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Global Defence Industry: Trends and Statistics for 2013



On 15 December 2014, the Stockholm International Peace Research Institute (SIPRI) published its 2013 annual report, “The SIPRI Top 100 Arms-Producing and Military Services Companies, 2013” in which the sales of arms and military services by the world’s 100 largest arms-producing and military services companies were highlighted. According to the report for

the arms sales of the Top 100 arms-producing and military services companies in 2013, (excluding China), totaled \$402 billion, a decline of 2.0% in real terms compared to revenues in 2012, continuing the decline that started in 2011, but at a slower pace.

All of the companies in the Top 10 were headquartered in USA and Western Europe. Their share of the total arms sales of the Top 100 in 2013 was 50.3%, a decline from 51.6% in 2012. Additionally, it is worth mentioning that little over two-thirds of the companies in the Top 100 for 2013 are headquartered in North America or Western Europe accounting for 84.2% of the total arms sales - a slight drop from 85.3% in 2012. More specifically, 69 of the Top 100 companies for 2013 are headquartered in North America or Western Europe.

As it is clearly showed in the table below, the 10 largest companies remain more or less the same as of 2012.

Rank ^b		Company ^c	Country	Arms sales (US\$ m.)		Total sales, 2013 (US\$ m.)	Arms sales as a % of total sales, 2013	Total profit, 2013 (US\$ m.)	Total employment, 2013
2013	2012			2013	2012				
1	1	Lockheed Martin	USA	35 490	36 000	45 500	78	2 981	115 000
2	2	Boeing	USA	30 700	30 600	86 623	35	4 585	168 400
3	3	BAE Systems	UK	26 820	26 770	28 406	94	275	84 600
4	4	Raytheon	USA	21 950	22 500	23 706	93	2 013	63 000
5	6	Northrop Grumman	USA	20 200	19 400	24 661	82	1 952	65 300
6	5	General Dynamics	USA	18 660	20 940	31 218	60	2 357	96 000
7	7	EADS ^d	Trans-European	15 740	15 400	78 693	20	1 959	144 060
8	9	United Technologies (UTC)	USA	11 900	12 120	62 626	19	5 721	212 000
9	8	Finmeccanica	Italy	10 560	12 530	21 292	50	98	63 840
10	11	Thales	France	10 370	8 880	18 850	55	761	65 190

Source: SIPRI

Regarding the other regions and/or countries, Australia, Israel, Japan, Ukraine and Russia (20 companies) - represented 12.1% of the total arms sales of the Top 100 in 2013. This compares with 11.4% for the same category in 2012.

Finally, it is worth mentioning that SIPRI has created for the first time a new category for emerging suppliers ranked in the SIPRI Top 100 for 2013. This new category covers arms-producing companies in Brazil, India, the Republic of Korea (ROK, South Korea), Singapore and Turkey. This should be largely attributed to the fact that these countries are steadily enhancing their position to the global defence industry a fact that is highlighted by the

impressive growth of some suppliers in 2013. For example, sales by South Korea's Korean Aerospace Industries grew by 31% in 2013.

Kyriazis Vasileios,
Epicos Newsletter Head Editor



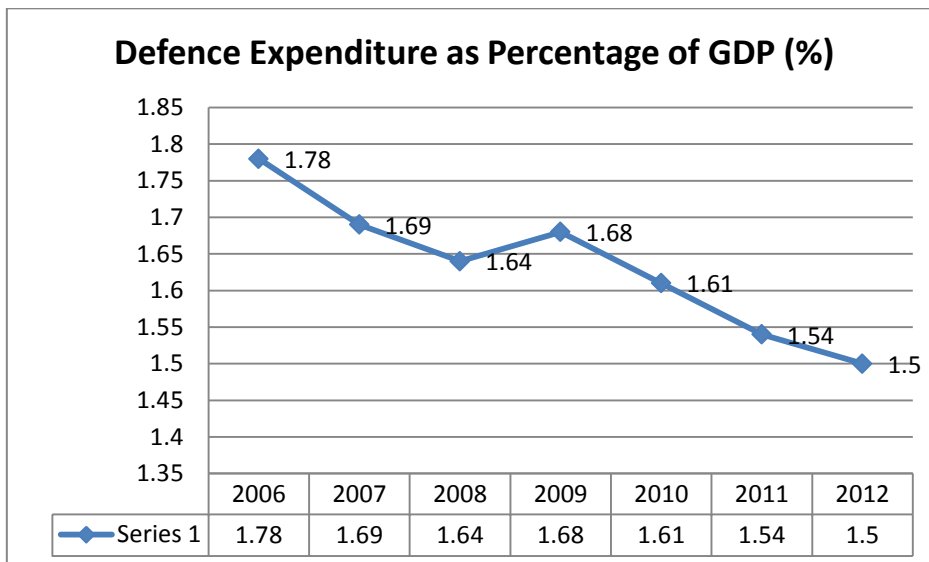
European Defence Industry: Future and Current Trends



