Volume 09 Number 18 – Wednesday, 03 May 2017

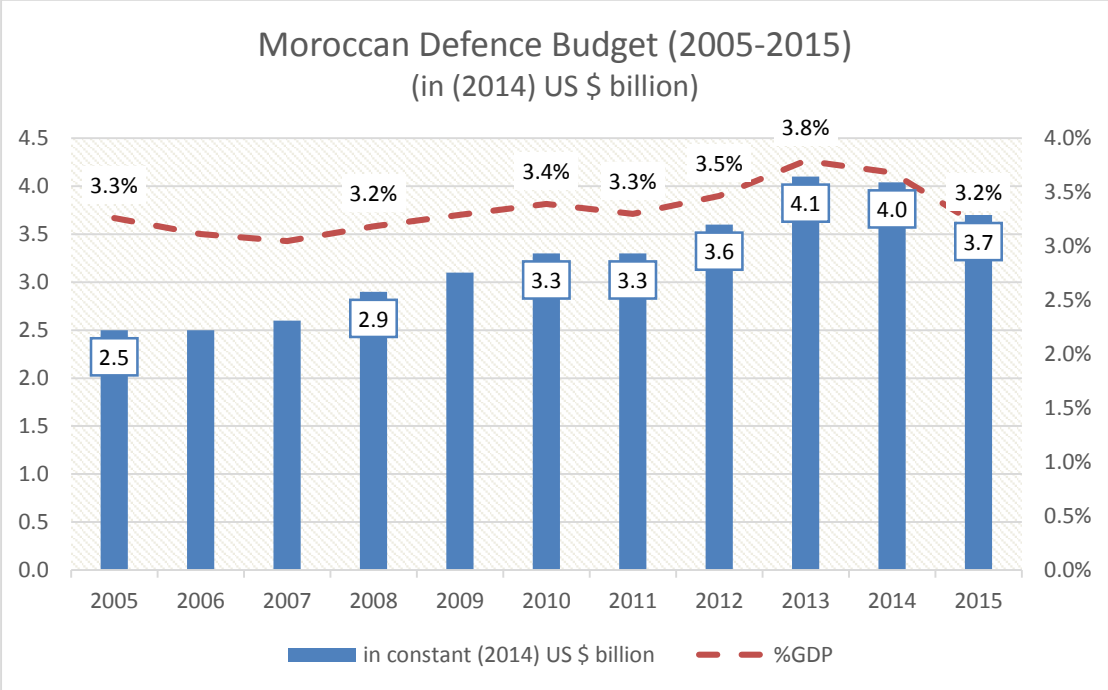
Part I: Morocco

Part II: Epicos Newsroom

Morocco: Future Defence Budget and Procurements

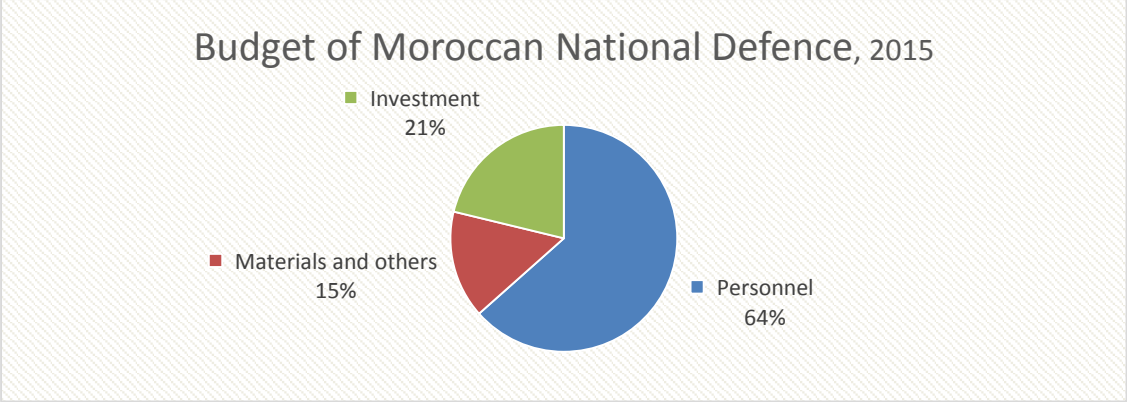
The Royal Moroccan Armed Forces, consist of the Royal Army (175,000 men), Royal Navy (10,000 men), Royal Air Force (13,000 men), the Royal Gendarmerie and the Royal Guard. Today, the total size of the country's military forces, as of 2014, consists of 350,000 personnel, making it the second largest military force (after Egypt), in the MENA region. Moreover, the recent incorporation of the Royal Moroccan Armed Forces to NATO's (North Atlantic Treaty Organisation) Interoperability Platform, will further strengthen the Moroccan Defence, through high standards of training, and joint initiatives against terrorism.

