



## **RUSSIA: CONSOLIDATION OF THE AEROSPACE INDUSTRY MAS/OAAI/AEROSPACE TEAM**

### **EXECUTIVE SUMMARY**

The Russian aviation industry is one of several key business sectors kept under constant review and scrutiny by the Ministry of Industry and Energy. The reasons for this close review are twofold; Russia considers a strong aviation industry vital not only to economic success but also to national security.

While Russia's military aviation sector marginally successful, at the beginning of the 21<sup>st</sup> century, Russia's aviation industry as a whole was essentially a non-player in the global aviation market. Mindful of this reality, President Vladimir Putin directed the formation a Government Commission to study the idea of industry consolidation as a means of revitalizing and developing an industry that had fallen on hard times. The recommendation of the Commission was the creation of an open joint stock company consolidating many of the state-owned aerospace companies under a single entity. This consolidated entity, the United Aircraft Corporation (UAC), has moved quickly to transform and revitalize the Russian aviation industry and has positioned itself as both a formidable competitor and potential partner in the global aviation market. (See Chart 1)

### **MOTIVATION AND CHANGE**

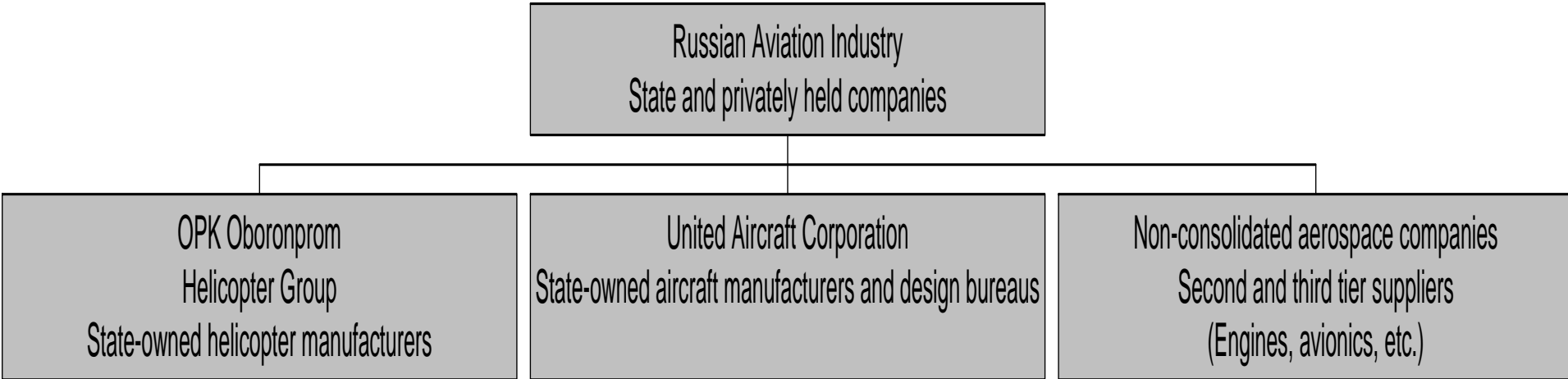
In the Soviet and immediate post-USSR era, the Russian aerospace industry was comprised of a number of separate state and privately held manufacturers and design bureaus. While these entities did cooperate to a degree, there was no central authority, public or private, coordinating research and development, design, manufacture, sales or marketing. As a result, once Russia began to compete with U.S. and Western European companies for market share both domestically and abroad, Russian aircraft makers found themselves with a product line that was basically non-competitive in comparison to aircraft produced by established competitors like Boeing and Airbus.

