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Special Focus: Global Defence Spending (Selection of Countries)

Volume 6 Number 52 - Wednesday, 24 December 2014

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Japan: Japanese Armed Forces Restructuring and Future Defence Procurements



Japanese armed forces are in a process of modernization and restructuring. The number of units and the structure of them will be reorganized in order to shape an army ready to be able to respond swiftly and deal effectively with an attack on offshore islands and various other situations that an army can face in the modern battlefield. Emphasis will be placed on functions that can be used for

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various activities having asymmetric response capability. Under this notion Japan will further strengthen its Ground Self-Defense Force (GSDF), Maritime Self-Defense Forces (MSDF) and the Air Self-Defense Forces (ASDF) with advanced equipment.

More specifically GSDF will review its organization and equipment with a particular focus on tanks and howitzers. Namely, the current number of tanks and howitzers were approximately 700 and 600 respectively at the end of 2013, and will be reduced approximately to 300 and 300 within 10 years.

		Category	Present (as of the end of FY2013)	Future		
	Authorized Number of personnel Active-Duty Personnel Reserve-Ready Personnel		approx. 159,000 approx. 151,000 approx. 8,000	159,000 151,000 8,000		
GSDF	Major units	Rapid Deployment Units	Central Readiness Force 1 armored division	3 rapid deployment divisions 4 rapid deployment brigades 1 armored division 1 airborne brigade 1 amphibious rapid deployment brigade 1 helicopter brigade		
		Regional Deployment Units	8 divisions 6 brigades	5 divisions 2 brigades		
		Surface-to-Ship Guided Missile Units	5 surface-to-ship guided missile regiments	5 surface-to-ship guided missile regiments		
		Surface-to-Air Guided Missile Units	8 anti-aircraft artillery groups/regiments	7 anti-aircraft artillery groups/regiments		
MSDF	Major units	Destroyer Units Submarine Units Minesweeping Units Patrol aircraft Units	4 flotillas (8 divisions) 5 divisions 5 divisions 1 flotilla 9 squadrons	4 flotillas (8 divisions) 6 divisions 6 divisions 1 flotilla 9 squadrons		
Ŷ	Major equipment	Destroyers (Aegis-Equipped Destroyers) Submarines Combat Aircraft	47 (6) 16 approx.170	54 (8) 22 approx.170		
ASDF	Major units	Air Warning & Control Units Fighter Aircraft Units Air Reconnaissance Units Air Refueling/Transport Units Air Transport Units Surface-to-Air Guided Missile Units	8 warning groups 20 warning squadrons 1 AEW group (2 squadrons) 12 squadrons 1 squadrons 1 squadron 3 squadrons 6 groups	28 warning squadrons 1 AEW group (3 squadrons) 13 squadrons 		
	Major equipment	Combat aircraft Fighters	approx. 340 approx. 260	approx. 360 approx. 280		

Regarding the MSDF the main differentiation is that the number of destroyers will be increased from 48 (12 escort divisions) to 54 (14 escort divisions). Furthermore, two Aegis-equipped destroyers will be added, bringing the fleet to 8. Finally MSDF will maintain the augmented submarine fleet as well as patrol aircraft units in order to patrol surrounding waters and carry out defence operations effectively.

The ASDF planned, to modernize the current F-15 fighters and improve the capability of F-2 fighters, as well as continuingly introduce the F-35A fighters. Finally the ASDF will maintain surface-to-air guided missile units providing multi-layered defence for Japan against ballistic missile attacks.

Kyriazis Vasileios, Epicos Newsletter Head Editor

Estonian Future Defence Budget



According to the Estonian authorities for the period 2015-2022 the military defence spending is guaranteed at a level of at least 2 percent of GDP and is aimed primarily at

developing military capabilities. Additionally, the total defence expenditure will be increased from €408,924 million Euros that will be in 2015 to €600,705 million Euros by 2022. The main objective the Estonian authorities are planning to achieve with these funds is to develop and sustain high-readiness units.

