

# SPACE FOR CULTURAL HERITAGE

How space technology can help monitor and preserve our cultural heritage



**DOWNSTREAM GATEWAY**  
Space for Earth

**Digital Workshop | 24 February 2021 | 9:00 am – 4:00 pm CET**

The Workshop is an open event. We invite you to register at:

[down2earth.esa.int](https://down2earth.esa.int)

## Background

The ESA Downstream Gateway provides a single interface to business sectors wanting to connect and collaborate with ESA's portfolio of infrastructure and activities. It enables new downstream communities to interact more easily with ESA and its broad expertise in several applications and domains.

All over the world, cultural heritage is dealing with several risk factors ranging across subsidence, ground motion, urban sprawl, looting, intentional attacks and climate change. Of 896 World Heritage sites, 53 are considered at risk. Satellite data together with cutting edge technologies in the field of artificial intelligence and machine learning can help monitoring and preserving cultural heritage at risk by providing a constant flow of valuable information also for sites hard to reach due to natural or human factors.

Unfortunately, this combined use of technologies is seldom used due to the large resources and high amount of high resolution satellite imagery required. Moreover, there is the need to spread the awareness of the potential of Space technology and satellite data for the preservation of the cultural heritage, since there is often a lack of collaboration and synergies between cultural heritage managers and space engineers.

ESA, thanks to its programmes and expertise, has already an established role in the sector with a clear willingness to be at the forefront of the new needs and strategic goals in order to tailor its action in support to it.

The ESA Downstream Gateway Digital Workshop will be organised with the participation of actors from the sector in order to present the opportunities

and challenges in the use of space technologies and data for cultural heritage discovery, monitoring and maintenance.

The workshop will be convened as a series of high-level panels over the course of one day.

## Objectives

The main objectives of this workshop are to:

- Present the policy and regulatory framework in the sector
- Debate the actual challenges, both natural and anthropic
- Present new technologies that help in the discovery, monitoring and preservation of cultural heritage
- Present ESA's activities in support for the cultural heritage sector

## Expected Outcomes

- Identify user needs.
- Evaluate how space technology combined with artificial intelligence and machine learning algorithms can support the sector.
- Raise awareness of those new opportunities and create a link between cultural heritage community and space technology experts.

## Targeted audience

The target audience for this workshop are public organisation and entities, such as cities, universities and research centres, private companies and individuals working in the cultural heritage sector.