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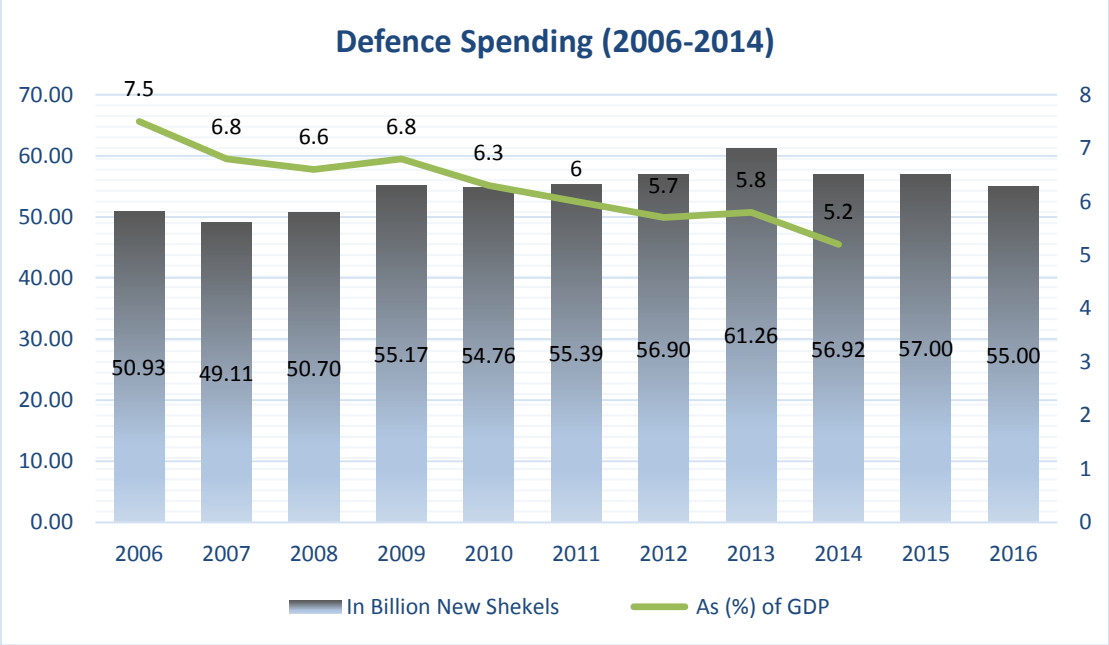
Part I: Israel

Part II: Epicos Newsroom

Israel: Defence Budget and Capabilities

Traditionally Israel spends a significant amount of funds in defence. According to the Stockholm International Peace Research Institute (SIPRI) Israel spends almost on average 6.3% of their Gross Domestic Product (GDP) for the period 2006-2014. This trend was reaffirmed as the defence budget for 2015 will reach Israeli new shekel (NIS) 57 billion (US$ 14.7 billion), while defence budget for 2016 will reach NIS 55 billion (US$ 14.7 billion). This actually highlights the determination of the Israeli government to support a defence budget which will ensure that the armed forces will be able to deliver their core capabilities.



Source: SIPRI DATABASE

Regarding defence imports, USA has a leading role. Apart from the North American country, other countries that export arms to Israel, during the period 2006-2014 were Germany, Italy and Canada. USA made equipment took the lion's share in Israeli defence imports as they represent 78% of total imports for the period 2006-2014.

One of the most sophisticated defence system Israeli armed forces operate is the "Iron Dome" a system designed to protect from the threat of projectile weapons, by intercepting short-distance rockets.

Air force operates among others the F-16I nicknamed "Sufa" (Storm) manufactured by "Lockheed Martin" and equipped with a "Pratt & Whitney" engine as well as advanced systems developed in Israel according to the air force's specifications by the country's defence industries.

Additionally, Israeli air forces operates Eurocopter AS-565 Panther nicknamed Atalef, a sea helicopter that entered service in 1996. The Atalef carries out a range of operations, including rescue, reconnaissance and targeting. It replaced the IAF's previous sea helicopter, the Dolphin.

