LAUNCH UK — Nanosat Design Competition

Competition Questions and Answers

1.
The application form and how to apply

You can get all materials you need to enter the competition by registering using this link: https://www.nanosatlaunch.uk/register-now/

Registering will give you and your team access to the full application form and a useful resources list. The application form is split into sections, and each section will provide details on what information you are expected to provide. Additionally, the resources we provide alongside the application form contain a guide to help you fill out each part of the form.

We anticipate you will spend 20 - 40 hours to submit your application. Once you have completed your application form, one member of your team should submit the completed form to this link: https://www.nanosatlaunch.uk/submit-application/

If for any reason you are not able to submit your form using the link, you can also email it to info@nanosatlaunch.uk

2.
Eligibility

The competition is open for UK residents or citizens and students who are studying at a registered UK place of study. This means that if you are an international student studying in the UK, you can apply, and we encourage you to do so!

The competition is open to anyone over the age of 16, at any level of education, and for young professionals. However, if you are currently employed, or have previously been employed, in a spaceflight-related organisation, you must have no more than two years' work experience at the point of the entry deadline. You do not need to have a STEM background to enter the competition. We encourage everyone to apply - no matter what your background or experience level. Shortlisted teams will have space industry experts and mentors to support the technical aspects of the project in the run up to final judging in 2022.

You can view the full eligibility criteria for the competition, and lots

3.
Teams

While we accept single entries, the competition will demand a lot of your time and dedication, and unless you are certain that you would be able to commit to the work required if you were to win and would be able to fulfil all of the roles that would usually be completed by a team, we would advise you apply as a team. We recommend that you use your personal network to find teammates. Unfortunately, the delivery team won't be able to help with matchmaking.

If you are applying as a team and want to add new team members later in the competition, the competition delivery team will have discretion whether or not new team members can be added at a later point.

4.
Considerations for school teachers

We absolutely encourage schoolteachers to get a group of students involved! Any shortlisted teams will all be provided with access to expert mentors to provide support to the teams. This access will be virtual and between initial shortlisting and final judging we do not expect travel to be necessary.

School teachers are absolutely allowed to advise applicants in their design proposals, but we kindly ask that teams provide a brief description of any external help provided in their application forms.

5.
Your mission objectives and satellite design

We will consider all satellite designs that address climate change or decarbonisation efforts. You can be as creative as you like in deciding which problem your design is addressing and how you will solve it! For example, your satellite does not necessarily need to be an earth observation satellite, it can be a technology demonstrator or a standalone design, it can work in conjunction with measurements on the ground etc. The design we ask for in the application form is 100% a paper design, so you will not need to use specialist software or use any hardware.

If you are looking for inspiration, the resources list you can download when you register contains a section on satellites and climate change. This section contains lots of useful reading to give you ideas about what sort of climate change and decarbonisation applications satellites can be used for.

To get more information on the technical requirements of the satellite, and what you need to consider in your design, please register and read the application form and resources. The application form gives guidance to requirements such as the weight and orbit of the satellite. For example, there is no upper size limit to the nanosatellite, just a weight limit of 1-10kg.

It is not necessarily a disadvantage if your design is collecting similar measurements to an existing satellite system. For example, your design could be collecting data from different spots on the Earth, or to a higher quality, or with a higher revisit rate. Alternatively, your design could be providing access to data to a different user group that needs it than current satellites provide.

It is possible that teams may submit similar satellite designs, for example if they are tackling the same problem. If this happens, the applications will be distinguished by how well the design is executed. More information on how each section of the application will be weighted when we score your application can be found on the application form.

Cont. to sections 6

6.
Shortlisting

Once applications are received on 7 Jan 2022, a shortlisting process will take place. We anticipate having 5 shortlisted entrants. Those 5 shortlisted entrants will compete for the £600k challenge fund. It is possible that 1 - 5 of the shortlisted entrants will win a part of the funding.

In the shortlisting stage, the focus will be on the method by which the design tackles climate change, in the final judging phase, more emphasis will be placed on the technical design. The rationale for this is we want everyone to apply whether or not you have any technical background. The shortlisted contestants will have space industry experts mentoring and supporting the technical aspects of the design.

