Volume 5 Number 40 – Wednesday, 02 October 2013

Passenger and Freight Aircraft Fleet: Future Estimations

According to Airbus' estimations the passenger and freight aircraft fleet worldwide will be more than doubled by 2032. Currently there are 17,739 aircraft in service whereas it is expected by 2032 there will be 36,556 aircraft. This means that around 19,000 new aircraft would be delivered within the next two decades in order to fill this gap. If we also take into consideration the aircraft that will be replaced the world's airlines will take delivery of more than 29,220 new passengers and freighter aircraft worth US$ 4.4 trillion at current list prices. Single-Aisle passenger aircraft represent the largest segment of the new deliveries with 20,242. The demand for Twin-Aisle aircraft will require 6,779 new passenger aircraft and 494 freight aircraft. Finally there will be a need for more than 1,300 very large aircraft. The following table provides a thorough review of the total demand for the next two decades.

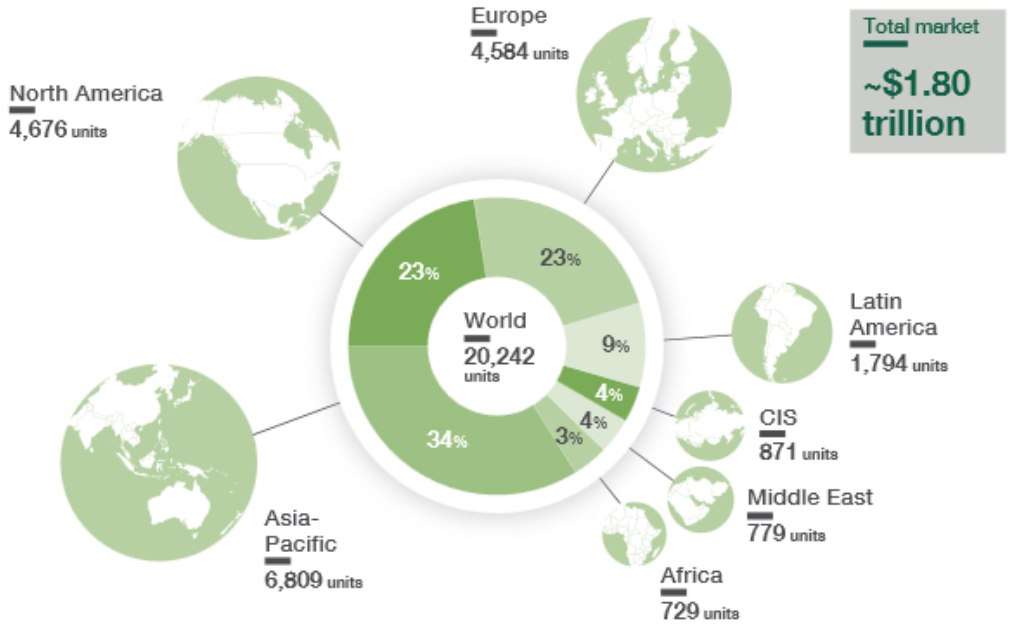
	2013-2022	2023-2032	2013-2032	% of 20 years total new deliveries
Africa	443	527	970	3%
Asia-Pacific	4,894	5,770	10,664	36%
CIS	587	508	1,095	4%
Europe	3,035	2,792	5,827	20%
Latin America	1,040	1,239	2,279	8%
Middle East	1,010	989	1,999	7%
North America	2,968	2,553	5,521	19%
Freighters	416	455	871	3%
World	14,393	14,833	29,226	100%

Source: Projected Sales of Aircraft

Today, there are nearly 12,600 Single-Aisle aircraft representing 78% of the total commercial airline fleet of aircraft over 100 seats. The number of aircraft will be doubled to more than 24,600 aircraft. Some 20,242 of these will come from new deliveries between now and 2032 with around 40% replacing older aircraft and around 60% targeting new growth in the

industry. It is expected that North America and Europe will drive the demand, as combined will account for 46% of the overall demand. The main reason is that the airliners of these regions will look to replace their aging fleets.