Merkava Mark IV tank operated by the Israeli armed forces, carries several Israeli made systems, including the Fire Control System, Turret and Gun Drive System, Battle Management System (BMS) and Crew Protection systems, developed by Elbit systems.

In May 2015, Israeli Defense Minister Moshe Ya'alon and German Defense Minister Ursula von der Leyen agreed Israel to purchase four warships from Germany to protect its offshore natural-gas drilling platforms, in a €430 million ($480 million) deal. Israeli defence capabilities will be upgraded with this purchase and as Defence Ministry Director General Maj. Gen. (Res.) Dan Harel stated it will provide "a dramatic leap upward in the navy's ability to protect the State of Israel's strategic natural gas sites". According to Israeli Industrial Cooperation Authority ICA, ThyssenKrupp (the supplier of the warships) would purchase Israeli-made goods, invest in research and development and look into investing approximately NIS 700 million ($180 million) in Israeli companies.

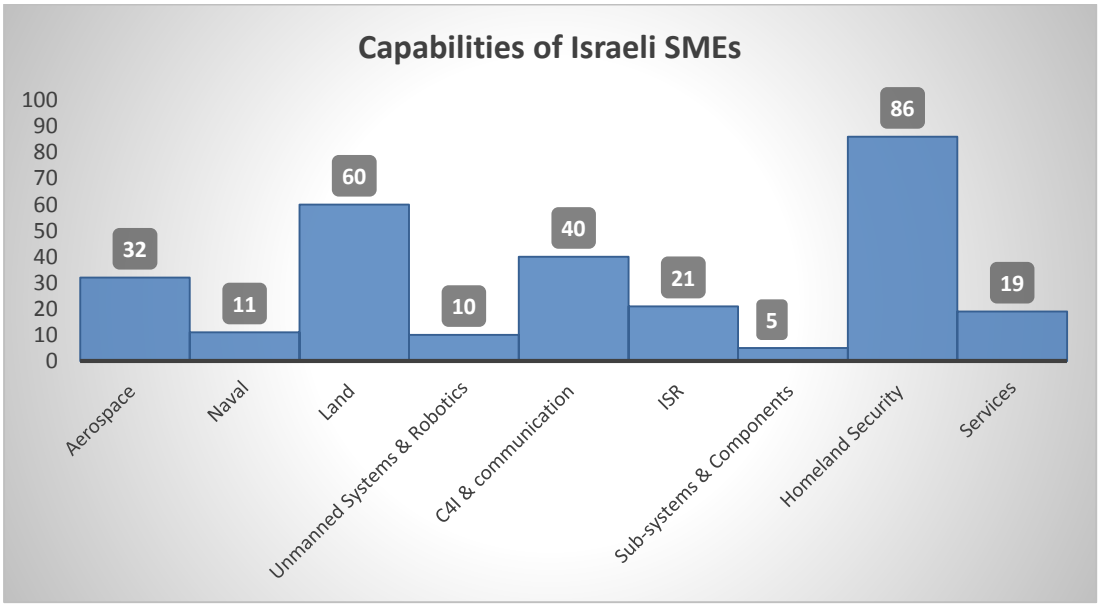
Kyriazis Vasileios
Epicos Newsletter Head Editor

Israeli Aerospace and Defence Industry

Despite its small size and overwhelming political problems, and perhaps even because of them, Israel has succeeded in developing what can someone probably, describe as a defence industry with comprehensive capabilities in ground, air and sea combat. This may be attributed to the unmatched pool of highly skilled workers and the world-renowned research and academic capabilities that the country has. The Israeli defence industry produces a wide range of products ranging from ammunition, small arms and artillery pieces to sophisticated electronic systems, UAVs and technological advanced tanks, such as the Merkava. The quality and flexibility of the products manufactured drew the attention of customers worldwide and currently more than 70% of the defence industry products are exported.

