expectations, if you don’t have something concrete to tell them, we will be a laughing stock.

As recently as August 18, when Arthur Sinodinos spoke about the expert review in the senate, there was a directional hint but still no decision.

“An important part of the review will be establishing the case for a national space agency,” Sinodinos said, “to act as a co-ordinator of space policy across the government and to act as an interlocutor on the global stage when we interact with other players.”

He said Australia needed to be able to “look them in the eye” and develop the networks and secure the contracts to take the space industry “to the next level”, developing a strategy that could last two decades and help draw Australian experts back home.

As the congress approached, at least one industry expert told Prime Minister Malcolm Turnbull that it would be “disastrous” politically if his ministers had nothing new to say there.

Turnbull was urged to commit to an agency and bring forward the announcement from next year to now.

The government sought a progress report from the expert reference group and made the decision to proceed without waiting for its final assessment.

Sinodinos had to take leave because of illness, so other ministers stepped into the breach. South Australian senator Simon Birmingham got to make the big announcement in Monday’s opening address.

It caught pretty much everyone unawares – including the well-connected Nobel prize-winning Australian astrophysicist and Australian National University vice-chancellor Professor Brian Schmidt.

“It caught me a little by surprise on the day,” Schmidt told *The Saturday Paper*. “It makes a lot of sense ... It would have been insane not to announce it then, so it was the right thing to do. It made a big impact.”

The response from the floor was instantaneous. When Birmingham declared “we will be establishing a national space agency”, the cheers almost drowned him out.

“We’re delighted that the Commonwealth government has finally listened to the community,” Space Industry Association chairman Michael Davis told *The Saturday Paper*. He said having Australia’s fragmented space industry centrally co-ordinated would enhance the national reputation.

“It wasn’t a model our counterparts from overseas understood very well.”

Dr Anna Moore, the director of the Advanced Instrumentation and Technology Centre at the ANU, and with Michael Davis a member of the government’s expert reference group, says that while space exploration still serves to inspire young people to wonder about the universe, the space industry has also moved into a very practical realm. An agency would expand those possibilities.

“There are university groups now that can build their own satellites and send them up to do very specific things,” Moore says. “It’s not ethereal anymore, it’s very specific.”

The long-time absence of any serious government aerospace policy has seemed like an aberration in a country with global scientific credentials.

Since 1985, when then Hawke government science minister Barry Jones commissioned Sir Russel Madigan and the Australian Academy of Technological Sciences to produce the report “A Space Policy for Australia”, government reviews of Australia’s space industry have fallen like snow and melted away just as quickly.

Most have recommended greater co-ordination and ideally a national agency.

The Madigan report suggested that having emerged from World War II relatively unscathed compared with its Asian neighbours, Australia was squandering its advantage by not moving fast. “It is not possible for the private sector, from its own resources, to develop a space industry which will carry the rest of Australia on its back into the space age,” it said.

“The commitment to a space programme must be a government decision, not a commercial one. It is a decision to ‘be in it’ or be left behind.”

The report said establishing a national space policy was “a matter of urgency” and warned that failing to engage actively would leave Australia dependent on other countries.

Thirty-two years on, that’s exactly where Australia finds itself.

The Hawke government responded to the Madigan report initially by meeting it halfway, establishing the Australian Space Office in 1987 to execute fledgling ventures into the space industry but with a budget of just \$5 million a year.

My own interest in the field is at least partly due to the fact that my father, Dr Bruce Middleton, was appointed as its inaugural executive director.

The Australian Space Office explored opportunities for partnering with industry to advance Australia’s engagement with space, including entertaining separate private-sector proposals to set up a spaceport on Cape York and a launch facility at Woomera. There were also discussions with the Russian space agency about launching Russian rockets. Neither proposal came to fruition.

As science minister, Barry Jones drove the government’s engagement but he was dumped from the frontbench in 1990.

“After I was kicked out there was a feeling that science was really a bit of a wank, that scientists were playing games,” Jones told *The Saturday Paper*. “If there was anything in what scientists were doing, well, industry would jump at it.”

