

A photograph of a rocket launch in a field. The rocket is on the right side, ascending vertically, leaving a thick white plume of smoke and a thin trail of white vapor. The background is a clear blue sky with scattered white clouds. The foreground is a flat, brownish-green field. The text is overlaid on the upper half of the image.

SOUTHERN LAUNCH

PRE-BUDGET SUBMISSION  
REGARDING THE PRIORITIES FOR THE  
2022-2023 BUDGET

for the  
The Treasury

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**Figure 1 (on front):** Australia’s first commercial launch of a space-capable rocket. Carried out by Southern Launch at the Koonibba Test Range in 2020.

## A. SUMMARY OF RECOMMENDED PRIORITIES

**Priority 1:** Budget allowance to review and amend the *Space (Launches and Returns) Act 2018* (Cth) and the delegated legislation in consultation with industry, field experts and stakeholders

**Priority 2A:** Budget allowance to equip the regulator of launch activities from Australia with the capability to professionally assess flight safety information relating to launch activities

**Priority 2B:** Budget allowance to remove the Cost Recovery Implementation Scheme regarding assessments of applications made under the *Space (Launches and Returns) Act 2018* (Cth)

**Priority 3:** Budget allowance for developing a coordinated structure and framework which considers the multitude of regulatory gateways required across various jurisdictions in conducting activities governed by the *Space (Launches and Returns) Act 2018* (Cth)

**Priority 4:** Budget allowance for the Commonwealth to streamline and prioritise the execution of a Technology Safeguards Agreement with the United States of America.

## 1. SOUTHERN LAUNCH

SouthernLaunch.Space Pty Ltd (“Southern Launch”) is a wholly-owned Australian company providing a suite of next-generation launch services ranging from engineering consultation to the operation of rocket launch sites.

The core pillars guiding Southern Launch in delivering quality services for the benefit of Australians are:

- **launch:** providing services supporting next-generation launch activities
- **land:** committed to environmental conservation and community development
- **leadership:** engaging in education, public outreach, and law reform initiatives.

Southern Launch manages two launch locations, both situated in South Australia.

- **The Whalers Way Orbital Launch Complex** is located on the Eyre Peninsula and allows satellites and launch vehicles rapid and reliable access to equatorial and polar orbits. These orbits facilitate communication services, positioning services and earth observation services which benefit Australians and reduce the dependence on foreign launch providers for Australians to access such services
- **The Koonibba Test Range** is the world’s largest civil overland launch site and allows satellites and launch vehicles to test their technologies and systems prior to conducting an orbital mission.

The Whalers Way Orbital Launch Complex and the Koonibba Test Range are Australia’s only two licensed space launch facilities.<sup>1</sup>



**Figure 2:** Australia’s first commercial launch of a space-capable rocket. Carried out by Southern Launch at the Koonibba Test Range in 2020. Photo Credit: Sean Jorgenson-Day, DEWC Systems.

<sup>1</sup> Department of Industry, Science, Energy and Resources ‘Notice of Minister decisions about space activities’ *Australian Government* (Web Page, 28 January 2022) <<https://www.industry.gov.au/regulations-and-standards/regulating-australian-space-activities/notice-of-minister-decisions-about-space-activities>>.

In addition to launch site provision, Southern Launch provides range safety analysis, launch engineering consulting, launch site evaluation, licencing services and further operational support.



**Figure 3:** Experimental campaign to test a Hapith I launch vehicle, taking place from the Whalers Way Orbital Launch Complex in 2021.



**Figure 4:** Prime Minister of Australia, The Hon Scott Morrison, meets with CEO of Southern Launch, Lloyd Damp and CEO of DEWC Systems, Ian Spencer.