The starting point for the metamorphosis of the Israel's Aerospace and Defence industry infrastructure was the 1967 Six-Day War. During the war, France imposed an embargo on arms sales to Israel, including the Mirage planes already on order from the Dassault aircraft factory. As a result Israel started to develop its own industry capabilities. Driven from the outmost motive, survival, Israeli Aerospace and Defence industry flourished and progressively became one of the most important industries globally.

Engineers with combat experience gained from the obligatory serving in the Israel Defence Forces (IDF) gave a significant advantage in the national defence industry. There is an almost symbiotic relationship between the Israel Defence Forces (IDF) and senior defence industry engineers and in general employees. Most of them are former officers of IDF and many continue to serve in the reserves. This fact provides an extra advantage to the Israeli defence industry and the reason is that employees convert their accumulated combat experience to technological innovation. Additionally, the army plays the role of a "big school" as it actually performs a nationwide screening program through which identifies young people with talent in advance technologies and puts them through rigorous training via elite programs and other military functions. Furthermore, the army helps young people to establish personal networks that often form the basis for later partnerships in the industry.



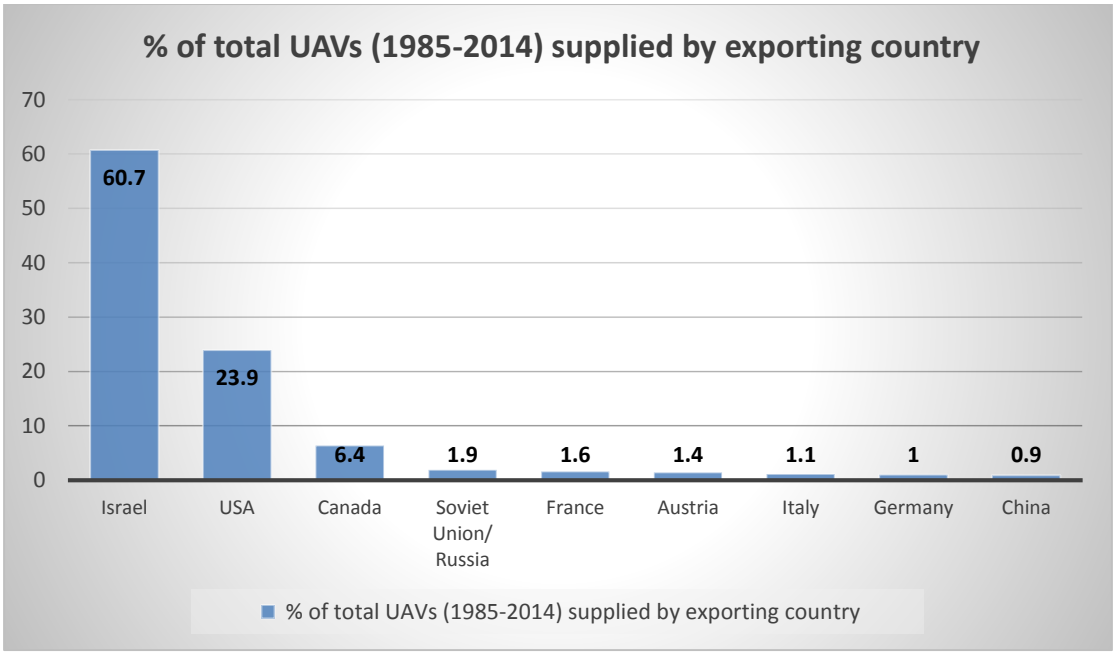
Source: http://en.sibat.mod.gov.il/Industries/SMEs/Pages/SMEs.aspx

According to SIBAT, the Israel MOD International Defense Cooperation directorate there are currently in the country 32 SMEs with capabilities in the aerospace sector, 11 with naval capabilities, 60 with Land sector capabilities, 10 in the unmanned systems and robotics, 40 in the C4I & communication sector, 21 in the ISR sector, 5 in the sub-systems and components sector, while 86 provide services and products to the homeland security (HLS) sector. Finally, there are 19 companies providing services.

