

Leonardo's naval systems demonstrate technology leadership at exercise Formidable Shield 2021

- **Formidable Shield, NATO's main air defence and anti-missile exercise, saw the involvement of naval, air and land assets from 10 countries**
- **Several Leonardo technologies were trialled including the Kronos MFRA radar, multi data link communications system and Mode-5-capable Identification Friend/Foe system**
- **Leonardo's Combat Management System facilitated the coordination of operations, processing data from sensors and presenting a real-time picture of the scenario to aid decision making and interventions**

Rome, 14 June 2021 – Leonardo's naval systems have been put through their paces in a recent NATO exercise, demonstrating their advanced technology and operational effectiveness. The range of systems, which included detection, tracking, communication, command and control capabilities, were on show between the 15th and 30th May at the MOD Hebrides Range in Scotland, UK as part of At Sea Demonstration / Formidable Shield 2021 (ASD / FS21), NATO's main air defence and anti-missile exercise.

The realistic scenario saw live and simulated engagements against subsonic, supersonic and ballistic missiles in the skies. Naval vessels, aircraft and land vehicles from 10 nations tested their information exchange and interoperability capabilities as part of a simulated coalition-level response.

A number of Leonardo technologies were on-board the Italian Navy's Antonio Marceglia, the eighth frigate to be delivered under the FREMM (European multi-purpose frigate) programme. This included the Kronos MFRA (Multi-Function Radar Active) 3D radar that can locate, classify and track targets within a 250km radius. The Kronos MFRA was able to locate ballistic missiles in flight as they reached speeds of over 1,800m/s and accelerated at over 6G, and continued tracking the missiles over 200km.

At the trial, the frigate also made use of its MDLP-EVO (Multi Data Link Processor) communication system to exchange tactical data, while its IFF (Identification Friend or Foe) system, updated to the NATO Mode-5 standard, helped distinguish between allies and potential threats.

The brain of the ship, its Combat Management System (CMS), coordinated the frigate's air defence and anti-missile operations, processing data from the ship's various sensors and presenting a real-time tactical picture of the scenario to the frigate crew and other units, supporting decisions and interventions at a coalition level.

Leonardo's weapon systems also saw positive results during the trial. The Super Rapido naval gun with 76mm DART guided ammunition demonstrated its ability to protect its host ship from even the most sophisticated threats. Meanwhile, the Aster 30 missile from MBDA, a European joint venture in which Leonardo has a 25% share, proved its ability to intercept incoming missiles.

Leonardo in the naval sector

Leonardo is a leader in the design and supply of systems for naval defence and maritime and coastal surveillance. The company can meet requirements for all classes and sizes of ship. Over the last 50 years, more than 40 navies internationally have chosen Leonardo technology to equip more than 100

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.

naval vessels. The company's portfolio includes the production and integration of combat systems, naval combat management and communications, radar, fire control systems, electro optics, navigation, remotely piloted aircraft, various calibre naval guns, missiles, torpedoes, sonar and electronic warfare suites. Leonardo is also a leading supplier of helicopters for naval use.