PRESS RELEASE

The third edition of Leonardo's Innovation Awards will shine a spotlight on the young people contributing to technology and sustainability

- **Students, new graduates and doctoral candidates from Science, Technology, Engineering and Maths (STEM) faculties at Italian universities have been called on to present their innovative ideas**

- **Winners will be rewarded with internships and bursaries**

- **Technologies and innovative solutions designed to protect cultural heritage are amongst the areas of research covered**

- **For more information visit www.premioinnovazioneleonardo.com**

Rome, 10 July 2017- Leonardo's annual competition for young innovators is back. Once again, the talents of students, recent graduates and doctoral candidates from the STEM (Science, Technology, Engineering, Mathematics) faculties at Italy's universities will be celebrated at the Leonardo Innovation Awards. The initiative, which supports the creativity and innovation of the next generation of inventors, will help transform today's ideas into tomorrow's technologies.

This year, entrants have been invited present their ideas in three business areas; image intelligence, quantum technologies for sensors and technologies/solutions for the protection of cultural heritage. The three finalists in each category will be awarded apprenticeships at Leonardo, a financial prize and an invitation to the awards ceremony. At the ceremony, the young innovators will join fellow winners from Leonardo's in-house Innovation competition to receive their awards in the presence of the company's senior management and representatives from international academia and research organisations.

Details of the awards are available at www.premioinnovazioneleonardo.com and entrants can also submit their projects through the site.

"Leonardo is the greatest forum for innovation and technology development in Italy" said Alessandro Profumo, Managing Director of Leonardo, adding; "To stay at the forefront of invention, we need the right people with the right skills, those needed to face the challenges that will emerge in coming years and to help develop the talent of future generations. The Leonardo Innovation Awards are an opportunity to bring young people, business and academia closer together and to generate ideas that can address the challenges of the future.

Leonardo's Innovation Award for Youth:

Image intelligence

The use of advanced image recognition technologies is all about creating innovative solutions that use images generated by a variety of sensor types including optical and infrared imaging, LIDAR ("Light Detection and Ranging", a ranging/remote sensing technique that allows you to determine the distance of an object or surface using a laser pulse) and SAR radar ("Synthetic Aperture Radar", a remote sensing system that uses a microwave radar). The development of these technologies and their associated image analysis algorithms, both in real time and in terms of "change detection", is supporting the development of applications in diverse fields including security (scenarios analysis, behavioural analysis and face recognition), land monitoring (precision farming, natural disaster management, sustainable development in the

agricultural sector, fishery monitoring and maritime traffic control) and to help develop the intelligence behind autonomous systems such as self-guided cars, drones, and anthropomorphic robots.

Quantum technologies for sensors

The frontier of quantum technology is rapidly expanding to include applications such as quantum cryptography, quantum computing and quantum radars. The field of quantum sensor technology is one of the least explored while also being one of the richest in opportunities. Examples include the evolution of radars to use "microwave quantum illumination", potentially allowing them to detect targets, such as stealth aircraft, that are invisible to conventional systems, and the measurement of gravity through the use of ultra-cold atoms. In many areas, quantum physics offers innovative perspectives.

Technologies and innovative solutions for the protection of cultural heritage

Italy has an extraordinary cultural heritage which needs to be protected and enjoyed for generations to come. To safeguard this culture we need to manage all phases of a heritage site's life cycle, from discovery, through mapping, study and conservation to public enjoyment and protection. To do so, innovative technologies need to be developed to sense, process and archive information, to enhance site security and to protect valuable assets. This commitment aims to extend Leonardo's contribution to the development of the artistic disciplines (STEAM = STEM + Arts), bringing technology to bear in service of culture.