

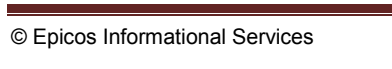
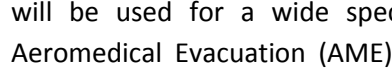
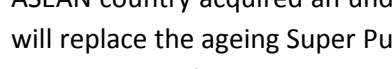
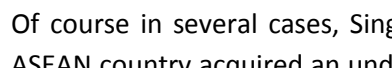
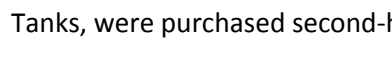
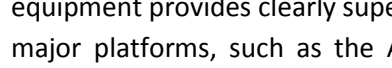
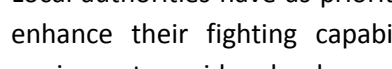
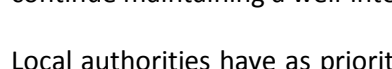
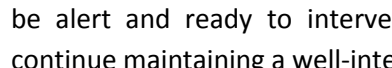
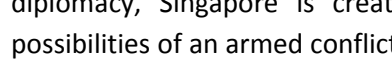
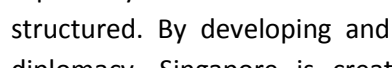
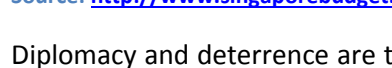
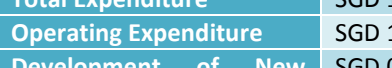
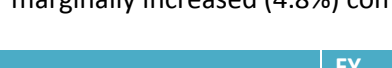
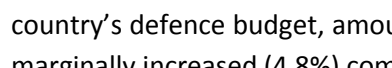
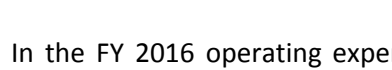
**Part I: Singapore**

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## Singapore: Defence Budget and Procurements



Singapore's total defence budget for Financial Year (FY) 2016 is expected to reach approximately 14 billion Singapore dollars (USD9.5 billion), an increase of 845 million Singapore dollars (USD597 million) compared to FY 2015. Defence budget for FY 2015 was approximately 13.12 billion Singapore dollars (USD9.26 billion), an increase of 5.7% compared to the FY 2014 budget. Additionally, it is worth mentioning that the funds allocated for the development of new capabilities in FY 2016 is expected to reach 671 million Singapore dollars (USD474.7 million), significantly increased (55.7%) compared to the previous FY.

In the FY 2016 operating expenditure is expected to consume the largest amount of the country's defence budget, amounting to Singapore dollars 13.3 billion (9.4 billion US dollars) marginally increased (4.8%) compared to FY 2015.

	FY 2013 SGD billion	FY 2014 SGD billion	FY 2015 SGD billion	FY 2016 SGD billion	(%) Change Over FY 2014
Total Expenditure	SGD 11.8	SGD 12.3	SGD 13.1	SGD 14	6.4%
Operating Expenditure	SGD 11.3	SGD 11.9	SGD 12.7	SGD 13.3	4.8%
Development of New Capabilities Expenditure	SGD 0.422	SGD 0.429	SGD 0.431	SGD 0.671	55.7%

Source: <http://www.singaporebudget.gov.sg>

Diplomacy and deterrence are the two pillars upon which the defence policy of Singapore is structured. By developing and maintaining good relations with other countries through diplomacy, Singapore is creating a safe environment which de facto diminishes the possibilities of an armed conflict. Nevertheless, Singapore Armed Forces (SAF) should always be alert and ready to intervene whenever is needed. That is why Singapore wises to continue maintaining a well-integrated force that is trim, balanced and potent.

Local authorities have as priority to upgrade existing platforms to extend their lifespan and enhance their fighting capabilities instead of purchasing new ones, unless the new equipment provides clearly superior and needed capabilities. It is indicative that a number of major platforms, such as the Archer-class submarines and the Leopard 2A4 Main Battle Tanks, were purchased second-hand and refurbished to suit the country's needs.