	2015	2016	2017	2018	2019	2020	2021	2022
GDP nominal growth	6.4%	6.5%	6.1%	5.5%	5.4%	5.4%	5.3%	5.3%
GDP real growth	3.49%	3.59%	3.29%	2.75%	2.66%	2.67%	2.59%	2.62%
Defence spending as a % of GD	2%	2%	2%	2%	2%	2%	2%	2%
Defence expenditures (current prices) thousands of €	408,924	435,329	462,037	487,641	514,048	541,805	570,488	600,705

Regarding the land operations, main priorities are to establish high-readiness infantry brigades, to develop armored maneuver capability and upgrading anti-tank capability. More specifically, mobile in-direct fire support capability, 155mm self-propelled howitzers shall be introduced into service and the Defence Forces' anti-tank capability will be enhanced significantly thanks to procurement of modern anti-tank missile systems.

Regarding the naval forces first priority is to develop mine warfare capability with the modernization of three mine countermeasure vessels and the introduction to service of one naval auxiliary vessel. Additionally, the Navy shall continue participating in international military operations and the NATO mine warfare group, thus ensuring, among other things, the frequent presence of NATO's permanent Mine Countermeasures Group (SNMCMG1) in the Baltic Sea.

Another priority for the years to come is the reconstruction of Ämari Air Base, which will enable fighter aircraft of NATO countries to use it as a base. Additionally, Ämari will also play an important role as a host nation support air base whenever a need for allied reinforcements would be required. Additionally, Estonia will develop a mobile short to medium-range air defence capability and the existing short-range air defence capability will be improved.

> Kyriazis Vasileios, Epicos Newsletter Head Editor

Canadian Defence Procurements; An Overall Analysis



Overall Analysis The Canadian authorities spend a fair amount of funds on defence. Starting from the year 2011-12 it is planned that the National Defence's annual budget will expand from approximately \$18 billion in 2008-09, to over \$30 billion in 2027-28. In total, the Government plans to invest close to \$490 billion in defence over the period 2008-2028. According to the Stockholm International Peace

Research Institute (SIPRI), Canada imports defence equipment from eight (8) different countries, a fact that highlights a variety of countries with which Canada is cooperating in the aforementioned subject. However, if we take a closer look in the Canadian defence imports we will see that USA plays an extremely important role that "shades" the participation of other countries in the Canadian defence procurements.

It is indicative that for the period 2008-2013, Canada spent \$1458 million US dollars at constant (1990) prices, in procuring defence equipment from foreign countries. From this amount, \$1297 million were spent in US made equipment (89% of the total amount). Netherlands and United Kingdom are the next two countries based on the amount of funds allocated with \$67 and \$27 million US dollars at constant (1990) prices respectively.



Aircraft are the predominant area of imports for the period 2008-2013 with a total amount of \$1145 US million at constant (1990) prices. The 2nd most important sector is that of missiles with \$136 US million at constant (1990) prices whereas other areas such as armored vehicles, sensors and artillery follow.

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 co



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...

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Design and manufacturing of special purpose jigs and machines for the aerospace and defense industry



A company with long standing experience in the automotive industry is proposing collaboration with a prime or lower tier company, for the design and manufacturing of jigs and/or machines that can be used for general or special purposes, in the aerospace and defense equipment manufacturing and testing processes.

For Further Information Contact our ICO Department

Mail at: g-menexis@epicos.com

Provision and Installation of an Airborne Video Surveillance System, for Homeland Security applications, to a targeted country



A company excelling in the area of embedded systems and avionics, is willing to undertake the task of collaborating with a local partner, in a targeted country, for the provision and installation of its Airborne Video Surveillance System, to be used in Homeland Security (HLS) platforms (UAV, UGV, stationary posts). The system can be installed as stand-alone equipment, or integrated in a major HLS system.

For Further Information Contact our ICO Department Mail at: <u>g-menexis@epicos.com</u>

News from our A&D Business Network

epicos.com Finmeccanica-Alenia Aermacchi: contract of 120 million Euros with Italian Minist Defence for the supply of three M-346 aircraft



Finmeccanica-Alenia Aermacchi and ARMAEREO (Italian National Armaments Directorate) signed today in Rome a contract worth 120 million Euros to provide the Italian

Air Force with further three advanced trainer aircraft M-346 (identified as T-346A by the Italian Air Force), with ground base training system and relevant logistic support included.

The contract is part of a wider agreement already signed by the parties in 2009 for the total supply of 15 M-346s. At that time, a contract for a first tranche of six aircraft and related flight simulators had been signed.