Israel's innovative systems in the aerospace sector, include advanced aerostructures, weapon systems and wide range of sensors and avionics including EO, radar and electronic surveillance, used for targeting, reconnaissance and self-defence. All are integrated in the world's most advanced fighter aircraft, including Lockheed Martin's F-35 and F-16, Boeing's F-15 and F/A-18, Sukhoi Su-30, Dassault's Mirage 2000, Eurofighter Typhoon, Saab's Gripen and more.

One specific domain in which Israeli aerospace industry excels, is that of the production of UAVs. It is indicative that the country is the largest exporter of drones. Between 2010 and 2014, it delivered 165 units across the globe. The US came second with 132, followed by Italy's (37). Furthermore, Israel has accounted for the majority (60.7%) of drone exports worldwide since 1987.

Israeli unmanned vehicles are operating in Latin America, the Indian Ocean, Europe, Asia, Africa, and the South Pacific.



Source: http://www.theguardian.com/news/datablog/2015/mar/16/numbers-behind-worldwide-trade-in-drones-uk-israel

Additionally, the Israeli industry is building and equipping the manned and unmanned platforms used by navies around the world to maintain offensive and defensive naval capability, providing situational awareness, command and control for the combat systems and naval special operations.

In the land sector, Israeli industry provides a wide array of equipment ranging from the Merkava Mk4 and Namer armored Infantry Fighting Vehicles (IFS), to precision missiles and guided projectiles, advanced electronics systems, robotic systems, lifesaving kits, sophisticated weapons and ammunition.

For Further information about the Israeli A&D industry visit:
http://www.sibat.mod.gov.il/sibatmain/defense/index.html#p=3

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

D38999 - Ethernet filtered connectors for high bandwidth secure military applications

A company specializing in the design and manufacturing of EMP/EMI/RFI filtered connectors and other filtered modules, made to meet specific customer requirements, is proposing the design, development and production of a unique high bandwidth Ethernet filtering solution, targeted at military and homeland security applications. The Ethernet filter to be developed shall meet international protection standards.

For Further Information Contact our ICO Department
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UDP communication optimization for inter-UAV communications in modern Network Centric Warfare operations

A company excelling in the design and development of advanced real time data exchange solutions for inter-UAV communication requirements, is proposing the installation of a new UDP smart gateway design, providing hard real time and secure data exchange between application machines. The proposed system architecture supports specific requirements including: time-critical and mission-critical applications, limited bandwidth, hot redundancy and deterministic behaviour. The system will fully support the new concepts for advanced Network Centric Warfare (NCW) operations using unmanned platforms.

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The Australian Defence Force Chooses the PC-21

The Australian Defence Force competitively tendered for a new Pilot Training System under "Project Air 5428", from which the PC-21 emerged as the winner after a thorough evaluation and contract negotiations. This package will harmonise training across all three services with the PC-21 providing a modern, cost-effective Training System for basic and advanced pilot training.

"We are delighted that after 28 years of Pilatus PC-9 operations the Commonwealth of Australia has chosen to endorse our reputation for providing world class Training Systems with this new contract. I am equally happy that Team 21 won the deal against all international competitors and that, in the final round, the Australian Defence Force has chosen the Pilatus PC-21 over all other aircraft – once Pilatus, always Pilatus!"

Markus Bucher, CEO of Pilatus, added: "We are truly happy that the Commonwealth of Australia, a valued long-standing customer, has shown their continued trust in Pilatus training systems by signing this new contract. This decision is further proof of the quality and flexibility offered by Pilatus, a world class provider of Training Systems."

The PC-21 is a proven and efficient Training System which is already operating in Australia. The PC-21 has been in service with the Republic of Singapore Air Force at RAAF Base Pearce in Western Australia since 2008 and is also operated by the Air Forces of Switzerland, the UAE, Saudi-Arabia and Qatar. With this latest order 180 aircraft have been sold and Australia is now the sixth country to revolutionize their pilot training with the PC-21.