Jones says there was resistance to spending taxpayers’ money. “The private sector is smart enough to pick it up,” is how Jones characterises the view.

Echoing the findings of the Madigan review, Middleton says it always needed to be the other way around. While industry now drives the space sector, government engagement remains crucial.

“In every country in the world, where there is significant interest from industry, there is also a significant budget,” he says. “The industry watches what the government is interested in. If the government says, ‘Oh no, we’re not going to put any money into this’, the same thing will happen. It will wither on the vine.”

Middleton told a parliamentary inquiry in 2008 that a space agency would need at least \$50 million to be viable. “That was 10 years ago,” he says.

Another former science minister, Chris Schacht, was on the organising committee for the Astronautical Congress. Schacht says part of the resistance to a central agency came from other agencies worried about their budgets.

“The people in the Space Council and the [Australian Space] Office, as much as they tried hard, could never break the bureaucratic patch protection,” Schacht told *The Saturday Paper*. “They all feared they would lose some money to the new agency.”

Under prime minister Paul Keating, the financial commitment to space science stalled. When the Howard government won office in 1996, it closed down the Space Office.

Schacht says Australia is now 30 years behind where it could have been. “That’s the tragedy,” he says. “But I’ve got no doubt we can do a fair bit of catching up.”

Middleton says Australia has missed opportunities, pointing to at least four approaches from the European Space Agency to grant it associate membership, which would bring guaranteed European investment into the Australian space industry. “Because there was no central agency, it wasn’t progressed,” he says.

In 2008, the senate standing committee on economics again recommended one. “It is not good enough for Australia to be lost in space,” the committee said. “It is time to set some clear directions.”

But under the Rudd, Gillard and Abbott governments, none were set.

Now, suddenly, that’s changed. The Turnbull government has drafted legislation to revamp the existing Space Activities Act to make it easier for Australian companies to obtain the permission required under international law to launch satellites. It will be put to parliament next year and the agency will follow.

Despite the sector’s enthusiastic response, some are cynical about its prospects. After governments hesitated for so long, they worry that in now moving so quickly the rhetoric may outrun reality.

The acting industry minister sought to head off that sentiment.

“This is not just about an agency for an agency’s sake: that is why this review process is so important,” Michaelia Cash told the congress. “We now need to put in the hard work to determine what form of agency and what mandate is best suited to support our growing space industry.”

She also welcomed the Labor opposition’s announcement that it, too, supported a space agency.

The 2008 parliamentary committee said Australia’s focus should be on expanding its scientists’ role in space tracking and astronomy and enabling Australian companies to make better commercial use of satellite data. It was not proposing to “land an Australian citizen on Mars”.

Brian Schmidt says that while nothing should be ruled out, an Australian agency’s focus would most likely be on technological support and the sector’s developmental, industrial and commercial dimensions – continuing what Australians were already doing but with the results staying onshore, earning money and kudos and providing more technological autonomy for Australia.

“I don’t see us running our own launch vehicle to Mars any time soon,” he says.

He envisages a “light-touch” agency, co-ordinating Australian efforts and being an international contact point.

“I’m not really keen to have a new NASA that is a huge agency,” he says. “I think that would be a mistake.”

Schmidt says it must be “business-led” with bipartisan “buy-in” from politicians and the bureaucracy.

Both Schacht and Middleton argue the agency must be a statutory authority, answerable directly to a cabinet minister and properly funded. But Malcolm Turnbull is hosing down expectations.

“It’s a small agency designed to co-ordinate and lead,” he said ahead of Monday’s announcement. “But the space sector, of course, is one of enormous potential. We already have many Australian companies participating in it and it’s an example of, you know, it is part of our innovation economy, our innovation and science economy.”

They all say it’s overdue.

“It is so extraordinary that New Zealand should have a space agency and we don’t,” Barry Jones says. “Peru’s got one and Nicaragua’s got one.”

Now it seems Australia will have one, too.

But the real indication of commitment will come in May, two months after the expert reference group reports – when the federal budget reveals just how much they’re willing to pay for it.

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