Of course in several cases, Singapore, purchased new equipment. In November 2016, the ASEAN country acquired an undisclosed number of Medium Lift Helicopters. The helicopters will replace the ageing Super Pumas in service with Singapore's air force since 1983 and they will be used for a wide spectrum of operations including Search and Rescue (SAR), Aeromedical Evacuation (AME), and Humanitarian Assistance and Disaster Relief (HADR) operations.

More on that direction the Ministry of Defence awarded Boeing a contract for an undisclosed number of CH-47F-Heavy Lift Helicopter. The procured helicopters will replace older Chinooks, which have been in service since 1994.

In some other cases, the Singaporean authorities developed unique solutions in cooperation with the local defence industry. One such example was the Terrex Infantry Carrier Vehicle and the Independence-class Littoral Mission Vessel. The Terrex Infantry Carrier Vehicle (ICV) is an armoured fighting vehicle developed by ST Engineering and Timoney Technology Ltd. The Terrex vehicle is network-centric, highly mobile and survivable. The platform offers great flexibility in adopting any protection solutions, weapon configurations and vehicular customisation.

The Independence-class Littoral Mission Vessel is a class of eight surface platforms that are selected to replace Fearless-class patrol vessel currently in operation with Singapore's navy. The new vessels measures 80m in length and beam at 12m with displacement of 1,250 tonnes, being 2.5 times larger than the Fearless-class patrol vessels. Additionally, they possess better sea-keeping capabilities to operate in higher sea state conditions. In January 2013, the Ministry of Defence awarded Singapore Technologies Engineering Ltd (ST Engineering) a contract for the design and build of eight new vessels. The manufacturing of the vessel will be implemented by Singapore Technologies Marine Ltd (ST Marine), the marine arm of ST Engineering. Deliveries of the vessels started in 2016.

The largest procurement decision, Singapore is going to take in the near future is whether to convert its Security Co-operation Participant status in the F-35 Lightning II joint Strike Fighter into a firm order. Speculations have that the ASEAN country is considering of buying up to 100 F-35s to replace its F-16 fleet.

Singapore, a small nation with conscript armed forces, needed to draw on the different strengths and abilities of its community to augment the national defence capabilities of the country. Towards this direction, Singapore introduced the concept of Total Defence in 1984 that was adapted from the experiences of countries like Switzerland and Sweden.

Currently, Total Defence has been enhanced as conflicts between countries are no longer just military in nature and potential sources of instability can appear in less obvious and non-conventional ways.

Total Defence in Singapore is based on five different aspects - Military Defence, Civil Defence, Economic Defence, Social Defence and Psychological Defence. These five aspects represent the key sectors of society, are complementary and when combined can create a "safe net" for all the facets of the socioeconomic spectrum. Thus, Total Defence can be implemented whether it is a security threat such as global terrorism or a national crisis and can bring together all relevant government agencies, private sector organisations and the citizens of Singapore in a coordinated effort.

Kyriazis Vasileios,

Epicos Newsletter Head Editor

## Singapore Aerospace and Defence Industry: Current Capabilities



The Aerospace and Defence (A&D) industries of Singapore have developed several capabilities. More specifically, the country's defence industry has developed a strong set of core competencies in developing high technology defence materiel. Currently, there are more than 200 companies, supplying products and/or services ranging from biometrics, maritime and aviation security solutions to fire safety, weapon systems and land and naval vessels. On the other hand Singapore is the home of more than 120 aerospace companies, recording an average rate of 10% in the last two decades and employing approximately 19,900 people. In 2012, the local aerospace industry generated a record output of 8.7 billion Singapore dollars (6.1 billion US dollars). According to a study provided by the Association of Aerospace Industries Singapore (AAIS), the country is considered to be Asia's most effective and competitive Maintenance, Repair and Overhaul (MRO) hub, based on the breadth and depth of its collective supply base, its logistics strengths and the business environment. It is indicative that the ASEAN state has captured approximately a quarter of the Asian MRO market.