The PC-21's for Australia will be delivered commencing June 2017 and will form the backbone of future pilot training for the Australian Defence Force for the next 25 years. Pilatus will continue to provide the ADF with premium Swiss quality and work with our partners to provide a world class training system – the Pilatus PC-21.

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For Further Information Click Here

Airbus Helicopters delivers the first two H145M to the German Armed Forces

Airbus Helicopters delivered the first two lightweight military multi-role H145M helicopters (LUH SOF) to the German Armed Forces (Bundeswehr). The helicopters will be used by the Kommando Spezialkräfte (KSK), the German Army's Special Forces, in Laupheim. The Bundeswehr, which is the launch customer for the H145M, has ordered 15 of these helicopters.

"With its cutting-edge technologies, outstanding performance and true multi-role capabilities, the H145M answers to the challenging demands of our military customers in today´s missions", said Wolfgang Schoder, CEO of Airbus Helicopters Germany. "We are very proud to hand over these aircraft on time and on budget. From contact signature to first delivery in just two years, this project is a benchmark of efficient cooperation between Bundeswehr, authorities and industry."

The H145M is the military version of the civil H145 that entered service in summer 2014 and recently reached the milestone of 10,000 flying hours in customer operations. With a maximum take-off weight of 3.7 tons, the H145M can be used for a wide range of military operations including utility, reconnaissance, search and rescue, armed scout, and medical evacuation. The Bundeswehr H145M (LUH SOF) is equipped with a fast roping system for troops, cargo hooks, hoists, a pintle-mounted door gun, ballistic protection and an electronic countermeasures system, which offers new capabilities for KSK special operations.

The aircraft has also been designed for day and night missions as well as for those carried out in harsh weather conditions and difficult terrain. Its mission equipment range also includes a helmet mounted sight and display as well as a self-sealing supply tank. Powered by two Turbomeca Arriel 2E engines, the H145M is equipped with full authority digital engine control (FADEC). Its low acoustic footprint makes the H145 the quietest helicopter in its class.

Earlier this year, the Bundeswehr awarded Airbus Helicopters a seven-year comprehensive co-operative support and services agreement. Airbus Helicopters´ responsibilities include the management and implementation of maintenance and repair activities, material supply and airworthiness. "This co-operative full-service contract is a modern and proven answer to the Force´s claims for optimal availability, reliability and readiness of the helicopter fleet. It secures the level of autonomy of the KSK in crisis and war operations while using the best-practice support and service of the global civil H145 fleet", said Wolfgang Schoder.

Building on the robustness, low operating costs and the especially high operational availability of the H145 family, the H145M is equipped with the Helionix® digital avionics suite, including the 4-axis autopilot developed by Airbus Helicopters. Helionix® significantly supports the pilot during the mission by intelligently providing the right information at the right time to reduce the pilots' workload. It summarizes relevant flight parameters on single

screens for intuitive flight management, thus optimizing the situational awareness in the cockpit and increases flight safety.

The H145 helicopter family has proven its value for military customers for many years. For instance, the US Armed Forces have ordered a total of 427 helicopters of the related model UH-72A Lakota for utility and training missions. All these rotorcrafts have been delivered on time and on budget. The UH-72A achieves operational availability rates of over 94 percent on average.

About Airbus Helicopters

Airbus Helicopters is a division of Airbus Group. The company provides the most efficient civil and military helicopter solutions to its customers who serve, protect, save lives and safely carry passengers in highly demanding environments. Flying more than 3 million flight hours per year, the company's in-service fleet includes some 12,000 helicopters operated by more than 3,000 customers in 152 countries. Airbus Helicopters employs more than 23,000 people worldwide and in 2014 generated revenues of 6.5 billion Euros. In line with the company's new identity, fully integrated into Airbus Group, Airbus Helicopters has renamed its product range replacing the former "EC" designation with an "H".