## 2. AUSTRALIA’S OPPORTUNITY TO BE THE LEADER IN NEXT GENERATION LAUNCH SERVICES

### 2.1 BECOMING THE GLOBAL LEADER IN NEXT-GENERATION LAUNCH SERVICES

The space economy is constantly changing and has begun to undergo a paradigm shift in the last two decades. Generally, the barriers to space have been decreasing, meaning lower costs and fewer technological barriers allow more people to contribute to and benefit from space activities.<sup>2</sup>

Traditionally, large, heavy, and expensive launch vehicles were required to transport large, heavy, and expensive satellites to outer space. Today, satellites are smaller, lighter, and take less time to develop. These “small satellites” of the modern era concern spacecraft which can weigh as little as 10 kilograms and are more cost-effective than relying only on traditional multi-tonne satellites.<sup>3</sup> This means earth observation for disaster management, telecommunications to and within remote Australia, and navigation services for maritime coordination, for instance, can all receive enhanced products at a cheaper cost.<sup>4</sup> The global demand for small satellite services is expected to be worth 360.5 billion USD by 2030.<sup>5</sup>

With the relative ease in producing and expanding the capability of satellites while minimising the volume and mass, has come a demand for facilitating those satellites access to space. In other words, there is a continually increase in the demand for launch service providers which specifically addresses the increase in demand for small satellites. This type of launch service provision designed to meet this demand is often referred to as “next-generation launch services”.

Australia has a unique foundation to become the world leader in civil launch services by developing its expertise in next-generation launch services, not least because of its political, economic, geographical, meteorological, and industrial advantages.. The Commonwealth has acknowledged the opportunity to become a global launch destination and has recognised the nation must become competitive and comparable in providing launch services.<sup>6</sup>

### 2.2 BENEFITS OF BEING THE GLOBAL LEADER IN NEXT GENERATION LAUNCH SERVICES

In terms of national objectives, launch services can contribute up to 20 per cent of the country’s 2030 target of 20,000 new jobs in the space sector and can deliver up to 2 billion AUD in domestic economic value.<sup>7</sup> The Commonwealth recognises launch services as a national priority area in its outer space ambitions and launch services significantly support the Commonwealth’s Modern

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<sup>2</sup> Tanja Masson-Zwaan in Chris Johnson (ed.) *Handbook for New Actors in Space* (Secure World Foundation, 2017) 2.

<sup>3</sup> Satellites weighing between 1.1 kilograms to 10 kilograms are typically referred to as “nano satellites”.

<sup>4</sup> See, eg, Satellite Industry Association (SIA), ‘Emergency Response & Disaster Relief’ SIA (Web Page, 2021) <<https://sia.org/satellites-services/emergency-response-disaster-relief>>.

<sup>5</sup> See VisionGain Research Inc., ‘Global Small Satellites Market is Projected to reach at a Market Value of US\$360.5 Billion by 2030’ (Media Release, 7 October 2021).

<sup>6</sup> House of Representatives Standing Committee on Industry, Innovation, Science and Resources, *The Now Frontier: Developing Australia’s space Industry* (Commonwealth of Australia, 2021) 108, 109 (*‘The Now Frontier’*).

<sup>7</sup> Lloyd Damp, ‘A Sovereign Space-Launch Capability is Crucial for Australia’s Prosperity and Security’ *Australian Strategic Policy Institute* (online, 31 March 2021) <<https://www.aspistrategist.org.au/a-sovereign-space-launch-capability-is-crucial-for-australias-prosperity-and-security>>.

Manufacturing Strategy, to which over \$1 billion is committed and within which space forms one of the six key areas.<sup>8</sup>

Capturing the market demand for next-generation launch services will provide Australia with significant direct and indirect benefit to Australians and would secure essential services in many key areas. An internationally competitive launch industry, irrespective of being the global leader, would anyway create economic opportunities and develop the broader advanced technology industry-base in Australia.

A strong domestic launch industry yields wide-reaching positive impacts to the broader economy and increases the resilience of supply chains in the face of increasing external shocks.<sup>9</sup> Australia is heavily dependent on foreign services for satellite data and access to space. A sovereign launch capability reduces this dependence on foreign actors and allows Australia to be in control of its priorities.

An Australian sovereign launch capability for next-generation launch services will ensure unimpeded and rapid access to space. Maintaining a full-spectrum industry capability – with access to the ability to design, build, launch and operate satellites – will ensure Australia’s ability to conduct sovereign launches, despite the advent of supply chain disruptions in the global market. This capability is crucial for launch defence systems, disaster response systems, and other critical space technologies that we rely upon every day on a ‘just-in-time’ basis, without dependence on foreign, uncontrollable variables. A sovereign launch capability would future proof Australia against changing circumstances and future crises.