By 2005 Russia's entire civil aviation industry was building on average a total of 10 aircraft per year. In comparison, in 2005 Boeing and Airbus booked over 1,000 orders each for new aircraft.<sup>1</sup> At the same time, on the domestic front, demand for civil aircraft is and remains high. According to the Russian Transport Ministry, by 2005, of 2,528 total civil aircraft currently in service, more than one-half had passed their legal operational limits and needed replacing. In addition, industry experts forecast that

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<sup>1</sup> [http://www.businessweek.com/bwdaily/dnflash/jan2006/nf20060117\\_9445\\_db039.htm](http://www.businessweek.com/bwdaily/dnflash/jan2006/nf20060117_9445_db039.htm)

Chart 1



Russian airlines would need at least 620 long- and medium-haul aircraft in the next 20 years.

With these figures in mind, Russia was faced with two choices. They could fill the country's aircraft needs with western sourced aircraft. Or, they could attempt to ramp up Russian domestic production to meet both their own needs while becoming a player in the international market for civil aircraft. Rather than cede this vital sector business to the West, President Putin decided on the latter option.

In 2005 President Putin directed the formation of the Government Commission for Integration of Aircraft Building Enterprises in the Russian Federation chaired by Viktor Khristenko, the Russian Minister of Industry and Energy. The Commission was charged with the responsibility of developing a plan to revitalize and develop an industry that had fallen on hard times since the demise of the former Soviet Union.

After 18 months of discussions and planning, the Commission confirmed that in its present configuration the Russian aviation industry was not equipped to compete in the international aviation market and that the best and most effective road to global competitiveness would be a consolidation of the country's mostly state-owned aviation companies. On November 2, 2006, the Commission announced its decision to establish an open joint stock company that would consolidate many of the state-owned aerospace companies under a single entity, the United Aircraft Corporation (UAC).

## CAPITAL AND CORPORATE STRUCTURE

At the release of its findings in November 2006, Minister Khristenko stated that:

(P)rospects of the development of the aviation industry lie in the sphere of conscious integration into the global market and international cooperation while preserving and developing key aircraft building competences on the territory of the Russian Federation, in reasonable concentration of assets and road involvement of private capital and private initiative.<sup>2</sup>

The consolidation plan, as described by the Commission, laid the foundation for a vertically integrated aircraft industry that encompasses both civil and military aviation while preserving core aircraft building competencies and vital assets in Russia. Under the plan, approximately 20 Russian aviation companies will eventually be placed under UAC control. This total includes seven of the largest aircraft making enterprises and five design bureaus. Once established, the consolidated assets of UAC should rank as the world's fifth largest aircraft building corporation.<sup>3</sup> At a meeting subsequent to the release of the Commission's report, President Putin approved UAC's initial charter capital plan for state-owned companies. According to this plan, a percentage of the total capital of each state-owned company will be "paid in" to UAC. A list of the charter members of UAC along with the percentage of their total

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<sup>2</sup> "United Aircraft Building Corporation Ready for Take-Off" available at <http://www.minprom.gov.ru/eng/press/news/165>

<sup>3</sup> "United Aircraft Building Corporation Ready for Take-Off"

capital that will be paid into UAC is as follows:

- Sukhoi Aviation Holding Corporation – 100 percent
- Aviaexport Foreign Trade Association – 15 percent
- Ilyushin Finance Corporation – 25.5 percent,
- Ilyushin Interstate Aviation Company – 86 percent,
- Nizhny Novgorod Aviation Plant (Sokol) – 38 percent,
- Tchkalov Aviation Production Association (TAPO), Novosibirsk – 25.5 percent,
- Public Stock Company Tupolev – 90.8 percent,
- The Financial Leasing Company – 58 percent.