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Lockheed Martin Commercial Flight Training to feature Rockwell Collins integrated visual systems on its Mexico-based A320 flight simulators for Airbus

As part of a contract with Lockheed Martin Commercial Flight Training, Rockwell Collins' integrated visual systems will be featured on two Airbus A320 full flight simulators that will be based at Airbus's new training centers in Mexico City, Mexico.

"Our integrated visual systems are proven in the most challenging training exercises, which is especially valuable for airlines whose routes take them to some of the busiest and most difficult airports in the region," said LeAnn Ridgeway, vice president, Simulation and Training Solutions for Rockwell Collins. "In addition, our visual system solution delivers a significant reduction in life-cycle cost. This aligns perfectly with the 'Training by Airbus' strategy to ensure service and support throughout the operational life of an airline's Airbus fleet."

Rockwell Collins' integrated visual system is available for both commercial and military training platforms and features the following to enhance flight training programs:

- Market-leading image generation systems with unmatched performance that exceeds all regulatory requirements;
- Long-life, laser-illuminated projector technology that provides superior image quality, especially for nighttime and low-visibility representations needed to meet training requirements;
- Whole Earth environment with high-resolution, geo-typical imagery with an expansive library of certified airport models to create high-fidelity realism.

The open, scalable architecture of Rockwell Collins' integrated visual system saves operators cost by minimizing hardware replacement over the life of the system.

About Rockwell Collins

Rockwell Collins is a pioneer in the development and deployment of innovative communication and aviation electronic 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.

Source: Epicos, Rockwell Collins

Northrop Grumman Delivers Center Fuselage for First Japanese F-35 Aircraft

Northrop Grumman Corporation (NYSE:NOC) has delivered the center fuselage for Japan's first F-35 Joint Strike Fighter, an F-35A conventional take-off and landing (CTOL) aircraft designated AX-1.

"This on-time delivery marks another important step in the F-35 team's drive to support and help fulfill our allies' 21st century national security requirements," said Brian Chappel, vice president and F-35 program manager, Northrop Grumman Aerospace Systems. "We're proud of the role that Northrop Grumman's F-35 Integrated Assembly Line [IAL] is playing in increasing the affordability and availability of this fifth-generation, multirole fighter."

The center fuselage is a core structure of the F-35 aircraft. As a principal member of the Lockheed Martin-led F-35 industry team, Northrop Grumman designed and produces the center fuselage for all three F-35 variants: the F-35A; the F-35B short takeoff vertical landing variant; and the F-35C carrier variant.

Each F-35 receives an alphanumeric designation based on its variant type (A, B or C), the country for which it flies (e.g., F = U.S., K= United Kingdom, X = Japan), and sequence number of the jet.

The AX-1 center fuselage is one of 42 F-35 center fuselages that Northrop Grumman is producing for Japan. It is the 206th center fuselage that the company has produced at its Palmdale Aircraft Integration Center of Excellence, and the 44th such unit delivered this year.

The first four Japanese F-35As, including AX-1, will undergo final assembly and checkout (FACO) at Lockheed Martin's F-35 facility in Fort Worth, Texas. The remaining 38 Japanese jets (AX-5 through AX-42) will be completed at Japan's new F-35 FACO facility in Nagoya, Japan.

The IAL is a highly automated set of work cells developed to assemble – efficiently, affordably and with high precision – the center fuselage for all three F-35 variants. In 2013, the IAL was designated the "Assembly Plant of the Year" by Assembly Magazine, the first and only time to date that this honor has been bestowed on an aerospace and defense contractor.

Northrop Grumman plays a key role in the development and production of the F-35 weapons system. In addition to producing the jet's center fuselage, the company produces its radar, electro-optical, avionics and communications subsystems. It also develops mission systems and mission-planning software; develops and maintains pilot and maintainer training systems courseware; and manages the team's use, support and maintenance of low-observable technologies.

Northrop Grumman is a leading global security company providing innovative systems, products and solutions in unmanned systems, cyber, C4ISR, and logistics and modernization to government and commercial customers worldwide. Please visit www.northropgrumman.com for more information.