The T-346A contributes to the technological update process on the advanced pilot's training of Italian Air Force fleet. The aircraft will work as the training pillar for the new generations of air tactical pilots, both Italian and international, at 61° Stormo in Lecce, where the Italian Air Force flight school - opened also to pilot students coming from other Countries - is based.

The M-346 is the most advanced fighter trainer aircraft currently on the market and the only new-generation trainer optimised for the role of training pilots who fly on latest-generation high-performance military planes.

The M-346 has won the most important international bids (Singapore, Israel and Poland), with a total of 59 aircraft ordered to date.

The M-346's Integrated Training System (ITS), actually operating in Lecce military Air Base, includes, further to the aircraft, flight simulators and ground based training systems.

Press Office Ph. +39 06 32473313 Fax +39 06 32657170 finmeccanica.com ufficiostampa@finmeccanica.com

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Airbus Helicopters Forging Ties with Innovative SMEs



Airbus Helicopters officially launched its new Open Innovation platform at an event attended by Airbus Helicopters' Executive Vice President of Engineering, the PEGASE center of excellence and a number of French SMEs. The program gives creative companies looking to break into new

markets the opportunity to support Airbus Helicopters in its innovation strategy.

The launch featured an appraisal of the calls for expertise made since 2012 as part of the Helicopter of the Future project. Though responding to a specific set of objectives, these calls have yielded convincing results and have paved the way for Airbus Helicopters' fresh approach to innovation.

Created to support new technologies applicable to the helicopter industry in the short term, the Open Innovation platform allows innovative companies to offer their services to Airbus Helicopters. Selection is based on predefined criteria, which include the following: a sufficiently high degree of technological maturity, the possibility of a rapid return on investment, the ability to integrate the specific characteristics of the aerospace industry, and a positive impact on customer satisfaction and quality of service.

The Open Innovation platform offers the creators of selected projects a partnership with Airbus Helicopters through a predefined contractual framework encompassing specific aspects of innovation, such as the development of expertise and intellectual property, and the potential for industrial development over time.

Though the program is aimed primarily at small and medium-sized enterprises, it is open to all legal entities possessing a suitable industrial or scientific framework.

Jean-Brice Dumont, Airbus Helicopters Executive Vice President Engineering: "Airbus Helicopters has always sought to make SMEs an integral part of its industrial strategy, and the Open Innovation program is the latest proof of that. Thanks to a mutually beneficial and enriching partnership for all parties, it gives innovative SMEs an opportunity to make themselves known and develop."

Currently oriented towards French companies, the program will very shortly be opened up to businesses around the world.

Companies wishing to sign up for the Open Innovation program or obtain more information may access the portal at the Airbus Helicopters website, the Partner Portal

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<u>https://partner.eurocopter.com/OpenInnovation/</u> or, from February 2015, at <u>https://partner.airbus.com/OpenInnovation/</u>.

About Airbus Helicopters

Airbus Helicopters, formerly Eurocopter, is a division of Airbus Group, a global pioneer in aerospace and defense related services. Airbus Helicopters is the world's No. 1 helicopter manufacturer and employs more than 23,000 people worldwide. With 46 percent market share in civil and parapublic sectors, the company's fleet in service includes some 12,000 helicopters operated by more than 3,000 customers in approximately 150 countries. Airbus Helicopters' international presence is marked by its customer centers and participations in 21 countries, and its worldwide network of service centers, training facilities, distributors and certified agents. Airbus Helicopters' range of civil and military helicopters is the world's largest; its aircraft account for one third of the worldwide civil and parapublic fleet. The company's chief priority is to ensure the safe operation of its aircraft for the thousands of people who fly more than 3 million hours per year.