In the last decade, Morocco has increased the nominal value of its defence budget; however this rise is not reflected as a significant change at the allocated % of GDP. More specifically, Morocco is considered as a "slow grower" in terms of defence spending, compared to the GDP growth of the country. After a period of continuous raises, since 2011 Morocco's defence budget increased sharply by some US $800 million to reach US $4.1 billion in 2013, before dropping to US $3.7 billion, in 2015 (See chart below).



Source: https://www.sipri.org/databases/milex

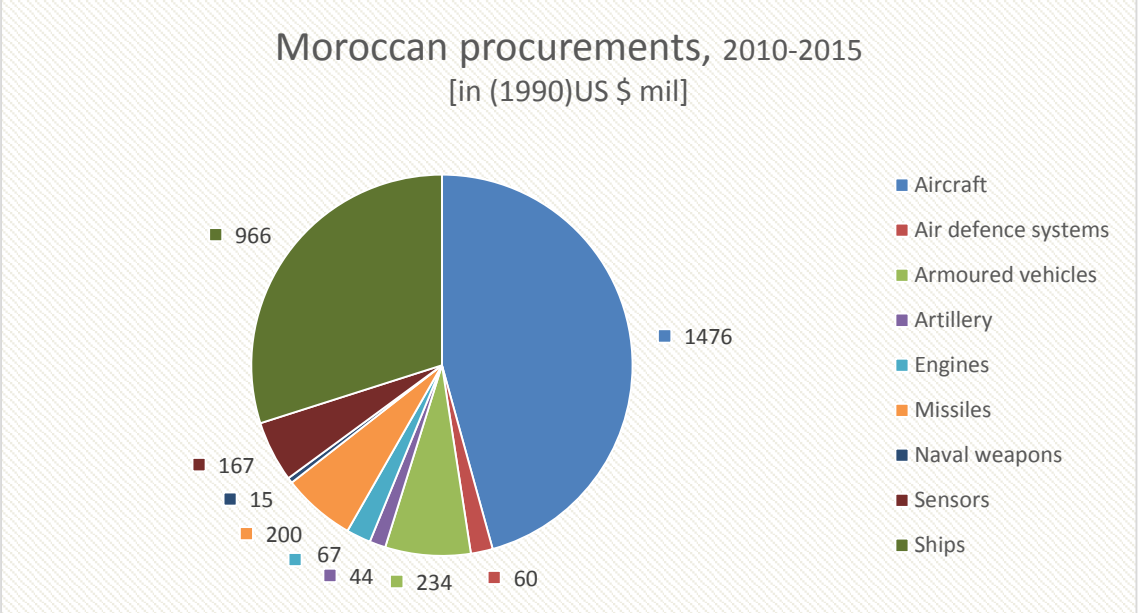
In more detail, in the 2015 Moroccan Defence Budget, 64% was allocated to Personnel, 21% to Investment –including 4.3 billion dirhams for investments during 2015 and 3.1 billion dirhams for 2016 commitments- and 15% to Material and various other expenses.