Source: Epicos, Northrop Grumman Corporation

Lockheed Martin Selected to Help Australia's Future Pilots Take Flight

The Australian Department of Defence has awarded the AIR 5428 Pilot Training System contract to Lockheed Martin-led Team 21 to train the next generation of Australian Defence Force pilots.

The initial seven year program is valued at AU$1.2 billion. Performance-based options for up to 25 years will provide the opportunity to extend the length and increase the value of the total contract. Lockheed Martin will lead the delivery of an integrated solution tailored for all future pilots for the Royal Australian Air Force, Royal Australian Navy and the Australian Army.

"We are honoured to partner with Australia to deliver a comprehensive training solution that is customised for their needs and focused on fifth-generation mission readiness," said Jon Rambeau, vice president and general manager for Lockheed Martin Training and Logistics Solutions. "Our proven, innovative training system will help the Australian Defence Force meet the challenge of preparing pilots to perform in today's complex global environment."

As prime contractor, Lockheed Martin will provide overall project management for the pilot training system and deliver a family of integrated ground-based training technologies.

"Our approach will be tailored to the particular needs of Australia's future defence requirements and will leverage proven turn-key training capabilities from Lockheed Martin, as well as those of our partners – Pilatus Aircraft and Hawker Pacific," said Raydon Gates, Chief Executive, Lockheed Martin Australia and New Zealand.

Pilatus Aircraft will provide PC-21 turboprop training aircraft and through-life engineering and airworthiness support. Hawker Pacific will provide maintenance services and fleet support and leverage its established supply chain in Australia.

With this selection, Australia joins Singapore in employing Lockheed Martin-led integrated turn-key training solutions. As a performance-based system, turn-key training provides increased pilot competency, shorter training times and lower training cost. Team 21 is in the ninth year of a 20-year performance-based flight training contract to provide the Basic

Wings Course to the Republic of Singapore Air Force, at Royal Australian Air Force Base Pearce in Western Australia.

For additional information, visit: www.lockheedmartin.com.au/readiness

About Lockheed Martin

Headquartered in Bethesda, Maryland, Lockheed Martin is a global security and aerospace company that - with the addition of Sikorsky - employs approximately 126,000 people worldwide and is principally engaged in the research, design, development, manufacture, integration and sustainment of advanced technology systems, products and services.

Source: Epicos, Lockheed Martin

US says China unfairly taxes imported aircraft

The United States launched a WTO challenge to China's aircraft taxation on Tuesday, accusing Beijing of discriminating against foreign-made airplanes in breach of global trade rules.

President Barack Obama's administration said Beijing's exemption of certain airplanes in its nascent domestic aircraft industry from a 17 percent value-added tax was unfair to foreign aircraft suppliers.

In a request for consultations with China at the World Trade Organization on the issues -- the first step in a dispute settlement process -- the US Trade Representative said the tax breaks for domestic makers of aircraft under 25 tons "result in substantial discrimination" against imports.

The challenge comes as China is seeking to develop its own aviation sector to reduce dependence on and develop rival suppliers to foreign giants such as Boeing and European rival Airbus.

"China's discriminatory, unfair tax policy is harmful to American workers and American businesses of all sizes in the critical aviation industry, from parts suppliers to manufacturers of small and medium-sized aircraft," US Trade Representative Michael Froman said in a statement.

"We're also especially concerned that China attempted to hide this discriminatory tax policy. Transparency of laws and regulations impacting trade is a core WTO commitment that China must uphold, just as it expects other countries to do," he said.

"For these reasons, the United States is filing a trade enforcement case to hold China accountable."

According to the USTR, the US has uncovered "evidence of multiple Chinese measures" that discriminate in favor of certain domestically made aircraft by exempting them from the 17 percent value-added tax (VAT) that is applied to imported aircraft that weigh less than 25 metric tons.

The tax is also applied to some foreign aircraft parts, while Chinese producers do not have to pay it, according to the USTR.

