

WARATAH SEED

Space Qualification Mission (WS1)

WS1 Payload Competition: Guidelines

The Waratah Seed (WS1) Payload Competition will lead to the selection of up to 5 payloads to fly on the Waratah Seed Space Qualification Mission WS1 CubeSat, a ride-share opportunity at greatly reduced cost.

The first two stages of the competition will be run by WolfPack Space Hub through Waratah Seed Partner, Saber Astronautics and will closely follow the Wolfpack Incubator 'Goldfish Tank' model. The final stage will be a written application.

A. PURPOSE

- a) The aims of the Waratah Seed WS1 Payload Competition are to:
- b) Attract submissions from NSW space industry SME's and startups for a competitive payload selection process.
- c) Stimulate NSW space industry groups, whether start-ups or not, to develop high-benefit and high-quality technology (hardware, software and services) to fill gaps in the Australian and International space sectors
- d) Help NSW space businesses overcome the barriers associated with attaining flight heritage so that their business can obtain valuable flight-time and proof of concept on the Waratah Seed (WS1) CubeSat at a substantially reduced cost
- e) Assist NSW space industry SME's and start-ups to evolve, grow and expand the opportunities that innovative space technology brings to other industries
- f) Help develop the space industry sector and opportunities within NSW
- g) Boost the profile of NSW and its space sector nationally, in particular to school and university students, industry groups and the general public.

B. PRIZES

The prizes for the Payload Competition will be a 'ride-share' at greatly reduced cost on the Waratah Seed 6U CubeSat (WS1) for the payloads from up to 5 winning teams.

1.5U of the satellite volume is reserved for the winning entries. Net payments are required so that teams have financial "skin in the game":

1st Prize:

\$40 K reduction in price to \$10K for the first 1/4 U and \$50K for each additional 1/4U;

2nd Prize:

\$30 K reduction in price to \$20K for the first 1/4U and \$50K for each additional 1/4U;

3rd Prize:

\$20 K reduction in price to \$30K for the first 1/4U and \$50K for each additional 1/4U;

4th Prize:

\$15 K reduction in price to \$35K for the first 1/4U and \$50K for each additional 1/4U;

5th Prize:

\$10 K reduction in price to \$40K for the first 1/4U and \$50K for each additional 1/4U.

In addition, each Waratah Seed Partner will host one or more winning payload teams, with associated opportunities to use facilities and interact with staff and students. Each team will also have a designated student intern and a dedicated Working Group to aid with integrating the payload into the satellite, as well as provide advice.

WARATAH SEED PARTNERS



C. PAYLOAD COMPETITION

Space Industry-led groups, whether start-ups or not, are invited to submit applications to the Waratah Seed WS1 Payload Competition by outlining their payload project while addressing specific selection criteria.

The Competition will consist of three stages. The first two stages will be run by WolfPack Space Hub through Waratah Seed Partner, Saber Astronautics, and will closely follow the Wolfpack Incubator 'Goldfish Tank' model. The final stage will involve a written application.

Stage 1: Slide-Deck Proposal

Applicants will submit a maximum 10-page slide deck proposal and a 1-page business plan overview, outlining the payload project. The pitch should describe and illustrate the technology developed so far as well as give an overview of the business case for the payload.

Stage 2: Pitch

1. Private Pitch

Shortlisted applicants from Stage 1 will be invited to pitch their project to a closed door zoom mentoring session with the Wolfpack Space Hub mentors.

2. Public Pitch

After revisions based on the Panel's feedback in the Private Pitch, selected applicants will be invited to pitch their projects to the WS1 Payload Competition Committee in a public zoom forum which industry partners, commercial organisations, potential sponsors and registered interested parties will be invited to observe.

Stage 3: Written Application

Shortlisted applicants from Stage 2 will be invited to provide a more detailed written application to the Payload Competition Committee for final consideration.

Applications will be assessed by the Waratah Seed Payload Competition Committee using the selection criteria shown below. Applicants will need to address the selection criteria in each stage of the application process and take on board any feedback from the Payload Competition Committee.

The winners of the Payload Competition will be the 5 top-ranked teams, with 2 runners-up selected in case of there are issues with one or more payloads for winning entries. Runners-up will have priority for subsequent Waratah Seed satellite payload ride-share opportunities.