New deliveries of Single-Aisle Aircraft by Region



Regarding the Twin-Aisle aircraft fleet will be doubled by 2032 to almost 7,670 aircraft. 37% of the deliveries, 2,510 aircraft, will replace existing, less fuel efficient aircraft with new, eco-efficient aircraft. Some 4,270 aircraft will be used for growth. Asia-Pacific will be the largest contributor accounting for nearly half of all Twin-Aisle deliveries over the next 20 years.

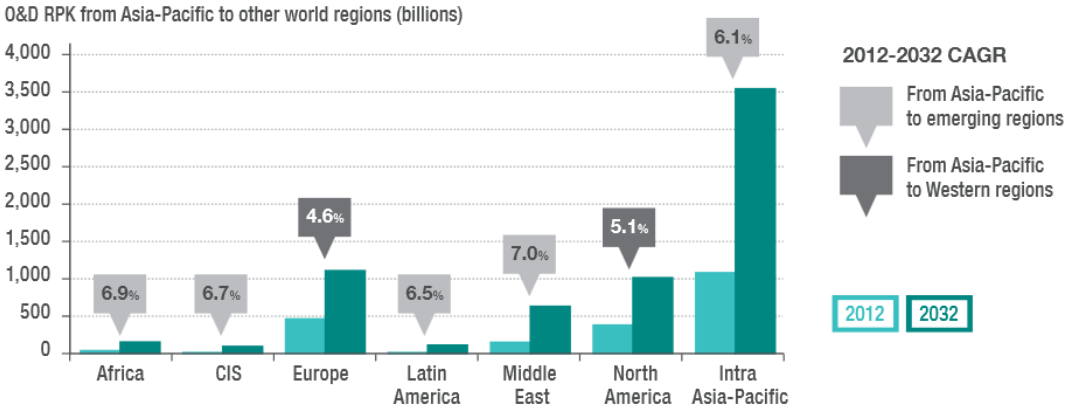
It is expected by 2032, there will be a need for more than 1,300 very large aircraft. The Asia Pacific Region will take 47% of these aircraft, whereas the Middle East will be the second largest region at 26%.

Kyriazis Vasileios,
Epicos Newsletter Head Editor

Asia-Pacific: A Constantly Growing Region

After two decades of tremendous growth the people of the Asian Pacific region are starting to enjoy the benefits of this economic development. It is indicative that according to the Economist Intelligence Unit it is expected that the share of households earning more than 10,000 US$ per year in China will grow from 5.9% in 2012 to 14.9% in 2017. Additionally in India it will increase from 5.3% to 8.8% over the same period. This means that air traffic will be increased as the standard of living will be improved in the forthcoming years in the region and air travelling will become more accessible. Currently people in China take just 0.2 trips per person per year, whereas in the USA they take average on nearly (2) trips per person per year. Conclusively increasing wealth will automatically increase the need for more aircraft in the area of Asia-Pacific.

Examining just the long-haul routes, more than 50% of the new routes created between 2013 and 2032 will be connected to Asia-Pacific. This gives a flavor of the dynamic nature of air transportation in the region.



Source: Airbus

Additionally, Intra-regional traffic volumes are also very important in Asia-Pacific. As a result, the way the need for capacity is handled in Asia is different to other regions, such as Europe and North America; aircraft size plays a bigger role. For example, the average aircraft capacity on routes of around 400nm is between 150 and 200 passengers in Asia, much higher than in North America where the average capacity is between 50 and 100 passengers. Another differentiating aspect is the aircraft average age of its fleet. Asian carriers' fleets are among the youngest in the world. Contrary to other emerging regions the weight of remarketed aircraft (i.e. aircraft coming from another operator), is low in the region, with airlines favoring new more efficient aircraft to meet their requirements.