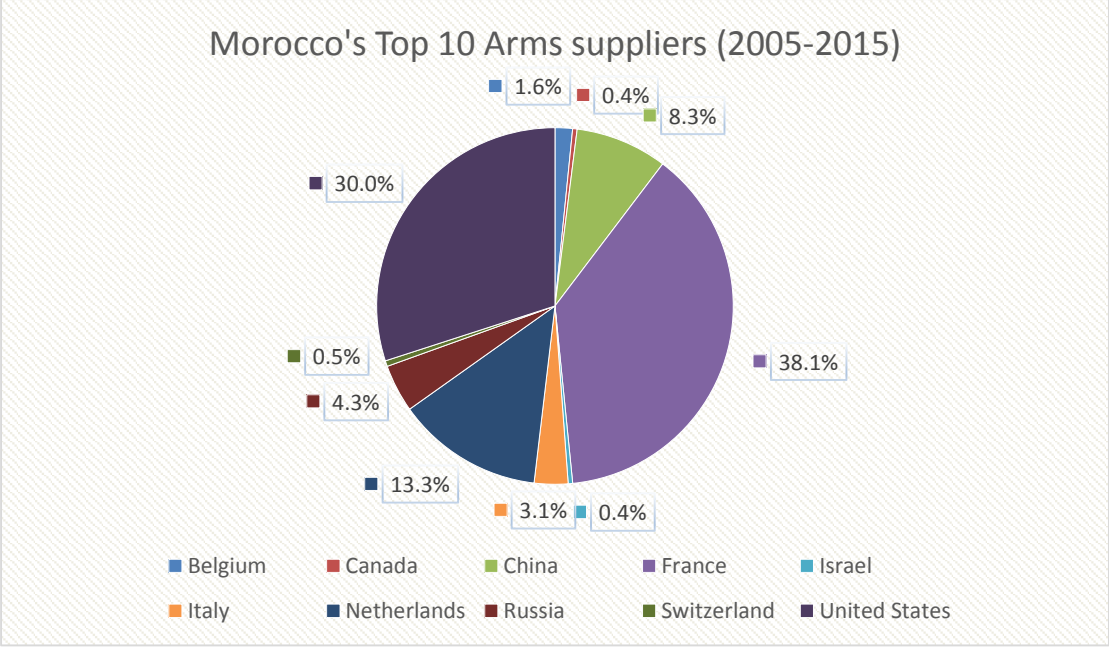
Source: http://www.finances.gov.ma/Docs/2015/DB/MB15fvolume3.PDF

According to the National Defence Administration representative, general budget will increase in 2016, by 2%. More explicitly, an additional DH 600 million for repair and purchase of equipment and DH 200 million for operations (included in the Army's budget) will bring the total defence budget to about US $11 billion. Furthermore, an amount of DH 1 billion will be allocated to the General Direction of Research and Documentation (DGED) and another DH 1.4 billion to the Royal Gendarmerie, for the purchase of equipment, fuel, transportation and allowances for missions abroad. It should be noted however, that about 70% of the defence budget will serve for paying out military salaries.

According to the SIPRI database, between 2006-2010 and 2011-2015, imports of arms in Africa increased by 19%. However, respective Moroccan imports increased by 528%, reflecting the 26% of the continent's total arms imports. Morocco was the first arms-import destination for France (16% of its total exports) and the Netherlands (17% of its total exports), for 2011-2015. These imports mainly included aircraft, ships and missiles – as the US $157 million deal for the provision of TOW 2A, Radio Frequency (RF) missiles, M220A2 TOW Launchers and associated equipment, provided by the US company Raytheon (See chart below).



Source: http://armstrade.sipri.org/armstrade/page/values.php



Source: http://armstrade.sipri.org/armstrade/page/values.php

As part of reinforcing its national security, Morocco awarded (in Oct 2015) General Dynamics Land Systems a US $358 million contract to upgrade 150 M1A1 Abrams Main Battle Tanks to the M1A1 SA configuration. These upgrades were to start to be delivered from January 2017 onwards. Further to the above, the Harris Corp., was awarded (in May 2016) a US $405.5 million contract, by the US Army, in order to provide Single Channel and Airborne Radio Systems (SINGARS) to Morocco, by April 2021.

Morocco: Aerospace and Defence Industry, Capabilities and Major Companies

The Moroccan Aerospace industry dates back to the 1950's, when it developed expertise in aircraft maintenance for civil and military aviation. Since then, the sector has recorded significant growth, with new activities in the manufacturing of seats, harnesses, metallic assembly parts, as well as with engine maintenance and repair. Many international companies have created plants in the country, including subsidiaries of the Safran Group – such as Aircelle, Labinal, Morpho, Safran Engineering Services, Matis (JV of Boeing & Labinal), Sagem, Snecma-, as well as DAHER, Zodiac Aerospace, THALES, Esterline, and more recently Bombardier, Stelia, and United Technologies (UTAS).