For more information please contact:

Stéphane Chéry Tel: + 33 (0)4 42 85 60 51 Mob: + 33 (0)6 23 93 71 23 <u>stephane.chery@airbus.com</u>

Gloria Illas Tel: + 33 (0)4 42 85 58 89 Mob: +33 (0) 6 31 47 08 99 gloria.illas@airbus.com

Claas Belling Tel: + 49 (0)906 71 4565 Mob: +49 (0)151 6885 4939 <u>Claas.belling@airbus.com</u>

Or Click Here

Julia Sailer Tel: + 49 (0)906 71 2129 Mob: + 49 (0) 151 2645 0997 Julia.sailer@airbus.com

Erin Callender Tel: + 33 (0)4 42 85 51 31 Mob: + 33 (0)6 72 86 68 03 Erin.callender@airbus.com

Priscilla Yip Tel: +65 6592 7217 Mob: +65 9660 7040 Priscilla.yip@airbus.com

Epicos Newsroom

Air China orders 60 Boeing 737s for more than \$6 bn



Boeing announced Monday it would sell 60 of its 737 jets to Air China for more than \$6 billion in its latest big deal with an air carrier from an emerging economy.

The deal will include "next generation" 737 and 737 MAX airplanes, which are known for their fuel efficiency, Boeing said. Deliveries are expected between 2016 and 2020, Air China said.

"Our long-standing and productive partnership with Air China dates back to the airline's beginning and we are proud the 737 has been part of their success," said Ihssane Mounir, Boeing's vice president of sales and marketing for Northeast Asia.

"We are excited to see that the 737 family will play a significant role in Air China's continued success."

Boeing officials have highlighted strong commercial growth as a key offset to weakness in its government business in light of defense budget cuts.

Boeing chief operating office Dennis Muilenburg said earlier this month that air travel growth in emerging markets like China, India and Indonesia are expected to increase in light of the mismatch between economies that account for 40 percent of the world's population but just 14 percent of its airplanes.

"We'll have another billion travelers in China come into the marketplace over the next 20 years," Muilenburg told an investor conference December 3.

The strength in commercial orders "is not some kind of short-term cycle."

The deal will grow Air China's fleet by about eight percent, the airline said.

"The company expects the Boeing Aircraft will deliver more cost efficient performance and provide more comfortable services to its passengers," Air China said in a securities filing to the Hong Kong stock exchange.

Air China plans to finance the transaction through cash from its business operations and commercial bank loans.

The airline said the basic price of the jets is \$5.9 billion, though that is subject to "price escalation" under a deal. Boeing granted Air China "significant price concessions" in the transaction, the Chinese company said.

Boeing last week announced it would boost its quarterly dividend by 25 percent and lift its share repurchase plan to \$12 billion from \$4.8 billion left in the current program's authorization.

Boeing said the Air China orders will only be added to its official log once the details are finalized.

As of December 16, Boeing had net orders of commercial aircraft in 2014 of 1,317 planes, just shy of the 1,355 for 2013.

The 737, popular for its fuel efficiency, accounted for the largest number of orders with 1,019.

Boeing shares rose 1.7 percent in mid-morning trade to \$128.31.

Source: 2014 AFP, Agence France-Presse (AFP)

Airbus delivers first next-generation plane to Qatar Airways

Airbus delivered its first next-generation A350-900 plane to Qatar Airways Monday in a formal ceremony that kickstarts its bid to erode rival Boeing's dominance in the lucrative long-haul market.

The Doha-based company, owned by the energy-rich Gulf state, has ordered 80 of the planes, making it not only the launch customer but also the largest single customer of the fuel-efficient A350 so far.

Qatar Airways's first A350 had been due to be delivered on December 13 in the southwestern French city of Toulouse where Airbus is based, but the airline postponed the handover at the last moment, citing equipment in the cabin that did not correspond to its requirements.

"My dear Akbar, you are a demanding customer, particularly demanding and sometimes even a little too demanding, but you are also one of the architects of the A350," Airbus chief Fabrice Bregier told Qatar Airways head Akbar al-Baker at the ceremony.

"We owe you a lot for this programme."

- Fuel savings crucial -

Airlines are in a major push to modernise their fleets to reap the energy savings that the latest generation of planes offer, especially as competition in the sector is fierce and fuel is one of biggest costs.

For the moment, Boeing dominates the lucrative market for long-haul, mid-sized planes with its B777 and next-generation 787 Dreamliner outweighing the European firm's A330.

But Airbus hopes to catch up with its A350, whose wings and fuselage are made of carbon fibre and which will save up to 25 percent in fuel consumption.

Airbus invested 10-12 billion euros (\$12-\$15 billion) in its strategy to position the A350 between the popular B777 and the Dreamliner, hoping to eat away at both planes' markets.