In order to further strengthen Singapore's position as an aviation hub, local authorities have developed an ambitious plan to create a world-class Aerospace Park in Seletar. In 2012, eight companies including Rolls-Royce, Bell Helicopter, Cessna Aircraft, Fokker Services Asia and Hawker Pacific have opened new facilities in the Park. The 320 hectare park will host an integrated cluster of the following activities:

- Maintenance, Repair & Overhaul of aircraft and components
- Manufacturing and assembly of aircraft engines and components
- Business and general aviation
- Training and Research & Development

ST Engineering is the jewel in the crown of the Singapore Aerospace and Defence Industry. ST Engineering is a global integrated engineering group with capabilities in aerospace, marine and land systems. According to the Stockholm International Peace Research Institute (SIPRI), ST Engineering is ranked 51 amongst the world's largest defence firms in 2014, with arms sales of 2010 million US dollars. Reflecting its successful broad diversification into the civilian sector however, this represents 39% of its total sales for 2014.

Additionally, it is worth mentioning that in some other cases, Singapore's authorities develop unique solutions in cooperation with the local defence industry. One such example was the Terrex Infantry Carrier Vehicle and the Independence-class Littoral Mission Vessel. The Terrex Infantry Carrier Vehicle (ICV) is an armoured fighting vehicle developed by ST Engineering and Timoney Technology Ltd. The Terrex vehicle is network-centric, highly mobile and survivable. The platform offers great flexibility in adopting any protection solutions, weapon configurations and vehicular customisation.

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Additionally, a special notice must be placed in the symbiotic relationship Singapore Armed Forces (SAF) has built with the defence research and development sector, as a number of SAF officers have been trained as engineers and then they have helped the Singaporean companies with their experience. Thus, most of the times, the army plays the role of a "big school" providing valuable information and/or training that it is then used by the local defence industry, in order to further enhance the country's defence industrial base.

Kyriazis Vasileios,

Epicos Newsletter Head Editor

## 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](#)

### Utilizing LED Technology for Aerospace and Defence applications



A leading supplier of LED solutions, mainly for commercial applications, is willing to expand its line of business in the Aerospace and Defence (A&D) sector, offering state-of-the-art solutions and products, as well as additional services and support.

[For Further Information Contact our ICO Department](#)

Mail at: [a-kintis@epicos.com](mailto:a-kintis@epicos.com)

### Insensitive Munitions (FOXIT) use in warheads for smart underwater mines and torpedoes



A leading developer and manufacturer of explosives, is proposing the implementation of its fully IM (Insensitive Munitions) compatible warhead subsystem, to new generation, smart underwater mines and torpedoes.

[For Further Information Contact our ICO Department](#)

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## News from our A&D Business Network

### Lockheed Martin Awarded \$1.2 billion to Modernize Republic of Korea F-16s



Lockheed Martin was awarded a \$1.2 billion contract to upgrade 134 F-16 aircraft for the Republic of Korea Air Force (ROKAF). The upgrades are based on the advanced F-16V configuration. Among the

enhancements are an Active Electronically Scanned Array (AESA) radar, a modern commercial off-the-shelf (COTS)-based avionics subsystem, a large-format, high-resolution center pedestal display and a high-volume and high-speed data bus.

"We truly appreciate the trust and confidence the Republic of Korea has placed in us with this contract," said Susan Ouzts, vice president of Lockheed Martin's F-16 program. "These upgrades are a critical piece of South Korea's national defense and highlight Lockheed Martin's commitment to the full lifecycle of the F-16, from production to through-life sustainment."

The contract for the ROKAF upgrade is a foreign military sales contract issued by the U.S. Air Force. As Original Equipment Manufacturer (OEM) and design authority of the F-16, Lockheed Martin is uniquely qualified to design, engineer, develop, integrate and sustain a complete F-16 weapons system solution tailored to customer requirements.

The F-16 Fighting Falcon is the world's most successful, combat-proven multi-role fighter with more than 4,570 F-16s delivered. The F-16 currently serves as the workhorse of the fighter fleet for 25 nations around the world.

For additional information, visit our website: [lockheedmartin.com/f16](http://lockheedmartin.com/f16)

#### About Lockheed Martin

Headquartered in Bethesda, Maryland, Lockheed Martin is a global security and aerospace company that employs approximately 98,000 people worldwide and is principally engaged in the research, design, development, manufacture, integration and sustainment of advanced technology systems, products and services.