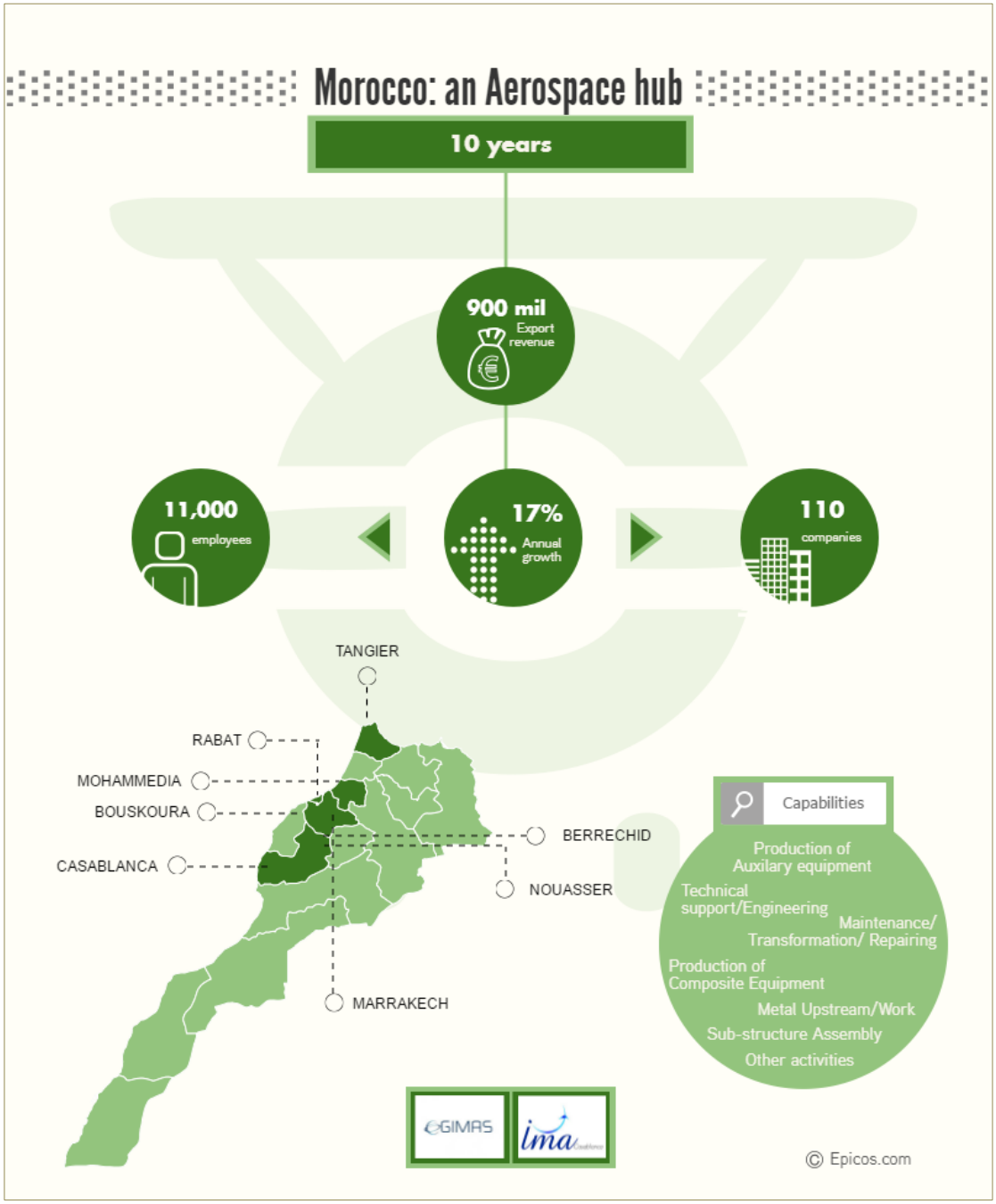
This growth has been partly fostered by the Safran Group, as a key 'global' player with a diversified and of high integration supply chain. In addition, the governmental incentives targeted at potential investors, including corporate tax exemptions, financial subsidy as a percentage of total investment, financial contribution for training costs, as well as a set of specific measures adopted to support innovation by the Snecma Morocco Engine Services (SMES) corporation, have all had positive results. In addition, the development of a dedicated industrial free (trade) zone –extending over an area of more than 140 hectares, namely the "Aeropole", in Casablanca –with high proximity to Europe- has attracted many foreign investors.