With a turnover of €96 billion in 2012 alone the European defence industry, contributes to the growth of the European economy. Moreover it sustains thousands of highly skilled jobs, since it employs some 400,000 people directly, with another 960,000 jobs depending in a more indirect fashion, on the activities of this industry. Apart from the socioeconomic benefits it provides, it also performs a “duty” of outmost importance, this of delivering sophisticated and innovative defence equipment to the armed forces of Europe enabling and securing their efficiency. As of 2013, the sale of West

European arms producers was rather mixed as some companies showed growth while other declined.

For 2013, in the United Kingdom, half of the 10 British companies ranked in the Top 100 Arms Producing and Military Services Companies had minor drops in their arms sales, while the remaining five had an average arms sales increase of 7%. Two of the most important increases in total arms sales from 2012 in real terms were those of French companies: the naval shipbuilder DCNS, showcasing an 23% increase, and the combat aircraft manufacturer Dassault, showcasing an 21% increase. On the other hand, the Spanish naval shipbuilder, Navantia, continued its descent in the Top 100 ranking from 65 to 83.



Source: European Defence Agency (EDA)

The difficulties, Western European defence companies face must be largely attributed to the economic crisis Europe is facing. As a consequence the available funds national authorities can allocate on defence are limited. It is indicative that according to a research conducted by the European Defence Agency (EDA), in 2012 total defence expenditure of the 26 EDA members amounted to € 189.6 billion reduced by € 1.1 billion or 0.6% compared to 2011.

This amount represented approximately 1.5% of their total Gross Domestic Product (GDP) being the lowest since 2006. Additionally, they also underline the fragmented character of the European arms industry, which is still strongly associated with national markets.

Maintaining a strong defence industry should be of utmost important for Europe as such an industry is a prerequisite for sustaining combat ready armed forces. Actually this was highlighted to the declarations made by the alliance leaders at the 2012 Chicago Summit as it was stated that *“Maintaining a strong defence industry in Europe and making the fullest possible use of the potential of defence industrial cooperation across the Alliance remain an essential condition for delivering the capabilities needed for 2020 and beyond”*.

Europe must try to comply with this by sustaining a broad and diverse defence industrial base and thus retain the “operational sovereignty” to act in future world events as a power of deterrence and peace maintenance providing security for their citizens.

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](#)

Body and Chassis manufacturing using steel alloys technology for Light to Medium and Heavy (MRAP) Weight Armoured Wheeled Vehicles



A company with long standing experience in manufacturing of metallic (high strength and stainless steel) components and parts for the automobile industry is willing to expand its activities in the manufacturing of Body & Chassis using steel alloys technology, for a wide range of military vehicles, from Light to Medium Weight Armoured Wheeled Vehicles, up to heavy Mine Resistant Ambush Protected (MRAP) vehicles.

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

Mail at: g-menexis@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](#)

Mail at: g-menexis@epicos.com

News from our A&D Business Network



Airborne Services BV: Collaboration with Dutch Air Force



On 15th December an Intention Letter was signed between the Royal Netherlands Air Force's Logistics Centre Woensdrecht (LCW) and the company Airborne Services BV for the shared usage of LCW's facilities. The signing took place during the Future Aircraft

Maintenance III event at Aviolanda Woensdrecht.