## Saab and Embraer Inaugurate the Gripen Design and Development Network in Brazil



Defence and security company Saab and Embraer Defense & Security have today inaugurated the Gripen Design and Development Network (GDDN) in Gavião Peixoto, in the state of São Paulo. The GDDN will be the hub for the Gripen NG technology development in Brazil for Saab and Embraer together with the Brazilian partner industries and institutions, AEL Sistemas, Atech, Akaer and the Brazilian Air Force, through its research department DCTA.

The GDDN includes the development environment and simulators required to undertake the fighter development work. In addition, the GDDN is connected to Saab in Sweden and the industrial partners in Brazil, securing both technology transfer and efficient development.

“We have a long-term commitment to Brazil. The launch of the GDDN is a key milestone in the Brazilian Gripen programme as it will be the basis for the technology transfer and fighter development in the country,” said Håkan Buskhe, CEO and president of Saab.

“Embraer and Saab have a long and proven record in the development and application of innovative technologies in the aeronautical industry. This co-operation is key to assure the best support for the Brazilian Air Force in the coming years” said Jackson Schneider, president and CEO of Embraer Defense & Security.

The GDDN facility is located at Embraer premises in Gavião Peixoto, where also the Gripen Flight Test Center and the Gripen Final Assembly will be based.

### Facts about the transfer of technology programme

Between 2019 and 2024, 36 Gripen NG fighters will be delivered to the Brazilian Air Force. To accomplish the deliveries Saab has a strong collaborative partnership with Brazilian industry, such as; Embraer, AEL Sistemas, Akaer, Atech, Mectron, Inbra, and Atmos.

The technology transfer programme for Brazil covers four areas aiming to provide the Brazilian aerospace industry with the technology and knowledge needed to maintain and develop Gripen in Brazil:

- Theoretical training
- Research & Technology programmes
- On-the-job-training in Sweden
- Development and production work

Between October 2015 and 2024, more than 350 professionals, engineers, operators, technicians and pilots from Saab’s partner companies and the air force in Brazil, will go to Sweden to participate in courses and on-the-job training. Skills and knowledge will be gained by Brazilian industry enabling extensive Gripen development and production work, including final assembly, in Brazil. As of today, about 100 Brazilian secondees have been in Sweden and started to return to Brazil earlier this month. The technology transfer programme is divided into 60 key projects, lasting up to 24 months.



Embraer will undertake a large share of work in the production and delivery of both the single and two-seat versions of the Gripen NG. The company will also be responsible for extensive work packages in systems development, integration, flight test, final assembly and aircraft deliveries. Furthermore, Embraer and Saab will be jointly responsible for the complete development of the two-seat version of the Gripen NG.

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#### About Saab

Saab serves the global market with world-leading products, services and solutions within military defence and civil security. Saab has operations and employees on all continents around the world. Through innovative, collaborative and pragmatic thinking, Saab develops, adopts and improves new technology to meet customers' changing needs.

#### About Embraer

Embraer is a global company headquartered in Brazil with businesses in commercial and executive aviation, defense & security. The company designs, develops, manufactures and markets aircraft and systems, providing customer support and services. Since it was founded in 1969, Embraer has delivered more than 8,000 aircraft. About every 10 seconds an aircraft manufactured by Embraer takes off somewhere in the world, transporting over 145 million passengers a year.

Embraer is the leading manufacturer of commercial jets up to 130 seats. The company maintains industrial units, offices, service and parts distribution centers, among other activities, across the Americas, Africa, Asia and Europe.



### GKN Aerospace's Fokker business announces Air Iceland order for ADS-B Out

GKN Aerospace's business unit Fokker received an order from Air Iceland (Flugfélag Islands) for the introduction of the ADS-B Out modification on the Dash 8-Q200 and Dash 8-Q400.