Next-generation launch services attract and enable investment in, and development of, satellite manufacturing, satellite mission control, data analytics, and other space-related downstream industries. This is due to modern satellite companies wanting to reduce their supply chain lengths and position their manufacturing hubs as close to the launch infrastructure as practical. This reduces overall logistics costs and transportation timelines.

Upon Australia becoming, and sustaining its position as, the global leader in civil launch services, the nation will not only have control over its own priorities, that are dependent on space activities, but is given a degree of influence in the global space economy that is currently worth approximately 447 billion USD per year with an annual growth rate of between 4 to 6 per cent.<sup>10</sup>

### 3. RECOMMENDED PRIORITY 1: LEGISLATIVE REFORM

#### 3.1 CONTEXT

In 2018, the Parliament of Australia passed a revised legal instrument concerning launching rockets and satellites into outer space, the *Space (Launches and Returns) Act 2018* (Cth) (“Space Act”). The Space Act came from a 2015 review commissioned by the government into how the legislative framework governing space objects can be improved to ensure the space sector in

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<sup>8</sup> Australian Space Agency, *Civil Space Strategy 2030* (Commonwealth of Australia, 2019); See also, Department of Industry, Science, Energy and Resources, ‘Space National Manufacturing Priority road map’ *Australian Government* (2021) <<https://www.industry.gov.au/data-and-publications/space-national-manufacturing-priority-road-map>>.

<sup>9</sup> See, Department of Industry, Science, Energy and Resources, ‘Make it Happen: The Australian Government’s Modern Manufacturing Strategy’, *Australian Government* (2021) <<https://www.industry.gov.au/data-and-publications/make-it-happen-the-australian-governments-modern-manufacturing-strategy>>.

<sup>10</sup> The Space Foundation, *The Space Report 2021* (The Space Foundation, 2021).

Australia can keep aligned with the international changes and technological developments globally.<sup>11</sup>

The review confirmed the obvious fact that the pre-existing framework was ineffective and was never used for its primary purpose of launching rockets or satellites from Australia.<sup>12</sup> The redirection the government sought to implement when developing the Space Act was:

- to reduce barriers to participation in the space industry by streamlining approval processes
- minimising insurance requirements for launches and returns (of rockets and payloads).<sup>13</sup>

While the Space Act's insurance requirements do facilitate participation in the launch sector, its approval processes for authorisations to carry out launch activities are, by no means, streamlined. It is therefore respectfully recommended that the Commonwealth prioritise in the 2022-2023 budget resources to conduct an informed review and revision of the legislation governing launch activity from Australia.

The primary challenges in the Space Act meeting the objective of streamlining approval processes are outlined in the report of the House of Representatives Standing Committee on Industry, Innovation, Science and Resources' Inquiry into Australia's Space Industry.<sup>14</sup> One of the challenges concerns the flight safety requirements under the delegated legislation to the Space Act.

### 3.2 SUITABLY QUALIFIED EXPERT PROVISIONS

The *Space (Launches and Returns) (General) Rules 2019* (Cth) ("General Rules") contain provisions requiring a risk hazard analysis be submitted before the Commonwealth may approve a launch or return activity.<sup>15</sup> While it is industry standard for a risk hazard analysis to be performed prior to conducting a launch activity, it is not industry standard to do so in the manner required by the General Rules.

As per the current drafting of the General Rules, the Commonwealth will only assess a risk hazard analysis if it meets the following criteria:

- 1) the risk hazard analysis has been performed by a third party which is independent from the proposed launch permit holder
- 2) this party has been approved by the Minister responsible for the Act as a "Suitably Qualified Expert"
- 3) the risk hazard analysis must be performed in line with Australia's Flight Safety Code.

In practice, these requirements mean:

- 1) as neither the vehicle operator, manufacturer, designer, or consultant involved in the operation, manufacture, or design of the launch vehicle can perform a risk hazard analysis that would be accepted by the Australian government, the risk to safety and property

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<sup>11</sup> Minister for Industry, Innovation and Science (Cth), 'Atmosphere is Right for a Review of Our Space Activities' (Media Release, 24 October 2015).