Regarding traffic from Asia-Pacific to the rest of the world will continue to increase and will experience the most significant growth in origin and destination (O&D) traffic on flows connecting Asia-Pacific to other emerging regions.

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…

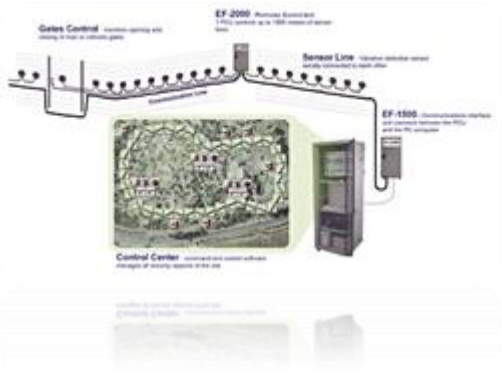
For Further Information Press Here

Insensitive Munitions plastic bonded explosive, FOXIT, warheads for smart underwater mines and torpedoes

A leading developer and manufacturer of explosives is proposing an 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
Mail at: g-menexis@epicos.com

Design and installation of an intruder detection, recognition and protection integrated solution for military facilities security enhancement



A leading company in the design, development and installation of integrated solutions for intruder detection systems is proposing, in the frame of an offset program, cooperation with military forces or governmental authorities for the design and installation of an intruder detection, recognition and protection integrated solution for military facilities security enhancement. The proposed system will be developed based on a wide range of existing and fielded products of the company.

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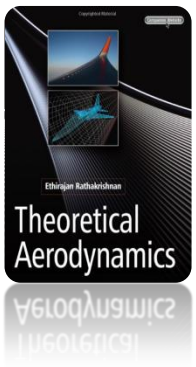
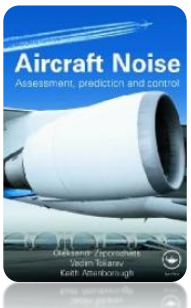
Theoretical Aerodynamics, by Ethirajan Rathakrishnan



Theoretical Aerodynamics is a user-friendly text for a full course on theoretical aerodynamics. The author systematically introduces aerofoil theory, its design features and performance aspects, beginning with the basics required, and then gradually proceeding to higher level. The mathematics involved is presented so that it can be followed comfortably, even by those who are not strong in mathematics. The examples are designed to fix the theory studied in an effective manner. Throughout the book, the physics behind the processes are clearly explained. Each chapter begins with an introduction and ends with a summary and exercises.

Aircraft Noise: Assessment, Prediction and Control, by Oleksandr Zaporozhets



Aircraft noise has adverse impacts on passengers, airport staff and people living near airports, it thus limits the capacity of regional and international airports throughout the world. Reducing perceived noise of aircraft involves reduction of noise at source, along the propagation path and at the receiver. Effective noise control demands highly skilled and knowledgeable engineers. This book is for them. It shows you how accurate and reliable information about aircraft noise levels can be gained by calculations using appropriate generation and propagation models, or by measurements with effective monitoring systems. It also explains how to allow for atmospheric conditions, natural and artificial topography as well as detailing necessary measurement techniques.

Epicos Newsroom

Leasing firm orders ATR planes for Indonesia's Garuda

A Danish leasing company has ordered 35 ATR turboprop planes to lease to Indonesian flag carrier Garuda, in deal worth more than $840 million, the European plane maker said Tuesday.

The move is the latest expansion in Indonesia's booming aviation sector, as the country's middle class grows rapidly and more people are able to afford air transport to get around the sprawling archipelago.

The deal agreed between ATR, Garuda and leasing company Nordic Aviation Capital (NAC) includes firm orders for 25 ATR 72-600s and options for a further 10, ATR said.

Garuda said it will begin taking delivery of the aircraft in November, and will start operating them in December.

Garuda chief executive Emirsyah Satar said the 70-seater aircraft "stand out as one of the best choices for short-haul flights and operations between the various islands of Indonesia".