We encourage you to register for the competition where you can download the application and see the weightings for the shortlisting stage. You can see detailed judging criteria on the Competition Details page for when shortlisted entries get to the final judging stage: https://www.nanosatlaunch.uk/competition-details/

You will be asked to give some basic information on your education and professional experience when filling out the application form, as well as providing some information on any previous work done or support received for your satellite design. The shortlisting weightings are designed such as to ensure all levels of experience are on an equal playing field for the competition.

7.
Use of funds

The competition has a £600,000 prize fund. The competition prize fund covers the design and build stage of the satellite. It does not cover launch and operations. Therefore, there will not be support towards securing satellite launch services, or the cost of renting/using ground station time during the competition. However, you will not be expected to pay these costs within the scope of the competition regardless.

There are different discussions being had about how the launch

can be funded. As these discussions are still being had, please check back to the website to see if there are any updates in the coming months. Please also sign up to the email list for future updates here: https://www.nanosatlaunch.uk/#newsletter

The money must be spent on finalising your satellite design, then building and testing this. For example, you may procure a satellite bus from one of the providers on the market, procure the payload from another or from a university, and then procure assembly, integration, and testing services from another company. It may be that you and/your team can conduct some of these services yourself. You cannot use the funds towards salaries, wages, or honorariums.

8.
Mentorship

There are two-stages of mentoring during the competition:

- 15 January 2022 to 18 April 2022 – Light touch mentoring stage: During this stage, shortlisted entrants will be allocated 2 to 3 mentors and will receive up to 3 hours of contact time per week. Additionally, optional fortnightly office hours with mentors will be offered to entrants. Shortlisted teams will receive guidance through to the submission of the PDR (Preliminary Design Review) on 18 April 2022.

- April 2022 to April 2023 – Winner mentoring stage: At this point, the finalists will be allocated between 2 and 4 hours each week from a dedicated team of mentors guiding them to Operational Readiness Review.

Mentors will be able to support you on the missions planning process, best practice in nanosat design, and point you in the right direction to find the components and services you might require to build your satellite. In some special cases, if you require highly specialised components or services which your mentors are unable to identify, the delivery team may provide additional assistance to help you find a solution or explore alternatives. Mentors and the delivery team will also help you comply with regulations needed for a satellite like this through coordination with the regulatory body for launches, the Civil Aviation Authority.

If you are shortlisted and get stuck later down the road, your mentors and the delivery team will seek to support you. If, for whatever reason, you encounter a capability gap so significant

that it is deemed un- addressable through mentorship alone, your mentors and the delivery team will explore options to help you allocate parts of your budget to appropriate outsourcing.

9.
If you are shortlisted

Shortlisted teams will be expected to do a significant amount of work before each design review.

If you are shortlisted, between January and May 2022, you will need to commit from 10 to 20 hours per week to develop your ideas. You will be expected to virtually meet, talk and check-in with your space industry mentors weekly.

Around March/April 2022, participants will need to attend a half-day review meeting with the UK Space Agency, where you will be provided with further guidance in preparation for your final submission.

We understand that your team composition may change post-shortlisting, given the long duration of the competition. We ask that, should you be shortlisted and/or win the competition, you inform the delivery team of any changes in your team composition. It will be at the competition delivery team's discretion if a team change will be allowed or disallowed. We advise that anyone looking to join your team carefully consider the commitment required should they proceed in the competition.

10.
If you win

Winning designs will be granted a portion of the £600k to develop their design further, build and test it so that it is "launch ready." We can't guarantee it will be launched in space, but we certainly hope it can! Winners can build their design themselves, outsource it, or a combination of both. AIT (Assembly, Integration, and Test) can certainly be outsourced, and there are different suppliers in the UK that provide AIT support.

We ask that, should you submit an application, you understand that being shortlisted and winning the competition requires a

high degree of commitment on your side. If at this stage you are already sure that you would prioritise other commitments over the competition, should you proceed, we ask that you carefully consider whether you want to enter.

LAUNCH UK Nanosat Design Competition

This Nanosat Design Competition is a LaunchUK initiative.

LaunchUK is the UK's spaceflight programme leading the commercial space age, comprised of...

UK SPACE AGENCY

Civil Aviation Authority

Department for Transport