Moreover, the IMA (Institut des Métiers de l'Aéronautique) education centre specialised in providing training on aerospace industry related skills and specialties, was created in an effort to boost the local industry's competitiveness, by covering the needs for a highly-skilled labour workforce, as well as continuing training for managers. With a current capacity of 400 trainees per year and plans to double its capacity (to 800 trainees) in the near future via a €2.5 million investment in upgrading and expanding its installations, IMA operates under GIMAS (Moroccan Aerospace Industries Association).

Towards this direction, in July 2016, VI International Aviation Academy (AIAC) of Morocco signed a Memorandum of Understanding (MoU) with the Brazilian Embraer, for the development of training programs, for engineers in aerospace and related areas (in the Moroccan territory). When this program will be implemented, Morocco will have managed to address further the demands of its aerospace sector, by creating a base of engineers of a world-class standard.

Today, the Moroccan Aerospace Industry sector, comprises of more than 110 companies, employs about 11,000 people and has an export revenue of €0.9 billion (See Infographic below). However, the local defence industry itself, is under developed, making Morocco mostly dependent on imports. Recently however (December 2015), a US $22 billion funding agreement with Saudi Arabia was signed, through which Saudi Arabia agreed to finance the

development of a national 'embryonic' military, aiding the country to become a producer of weapons, thus in turn gaining an important role in the International Defence Industry.



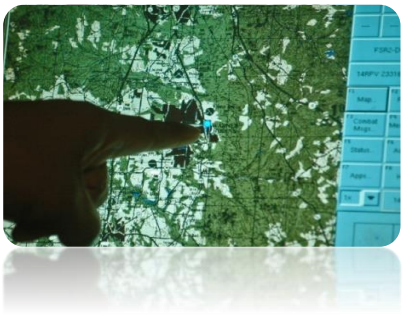
Source: http://gimas.org/pdf/brochuregimas.pdf

Epicos "Industrial Cooperation and Offset Projects"

Epicos "Industrial Cooperation and Offset Projects" provides a unique set of online tools enabling the structure, identification and implementation of comprehensive Offsets programs, through a searchable database. By introducing different offset projects and ideas proposed by local A&D industry it ensures the optimum cost for Prime Contractors and reassures that the priorities of local industry are fully met…

For Further Information Press Here

Blue Force Tracking (BFT) System for Military Personnel and Military Vehicles



The network-centric ability to distinguish between friend and foe, a concept known as blue force tracking (BFT), is critical to conducting effective network-focused military operations. Within this frame, a company with extensive expertise in developing Solutions for the aerospace industry, is proposing the utilization of the existing know how -mainly in complicated space missions- in the development of advanced Blue Force Tracking (BFT) and situational awareness capabilities into products and systems used to identify and track friendly forces.

For Further Information Contact our ICO Department
Mail at: a-kintis@epicos.com

Development of a portable mission data acquisition Remote Terminal Unit (RTU) with advanced vehicle mission control and functions monitoring capability for UAVs

Unmanned Aerial Vehicles (UAVs) are systems for intelligence, surveillance & reconnaissance, as well as weapons' delivery. A company specialized in the design, development and manufacturing of UAVs, is proposing collaboration in the design and development and/or manufacturing of a portable mission data acquisition Remote Terminal Unit (RTU), with advanced vehicle mission control and functions monitoring capabilities that can be used in a wide range of Unmanned Aerial Vehicles (UAV) worldwide.

