

# Enhancing Port Safety and Efficiency through Space

## ESA-Star News Item

This News Item presents an overview of “Enhancing Port Safety and Efficiency through Space”, Thematic Call for Proposals entitled "[Enhancing Port Safety and Efficiency through Space](#)", issued under the ARTES 4.0 Generic Programme Line “Business Applications – Space Solutions”, “Space Systems for Safety and Security” (4S) and “Space for 5G/6G and Sustainable Connectivity” Strategic Programme Lines in the frame of standard call for proposals AO/1-10494 (see details in the attached Activity Description).

This Thematic Call for Proposals (CfP) aims at supporting the development of space-based services with high market potential, addressing the challenges related to ports by taking advantage of data and innovative technologies.

The services developed as part of this call will capture the growing demand for innovative solutions that enhance the efficiency, the safety and security in the port areas. Innovative solutions to enhance the marine environment monitoring and operational efficiency, bolstering safety and security measures are required to rely on the seamless connectivity within the port digital ecosystem and on the integration of the diverse platforms and vehicles into a cohesive system. A description of the activity including a list of optional high-level use cases provided by ESA partners are available in this news item and at this link: “Enhancing Port Safety and Efficiency through Space”.

The call’s focus is on (but is not limited to) the following areas of interest:

- **Port Safety**  
These applications focus on ensuring the safety of port terminal personnel during loading and unloading operations, as well as the safety of ships throughout their stay in the port. They also address emergency responses to safety hazards occurring at the port or involving ships approaching the port.
- **Port Security**  
To safeguard ports, cargo, and personnel from threats such as terrorism, theft, and vandalism, applications that integrate various types of data are essential. These systems also ensure compliance with international treaties.
- **Port Automation**  
Autonomous vehicles equipped with advanced sensors and sensor fusion technology can support port operations, such as crane activities, by integrating information from multiple sources.
- **Movement of Passengers**  
Autonomous vehicles can enhance passenger transport in ports by improving safety, efficiency, and cost-effectiveness. This implementation allows passengers to travel seamlessly between the port and nearby airports, terminals, or rail stations.
- **Movement of Goods**  
Port automation is key to achieving faster and more accurate handling of container traffic compared to human-operated systems. It improves logistics by making operations more

predictable and reliable, simplifying planning and tracking. Autonomous vehicles enhance efficiency, leading to better fuel usage and reduced emissions.

The interested Industry partners are invited to submit their Activity Pitch Questionnaire (APQ) by following the guidelines available at this link [Activity Pitch Questionnaire guidelines](#) based on a template made available by ESA at this link:

<https://business.esa.int/sites/business/files/APQ%20ProjectName.pdf> and further details are available in the document attached to this news item. The completed Activity Pitch Questionnaire (APQ) shall be uploaded using the online web submitter on ESA's open space innovation platform (OSIP) under the channel [Outline Proposal for ARTES Downstream Business Applications – Feasibility Studies/Demonstration Projects](#).