So far, the plane has been a success with 778 orders already registered by the end of November.

Boeing, meanwhile, has accumulated 1,055 orders for the Dreamliner, which was launched several years ago.

The first commercial flight of Qatar Airways's brand new plane will take place on January 15 on the Doha to Frankfurt route, and the second A350-900 should come into operation in February.

The airline is one of a trio of fast-growing Gulf carriers seeking to further muscle into European markets, as energy-rich states in the region seek to develop new sources of income to reduce their dependence on oil.

Baker has described the delivery of the A350 as the "second significant fleet milestone" for the carrier after recently receiving three of 14 A380 superjumbo planes bought from Airbus.

The airline has also purchased Boeing's 787 Dreamliner.

The A350 programme was launched in 2007, and the first test flight for the plane took place in June last year.

Bregier told reporters in Toulouse that Airbus planned to ramp up production of its newest plane from two to 10 aircraft a month within four years.

Source: 2014 AFP, Agence France-Presse (AFP)

Raytheon awarded \$2.4 billion contract to provide the State of Qatar with Patriot Air and Missile Defense System

Raytheon Company (NYSE: RTN) has received a \$2.4 billion Foreign Military Sales contract for new-production fire units of the combat-proven Patriot Air and Missile Defense System for the State of Qatar. Qatar, a new Patriot customer, now brings the total number of global Patriot customers to 13.

The acquisition is part of an Armed Services modernization and recapitalization effort announced by Qatar in March of this year. The contract includes the latest Patriot fire units featuring increased computing power and radar processing efficiency, improved manmachine interface and reduced life-cycle costs.

Patriot will be the cornerstone of Qatar's advanced Integrated Air and Missile Defense (IAMD) capability. Earlier this month, Raytheon announced a U.S. Air Force contract to provide the state of Qatar with an Air and Missile Defense Operations Center (ADOC) which will integrate U.S. air defense systems including Patriot, the Early Warning Radar, and THAAD; with European air defense systems and radars and Qatar's Air Operation Center.

"This award is yet another example of the trust countries around the world place in the combat-proven Patriot," said Dan Crowley, president of Raytheon's Integrated Defense Systems business. "As our customer base continues to grow, our global partners benefit from the shared costs for system upgrades and enhancements through Raytheon's unique Engineering Services Program. This ensures that Patriot remains at the highest level of readiness to counter current and evolving threats anywhere in the world."

Work under this contract will be performed at Raytheon's Integrated Air Defense Center, Andover, Mass.; El Paso, Texas; and Huntsville, Ala. The company is supported by a 2,700+- strong global team of Patriot system suppliers.

About Patriot

Patriot is the world's most modern and capable air and missile defense system, providing protection against a full range of advanced threats, including aircraft, tactical ballistic missiles, cruise missiles and unmanned aerial vehicles. Continually upgraded and enhanced to reflect the latest technology, Patriot is the system of choice for 13 nations around the globe.

Raytheon is the provider of Patriot Air and Missile Defense Systems, both domestically and internationally, and system integrator for PAC-3 missiles.

About Raytheon

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Raytheon Company, with 2013 sales of \$24 billion and 63,000 employees worldwide, is a technology and innovation leader specializing in defense, security and civil markets throughout the world. With a history of innovation spanning 92 years, Raytheon provides state-of-the-art electronics, mission systems integration and other capabilities in the areas of sensing; effects; and command, control, communications and intelligence systems, as well as cyber security and a broad range of mission support services. Raytheon is headquartered in Waltham, Mass. For more about Raytheon, visit us at www.raytheon.com and follow us on Twitter @Raytheon.

Media Contact Mike Nachshen +1.520.269.5697

Source: PRNewswire, Raytheon

New India airline to start flights as rival seeks to stay aloft

India's newest airline announced Monday it will start flying next month and declared it was "enthusiastic" about the future, as shares of troubled rival SpiceJet rocketed on reports of a rescue.

The new carrier, called Vistara -- a Sanskrit word meaning "limitless expanse" -- said it will make its first flight January 9.

The airline is 49-percent-owned by deep-pocketed Singapore Airlines, one of the world's top-rated carriers. Mumbai-based Tata conglomerate, one of India's best-respected brands, controls the other 51 percent.