ATR, a joint venture between aerospace giant EADS and the Italian company Finmeccanica, said the order "confirms (its) success in the countries of Southeast Asia".

Indonesia, where the aviation sector is experiencing passenger growth of around 20 percent every year, has become a huge market for planemakers.

But the country has one of Asia's worst aviation safety records, with analysts warning that there are not enough trained pilots to keep up with rapid expansion in the sector.

Source: 2013 AFP, Agence France-Presse (AFP)

Boeing, Alaska Airlines Announce Order for Five Next-Generation 737-900ERs

Boeing (NYSE: BA) and Alaska Airlines (NYSE: ALK) today announced an order for five additional Next-Generation 737-900ERs (Extended Range). The order, valued at $481 million at list prices, continues Alaska Airlines' investment in its fleet and efforts to improve fuel performance.

"Today's announcement supports our goal of growing Alaska Airlines by 4 to 8 percent a year," said Mark Eliasen, Alaska Air Group's vice president of finance and treasurer. "The 737-900ER is a great aircraft, with the cost efficiency and reliability needed for us to be successful in today's competitive marketplace."

"The order of five additional 737-900ERs is an affirmation of our hometown partner's successful strategy of offering customers good value, delivering a great onboard experience and running an on-time airline," said Brad McMullen, vice president of North America Sales, Boeing Commercial Airplanes.

"The 737-900ER offers Alaska Airlines the best seat-mile cost of any single-aisle airplane in production, which is especially important with today's high fuel prices. The interior also complements Alaska's excellent customer service, providing the passengers with a wonderful flying experience."

The largest and newest model in the Next-Generation 737 family, the 737-900ER can carry up to 26 more passengers or fly about 500 nautical miles (926 km) farther than the 737-900. Alaska Airlines operates the 737-900ER in a two-class configuration with 181 seats and features the Boeing Sky Interior.

The Boeing Sky Interior is the latest in a series of enhancements for both airlines and passengers that introduces new lighting and a curving architecture that create a distinctive entry way. Passengers enjoy a more open cabin feel and an environment simulated by light-emitting diode (LED) lighting. The interior also features sculpted sidewalls and newly improved and expanded pivot bins. In addition, all of Alaska's seats will feature outlets providing dual 110-volt and USB power.

The longer range of the 737-900ER can connect distant city pairs across continents, such as Seattle to Orlando, Fla., in a generous two-class configuration. It has substantial economic advantages over competing models, including 6 percent lower operating costs per trip and 4 percent lower operating costs per seat mile. With today's order, Alaska Airlines now has unfilled orders for 35 737-900ERs and 37 737 MAX airplanes.

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Source: Epicos, Boeing

Japan's defence chief vows updated military model

Japan's defence chief vowed Friday to press ahead with updating the country's military at a time of Chinese expansion, and called for a rebalancing of Tokyo's role in its security relations with the United States.

Itsunori Onodera, speaking ahead of a meeting with his US opposite number next week, said his ministry was hastening the compilation of a new defence model.

"The security environment surrounding Japan has dramatically changed over he past few years," he said. "This is because of the modernisation of our neighbour's military and their expansion in terms of both quantity and quality," Onodera said, in an apparent reference to China that stopped short of mentioning the country by name.

Onodera said the new defence model will feature plans to introduce drones for surveillance of remote territory, and a special amphibious unit designed to protect southern islands.

Japan has become chary of its place in the world at a time when China's naval activity is on the rise and as unpredictable North Korea continues its missile and nuclear programmes.

Onedera's remarks come before he and Foreign Minister Fumio Kishida hold Japan-US security talks with Secretary of State John Kerry and Defence Secretary Chuck Hagel on October 3 in Tokyo.

Onodera said Japan should consider boosting its offensive power to even up a relationship he characterised as one in which Tokyo has traditionally carried the shield and Washington wielded the weapon.

