"SPACE FOR OLYMPIC GAMES" THEMATIC CALL

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→ THE EUROPEAN SPACE AGENCY

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→ THE EUROPEAN SPACE AGENCY

Table of Contents

→ THE EUROPEAN SPACE AGENCY

1. INTRODUCTION

This document presents an overview of the Thematic Call "Space for the Olympics" issued under the ARTES BASS, 4S and 5G Programme lines.

2. BACKGROUND AND RATIONALE

In the Olympic Agenda 2020[1], defined by the International Olympic Committee (IOC) in 2014, the IOC addressed the evolution of the Olympics under the three overarching topics of sustainability, credibility, youth. With this new philosophy embedded in the bidding process, the next Olympic/Paralympic and the Winter Olympic/Paralympic Games have been assigned to Countries that presented a holistic concept of respect for the environment, feasibility and of development, to leave a lasting legacy.

The following roadmap Olympic Agenda 2020+5[2] has confirmed the same approach and defined 15 recommendations based also on the key trends identified as likely to be decisive in the post-coronavirus world.

These key trends include:

- the need for greater solidarity within and among societies;
- the growth in digitalisation, while keeping in mind the need to expand digital capability to the currently digitally underserved;
- the urgency of achieving sustainable development;
- the growing demand for credibility, both of organisations and institutions; and
- the need to build resilience in the face of the financial and economic consequences that will result from the COVID-19 pandemic and which will influence priority-setting among governments and enterprises.

The city of Paris in France will host the Games in 2024, and Milano-Cortina in Italy the Winter Games in 2026, leading the way for this new approach towards the Olympics, which covers

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[1] Ref Olympic_Agenda_2020
[2] Ref Olympic_Agenda_2020plus5

→ THE EUROPEAN SPACE AGENCY

not only the management of the event but includes sustainability in all aspects of the Olympic/Paralympic Games.

Sustainability is one of the main pillars of that agenda, with significant impact: the Olympic/Paralympic Games of Paris 2024, Milano Cortina 2026 and Los Angeles 2028 are the first to truly embrace and reflect this new strategic direction:

1) No new venues are needed, and the use of temporary venues is encouraged;

2) Sport can take place outside of the Host city, where appropriate, and

3) From the candidature onwards, the Olympic Games are based first and foremost on long-term sustainability, including from an economic standpoint.

Based on the initial work, innovative solutions must be continuously explored to increase the impact and long-term benefits, and to assess and control them, while delivering key legacies prior to and after the Olympic Games. In this regard, the IOC took the even more ambitious decision that from 2030 onwards the Olympic Games will be climate positive. To achieve these goals and provide a positive impact on such global issues as the climate change, biodiversity loss and human rights, new solutions must be put in place as soon as possible, based on an open approach to change and innovation.

Digitalisation is another main pillar of the new Olympic Games: it supports the communication, building on the recently launched Olympic Channel, but also the organisation, helping in the planning, management of the fans and the crowds and the related security services. The fan community requires a higher engagement during and between Olympic Games, but through more effective and engaging digital communications the Olympic values can also be reinforced and promoted.

3. OBJECTIVES OF THE THEMATIC CALL

The intended Thematic Call aims at supporting new space-based services for the digital transformation and sustainability of the sport sector, specifically in the organisation, management, and further exploitation of the Olympic and Paralympic Games. It primarily

targets the next Games in Europe - Paris 2024 and Milano-Cortina 2026 -, with the ambition of providing services for the future Games as well, ensuring continuity of the sustainability model. Both Paris 2024 and Milano-Cortina 2026 have committed to deliver a net-zero event with a strong engagement of the communities, and these new challenges require investments in innovation, where space can offer ubiquitous information and connectivity in support of a punctual as well as long term perspective. New services are required for the preparation phase before the Games, during the event itself, and in the post-event phase to ensure the most efficient exploitation of the critical infrastructures, the safe and fun engagement with the fans, the environmental sustainability of the events and the highest return of public investments.

