

Leonardo at Expo 2020 Dubai: atomic clock, Martian drill and tiltrotor to be showcased at innovation fair par excellence

- High-precision space clocks, robotic drills that search for life on Mars and vertical take-off aircraft - record-breaking solutions being presented in the Italian Pavilion
- Leonardo contributes to this international event of innovation and sustainability with strategic technologies that span its sectors of operation
- Leonardo factories selected as technological excellence for Oscar winner Gabriele Salvatores' documentary 'Saper Fare' (Know-How)

Rome, 29 Sept. 2021 – Leonardo presents unparalleled technological solutions at Expo 2020 Dubai with its robotic drill about to break the record for drilling on Martian soil, the most stable and accurate atomic clock ever made for space applications, and the only tiltrotor in the market that is soon to be certified for civil use.

These unique technologies are the pillars of Leonardo's participation at Expo 2020 Dubai, which opens on 1 October and takes place for the first time in the Arabian Peninsula. As a leading high-tech company in the world and Italy, Leonardo, a Platinum sponsor of the Italian Pavilion, was keen to contribute to the event – an international showcase of future solutions – as a catalyst for innovation and sustainability in the strategic technologies of its sectors of operation, both in Italy and in the UK, US, Poland and Germany.

Leonardo's hydrogen atomic clock is the most accurate in the world, losing just one second every three million years. It makes Europe's Galileo satellite navigation system the most precise ever made for civilian use. The one on display in Dubai is a new project: the RbPOP (Rubidium Pulsed Optically Pumped) rubidium atomic clock, which provides the same performance but weighs just 10 kg.

The robotic drill ready to blast off to Mars with the ESA-Roscosmos ExoMars 2022 mission, produced with the support of the Italian Space Agency (ASI), will also be on display, and it is about to break a world record: drilling up to 2 metres into Martian soil, compared to the existing 7 cm reached so far. With five times less power than a domestic drill (80 watts) and 60 revolutions per minute, it will drill into the ground using a polycrystalline diamond bit. It will search for traces of past or present life, which at that depth should not have been destroyed by the Red Planet's cosmic radiation.

The AW609 tiltrotor is the company's world first in the aviation sector. It is the only aircraft of its kind set to receive civil certification. Thanks to the ability to change the position of the two drive shafts in less than 60 seconds, it can take-off vertically like a helicopter while flying with the performance of an aeroplane. Capable of carrying out different types of missions, from passenger transport to medical care, from civil protection to search and rescue, the AW609 can fly at over 500 km/h. It has a range of almost 1,400 km, which increases to over 2,000 km with auxiliary tanks.

Leonardo, a global high-technology company, is among the top 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 2020 Leonardo recorded consolidated revenues of €13.4 billion and invested €1.6 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.

As part of the company's strategic vision for urban aviation in the near future, Leonardo has built – with its Emirates partner Falcon Aviation Services – a new concept helicopter terminal at the Dubai Expo site, representing the latest frontier in vertical mobility. The travellers' spaces are designed to house showrooms where commercial and cultural activities can be offered, within a structure built with sustainable materials. They can easily be remodelled or reallocated as the needs of urban transport and the city itself changes.

Leonardo also features in Oscar-winning director Gabriele Salvatores' 'Saper Fare' documentary. This journey through the Italian craft and manufacturing tradition, synonymous with excellence and Made in Italy, will be screened in a dedicated area inside the Italian Pavilion. Indiana Production's cameras entered some of the Leonardo group's factories, recognised as national flagships of innovation: Nerviano (MI) is the home of the world class space technologies on display in the Italian Pavilion; Grottaglie (TA), the site of the development of innovative aerostructures for civil aeronautics; the Fucino (AQ) and Matera space centres are known internationally for their key role in the provision of satellite services.

First quarter appointments:

- 2 October, 15 UTC - Inauguration of the helicopter terminal (closed event)
- 3-4 October - Media visit to the helicopter terminal (booking required)

At the Italian Pavilion:

- 19 October, 7 UTC, Amphitheatre – Space Week
#T-TeC 2021 Meet up, Leonardo and Telespazio space technology contest, in-person and livestreamed event
- 19 October, 12 UTC, Amphitheatre – Space Week
The lunar space economy. The first steps towards an interplanetary generation, in-person and livestreamed event
- 16 December, 12 UTC, Amphitheatre - Knowledge & Learning Week
#T-TeC 2021 Award, Leonardo and Telespazio space technology contest, in-person and livestreamed event