<sup>12</sup> Steven Freeland, 'Analysis Report: Public Submissions into the Australian Government's Review of the Space Activities Act 1998' (Commonwealth of Australia, 2016) 24.

<sup>13</sup> Explanatory Memorandum to the Space Activities Amendment (Launches and Returns) Bill 2018 (Commonwealth of Australia, 2018).

<sup>14</sup> *The Now Frontier* (n 6) Part 4.

<sup>15</sup> *Space (Launches and Returns) (General) Rules 2019* (Cth) ('General Rules') r 52, 95.



- damage is increased as the entity performing the risk hazard analysis is unlikely to be familiar with the launch vehicle particulars
- 2) an applicant under the Space Act cannot use a trusted service provider to perform the risk hazard analysis unless the Australian government first deems that provider as suitably qualified
  - 3) the strict requirement to use Australia’s Flight Safety Code, or assess the methodology used in the risk hazard analysis against the Flight Safety Code, is inflexible and fails to recognise alternative proven methodologies that are in use by other, more mature, regulators of launch activities.

An additional limitation arising from the risk hazard analysis provisions of the General Rules is the wasted time and cost in performing the risk hazard analysis. Under the current framework, the applicant must engage a third party to seek approval from the Commonwealth as a Suitably Qualified Expert to perform a risk hazard. This approval from the Commonwealth can take several weeks for a determination. The Suitably Qualified Expert’s performance of a risk hazard analysis is in addition to the launch services provider (such as the launch site operator) performing an in-house analysis or otherwise arranged risk hazard analysis in line with standard industry practice to ensure the risk to persons and property is as low as practicable.

Once the Commonwealth-approved Suitably Qualified Expert’s risk hazard analysis is submitted to the regulator, the regulator then undergoes a technical assessment of the analysis which can take several weeks to perform. It is therefore a redundant exercise to require a party performing the risk hazard analysis to be approved by the Commonwealth if the risk hazard analysis will be treated as if the third party was not approved by the Commonwealth. In other words, if the Commonwealth is assessing the risk hazard analysis on a technical level, there is no added value to safety for a Commonwealth-approved Suitably Qualified Expert to perform that risk hazard analysis.

Further details concerning the Suitably Qualified Expert provisions are provided in the House of Representatives Standing Committee on Industry, Innovation, Science and Resources’ Inquiry into Australia’s Space Industry.<sup>16</sup>

The purpose of the Suitably Qualified Expert provisions in the General Rules is to remove bias. Southern Launch notes that this bias is already removed upon the regulator’s assessment of the risk hazard analysis. In any case, the suggestion of bias is contrary to logic – the reputation and business of the applicant and launch services provider could be destroyed by an incident that resulted from inadequate assessment of the risks involved.

### 3.3 LAUNCH SAFETY OFFICER NOTIFICATION PERIOD AND ACCIDENTS

One of the objects of the Space Act is to remove the barriers to participation in space activities and to encourage innovation and entrepreneurship in the space industry. Two provisions in the Space Act’s delegated instrument, the General Rules, are in direct opposition to this object. These provisions relate to notification periods before a launch activity can take place and the definition and requirements following a prescribed “accident”.

Section 120 of the General Rules requires a Launch Safety Officer, who is appointed by the Minister under the Space Act, to give 30 days’ notice to particular people or entities prior to a launch activity taking place.

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<sup>16</sup> *The Now Frontier* (n 6) Parts 4.40 – 4.46.

The current practice of the regulator is to not appoint a Launch Safety Officer until authorisation for the launch activity has been granted. This means that the minimum time between receiving the authorisation to launch and conducting the launch is 30 days.

Due to the high demand for rapid and real-time response in satellite access, it is not commercially viable for Australia to require 30 days' notice between the approval of an Australian launch permit, for instance, and the execution of the launch governed by that permit. Southern Launch recommends the Commonwealth ensure resources are allocated to legislative reform in order to ensure that this notification period is reduced to a time of five business days. Anytime greater than five business days' notice is not commercially appealing to foreign or domestic small satellite operators and, thus, Australia will risk failing to capture its full potential in the market for next-generation launch services.

Section 85 of the Space Act defines the term "accident". Under the Space Act, an accident requires that an official investigation takes place which brings about an array of limitations on a launch facility operator or launch vehicle operator being able to effectively continue business operations.