The Olympic/Paralympic Games are a very complex event involving an ecosystem of intertwined services and stakeholders. The event lasts a few weeks, and the competitions are spread in different venues and places; the preparation of the event requires time and actions impacting the local environment and community; the effects of the event on the hosting country and cities also last for a long time after the event itself has concluded.

Some specific applications operate before the Olympic Games supporting the preparation of the event. Many more are exploited during the Games, for the success of the event and the live fruition of the competitions. Others are focused directly on serving the local community, especially from a sustainability point of view, even after the event itself. However, very often the same service spans across the whole value chain of the Olympic Games organisation, starting before the Games and covering the impact after the Games have concluded.

As an example, the services for building the new needed infrastructures can be seen as focusing only on the preparation part, but the design of the infrastructure will also affect the future use of them, and their environmental impact. In a similar way, connectivity services built for supporting the construction works might be used also to enhance the communication during the live events.

Given the extreme visibility and relevance of the Olympic Games, the proposed applications shall demonstrate robustness and reliability. A fast and short-term implementation of the proposed application is subject to a proved maturity and integrity of the service.

A longer development and validation process should be built on a sensible plan potentially involving more events and Games editions to support the final deployment of the service, where

one edition of the Games or a major sport event could be used as a testbed before operational deployment of the service.

4. TOPICS OF INTEREST

Examples of possible use cases are provided below and in Annexes (available in this website https://business.esa.int/funding/invitation-to-tender/space-for-olympic-games), either focused on a specific edition of the Games, or considered as common to all the future editions and/or to other sport events.

The topics of interest have been derived after several interactions with key stakeholders of the sector, including:

- Olympic Committees: Paris 2024, Infrastrutture per Milano-Cortina 2026, Fondazione Milano-Cortina 2026, International Olympic Committee;
- Partners and service providers of the Olympic Games: ATOS, Swiss Timing (Omega group);
- Innovation hubs for acceleration of technology uptake in the sport industry: European Platform for the Sport Innovation EPSI, Global Sport Innovation Centre GSIC

Updated list of stakeholders is included in the Annexes. Some specific use cases have also been defined together with some of the stakeholders listed above, and they are detailed in the Annexes, addressing specific needs of one or more of them.

A continuous use of the proposed service throughout subsequent Games is encouraged, as well as the implementation of a continuous learning approach from one edition to the other.

Some of the needs are shared across the whole sport industry, especially regarding competition events. Applicability of the proposed service to different major sports events is encouraged and should be taken into consideration.

Each proposed service should assess its economic viability for the service provider and the cost-benefit analysis of the potential customers (e.g. the Olympic Committees).

From the interactions with the stakeholders and the Olympic Committees, main areas of interest have been derived, including (non-exhaustive list, details in the Annexes):

- Sustainability:
  o Sustainable infrastructure
  o Services around construction sites
  o Smart and green (Olympics) cities
- Smart management of the event:
  o Crowd management, first response and management of emergency events, public safety
  o Event management
- Engagement with fans
- Performance: Athletes' preparation and training

Specific use cases have also been detailed by individual stakeholders, in particular:

- Swiss Timing (official timekeeper of the Games, for every competition)
- ATOS (system integrator, technology provider of digital services)

Annexes are available at the link https://business.esa.int/funding/invitation-to-tender/space-for-olympic-games.

5. SPACE ASSETS

To achieve the objectives and address the above areas, the proposed services shall rely on space assets, such as:

- Satellite Navigation: supports geo-localisation of vehicles and routing to events and facilities, mapping of the position/velocity of the athletes during training for performance improvement, or during competition for results assessment
- Satellite Communications: enables the provision of connectivity to enhance the communication links within the facilities, connectivity of IoT devices for the monitoring of the event parameters and support of remote locations selected for specific sports (e.g. Tahiti for Surf, Mountains in the Winter Olympics)

→ THE EUROPEAN SPACE AGENCY

- Earth Observation (including weather): monitoring of the status of the working sites, collect information on geographical and environmental parameters for the sustainability analysis, integration of environmental data into the athlete performance assessment
- Human Spaceflight Technologies: technology transfer of health/life parameters sensors, innovative textiles, algorithms for the physical status assessment

In addition to space assets other innovative technologies such as Web 3.0, AR/VR, AI/ML, cyber secure digital technologies, robotics, unmanned/remotely piloted transportation systems such as Remotely Piloted Aircraft Systems (RPAS), Unmanned Surface Vehicles (USV), non-fungible tokens (NFTs), etc. can be used if relevant to the identified use cases.