During the NIDV symposium (Netherlands Industry for Defence and Security) in Rotterdam on 20th November 2014 Airborne signed a maintenance agreement with NHIndustries and Airbus Helicopters for NH90 rotor blades. In order to perform these activities in controlled surroundings Airborne has put in a request for shared usage with the Commander of LCW. By using existing equipment, Airborne intends to take on international contracts using its own rotor blade repair specialists. The LCW, the "Main Support Base" of the Royal Netherlands Air Force has already been cooperating for some time with industry. Air Commodore Schevenhoven: "Joint usage of our facilities by specialized companies complies with our aim to increase the operational availability of helicopters and to lower the costs".

For Airborne, cooperation with the Air Force will allow their maintenance activities to grow further. Apart from Airbus, the company is in contact with other helicopter OEM's. "Our company specialises in the production and maintenance of composite structures. Here in Woensdrecht we have found the ideal location to combine the existing capabilities and infrastructure to export internationally", according to Marco Brinkman, Director of Airborne Services. Obtaining this kind of assignment requires close cooperation between industry and government. The agreement with Airbus Helicopters came about as a result of good support from NIDV, the Netherlands Embassy in Paris and others. "This is a perfect example of how business and the Air Force can together win international contracts", according to Ron Nulkes – NIDV Director. Increasing maintenance activity at the airbase and adjacent business location Aviolanda will in future maintain and increase employment in the region of West Brabant.

About the LCW:

The LCW is located at Woensdrecht Airfield and is part of the Royal Netherlands Air Force. The LCW is the Defence Ministry's business and knowledge centre for (air defence) weapons, communication systems, system integration and mission support. The LCW controls maintenance and availability of all Air Force equipment. Furthermore the LCW performs 'Maintenance, Repair, Overhaul & Upgrade' and from the synergy between its technical and logistical expertise, uses this capacity to serve operational users and other partners in both The Netherlands and abroad. For Further Information [Click Here](#)

Embraer’s Legacy 500 receives EASA certification



Embraer’s Legacy 500 executive jet today was granted certification by the European Aviation Safety Agency (EASA) during a ceremony at its headquarters, in Cologne, Germany. This approval enables entry into

service of the aircraft in the Member States of the European Union as well as in EASA associated countries.

“EASA’s certification is a very important achievement for the Legacy 500, which is introducing advanced technologies and superior comfort in the midsize class,” said Marco Túlio Pellegrini, President and CEO of Embraer Executive Jets. “The approval of this revolutionary aircraft is a testament to our commitment to deliver true innovation to the market.”

“This certificate demonstrates the excellent safety performance of Embraer aircraft and the outstanding cooperation spirit which is in place between EASA, the Brazilian Airworthiness Authority ANAC and Embraer, making excellent use of the EU/Brazil Bilateral Aviation Safety Agreement,” said Norbert Lohl, EASA Certification Director. “It was Embraer that received the first EASA Transport Airplane Type Certificate in 2004 and are receiving now, 10 years later, another important one for the Legacy 500.”

Legacy 500 Performance Characteristics

Specifications	Design Goals	Certified Legacy 500
Range ⁽¹⁾	3,000 nm / 5,556 km	3,125 nm / 5,788 km
Takeoff distance ⁽²⁾	4,600 ft / 1,402 m	4,084 ft / 1,245 m
Unfactored landing distance ⁽³⁾	2,400 ft / 732 m	2,122 ft / 647 m
Block fuel for 600nm @ M0.80 ⁽⁴⁾	2,610 lb / 1,184 kg	2,540 lb / 1,152 kg
Maximum operating altitude	45,000 ft / 13,716 m	45,000 ft / 13,716 m
Initial climb altitude ⁽⁵⁾	43,000 ft / 13,106 m	43,000 ft / 13,106 m
Time to climb to FL430 ⁽⁵⁾	22 min	22 min
Maximum operating speed (MMO)	Mach 0.83	Mach 0.83
High speed cruise ⁽⁶⁾	460 kt / 852 km/h	466 kt / 863 km/h
Maximum payload ⁽⁷⁾	2,800 lb / 1,270 kg	2,800 lb / 1,270 kg
Payload full fuel ⁽⁷⁾	1,600 lb / 726 kg	1,600 lb / 726 kg
Total baggage & stowage volume	150 ft ³ / 4.25 m ³	155 ft ³ / 4.39 m ³
External noise	Stage IV	23 EPNdB below stage IV
Engine thrust	6,540 lbf	7,036 lbf
Engine flat rating	ISA + 15 °C	ISA + 18 °C