Because of the definition of accident under the Space Act, an investigation must take place if one of the two circumstances arise:

- a person dies or suffers serious injury as a result of the operation of the launch vehicle or satellite
- the launch vehicle or satellite is destroyed or seriously damaged other than as laid down in the General Rules.<sup>17</sup>

Southern Launch recommends that resources be allocated to consider the second of the above two points.

Section 121 of the General Rules provide an exemption for an investigation if the launch vehicle or satellite has been destroyed or has been damaged in line with the stated purpose of the activity, so long as the flight was not terminated by the flight termination system.

Southern Launch notes either the scope of this exemption under the General Rules must be broadened or the definition of accident under the Act must become narrower. It is not in line with industry standards to investigate the failure of a launch vehicle or satellite, albeit if the object is considered "destroyed". The purpose of an investigation is to prevent other accidents or incidents from occurring.<sup>18</sup> The trigger for commencing an investigation, therefore, should depend on whether the Commonwealth considers the "destruction" of the launch vehicle or satellite could pose an unsatisfactory risk to safety or to property, not merely by whether "destruction" has occurred or not.

The Suitably Qualified Expert provisions and the provisions relating to notification periods addressed herein form part of the delegated legislation. Therefore, the Minister may amend these provisions by legislative instrument rather than by the reforms needing to pass through both houses of parliament. The issue of accidents, however, also concerns a review of the Space Act itself. Resources must be allocated for this purpose to ensure an informed consultation takes place so that the amended provisions best facilitate the development of the domestic next-generation launch services for the benefit of Australians.

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<sup>17</sup> *Space (Launches and Returns) Act 2018* (Cth) s 85 ('Space Act').

<sup>18</sup> *Ibid* s 87.

## 4. RECOMMENDED PRIORITIES REGARDING ASSESSMENTS AND COSTS OF ASSESSMENTS

### 4.1 PRIORITY 2A: GOVERNMENT IN-HOUSE FLIGHT SAFETY EXPERTISE

Southern Launch respectfully recommends that the 2022-2023 budget allows for the Commonwealth to equip the regulator governing launch activities with the expertise to assess flight safety matters relating to an application for a launch activity.

This priority follows from what was identified in recommended priority 1 regarding the challenges posed by the Suitably Qualified Expert provisions in the General Rules. The Suitably Qualified Expert requirements impose a cost on both industry and government that bring about no added value to safety or the commercial viability of Australia becoming the global leader in next-generation launch services.

In many cases, a launch vehicle operator and a launch facility operator will each individually either conduct or arrange for the performance of a risk hazard analysis relating to any one mission. In some cases, it may only be the launch facility operator who performs or arranges for the performance of a risk hazard analysis. In either case, at least one risk hazard analysis is available for the regulator's assessment.

The Suitably Qualified Expert provisions under the rules not only prevent applicants under the Space Act from performing their own risk hazard analysis, but they also require a doubling up on the work involved in the Commonwealth accepting a risk hazard analysis.

Once the applicant provides the regulator with a risk hazard analysis performed by a Minister-approved Suitably Qualified Expert, the regulator then arranges for a technical assessment of that analysis. This technical assessment ranges from 31,920 AUD to 191,520 AUD depending on the activity seeking to be conducted.<sup>19</sup> These figures are grossly disproportionate to other nations with next-generation launch capabilities.<sup>20</sup>

The 2021-2022 budget papers allocate funding to "support the growth of industry".<sup>21</sup> In the Senate Economic Legislation Committee Estimates on 3 June 2021, the Head of the Australian Space Agency, Mr Enrico Palermo, noted the Agency's intention to dedicate a portion of their funding over the coming four years to increasing the capacity of their regulatory team.<sup>22</sup> Southern Launch recommends that the 2022-23 budget support this intention for the Agency's regulatory team to develop the expertise that would allow them to conduct an internal technical assessment of applications under the Space Act.

Southern Launch recommends that the 2022-2023 budget allows for the regulator governing next-generation launch services to house the technical skills required for assessing all aspects of applications under the Space Act, particular matters relating to flight safety.