6. SCOPE OF THE THEMATIC CALL

The proposals under this Thematic Call for Proposal shall address aspects of the setup, management and decommissioning of Olympic Games, with a particular focus on the next Games host in Europe (Paris 2024 and Milano-Cortina 2026). The proposals shall refer to innovative user-driven integrated downstream services which rely on advanced technologies and space data.

The specific scope of the activities presented in response to this Thematic Call "Space for Olympics" has to be defined by the Tenderer, but it shall in any case:

1. be in line with the general Thematic Call objectives set forth in Section 3
2. address one or more of the needs identified in Section 4 and in the Annexes (available here https://business.esa.int/funding/invitation-to-tender/space-for-olympic-games)
3. be instrumental to pursue in an effective and sustainable manner the objectives of BASS Programme as outlined in section 1.

The Bidder shall engage with relevant representatives of user communities operating in the Olympic event management and services provisioning, having as examples those highlighted in the Annexes (available at https://business.esa.int/funding/invitation-to-tender/space-for-olympic-games). The Bidder shall involve in the activity representatives from these users' communities as potential customers. The Bidder shall either address the use cases included

→ THE EUROPEAN SPACE AGENCY

in the Annexes or address other use cases and requirements related to the digitalisation and sustainability of the Olympic/Paralympic Games provided by other customers / users directly involved by the Bidder. Points of contact for the end-users highlighted in the Annexes may be requested to the Agency. In the second case (proposals addressing other use cases), the bidder shall name in the APQ the potential customers intended to be involved.

In any case, support from those potential customers shall be evidenced in letters of interest to be attached to the Outline Proposal.

Additional users/potential customers outside the ESA Member States can be proposed when targeted at reinforcing the business case in European or export markets.

The service provider shall be identified and possibly be part of the bidding team to ensure the commercial operational roll-out of the proposed service following completion of the project.

This Thematic Call covers two types of activities:

1. <u>Feasibility Studies</u>, which provide the preparatory framework to identify, analyse and define new potentially sustainable services. Given the time constraints for the 2024 and 2026 events, the Tenderer should demonstrate that there is sensible plan for reaching market when applying for Feasibility Studies.

   The applications and/or services covered by the proposed Feasibility Studies have to:

   - Be customer/user driven and present a strong sustainability potential.
   - Propose a service demonstrating the benefits of the utilisation of integrated space assets
   - Include a viability analysis
   - Aim to evolve the targeted applications and services to marketability and operational roll-out, potentially through a Demonstration Project after successful completion of the feasibility study.
   - Address at least one of the thematic areas described in section 4 or other(s) defined by the Bidder.

2. <u>Demonstration Projects</u>, dedicated to the implementation and demonstration of pre-operational services.

The applications and/or services covered by the proposed Demonstration Projects have to:

- Be customer/user driven (including user involvement and active participation in the project).
- Propose a service demonstrating the benefits from the utilisation of space assets with clear potential to become sustainable.
- Address at least one amongst the thematic areas described in section 4, covering one or more of the mentioned applications or other(s) defined by the Bidder.
- Provide a measurable socio-economic impact.
- The Bidder shall involve in the project representatives from users communities, which shall take part in the pilot.

7. PROCUREMENT APPROACH

The proposals submitted in reply to the Thematic Call shall be implemented in the context of ESA BASS GPL or the 4S SPL or the 5G SPL of ARTES: Tenderers may indicate in the cover letter of their proposal which Programme Line they address and justify this preference. Further information is included in the Letter of Invitation of the Standard Call for Proposal AO/1-10494, to which frame this Thematic Call refers.