(1)NBAA IFR reserves; 200 nm alternate; 4 pax @ 200 lbs each; baseline aircraft; LRC (Long Range Cruise)

(2)SL; ISA; MTOW

(3)SL; ISA ; 4 pax @ 200 lbs each; NBAA IFR reserves; 200 nm alternate; baseline aircraft

(4)NBAA IFR reserves; 200 nm alternate; 4 pax @ 200 lbs each; baseline aircraft

(5) From SL; @ MTOW; ISA

- (6)Max cruise speed; FL430; ISA; 4 pax @ 200lbs each; half fuel tank; baseline aircraft
- (7)Baseline aircraft

The Legacy 500 has met or exceeded all performance expectations, having also received certification from Brazil's ANAC (Agência Nacional de Aviação Civil) in August and from the FAA (Federal Aviation Administration) in October. The Legacy 500 is now able to begin operations in Europe, Brazil, United States and in countries that require EASA or FAA certification. The first Legacy 500 was delivered to a Brazilian customer, on October 10.

About the Legacy 500

The Legacy 500 has the best-in-class six-foot flat-floor cabin, which is comparable to those of some aircraft in the super midsize category. Eight club seats may be berthed into four beds for complete rest in a cabin altitude of 6,000 feet. The in-flight entertainment system consists of a high definition video system, surround sound, multiple audio and video input options, a cabin management system, and three options for voice communications and connectivity.

The Legacy 500 is the first midsize business jet with digital flight controls, based on Fly-By-Wire technology, featuring side sticks. The state-of-the-art Rockwell Collins Pro Line Fusion avionics suite on four 15-inch high resolution LCD displays allows graphical flight planning, and has options like paperless operations capability, auto brakes, and the E2VS (Embraer Enhanced Vision System), which includes a Head Up Display (HUD) with the Enhanced Vision System (EVS).

The Legacy 500 is capable of flying at 45,000 feet and is powered by two Honeywell HTF7500E engines, the greenest in their class. Taking off from airfields as short as 4,084 ft, the Legacy 500 has a range of 3,125 nautical miles (5,788 kilometers) with four passengers, including NBAA IFR fuel reserves, which enables it to fly nonstop from São Paulo to Caracas, Los Angeles to Honolulu, Teterboro to London, Moscow to New Delhi, Jakarta to Sydney, Dubai to Zurich, and Beijing to New Delhi.

For more information, please visit www.EmbraerExecutiveJets.com

Embraer S.A. is the world's largest manufacturer of commercial jets up to 130 seats, and one of Brazil's leading exporters. Embraer's headquarters are located in São José dos Campos, São Paulo, and it has offices, industrial operations and customer service facilities in Brazil, China, France, Portugal, Singapore, and the U.S. Founded in 1969, the Company designs, develops, manufactures and sells aircraft and systems for the commercial aviation, executive aviation, and defense and security segments. It also provides after sales support and services to customers worldwide. For more information, please visit www.embraer.com.br.

Epicos Newsroom



EU wasted 38 mn euros on 'ghost airports'

The European Union has wasted tens of million of euros on out-of-the-way, underused airports, an auditors' report said Tuesday.

The report examined 20 airport projects in Estonia, Greece, Italy, Poland and Spain which together received 600 million euros (\$746 million) of EU funds between 2000 and 2013, the EU Court of Auditors said.

"We found that some airports were not profitable in the long term, some were underused and some were not used at all," said auditor George Pufan in a statement.

The report comes just three days before EU leaders are to greenlight an ambitious 315 billion euro investment plan, that European Commission head Jean-Claude Juncker says will kick-start growth in Europe.

The plan will in part target thousands of infrastructure projects, including airports, proposed by member states eager to gain funding for pet projects.

In all, the report found that only half of the airports investigated proved worthy of the EU funds, with an estimated 38 million euros wasted completely.

"In Cordoba (Spain), for example, fewer than 7,000 passengers travelled (through the airport) in 2013, against the 179,000 forecast," a statement introducing the report said.

Moreover, seven of the airports, including the Crotona airport in Italy's Calabria region, are not financially sustainable and will require a steady flow of public funds to remain in operation.