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<sup>19</sup> Australian Space Agency, Updated Cost Recovery Implementation Scheme (2021) 7.

<sup>20</sup> *The Now Frontier* (n 6) Parts 4.47- 4.54.

<sup>21</sup> Budget Paper No. 2 for 2021-22.

<sup>22</sup> Commonwealth of Australia, *Proof Committee Hansard – Economic Legislation Committee Estimates*, Senate, 3 June 2021, 60–1 (Rex Patrick, Senator and Mr Enrico Palermo).

## 4.2 PRIORITY 2B: ABOLISH COST RECOVERY FOR ASSESSMENTS RELATING TO NEXT GENERAL LAUNCH SERVICES

Cost recovery in administering the Space Act is not to build the capability of the regulator's functions in performing technical assessments. Rather, costs are imposed on industry so that the regulator may contract other industry actors to perform those technical assessments.<sup>23</sup>

This means that instead of the Commonwealth allowing applicants to perform, or arranging for the performance of, a risk hazard analysis, the Commonwealth is imposing a cost on applicants for outsourcing that work to two separate members of the industry chosen by the Commonwealth.

Currently, the estimated costs to be recovered from applicants seeking to carry out launch activities from Australia is approximately 91,200 AUD.<sup>24</sup> These costs, which are immensely disproportionate to costs imposed for such assessments elsewhere in the world,<sup>25</sup> will be implemented on 1 July 2022, which has not yet allowed the next generation launch service providers the time to mature and capitalise on the market demand.

Should the cost recovery implementation scheme come into effect, the next generation launch service providers cannot economically conduct launch activities without passing those costs onto customers. Feedback from customers and potential customers, as well as general market observations, makes it clear Australia will be at real risk of missing the opportunity to become the global leader of next-generation launch services should cost recovery be imposed on applicants under the Space Act.<sup>26</sup>

Following from Priority 2A above (see Part 4.1), were the Commonwealth to ensure the regulator of next-generation launch services hold the expertise to, in the long term, save resources instead of always outsourcing for technical advice, this would further support the Commonwealth to abolish the currently deferred cost recovery implementation scheme.

The Commonwealth also experiences costs (albeit not recovered) in preparing advice to the Minister in whether or not a party should be approved as a Suitably Qualified Expert to perform a risk hazard analysis. This process takes several weeks to resolve.

Should the government remove the Suitably Qualified Expert provisions and upskill the regulator's capabilities, there would be no staff hours spent in the regulator considering requests from third parties to be approved. Instead, the regulator would have the technical expertise to assess risk hazard analyses performed by anyone and assess those analyses on their own merits of the contents rather than the Minister approving the parties which performed the analyses.

The 2021-2022 budget papers sees the Commonwealth absorbing \$300,000 for the 12 month deferral of the cost recovery implementation scheme regarding assessments under the Space Act.<sup>27</sup> As this cost derives from the regulator engaging the services of a consultant to provide technical advice on the assessment of applications, the government can significantly reduce such costs by equipping the regulator with the expertise so as to not require engagement of external technical advice.

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<sup>23</sup> Australian Space Agency, *Updated Cost Recovery Implementation Scheme* (2021); See also, *Space (Launches and Returns) (Insurance and Fees) Rules 2019 (Cth)* (Exposure draft).

<sup>24</sup> Australian Space Agency, *Updated Cost Recovery Implementation Scheme* (2021) 7.

<sup>25</sup> This cost disparity was noted in the *Economic Legislation Committee Estimates* (n 22) 61 by Senator Patrick.

<sup>26</sup> *The Now Frontier* (n 6) Parts 4.47–4.54.

<sup>27</sup> Budget Paper No. 2 for 2021-22.

Were the Commonwealth to abolish the Suitably Qualified Expert provisions in the General Rules (see Part 3.2 above) and equip the regulator with capabilities to conduct technical assessments of flight safety matters, it could have further assurance that costs need not be recovered from industry, thus allowing the domestic industry to develop its operations and bring Australia into the position of the global leader in next-generation launch services.

## 5. RECOMMENDED PRIORITY 3: COORDINATION AND REDUCTION OF RED TAPE

While Southern Launch is in the business of conducting activities requiring authorisations under the Space Act, the Space Act is not the only jurisdiction in which those activities occur. Depending on the nature of the activity, there are over 25 separate authorisations that must be satisfied across federal, state and local government bodies.