The Bidder shall submit first an Activity Pitch Questionnaire, and following evaluation, may be invited to submit the Outline and Full Proposal. The Activity Pitch Questionnaire (APQ) template provided by ESA shall be used, and it shall be uploaded using the online web submitter: https://business.esa.int/apq-submit.

The price of activities carried out in a given State are charged against the contribution of that State in the programme. Letter of Authorisation of Funding (AoF) from the relevant National Delegation is therefore required as part of the Full Proposal. The Bidder is however advised to inform the relevant National Delegation(s) when submitting the Pitch.

The Agency will admit for evaluation only proposals from a bidding team composed of an economic operator - being a Prime or Subcontractor - residing in any of those States that have subscribed to BASS, 4S SPL or 5G SPL, as specified in the procurement rules of the CALL

FOR PROPOSALS FOR DOWNSTREAM APPLICATIONS IN ARTES 4.0 (esa star ref.: 1-10494). The coordinates of the National Delegates can be found here: https://artes.esa.int/national-delegations.
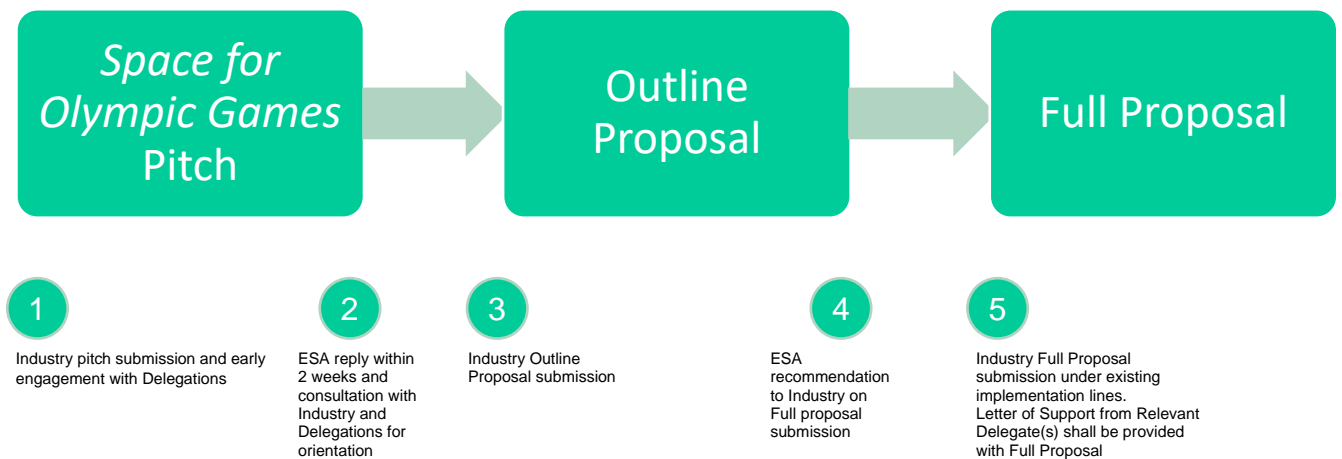
8. PROCESS AND SCHEDULE

It is planned for the Thematic Call to be opened on 17 October 2022 for a period of 3 years, closing 31 December 2025.

8.1. Timeline and Procedure

The Thematic Call will include both Feasibility Studies and Demonstration Projects.

The Thematic Call is open from 17 October 2022 for a period of 3 years, where the industry can respond by submission of pitches anytime.