"Both the Commission and the Member States must improve the way they invest in our airports by funding only those which are profitable and for which there is a real investment need," Pufan said.

After the report, the commission acknowledged money was wasted, though the way of calculating funds allocated to the projects had now changed.

"We have a radically different approach that will prevent a repeat of these problems," said commission spokesman Jakub Adamowicz.

Investment terms are now "much stricter", he said.

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

India's newest airline gets permit to fly

India's newest airline said Tuesday that it has received an air permit to begin flying in the country.

Vistara, jointly owned by Singapore Airlines and the Mumbai-based Tata conglomerate, said it would soon make an announcement on the start of sales, routes and schedules.

"Vistara has received the Air Operator Permit (AOP) from the regulatory authority," airline spokeswoman Bhakti Arora said in an email.

Vistara, whose name means "limitless expanse" in Sanskrit, will be headquartered in New Delhi. The airline had earlier said it hoped to start flying passengers in October this year.

Singapore Airlines holds a 49 percent stake in the venture, while Tata's is 51 percent -- an arrangement allowed after India's previous government said foreign airlines could buy up to 49 percent stakes in Indian carriers.

India's air passenger market has rapidly expanded, but many companies are struggling with debts and cut-throat fare wars, high fuel costs and poor infrastructure.

The SpiceJet airline, which announced the cancellation of nearly 1,900 domestic flights last week, sought "urgent relief" from the government on Monday as its financial woes mounted.

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

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

Aviation's white-knuckle year closes with flying colours

If you weren't already nervous about flying, that may have changed in 2014, a year that stirred our deepest fears about modern jet travel despite shaping up as one of the safest in aviation history.

The tragic dramas surrounding Malaysia Airlines, in particular, played out before unprecedented global television and Internet audiences, confronting the travelling public with the startling truth that planes can be shot down or simply disappear.

2014's events triggered the first major worldwide reviews of aviation precautions in years and gave aerophobes a new reason to tense up on take-off.

"I always disliked flying but now it's a real ordeal," said Marie Lefebvre, a Bangkok-based Canadian businesswoman who has curtailed her frequent business travel. She now occasionally takes sedatives before take-off.

"It's that feeling of helplessness. Some of the things this year were terrifying."

Exhibit A was MH370, which took its place alongside Amelia Earhart's vanishing as one of aviation's great mysteries, a buzzword for the terror of vanishing without a trace.

The Boeing 777 disappeared March 8 with 239 people aboard after its communications systems were apparently deliberately shut off. No trace has been found.

It remains unknown whether an onboard emergency, hijack, rogue pilots, fire among lithium batteries in its hold, or other less-plausible theories were responsible.

Four months later, MH17 was blown out of the sky over Ukraine, killing all 298 aboard and stoking superpower rivalries when the West accused Russia-backed rebels of downing it with a missile.

The following week, crashes by a TransAsia Airways flight amid rough weather in the Taiwan Strait and Air Algerie flight 5017 in Mali for reasons still unknown killed a combined 164 people, giving the impression planes were literally falling from the skies.

The risks of mankind's push to expand flight frontiers were driven home in October when British billionaire Richard Branson's Virgin Galactic spaceship -- intended to take tourists to the edge of space -- broke up on a test flight, killing a pilot.

- Accidents at record low -

Ironically, however, 2014 continued a long-term trend of ever improving air safety.

A record-low seven fatal commercial passenger incidents occurred as of last week, according to the Netherlands-based Aviation Safety Network, an infinitesimal figure amid the several million flights and billions of passengers each year.

There were 15 such accidents last year, while the annual average since 1946 is 32.

"It's so safe now that incidents tend to be more mysterious and striking because crashes only happen in extremely rare circumstances," said Gerry Soejatman, a Jakarta-based aviation consultant.

"That's why this year had such an impact. Accidents are so rare that we magnify those that occur."

Fatalities are up sharply to 762 -- the highest in four years -- after 2013's record-low 224 deaths. If the once-a-generation Malaysian incidents are removed, just 225 people died.

Despite the headlines, air traffic has been unaffected.

Total passenger miles travelled grew a solid 5.8 percent from January-October, the International Air Transport Association (IATA) said last week, forecasting another solid year ahead.

Nevertheless, MH370 challenged modern notions of an interconnected, highly monitored world.