For Further Information Contact our ICO Department
Mail at: a-kintis@epicos.com

Vard Secures Contract for the Design and Construction of One Research Expedition Vessel

VARD is pleased to announce a contract for the design and construction of one Research Expedition Vessel for Rosellinis Four-10. Rosellinis Four-10 is wholly-owned by the Norwegian industrialist Kjell Inge Røkke and his family. Developed by Vard Design in collaboration with the customer and the designer Espen Øino, the Research Expedition Vessel (REV) is expected to enter service in 2020. The hull will be built at Vard Tulcea in Romania, and towed to Vard Brattvaag in Norway for outfitting. After delivery in Norway, the vessel will return to Romania for fairing, deck laying and finalization of the accommodation area.

The highly specialized vessel is tailor-made for worldwide research and expedition activities, with the objective of developing knowledge and sustainable solutions to address the ocean's environmental challenges. WWF Norway is invited by the shipowner to take part in the further development of the research and expedition project.
Equipped with the latest technology on board, the vessel will be one of the most advanced research expedition vessels in the world. Equipment for monitoring and surveying marine areas, currents, the seabed, fish, animals and plant life in all of the world's oceans will be available on the vessel.

Environmental performance has been crucial throughout the concept- and development phase. The VARD 6 16 design is developed for navigating waters in the most challenging and vulnerable environments, from arctic to tropical areas. To secure the most cost efficient, silent, comfortable and environmentally friendly expeditions in all weather conditions, the vessel is designed with slim hull lines in combination with wave-cutting bulb, slender foreship, large propellers and two pairs of stabilization fins. Other key features are the energy recovery rudder system, medium speed engines, a direct drive diesel-electric propulsion system with battery package, and an exhaust cleaning system.

The vessel will also employ VARD'S SeaQ Green Pilot, a data driven maritime energy management and operational performance system. By using real-time measurements, mathematical models and analysis of the vessel's performance, an expert system will give the operator advice on the ship's performance and fuel consumption. This will empower the crew to minimize the carbon footprint of the vessel. SeaQ Green Pilot was developed by Vard Electro in Norway.

With its length of 182 meters, the vessel will be the longest one ever designed and built by VARD. The research and expedition area features modern laboratories, an auditorium, a hangar for a Remote Operated Vehicle (ROV) and an Autonomous Underwater Vehicle (AUV) with direct access to the vessel's moonpool, and a multifunctional cargo deck.

VARD's subsidary Seaonics has developed a large high-end scientific winch package for handling through moonpool and over side, a 20 tons fiber rope crane with reach down to 6,000 meters, and a pelagic trawl setup with catch selection for operations down to 3,000 meter depth. All operations including trawling will be inside operations either from the hangar amidships or from a horizontal built in A-frame construction at the stern.

The vessel will have a high standard to make it suitable for charter to private individuals, companies and institutions. The total accommodation capacity is for 90 persons, including a maximum of 36 guests on board.

Kjell Inge Røkke commented, "My very first large factory trawler was built by VARD 30 years ago, and I have enjoyed a great relationship with the team at VARD since then. I know what VARD stands for, and it is a pleasure to come back and build this Research Expedition Vessel together with them."

Røkke continues: "The REV will be a platform for gathering knowledge. I would like to welcome researchers, environmental groups, and other institutions on board, to acquire new skills to evolve innovative solutions to address challenges and opportunities connected to the seas."

CEO and Executive Director Mr. Roy Reite says, "We are excited and humbled to be chosen as the partner to develop and build this unique vessel. It is a pleasure to work with Kjell Inge Røkke and his team again. Our relations span several decades, and we welcome his private initiative and engagement for research and expedition activities at sea. VARD's experience from R&D and the design and construction of highly specialized vessels such as research, surveillance and expedition vessels will be valuable in this project. This newbuilding also offers an excellent opportunity to showcase the innovation power of the Norwegian maritime industry by involving many local suppliers."

For Further Information Click Here

SAAB Receives Order from FMV for Next Generation Anti-Ship Missiles

Defence and security company Saab has received an order from the Swedish Defence Material Administration (FMV) for production of next generation anti-ship missiles. The total order value amounts to SEK 500 million and deliveries will begin in the mid-2020s. In March 2017, Saab announced an order from FMV for development and production of the next generation anti-ship missile system. It will be delivered to the Swedish Armed Forces and will be integrated on both the new Gripen E fighters and the Visby class corvettes. This new order covers deliveries of additional missiles.