"We're enthusiastic. There are no doubt challenges, but we believe in the immense potential of the Indian aviation market," Vistara chief executive Phee Teik Yeoh told reporters.

India's aviation market is expected to be the third-largest globally within a decade. But the sector is plagued by losses stemming from hefty operating costs and bruising fare wars, with no-frills SpiceJet the latest casualty.

Shares of India's second-biggest budget airline jumped 17 percent to 2.7 rupees on reports that co-founder Ajay Singh had presented a plan to keep the carrier in the skies with help from private equity investors and possibly a foreign airline -- though the share price remains a fraction of its 2007 peak.

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Business Standard newspaper and other media reported that Singh, who sold his SpiceJet stake in 2010 to new owners, had submitted the proposal to the government to revive the ailing carrier.

The right-wing government, elected in May, is keen to avoid an embarrassing re-run of the 2012 collapse of full-service Kingfisher Airlines, owned by liquor tycoon Vijay Mallya, which left thousands of workers unemployed and creditors holding millions of dollars in unpaid bills.

Business Standard quoted a senior unnamed government official saying that the scheme involved restoring "normalcy of operations" in the "near future".

- 'Personalised travel' -

Aside from the general problems facing the sector, SpiceJet's woes stem from heavy fare discounting, aggressive expansion and the dues it owes vendors, airport operators, oil firms and other creditors, which total hundreds of millions of dollars.

The airline was briefly grounded last week when it could not pay its fuel bill.

SpiceJet's majority owner a media mogul Kalanithi Maran has declared that he can't afford to bail out the airline after spending hundreds of millions of dollars on the carrier.

While analysts say India's aviation future belongs to low-cost carriers, Vistara's chief insisted there was also room for full-service airlines.

"We're here to redefine the flying experience" and "create a demand for a kind of personalised travel" that doesn't exist, he said, referring to the "massification" of the Indian travel market.

Vistara will operate the 148-seater Airbus A320-200 with 16 seats in business class, 36 in premium economy and 96 in economy.

Once it takes off, Vistara will be the third full-service carrier after state-run Air India and Jet Airways, both currently in the red.

The new carrier will start with Delhi to Mumbai flights and will add routes as its current twoplane Airbus fleet grows. It aims to have five planes in a month and 20 Airbus planes within four years.

IndiGo, India's largest passenger carrier, is a budget operation and the only one among the four biggest airlines to consistently report a profit.

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Right now, India's airlines are benefiting from lower fuel prices but pressure will be on again if oil prices rebound, analysts note.

Tata also holds a stake in an Indian low-cost carrier, which started flying in June, operated by Asia's biggest-budget airline AirAsia.

The previous Congress government began allowing foreign airlines to buy up to 49 percent stakes in Indian carriers in 2012.

Source: 2014 AFP, Agence France-Presse (AFP)

Airbus will not scrap A380s despite order drought: CEO

The head of Airbus said Monday the aircraft manufacturer had no intention to stop making the A380, saying the super jumbo had a "bright future" despite a lack of orders this year.

The idea of stopping production of the A380 is "just crazy", Fabrice Bregier said as Qatar took delivery of the first of Airbus's next-generation long-haul A350-900 aircraft.

Bregier admitted however: "Clearly our challenge is to get more customers", while insisting that the Airbus order book was "largely filled".

The remarks came after an official at parent company Airbus Group suggested that the A380 would be wound down by 2018 because of a lack of orders.

The comment caused Airbus shares to nosedive on December 10 and 11, losing nearly 15 percent of their value.

Airbus, which aimed to sell 30 A380s and deliver the same number this year, met the delivery goal but not the sales target.

The CEO said the trend was towards bigger planes like the A380 because global air traffic is expected to double every 15 years.

"The A380 has a bright future as the market is getting bigger," Bregier said.

He said one option for making the plane more attractive was to replace the engines with more fuel-efficient ones such as those used in the mid-range A320neo (new engine option) and long-haul A330neo.

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Meanwhile the head of Qatar Airways, Akbar al Baker, said the airline might buy more than the 14 A380s it has already ordered, of which three have been delivered.

"Qatar Airways is very satisfied with this airplane. And I don't know what more Airbus can do... It's a very well defined aircraft," he said.

Source: 2014 AFP, Agence France-Presse (AFP)