Unsuccessful applicants can also enter the separate Commercial Client selection process, for which 3U of satellite volume are nominally reserved (cf. 1.5U for the Payload Competition).

Selection Panel Members

- Chair: Dr Jason Held - Founder, Saber Astronautics
- Dr Naomi Mathers - General Manager, Geospatial Intelligence
- Dr Geraldine Baca Triveno - Specialist Senior Manager at Deloitte Space
- Prof. Iver Cairns - Director, ARC Training Centre (CUAVA) and Professor in Space Physics, University of Sydney
- Dr Tim Parsons - Founder, Delta-V Newspace Alliance

SELECTION CRITERIA

Applicants will need to address the following criteria in each stage of their application, referring to the Waratah Seed Competition (WS1) Information Pack for specific technical guides.

1. Technical Readiness
2. Business Plans and Commercial Viability
3. Innovation and Benefit
4. Ability to Pay

Applications with higher Technical Readiness, Innovation and Benefit, and Ability to Pay, and with better Business Plans and Commercial Viability will be assessed more highly.

1. TECHNICAL READINESS

Applicants will need to demonstrate that they have the necessary technology readiness level (TRL – please refer to the WS1 Information Pack for details) to participate in the ride-share, with the minimum requirement being TRL 4 (breadboard demonstration of

the system in the laboratory) by the date of the Public Pitch in Stage 2 of the Competition.

Applications will need to:

1. Describe the payload and its TRL.
2. Demonstrate that they have a technology readiness level that is at least TRL 4 by the date of the Public Pitch in Stage 2 of the Competition. It is recognised that the TRL of a payload may increase from the beginning to the final stage of the Competition.
3. Describe a plausible development plan that will result in a working payload at TRL 6 by the delivery deadline, that is ready to be tested in space.
4. Describe the payload's requirements (e.g., apertures, volume, mass, power, data and software connections) and demonstrate that the payload satisfies the payload restrictions described in the Interface Control Document (please refer to the WS1 Information Pack for details).
5. Demonstrate the viability of the project to be added to the Waratah Seed CubeSat.

2. BUSINESS PLAN AND COMMERCIAL VIABILITY

Applications will need to:

1. Describe why their payload makes sense and briefly present a clear plan for business development and commercialisation.
2. Demonstrate a well thought-out and budgeted business proposal.
3. Present a clearly considered risk-management plan.
4. Describe how the payload fits into their plan and improves its sustainability.
5. Present a clear path for commercialisation.

3. INNOVATION AND BENEFIT

Applications will need to:

1. Describe the new or innovative ideas in the payload that will contribute to the National and International space sectors.
2. Demonstrate high-benefit and high-quality technology (hardware, software and/or services) which fill gaps in the National and International space sectors.
3. Describe how their idea will help develop the space industry sector and opportunities within NSW.
4. Demonstrate a benefit to NSW in general, and to the public.

4. ABILITY TO PAY

1. Each team entering the Payload Competition will need to demonstrate a capacity to pay for their component of the ride-share costs by submitting at least two (2) supporting documents and including the costs in their Written Application business plan budget.
2. It is recognised that payload teams may obtain additional funding from investors between Stages 1 and 2 of the application process and the written application (Stage 3), one of the possible benefits of the Goldfish Tank / Wolfpack Space Hub approach.

TECHNICAL GUIDES:

Before starting on your application, please download the WS1 Information Pack from our website. This contains critical design and technical information, it includes the current version of the Satellite Interface Control Document and the Technology Readiness Level Definitions that will inform your application. Additional detail will be provided to successfully shortlisted applicants prior to their final written application.

TIMELINE:

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|---------------------------------------|----------|
| Joint Press Release/Guidelines | - Aug 24 |
| Competition Launch/ Applications Open | - Aug 31 |
| Stage 1 Applications close | - Sep 28 |

Stage 1 Shortlisted applicants notified	- Oct 5
Stage 2: Private Pitch	- Oct 19
Stage 2: Public Pitch	- Nov 9
Stage 2 Shortlisted applicants notified	- Nov 16
Stage 3 Written applications close	- Nov 30
Panel Decisions	- Dec 7
Finalists and shortlist announced	- Dec 10

CONTACT:

Waratah Seed Space Qualification Mission Payload Competition (WS1) Info Packs and Guidelines can be downloaded at our website: waratahseed.space

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