In addition, it said, China has not published its tax exemptions for domestically produced aircraft.

The USTR said that the Chinese-made aircraft supported by the exemptions appear to include general aviation aircraft, including business jets, certain agricultural aircraft, and regional jets such as the ARJ21, made by the state-owned giant Commercial Aircraft Corp. of China.

It did not say which US aircraft makers have been hurt by the policy. Boeing, the US aerospace giant, generally makes aircraft larger than 25 tons.

US producers of small and medium aircraft and aircraft components and systems are "all potentially disadvantaged," a US trade official told AFP.

For example, the official said, Canadian manufacturer Bombardier reports suppliers in 49 states.

China is one of the fastest-growing aviation markets in the world. The USTR cited estimates by Chinese regulatory agencies of annual growth of about 19 percent per year in general aviation aircraft through 2020.

- Aerospace key US export -

The US aerospace sector employs nearly 500,000 people and is a major driver of US economic growth and exports, and Washington has long been quick to defend it against alleged unfair treatment. "The Obama administration is committed to strong trade enforcement to ensure that our trading partners play by the rules," Froman said.

If the consultations with China fail to reach an agreement, the US may request a WTO dispute settlement panel to weigh the matter. The United Steelworkers union welcomed the USTR announcement. "China showers the industry with subsidies and has accelerated the growth of its aerospace companies through coercive and often illegal means," USW president Leo Gerard said in a statement.

Trade is a chronic irritant between the countries as China's massive economy depends largely on exports for growth, and the United States is its biggest import market.

Some US officials and businesses have long complained about the huge US trade deficit with China and accuse Beijing of keeping its yuan currency undervalued to gain an unfair trade advantage.

In 2014, the United States won two WTO decisions against China, one for imposing unfair extra duties on American cars and sport utility vehicles and the other for imposing duties and quotas on exports of rare earths and other materials used in manufacturing high-tech goods like mobile phones and wind turbines.

"The success of our global trading system depends on transparency and strong enforcement. Each partnering country must play by the same rules," said Dave Reichert, chairman of a trade committee in the US House of Representatives.

"Today's case is an important confirmation that enforcement matters," said Reichert, a Republican lawmaker who represents Washington state, where Boeing aircraft manufacturing is concentrated.

Source: 2015 AFP, Agence France-Presse (AFP)

Pakistan to privatise national airline by next year

Pakistan will privatise its national carrier by next July, a minister said Tuesday, following years of crushing losses and mismanagement that have battered the airline's reputation.

The widely anticipated announcement prompted protests by Pakistan International Airlines employees and the main opposition party.

"We are planning to privatise PIA in view of its heavy and recurring financial losses," Privatisation Minister Mohammad Zubair told AFP.

Once the government approves the sale, the Privatisation Commission will try to sell the struggling airline on the international market.

Zubair said the government was considering the mode of privatisation but one option was to sell 26 percent of the total shares along with management control.

"We will hold road shows in the Middle East and China as well as in Europe to find a buyer," he added.

The government over the weekend converted PIA's state-owned status to a "commercial entity" through an ordinance, but stopped short of announcing its privatisation plans.

That move sparked a fierce backlash among many of PIA's 15,000 employees, who rallied at major airports across the country Monday and Tuesday.

"This is our peaceful protest against the government plan," said Shamim Akmal, a senior employee representative.

PIA's cumulative losses were 227 billion rupees ($2.2 billion) as of last June.

The government had to inject 12 to 15 billion rupees annually to keep the airline alive and pay employees.

PIA, one of the world's leading airlines until the 1970s, now suffers from frequent cancellations and delays and has been involved in numerous controversies over the years, including the jailing of a drunk pilot in Britain in 2013.

It has also faced problems acquiring security clearances to the European Union for cargo flights. The airline has also traditionally handed out tens of thousands of free tickets each year, contributing to its losses.

"If anybody has a better plan (except privatisation), we are ready to listen to that," the minister said.

Source: 2015 AFP, Agence France-Presse (AFP)