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PRESS RELEASE

## **High-tech security for the Castel Fusano nature reserve**

**Roma Capitale and Leonardo present an experimental project which will use satellites, drones, sensors, artificial intelligence and 5G to improve safety, protect the environment and support sustainability**

**Rome, 23 March 2021** – An experimental project will demonstrate how new technology can improve the security of public areas, with a roughly-year-long trial taking place at Castel Fusano, a 1,000 hectare area of protected environmental heritage in the Roman Coastal State Nature Reserve. The project, being presented today by the city of Rome's municipal management body Roma Capitale and technology company Leonardo, will draw on satellites, drones, fire prevention systems, video-acoustic sensors, artificial intelligence and 5G to improve public order, fire safety and environmental protection. Leonardo is coordinating a consortium of innovative technology companies to deliver the project.

The initiative follows the Memorandum of Understanding that Roma Capitale signed with the European Space Agency (ESA) in 2019 and will provide for the real-time monitoring of Castel Fusano park, supporting prompt intervention when necessary. It will be operational from July until mid-2022.

A press conference today saw the project announced by Virginia Raggi, mayor of Rome, Elodie Viau, director of telecommunications and integrated applications at the European Space Agency, Giorgio Saccoccia, president of the Italian Space Agency (ASI) and Alessandro Profumo, CEO of Leonardo.

The project is called SES5G (**S**ecure **E**nvironment empowered by **S**atellites and **5G**) and is being co-funded by the ESA and the ASI under its 5G for L'ART (L' Aquila, Abruzzo Region, Rome, Torino) initiative, part of the ESA's programme of Advanced Research in Telecommunications Systems (ARTES).

Under the experimental project, artificial intelligence and big data analysis will be used to collate, filter and correlate information from a range of different sensors and other sources to present police forces with a real-time overview of the situation in the park, supporting rapid and high-quality decision making and interventions.

Drones will patrol and collect imagery, even at night, while audio-video sensors will be able to automatically detect critical events such as gatherings, gunshots and calls for help. Optical license-plate reading systems will be able to recognise non-compliant vehicles. Meanwhile, firefighting systems will be able to detect even very small outbreaks of fire up to 15km away and communications networks including narrowband (TETRA) and broadband (LTE and 5G) technologies will be employed to coordinate interventions.

Security will also be supported from Space, with the Copernicus and PRISMA earth observation satellites and Athena Fidus telecommunications satellite helping to monitor the area's forests, spot illegal activities and provide backup communications in the event of problems with the ground-based network.

This includes the ASI's PRISMA satellite, which will be able to use Leonardo's hyperspectral instrument to carry out a chemical-physical analysis of the area from 615km away, providing information on the health of vegetation and allowing operators to generate a fire risk model for the area.

Virginia Raggi, mayor of Rome, said: "We want citizens to feel safe wherever they are in the city. The Castel Fusano pine forest is a wonderful natural area with great potential, which we must protect and improve. Unfortunately, it is also often threatened by arson, chosen as a base for illegal settlements or used for illegal waste dumping. Many people would like to visit more often but do not feel safe doing so. With this new

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surveillance system, we will be better able to monitor these critical issues and intervene more promptly when necessary, making the park into a safe place which is useable by all”.

Alessandro Profumo, CEO of Leonardo, said: “We are proud to support Roma Capitale and the public safety authorities with technological solutions to the challenges they face every day. This includes helping deliver timely responses in the case of emergencies as well as planning long-term interventions. Leonardo, the company which oversees Italy’s strategic technologies, is convinced that our role, especially during this time of recovery, is to use our know-how to support administrations in the development of connected, sustainable, liveable and resilient places. This commitment is supported by investment and a clear vision, as laid out in our Be Tomorrow - Leonardo 2030 Strategic Plan”.

The SE5G system will be managed from an Environmental Protection Department control room in Castel Fusano park and the nearby Interforce Operations Centre (COI). It will also be accessible from the local police’s Rome System Room and the Capitoline Civil Protection’s Operations Room. All bodies involved in the safety of the park will be able to draw on the information generated.

Leonardo will lead a consortium of partners to deliver the SE5G project including Telespazio (a joint venture between Leonardo and Thales), e-Geos (a joint venture between the ASI and Telespazio), Siralab, EPG, Radiolabs and TPSSferiacom.

#### **Leonardo**

Leonardo, a global high-technology company, is among the top ten world players in Aerospace, Defence and Security and Italy’s main industrial company. Organized into five business divisions, Leonardo has a significant industrial presence in Italy, the United Kingdom, Poland and the USA, where it also operates through subsidiaries that include Leonardo DRS (defense electronics), and joint ventures and partnerships: ATR, MBDA, Telespazio, Thales Alenia Space and Avio. Leonardo competes in the most important international markets by leveraging its areas of technological and product leadership (Helicopters, Aircraft, Aerostructures, Electronics, Cyber Security and Space). Listed on the Milan Stock Exchange (LDO), in 2019 Leonardo recorded consolidated revenues of €13.8 billion and invested €1.5 billion in Research and Development. The company has been part of the Dow Jones Sustainability Index (DJSI) since 2010 and has been named as sustainability global leader in the Aerospace & Defence sector for the second year in a row of DJSI in 2020.

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