"We have to swiftly discuss how we should respond to ... eventualities under the Japan-US guidelines," he said. "That's an urgent task."

On Wednesday, Prime Minister Shinzo Abe vowed to boost Japan's security role on the world stage.

"Japan should not be the weak link in the regional and global security framework where the US plays a leading role," Abe said at the Hudson Institute in New York.

Japan's US-imposed post-World War II constitution stripped the nation of its right to wage war. The current "interpretation" of the document forbids Tokyo from using force in all but the narrowest of cases.

Moves to beef up its military are greeted with suspicion by neighbouring countries that bore the brunt of Japan's 20th Century militarism.

Source: 2013 AFP, Agence France-Presse (AFP)

Expansion of INTRACOM Defense Cooperation in NATO's ESSM Program

Continuing the expansion of its activities, INTRACOM Defense (IDE) has signed a new contract with RAYTHEON for the surface-to-air missile ESSM (Evolved SeaSparrow Missile) program of NATO. The $ 3.3 mil. agreement, concerns the production of electronic systems of the missile's guidance section and will be completed by September 2015. IDE has been participating in the multinational ESSM program since 1995 when undertook on competitive terms the design, development and production of electronic systems of the missile.

"The ESSM missile is the result of a government-to-government agreement for development and production, implemented with defense industries' cooperation of NATO member-nations and is an excellent example combining an operationally successful weapon system with expanded local industrial participation", said Mr. George Troullinos, CEO of IDE.

The long-lasting and reliable participation of IDE in the ESSM program is captured by the value of the contracts that have been implemented and which is approximately $ 50 mil.

About INTRACOM Defense Electronics

INTRACOM Defense Electronics (IDE), Greece's largest defense electronics systems provider, is a subsidiary of Intracom Holdings, one of the largest multinational technology groups in Greece. IDE possesses unique know-how in design, development and manufacturing of products that incorporate state-of-the-art technology in tactical military communication systems, encryption devices, command, control and communication systems (C^3I), missile electronic components, software for military applications, simulators, and testing equipment. IDE participates in international development and production programs, as well as in international cooperations for the production and export of defense equipment and is a registered member on NATO's vendors list. The Company's products and services are deployed in Belgium, Cyprus, England, France, Germany, the Netherlands, Spain, Sweden and the USA.

For more information please visit: www.intracomdefense.com

Source: Epicos, INTRACOM Defense

US concerned at Turkey's pick of Chinese missile firm

The United States Monday reacted with alarm to news that Turkey has chosen a Chinese company, slapped with US sanctions, to build its first long-range air defense and anti-missile system.

China Precision Machinery Export-Import Corp (CPMIEC) beat out competition from a US partnership of Raytheon and Lockheed Martin, Russia's Rosoboronexport, and the Italian-French consortium Eurosamrs in the tender, worth $4 billion according to Turkish media.

Turkey is a key regional ally to the United States, and currently has US-built Patriot missile systems deployed on its border to deter incoming attacks from Syria.

CPMIEC has been hit by a series of US sanctions over the past decade, accused of selling arms and missile technology to Iran and Pakistan, meaning that all US groups and individuals are barred from doing business with it.

The United States has "conveyed our serious concerns about the Turkish government's contract discussions with a US-sanctioned company for a missile defense system that will not be interoperable with NATO systems or collective defense capabilities," State Department spokeswoman Jen Psaki said.

"Our discussions will continue," she told reporters.

An official statement from Ankara last week said Turkey had "decided to begin talks with the CPMIEC company of the People's Republic of China for the joint production of the systems and its missiles in Turkey."

Turkey wants to build its own long-range air defense and anti-missile architecture to counter both enemy aircraft and missiles.

In January, NATO began deploying Patriot missile system batteries to help protect Turkey from any spillover of the conflict in neighboring Syria.

The Patriot missiles, effective against aircraft and short-range missiles, were provided by the United States, Germany and the Netherlands.

Source: 2013 AFP, Agence France-Presse (AFP)