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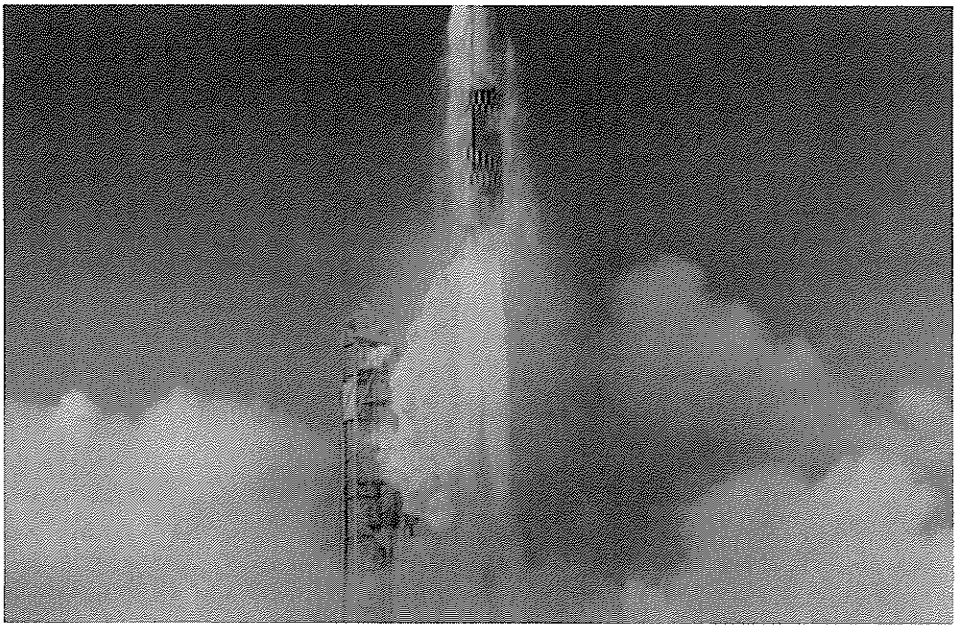
Why Australia needs to stand on its own in space

UNCATEGORISED

Brexit and the China/US trade war are prime examples of why Australia needs to develop its own sovereign space capabilities, says Australia's SmartSat CRC CEO-designate Professor Andy Koronios.



Europa-1 launched from Woomera in 1964. Picture courtesy National Archives of Australia.

Recent global events point to a more uncertain and unpredictable world and illustrate the importance of having a sovereign technological capability, especially in defence and national security.

For example, a no-deal Brexit could see the UK cut its umbilical cord from the EU, and this, in turn, may shut them out from the space work in which they are currently involved in and for which they have paid.

This includes programs like the Global Navigation Satellite System project Galileo, which provides GPS type positioning and navigation services or Copernicus, which provides global, continuous, autonomous, high quality, wide-range Earth observation capability.

By developing our own capabilities, Australia will not only protect its national security from unforeseeable future events like Brexit but also improve the economic outlook in a range of important industries.

When people talk about Industry 4.0 you cannot achieve much of that without some space-mediated technology. That's why we have to provide and help build an Australian sovereign capability in that area. At the moment, we are just simply buying external products and earth observation services but we need to control our own satellite applications, especially in agriculture.

We collaborate very well on crop yields with the Chinese Academy of Science. The Chinese have so much advanced modelling and, of course, they've got their own satellites and they can actually have a very good understanding of our crop yields. They give us that information but we receive it late: they use it first and then give it to us.

This means Australian agriculture relies on estimated yields from mobile ground inspectors for future trading, which isn't as accurate as satellite information. This gives the Chinese an advantage in future price negotiations because they know more about our yields than our farmers know and that's not a good thing.

Another reason to develop Australian technologies is to ensure the country is not bound by other nations on price or access. If we don't develop the science ourselves we are beholden to what prices the provider puts on us accessing that technology. This also means that you never get your own capability built so over time you become dumber and dumber and more reliant on the technologies of others.

For example, if someone sells us a satellite technology, say, at 15 per cent profit and, let's say, another 10 per cent goes towards R&D to improve the next generation of their satellites, this means we are paying an extra 25 per cent for them to become smarter than us. That's dumb.

It's the same argument for people questioning why the Americans want to go back to the Moon.

People ask "why are you going to the moon? Fix the problems here." But by going to the Moon, you are getting the know-how and building that technology that you can actually apply on Earth and make our lives easier, healthier and more comfortable.

The SmartSat CRC will tackle these sovereignty issues by bringing together experts in advanced satellite technologies around communications and IoT connectivity, sensors and intelligence, and next-generation Earth observation data services.

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