Presently, the process to satisfy all authorisation to legally conduct next-generation launch activities from Australia remains prolonged and not commercially viable to meet the demand of the small satellite market.

In 2018, the Australian Space Agency was established to, among its six roles and responsibilities:

- coordinate Australia's domestic civil space sector activities
- administer space activities legislation.<sup>28</sup>

Should the 2022-2023 budget equip the Australian Space Agency with resources to conduct a comprehensive review of state and territory regulatory barriers and gateways to conducting next-generation launch activities, the Commonwealth would greatly facilitate Australia's steps towards becoming the global leader in that field.

Southern Launch respectfully suggests that the 2022-2023 budget allows for the development of a coordinated structure and framework that considers the multitude of regulatory gateways required across various jurisdictions in conducting activities governed by the *Space (Launches and Returns) Act 2018* (Cth).

## 6. RECOMMENDED PRIORITY 4: STREAMLINE A TECHNOLOGY SAFEGUARDS AGREEMENT WITH THE UNITED STATES

To enable the export of spaceflight technologies from the United States of America ("US") to Australian entities, the Commonwealth must execute a bilateral treaty with the US called a Technology Safeguard Agreement ("TSA").

A TSA would allow the use and secure management of sensitive US space launch and satellite technologies from Australia and would provide for specific controls on access to, disclosure of and procedures for safeguarding US launch vehicles, spacecraft, related equipment, technical data, and other areas that contain these items during launch activities in Australia.

Without a TSA in place, Australian organisations, including next-generation launch service providers, remain locked out of the US space market which makes up a majority share of the global space market. Without such an agreement in place, Australia will not be approved to launch US launch vehicles or US payloads from Australia. A significant portion of the customer base of

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<sup>28</sup> *Australian Space Agency Charter*, Australian Space Agency, Australian Government (October 2018).

Southern Launch and other Australian launch service providers is based in the US, some entities of which are prepared to invest millions of dollars in Australia but are not able to do so because of the lack of a TSA.

The United States has executed a TSA with both New Zealand and the United Kingdom.<sup>29</sup> Australia, without a TSA, risks losing its reputation as a globally respected, competitive, and trusted space power. In July 2021, the Commonwealth announced negotiations for TSA will be commenced and Southern Launch notes the importance that this process be prioritised. Where appropriate for the 2022-2023 budget to do so, resources should be allocated to expedite this particular treaty process to avoid Australia missing out on becoming the leading provider of next-generation launch services. Should the processes take the expected amount of time for treaties to be finalised, there is a real risk the US-based customers and collaborators will have secured their business elsewhere than Australia.

Southern Launch respectfully recommends that the 2022-2023 budget allows for the Commonwealth to streamline and prioritise the execution of a Technology Safeguards Agreement with the United States of America.

## 7. CONCLUSION

The enhanced services enabled by the small satellite market offer great benefit to Australians. The demand for enhanced services enabled by small satellites brings about a demand for next generation launch services.

Southern Launch is a next-generation launch services provider which is wholly Australian owned. The ability for Southern Launch and other Australian launch services providers to meet the growing demand for small satellites accessing outer space is a unique opportunity for Australia to become the global leader in next-generation launch services.

All barriers which pose a significant risk to Australia missing this opportunity are barriers that are controlled by government and, therefore, can be relieved by government.

Should the 2022-2023 budget invest in legislative reform and streamlining red tape and a TSA with the US, the Commonwealth will have established an environment for entrepreneurial activities in launch service provision, thereby have actively enabled its domestic launch industry to grow to its full potential. Enabling the domestic launch industry to develop and meet market demand will lead to Australia's sovereign launch capability becoming the global leader in next-generation launch services and, in doing so, will also ensure Australia's secure access to enhanced and essential space services for the benefit of Australians.

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<sup>29</sup> New Zealand Government, 'NZ-US Technology Safeguards Agreement reached' *Beehive, The Official Website of the New Zealand Government* (Web page, 14 June 2016) <<https://www.beehive.govt.nz/release/nz-us-technology-safeguards-agreement-reached>>.