ADS-B out (Automatic Dependent Surveillance – Broadcast) is a common system on-board many aircraft that automatically broadcasts relevant data from the aircraft towards air traffic management organizations. ADS-B out data includes the identity of the aircraft, the GPS location and direction of flight. The current ADS-B out systems need to be improved, to ensure higher accuracy and reliability of the broadcasted data. Once this is achieved, it will become possible to optimize the airspace, fly more economical routes in terms of costs and energy use, and minimize the use of ground radar stations.

A new version of ADS-B out, ensuring the improved data accuracy and reliability, is mandated on all flying aircraft in both Europe and the US by 2020. The ADS-B out mandate in 2020 requires a retrofit to almost all aircraft currently flying. The retrofit involves an upgrade or replacement of two major cockpit systems: the ATC Transponder and GPS Receiver.

Fokker Services has positioned itself as a full solution provider for aircraft operators to comply to the ADS-B out mandate. This includes a fully certified design (STC), all updates of relevant aircraft documentation, a complete modification kit to install on the aircraft and installation support. Extensive experience in upgrading cockpit systems on a wide range of aircraft ensures Fokker Services' capability to service all commonly used aircraft platforms.

Air Iceland marks the start of the ADS-B Out program for Fokker Services. With its innovative product offering, Fokker expects to gain substantial market share in both the US and EU market for ADS-B out retrofits, driving revenue in its modification business line for the next few years.

Ed Bakkum, Regional Sales Manager at Fokker Services said: "Air Iceland is running a major operation with thousands of flights per year. We are pleased and proud that we again can contribute to this operation with our innovative ADS-B Out solution and to further emphasize our long lasting relationship."

For Further Information [Click Here](#)

**Source:** Epicos, Fokker Services

## INDRA and UPM will Collaborate in the Development of Sensors for the Spanish Navy'S F110 Frigate

Indra has reached an agreement to include the Polytechnic University of Madrid (UPM) in the Industrial Plan for the PROTEC Program launched to develop and integrate the sensors for the Spanish Navy's future F110 frigate.

The deal was formalized through the signature of a partnership agreement with the UPM Rogelio Segovia Foundation for the Development of Telecommunications (Fundetel) and the Indra-UPM Research Chair at the university's Faculty of Telecommunications Engineering.

The works will commence this year and will last until 2019. The first areas of collaboration that have been identified are related to the analysis, design and development of elements for the identification friend or foe (IFF) system, the X-band radar for the surveillance of surface and low-flying aerial targets, and the radar electronic support measures (RESM) system.

Indra will start working with the UPM Radiation, Microwave and Radar groups, with which it has collaborated in other projects in the past.

Other areas of collaboration under the auspices of the agreement will be determined in later stages of the PROTEC F110 program.

The agreement enables Indra to forge ahead with the Industrial Plan associated with the PROTEC F110 program in which it is acting as the driving organization for reinforcing the business fabric and developing research centers at Spanish universities.

The company will therefore help shine the spotlight on the expert knowledge of university professionals who work in highly specialized fields. For the UPM, it is an opportunity to participate in a cutting-edge technological project which will help it consolidate work and research groups that have experience in and knowledge of the development of the technologies of the future.

The agreement highlights the benefits to be gained from university-business collaboration in the development of highly complex technological solutions.

### Integrated mast

Indra and Navantia are working closely together in the PROTEC F110 R&D program to equip the Spanish Navy's new frigate with a novel mast that will house all of the vessel's sensors. These will be composed of flat elements to lower the radar cross section, making them harder to detect. Meanwhile, the high level of digitalization involved will significantly enhance their functions and performance.

Indra's input in the program consists in developing the primary radars for both aerial and surface surveillance; the secondary radar or IFF system; the radar electronic support measures and communications systems, and their countermeasure systems to protect the vessel; and the Link 16 communications system. All of these systems will be integrated into the Navantia SCOMBA combat system.

The development of these sensors entails considerable R&D because they will incorporate the most advanced technology to ensure that the systems remain state-of-the-art throughout the entire useful life of the vessel. Moreover, their development is closely in line with the technology demanded in the most advanced international markets.