"With these missiles the Swedish Armed Forces will have an outstanding capability to defeat any target, on both land and sea at long distances. The system also allows them to engage targets regardless of weather conditions and enemy countermeasures", says Görgen Johansson, head of Saab business area Dynamics.

The next generation anti-ship missile system combines proven capabilities from the RBS15 anti-ship missile family with new and enhanced capabilities. The RBS15 is a missile system that has been used by navies, coastal batteries and air forces for almost 30 years.

The next generation missile system has an improved combat range, an upgraded missile seeker, and a lower mass compared to the earlier system. It also has an ability to combat a wide spectrum of naval and land-based targets, an all-weather capability and a new design enabling future growth potential. The RBS15 missile family is jointly produced by Saab and Diehl Defence.

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Epicos NewsRoom

Orbital ATK Completes Successful Development Test for the Orion Launch Abort System Motor

Orbital ATK, a global leader in aerospace and defense technologies, announced today that it has completed another milestone in the development of the Attitude Control Motor (ACM) for NASA's Orion spacecraft Launch Abort System (LAS). Members of the NASA and Lockheed Martin team were on hand to witness the successful ACM test, which demonstrated the motor's power to steer the LAS during a mission-abort scenario.

This recent test is part of a design, analysis and test series focused on qualifying the ACM for crewed-flight missions. Initial data from the test show the motor is very capable of fulfilling its critical role in the Launch Abort System.

"With the Orion spacecraft and Space Launch System, NASA has taken up the challenge of not just opening up space exploration, but making it as safe as possible for our astronauts," said Pat Nolan, Vice President and General Manager of the Missile Products Division of Orbital ATK's Defense Systems Group. "Orbital ATK is proud to support that vision with our innovative and reliable technology. The success of today's test brings us that much closer to seeing this vision realized."

Orbital ATK has been working with Lockheed Martin and NASA to leverage the company's extensive advanced propulsion and controls capabilities deployed in other mission critical applications to provide steering thrust that can be reliably operated in an instant as part of the Orion crew-escape system. Orbital ATK also produces the main Launch Abort motor, providing the necessary thrust to pull the crew module safely away from the vehicle. These items have been in development for many years, and will be ready to support the first Space Launch System flight late next year.

The Orion spacecraft is launched by NASA's Space Launch System and built to take humans farther into space than they've ever been. Lockheed Martin is leading the industry team charged with developing Orion under contract to NASA. Orbital ATK's Attitude Control Motor uses a solid propellant gas generator with eight proportional valves to steer the LAS in the event of a mission-abort scenario.

Orbital ATK's Defense Systems Group is an industry leader in providing innovative and affordable precision and strike weapons, advanced propulsion and hypersonics, missile components across air-, sea- and land-based systems, ammunition and related energetic products.

For Further Information Click Here

Source: Epicos, Orbital ATK

Rockwell Collins delivers first Iridium SATCOM units for Boeing 737 MAX

Rockwell Collins has delivered its first Iridium® ICS-300 SATCOM units to Boeing for its 737 MAX aircraft. Available as a production line option and the only approved Iridium SATCOM solution on Boeing platforms, the product provides long-range voice capabilities as well as data link communications that improve operational efficiency.

“Together with Boeing, Rockwell Collins will be providing airlines with the latest satellite communications capabilities for the 737 MAX flight deck,” said Steve Timm, vice president and general manager of Air Transport Systems for Rockwell Collins. “By enabling worldwide voice and data communications for the cockpit with the ICS-300, airlines will realize a variety of benefits.”

The ICS-300 is an advanced voice and data link communications system that operates over the Iridium satellite network. With complete global coverage, reliable communications between the ground and aircraft enable improved routing and enhanced coordination between the flight crew and operations.

“This solution offers Boeing 737 MAX customers a highly reliable and cost effective platform for all their aircraft operational communications needs wherever they may fly,” said Brian Pemberton, vice president and general manager of Aviation for Iridium. The Iridium constellation consists of 66 low-Earth orbit satellites, enabling real-time communications anywhere on the planet and extends coverage to include polar and all remote airspaces.