The timeline is illustrated below

| *Space for Olympic Games* Pitch | Outline Proposal | Full Proposal |

| 1 | 2 | 3 | 4 | 5 |
| Industry pitch submission and early engagement with Delegations | ESA reply within 2 weeks and consultation with Industry and Delegations for orientation | Industry Outline Proposal submission | ESA recommendation to Industry on Full proposal submission | Industry Full Proposal submission under existing implementation lines. Letter of Support from Relevant Delegate(s) shall be provided with Full Proposal |

The Thematic Call is planned to be implemented according to the following stepwise approach: In **Step 1**, the interested Bidders are requested to submit their proposal(s) based on a short Pitch template made available by ESA that can be downloaded from the Thematic Call website (Activity Pitch Questionnaire). The pitch should provide the initial idea of what the Bidder would like to propose, elaborated on the basis of the topics of interest and either the use cases proposed in Annexes or others selected by the Bidder.

Should the Bidder propose to address other use cases from other stakeholders, support of the stakeholders should be evidenced by a LoS attached to the Outline Proposal (OP).

The completed Activity Pitch Questionnaire (APQ) shall be uploaded using the online web submitter:

https://business.esa.int/apq-submit

The name of the APQ file must be APQ_OlympicGames_ProjectName (the words OlympicGames shall not be removed).

Multiple Pitches can be submitted.

Contacts could be shared with the users listed in Section 4 or in the Annexes, if the proposed service is considered of their interest or specifically addresses one of their use cases (Annexes available here https://business.esa.int/funding/invitation-to-tender/space-for-olympic-games).

It is strongly recommended that the interested Bidder liaises since the beginning with the relevant ESA Member States Delegates.

In **Step 2**, following an assessment of the Pitch by ESA, ESA will provide feedback to the company, aiming to provide a reply within 10 working days following the deadline for submission of the Pitch.

It is recognised that some interactions with the Bidder may be required and ESA may therefore consult with the Bidder and may offer support in providing further clarifications, aimed at better shaping the Outline Proposal(s). Dialogue sessions may be organised individually with potential partners prior to Step 3.

ESA might also consult, when necessary, with the relevant National Delegation(s) for orientation and will provide key information (e.g. title, cost, price, subcontractor) to the relevant National Delegation(s).

Subject to a positive evaluation of the Pitch and the Bidder having informed the National Delegation(s), the Bidder will be notified by ESA and invited to submit an Outline Proposal.

In **Step 3**, the Bidder will submit the Outline Proposal, based on a template provided by ESA, with letter(s) of interest from users/stakeholders. The Outline Proposal is expanding the Pitch with a more extensive level of details.

In **Step 4**, subject to a positive assessment from ESA and in-principle support from the National Delegations, the Bidder will be invited to submit a Full Proposal in accordance with BASS programme line.

In **Step 5**, the Bidder will submit a Full Proposal with the Authorisation of Funding (AoF) from the relevant National Delegation(s). Following a positive assessment by ESA the proposed activity will be approved for implementation.

8.2. Evaluation Criteria

The evaluation process is non-competitive, as each proposal will be assessed individually on its own merits, according to the evaluation criteria applicable for CALL FOR PROPOSALS FOR DOWNSTREAM APPLICATIONS IN ARTES 4.0 (esa star ref.: 1-10494).

8.3. General Conditions

The submissions and all correspondence relating to it shall be in English.

The tender shall not contain any Classified Information, whether in the Pitch, Outline Proposal or in the Full Proposal.

To avoid any confusion with Classified security markings, the unclassified protective marking used by the Tenderer in the proposal shall not contain the terms: "Restricted", "Confidential", or "Secret".

However, should the Tenderer consider necessary to include Classified Information in the tender, the Tenderer shall inform beforehand the Security Officer.

The Tenderers are informed that Classified Information can be shared with ESA only in compliance with the Project Security Instruction (PSI) duly established by the Agency beforehand and subject to the approval by the ESA Member States.

The Agency will treat commercially sensitive or proprietary information confidentially and solely for the purpose of the assessment of the response.

Expenses incurred in the preparation and dispatch of the response to the Thematic Call will not be reimbursed. This includes any expenses connected with a potential dialogue phase.

The Thematic Call does not bind the Agency in any way to place a contract. The Agency reserves the right to issue amendments to the Thematic Call.