#### About the UPM Faculty of Telecommunications Engineering

The Faculty of Telecommunications Engineering (ETSIT) of the Polytechnic University of Madrid (UPM) is the doyen of these faculties in Spain. With more than 2,000 students and 260 professors, the ETSIT offers undergraduate programs in Engineering Technology, Telecommunications Services and Biomedical Engineering, as well as a master's program in Telecommunications Engineering (which entitles recipients to practice as telecommunications engineers). The ETSIT is a national and international benchmark in telecommunications engineering training and has agreements with more than 100 universities in 28 countries. It boasts 36 research groups engaged in more than 400 active R&D&I projects, three research institutes and 15 business chairs (including the Indra-UPM Chair), which encourage close ties between the business and academic worlds.

#### About Indra

Indra is one of the main global consulting and technology companies and the technology partner for core business operations of its clients businesses throughout the world. It offers a comprehensive range of proprietary solutions and cutting edge services with a high added value in technology, which adds to a unique culture that is reliable, flexible and adaptable to its client's needs. Indra is a world leader in the development of comprehensive technological solutions in fields such as Defense & Security, Transport & Traffic, Energy & Industry, Telecommunications & Media, Financial Services and Public Administrations & Healthcare. Through its Minsait unit, it provides a response to the challenges of digital transformation. In 2015 it reported revenues of €2,850m. had a workforce of 37,000 professionals, a local presence in 46 countries, and delivered projects in more than 140 countries.

For Further Information [Click Here](#)

**Source:** Epicos, Indra

## Aegean Airlines selects Rockwell Collins to provide data link connectivity for its fleet of aircraft

Aegean Airlines is now experiencing the operational benefits of air-to-ground data link communications using Rockwell Collins' ARINC GLOBALinkSM.

The new GLOBALink implementation is enabling the airline to become more efficient by using data link messages to improve departure control and turnaround, send and receive real-time aircraft and engine data to improve maintenance operations and upload gate connection information to aircraft inflight entertainment displays to enhance the passenger experience.

"Adding data link capability to our fleet will further enhance the effectiveness of our operation and help to improve service to our customers," said Nikos Panagiotopoulos, Operations Manager, at Aegean. "Our crews and passengers will highly benefit from the options that data link offers. Rockwell Collins is a valuable partner that was able to provide complete end-to-end support including avionics configuration, air-ground routing and integration with our back office systems in a very short implementation time."

"Aegean Airlines has been highly successful even in the face of very challenging global economic conditions," said Alexis Hickox, head of global sales, Commercial Aviation for Rockwell Collins. "It's clear that their investment in services like ARINC GLOBALink is enhancing operations today and for the future."

### About Rockwell Collins

Rockwell Collins is a pioneer in the development and deployment of innovative aviation and high-integrity solutions for both commercial and government applications. Our expertise in flight deck avionics, cabin electronics, mission communications, simulation and training, and information management is delivered by a global workforce, and a service and support network that crosses more than 150 countries. To find out more, please visit [www.rockwellcollins.com](http://www.rockwellcollins.com).

**Source:** Epicos, Rockwell Collins

## SAAB Receives Upgrade Orders for U.S. Army Training Systems

Defence and Security company Saab has received three orders from the U.S. Army Program Executive Office of Simulation, Training and Instrumentation (PEOSTRI). Saab will now provide OSAG 2.0 interoperability upgrades for the U.S. 7th ATC's Deployable Instrumentation System – Europe (DISE) and the Combat Vehicle Tactical Engagement Simulation System (CVTESS) to meet U.S. Army and European forward deployment interoperability requirements.

These new orders, implemented as Mid-Life Service Upgrades, deliver a first of its kind fully interoperable solution to the customer. They will enable soldiers to quickly configure training system lasers to operate using either MILES Communication Code (MCC), primarily used in U.S. training environments or the OSAG 2.0 standard, used by most nations in Europe, for training engagements in any theatre and together with multinational units. OSAG 2.0 is a software code originally developed by Saab that enables true ballistic simulation of ammunition used in anti-tank and vehicle weapons when firing with laser transmitters.

Originally delivered in 2001 for up to Battalion sized training, DISE provides deployable instrumented Live Training capability consisting of Tactical Engagement Simulation System lasers and detectors, exercise control (EXCON), battle tracking, data collection and rapid After Action Review (AAR) capability for Live Training events.