Aiming to reduce chances of a recurrence, aviation authorities are expected to announce new global flight-tracking standards soon.

These could include reporting an aircraft's position every minute after an unexpected route change, and possibly every 15 minutes during normal flight. Positions are now typically reported every half-hour.

MH370's revelation that flights are not continuously tracked "was a surprise for many," said Raymond Benjamin, head of the International Civil Aviation Organization (ICAO).

"But we now have a consensus with the industry to develop global monitoring of all traffic to improve the response in similar cases, in particular for organising search and rescue in case of an accident," he said.

- 'Worst nightmare' -

The ICAO is also reviewing whether flight risks over conflict zones are assessed and communicated adequately in an age of highly-armed non-state entities.

Proposals on both fronts will be outlined at an annual ICAO gathering in February, Benjamin said.

But little change is expected on limiting the chances of a rogue pilot or hijacker disabling communications, which also occurred in the September 11, 2001 attacks.

Pilots jealously guard that power as a safeguard in case, for example, malfunctioning systems trigger a fire.

Video monitoring in cockpits is similarly considered infeasible for technical reasons.

David Learmount, safety editor of Flightglobal magazine, called proposed changes "peripheral" and sees no lasting industry impact from 2014.

"The rest of the world has already mentally consigned (2014's) events to the dustbin of history, and attitudes toward flying for business or leisure have not changed because statistically it is still safer than it has ever been," he said.

But Tom Bunn, who runs SOAR, a US-based firm that offers fear-of-flying counselling, disagrees, saying dark thoughts will lurk in travellers' minds.

"The distrust (of aviation) is so profound that I think it will have some lasting impact. Anxious fliers describe (MH-style disasters) as their worst nightmare," he said.

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

AirAsia confirms order of 55 Airbus A330Neos for some \$15bn

Malaysian low-cost carrier AirAsia X confirmed Monday its order of 55 long-haul A330Neo passenger planes from Airbus at a list price of \$15 billion, in what is the biggest single order for the line of aircraft.

Since signing an agreement to purchase 50 of the new-generation A330s in July, AirAsia X has added five more planes to its order, the group said in a statement.

Airbus will begin delivering the fleet in 2018, AirAsia X said.

The Malaysian carrier is now Airbus's biggest customer for the A330 family of aircraft, having already ordered 91 of them to date.

"This latest deal with Airbus will enable AirAsia X to consolidate its growth rate in 2015-2017 before ramping up deliveries from 2018 onwards," said Tony Fernandes, co-founder and director of the company.

"The A330 has proven itself to be exactly the right aircraft for our business model, combining low operating costs, long-range flying capability and high levels of comfort."

The A330Neo is an updated version of Airbus's wide-body medium-haul jet with fuel-saving engines.

AirAsia X is the long-haul and low-cost affiliate of AirAsia, which was a failing carrier in 2001 when Fernandes acquired it.

The former record industry executive quickly turned the airline around with his no-frills, low-fare formula.

Since then, it has recorded spectacular success and aggressive growth at the expense of national flag carrier Malaysia Airlines.

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

Boeing wins aircraft order from new Canadian airline

US aerospace giant Boeing on Monday announced an order for five 737 MAX 7 aircraft from Jetlines, a new Canadian discount airline set to launch next year.

The order has a list price of \$438 million, and Jetlines has options to buy an additional 16 of the aircraft, Boeing said.

"Boeing is proud to partner with Jetlines as it begins a journey to offer low airfares to passengers across Canada," said Brad McMullen, vice president of North America Sales, Boeing Commercial Airplanes, in a statement.

Privately-owned Jetlines plans to begin domestic Canadian air service in mid-2015 from a base at the Vancouver International Airport, addressing what it said is "currently an unserved market of price-sensitive customers in Canada."

Jetlines said it intends to select routes which avoid direct competition with currently operating airlines where possible, and focus on cost discipline in order to keep operating costs low.

"This agreement with Boeing is a major milestone for Jetlines," said Jim Scott, chief executive of Jetlines. "We are thrilled to be partnering with Boeing and look forward to introducing the 737 MAX 7 into our fleet."

Dow member Boeing shares were up 1.1 percent in morning trade on the New York Stock Exchange.

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