For Further Information Click Here

Source: Epicos, Rockwell Collins

Harris Corporation Completes Sale of its Government IT Services Business to Veritas Capital

Harris Corporation has completed the previously announced sale of its government IT services business to Veritas Capital for $690 million in cash. Proceeds from the transaction will be used to support the company’s capital allocation strategy, including pension pre-funding and share repurchases.

The business, which was part of the former Critical Networks segment, provides IT and engineering managed services to U.S. government agencies, including supporting NASA’s Space Communications Network and Deep Space Network programs.

For Further Information Click Here

Source: Epicos, Harris Corporation

Honeywell and Paragon to Create Life Support Technology for Future NASA Space Missions

Honeywell and Paragon Space Development Corporation have announced a teaming agreement that will change the way astronauts experience life in space. The two companies will design, build, test and apply environmental control and life support systems for future human NASA and commercial programs.

Longer duration, human-exploration missions are planned for the future, but there is no easy way to replenish resources such as oxygen and water in space. NASA's future human-exploration missions will require an integrated and highly efficient system for life support and thermal control. Paragon's focus on evolving water and thermal technologies complements Honeywell's new developments in air revitalization technologies, both of which are essential parts of the spacecraft needed for NASA's deep space goals.

"A renewed interest in developing a Deep Space Habitat needed for reaching the Moon and Mars, continued experimentation aboard the International Space Station, and a desire to push the limits of unmanned flights make this a remarkable time in space exploration. Unmanned achievements are now giving way to long-distance and long-duration human missions. The technology developed by Honeywell and Paragon will give humans the opportunity to explore space for longer periods than before," said Marty Sheber, vice president, Space, Honeywell Aerospace. "Honeywell has a long legacy of providing mission-critical environmental control and life support systems (ECLSS), including being the provider of critical parts of the system currently used on the International Space Station. That heritage, coupled with Paragon's focus on innovative and emerging ECLSS technologies, provides a complementary team to develop technology capable of supporting humans on their longer explorations into space."

"This agreement allows the Honeywell and Paragon team to provide fully integrated solutions to NASA, combining our strengths of experience and innovation in technology with an agile and customer-focused responsiveness," said Grant Anderson, president and CEO, Paragon Space Development Corporation. "Potential prime contractors and NASA will have access to a system-focused integration team with a catalog of proven and emerging technology to bring long-duration exploration of the Moon and Mars to practical implementation."

For Further Information Click Here

Source: Epicos, Honeywell

Government of Greece– CH-47D Helicopters

The State Department has made a determination approving a possible Foreign Military Sale to the Government of Greece for CH-47D helicopters. The estimated cost is $80 million. The Defense Security Cooperation Agency delivered the required certification notifying Congress of this possible sale on April 27, 2017.

The Government of Greece requested the possible sale of five (5) CH-47D helicopters, seven (7) Common Missile Warning Systems (CMWS) (one (1) for each aircraft plus two (2) spares), and twelve (12) T55-GA-714A turbine engines (two (2) for each aircraft plus two (2) spares). Also included are mission equipment, communications and navigation equipment, ground support equipment, special tools and test equipment, spares, publications, Maintenance Work Order/Engineering Change Proposals (MWO/ECPs), technical support, and training, and other associated support equipment and services. The total estimated cost is $80 million.

This proposed sale will enhance the foreign policy and national security objectives of the United States by helping to improve the security of a NATO ally that has been, and continues to be, an important force for political stability and economic progress. Greece intends to use these defense articles and services to modernize its armed forces by increasing its rotary-wing transport capability. This will contribute to the Greek military's goal to upgrade its capability while further enhancing greater interoperability between Greece, the U.S. and other allies.

The proposed sale of this equipment and support does not alter the basic military balance in the region.

There is no principal contractor as the systems will be coming from U.S. Army stocks. There are no known offset agreements proposed in connection with this potential sale.

Implementation of this proposed sale will require U.S. Government or contractor representatives to travel to Greece for equipment de-processing/fielding, system checkout and new equipment training.

There will be no adverse impact on U.S. defense readiness as a result of this proposed sale.

This notice of a potential sale is required by law and does not mean the sale has been concluded.

For Further Information Click Here

Source: Defense Security Cooperation Agency