In addition to the OSAG 2.0 upgrade of the DISE infantry systems, Saab will also deliver OSAG 2.0 enabled CVTESS capability for the M1 Abrams Main Battle Tank, the Bradley Infantry Fighting Vehicle and brackets for OPFOR vehicles.

“This capability provides the U.S. 7th ATC with the ability to train seamlessly with the European partners, using equipment that can be configured for MILES or OSAG 2.0.” says Cyndi Krisan General Manager, Saab Defense and Security USA's (SDAS) Training & Simulation unit.

Saab has delivered similar Instrumentation Training and CVTESS systems around the world to U.S. Army CONUS and OCONUS locations for Homestation and Combat Training Center (CTC) warfighter readiness training, from Company to Brigade forces.

“This upgrade presents a unique opportunity for NATO forces and U.S. Training Partners within Europe to train together by combining interoperable national systems to create a fully instrumented training environment with any configuration, scale and at any given location,” says Åsa Thegström, head of business unit Training & Simulation within Saab business area Dynamics. Based in Grafenwoehr, Germany, the upgraded DISE capability will be deployed throughout Europe supporting Training Support Activity Europe (TSAE) for Joint and Multinational forces.

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Saab Defense and Security USA LLC (SDAS) delivers advanced technology and systems to United States armed forces and other government agencies. Headquartered in Sterling Virginia, the company has business units and local employees in four states. SDAS is a wholly owned subsidiary of the Saab Group.

Saab serves the global market with world-leading products, services and solutions within military defence and civil security. Saab has operations and employees on all continents around the world. Through innovative, collaborative and pragmatic thinking, Saab develops, adopts and improves new technology to meet customers' changing needs.

**Source:** Epicos, SAAB

### **U.S. Navy awards BAE Systems \$192 million contract for work on new DDG 1000 ships**

BAE Systems has received an indefinite delivery / indefinite quantity contract from the U.S. Navy for post-construction work aboard the guided missile destroyers USS Zumwalt (DDG 1000) and USS Michael Monsoor (DDG 1001). The contract has an initial award of \$10.3 million and a maximum value of \$192.7 million for work through September 2021.

"We're pleased with the opportunity to help prepare the Zumwalt and Michael Monsoor for initial service in the fleet," said Bob Koerber, vice president and general manager of BAE Systems San Diego Ship Repair. "We look forward to working with industry partners to install the state-of-the-art combat systems aboard these leading edge combatants and to finish other hull and engineering enhancements following their construction and delivery."

USS Zumwalt and Michael Monsoor are the first two ships of the Navy's new class of surface combatants. The ships are 610 feet long, displace about 15,700 tons, and are comprised of steel hulls and composite structure deckhouses. The Zumwalt was commissioned in Baltimore last month and now is enroute to its homeport in San Diego. The Michael Monsoor is currently under construction in Bath, Maine, and will also be homeported in San Diego.



BAE Systems will begin work on the Zumwalt next month. Work on the Michael Monsoor will begin after the ship is delivered to the Navy. Under the new contract, the company's San Diego shipyard will support the installation and completion of the ships' combat systems and perform post-construction hull, mechanical, and electrical enhancements. The shipyard also will support the ships' post-shakedown availabilities following the demonstration and certification of their combat systems and final sea trials.

In addition to the shipyard's work, BAE Systems' Weapon Systems business will work on the ships' gun systems, which will be capable of delivering ordnance against a wide variety of targets. The business also will install the ships' Mk 57 vertical launch systems, which will provide the capability and flexibility of deploying existing and new missiles without costly, complex reconfiguration or maintenance.

BAE Systems is a leading provider of ship repair, maintenance, modernization, conversion, and overhaul services for the Navy, other government agencies, and select commercial customers. The company operates seven full-service shipyards in Alabama, California, Florida, Hawaii, and Virginia, and offers a highly skilled, experienced workforce, eight dry docks, and significant pier space and ship support services.

For Further Information [Click Here](#)

**Source:** Epicos, BAE Systems