In addition to the above listed state-owned companies, the Commission also agreed to the contribution of 38.2 percent of the total value of the shares of the privately held research and production corporation NPK Irkut. Since the Sukhoi Aviation Holding Corporation holds 11.89 percent of Irkut's total shares, UAC will have a controlling stake in NPK Irkut. In addition to Irkut, UAC plans to integrate the assets of state-owned fighter aircraft manufacturer RSK MiG. Finally, UAC will hold open the possibility of additional manufacturers.<sup>4</sup>

Perhaps the most significant potential addition to UAC is state-owned Ukrainian aircraft manufacturer Antonov ASTC. Antonov produces a number of light, medium and long-range transport aircraft that would fill a gap in UAC's current lineup. In August 2007 at the Moscow

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<sup>4</sup> "United Aircraft Building Corporation Ready for Take-Off"

International Aviation and Space Salon (MAKS 2007), UAC and Antonov signed an agreement covering cooperation in marketing, design and production between the two companies. The agreement does not cover integration of Antonov into UAC as a full-fledged member company; however, UAC and the Government of the Ukraine are engaged in ongoing discussions over possible future integration of Antonov into UAC.<sup>5</sup>

Although UAC is holding open the possibility of adding additional members, the company will not include many second tier manufacturers, most prominently:

- NPO Saturn Motors
- Perm Motors
- Aviadvigatel
- NK Engines
- Klimov Engines
- Nizniy Novgorod Radio

There are several disadvantages to non-membership in UAC, but most notable among these is that non-members will not benefit from government support for the Russian aviation industry. The three year state budget recently signed by President Putin provides for USD 700 million in direct investment support to UAC, along with state support for the modernization of production facilities and design bureaus and subsidization of leasing payments.<sup>6</sup>

Although these manufacturers were not included in UAC, most of them have business with the member companies. For

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<sup>5</sup>"Antonov and United Aircraft Building Corporation Sign Cooperation Agreement" available at [http://www.deagel.com/news/Antonov-and-United-Aircraft-Building-Corporation-Sign-Cooperation-Agreement\\_n000002734.aspx](http://www.deagel.com/news/Antonov-and-United-Aircraft-Building-Corporation-Sign-Cooperation-Agreement_n000002734.aspx)

<sup>6</sup> MAKS 2007 Show Program interview with Alexei Fedorov, President of United Aircraft Corporation.

example, NPO Saturn is providing the engines to Sukhoi Civil Aircraft through its Powerjet joint venture with French engine company Snecma, and NK Engines produces engines for many Tupolev civil and military aircraft.

In addition, the Commission did not recommend integration of any of Russia's helicopter manufacturers into UAC. Instead the Russian helicopter industry has been consolidated into a single corporate entity under the state-owned defense corporation OPK Oboronprom, which will be addressed in a subsequent section of this paper.

## **UAC BOARD AND MANAGEMENT STRUCTURE**

At the first meeting of the supervisory board of UAC, the officers of the various member companies selected a board of directors and senior management. The board and management selection reflects a priority of re-establishing central control of the industry, as opposed to immediate improvement. Also, the relatively small number of board members with aerospace, or for that matter, business experience, reflects the political nature of the process and a apparent desire to afford the board substantial political influence. (See Chart 2)

The new board is chaired by Russian First Deputy Prime Minister Sergei Ivanov. The selection of Ivanov, widely considered the heir apparent to President Putin, is unsurprising. Ivanov speaks fluent English and has significant international experience and is therefore an asset from a public relations standpoint. In addition, Putin has tasked Ivanov with several "troubleshooting" tasks to include oversight of the country's aviation safety system.

UAC's supervisory board selected Alexei Fedorov, former general director of RSK MiG, as the company's President and General Director.<sup>7</sup> In this capacity, Fedorov will be responsible for day to day operations of the consolidated entity. As the former director general of RSK MiG, Fedorov is well suited to the position due to his aerospace industry experience.

In addition to the two top spots, the board also includes Valery Bezverkhny, president of OAK Non-Commercial Partnership and Oleg Demchenko, President of NPK Irkut. The heads of four state-owned companies

were also named to seats on the board: Mikhail Pogosyan, director general of Sukhoi Aviation Holding Corporation; Victor Livanov, director general of MAK Ilyushin; Igor Shevchuk, President of Public Stock Company Tupolev; and Alexander Rubtsov, director general of Ilyushin Finance.

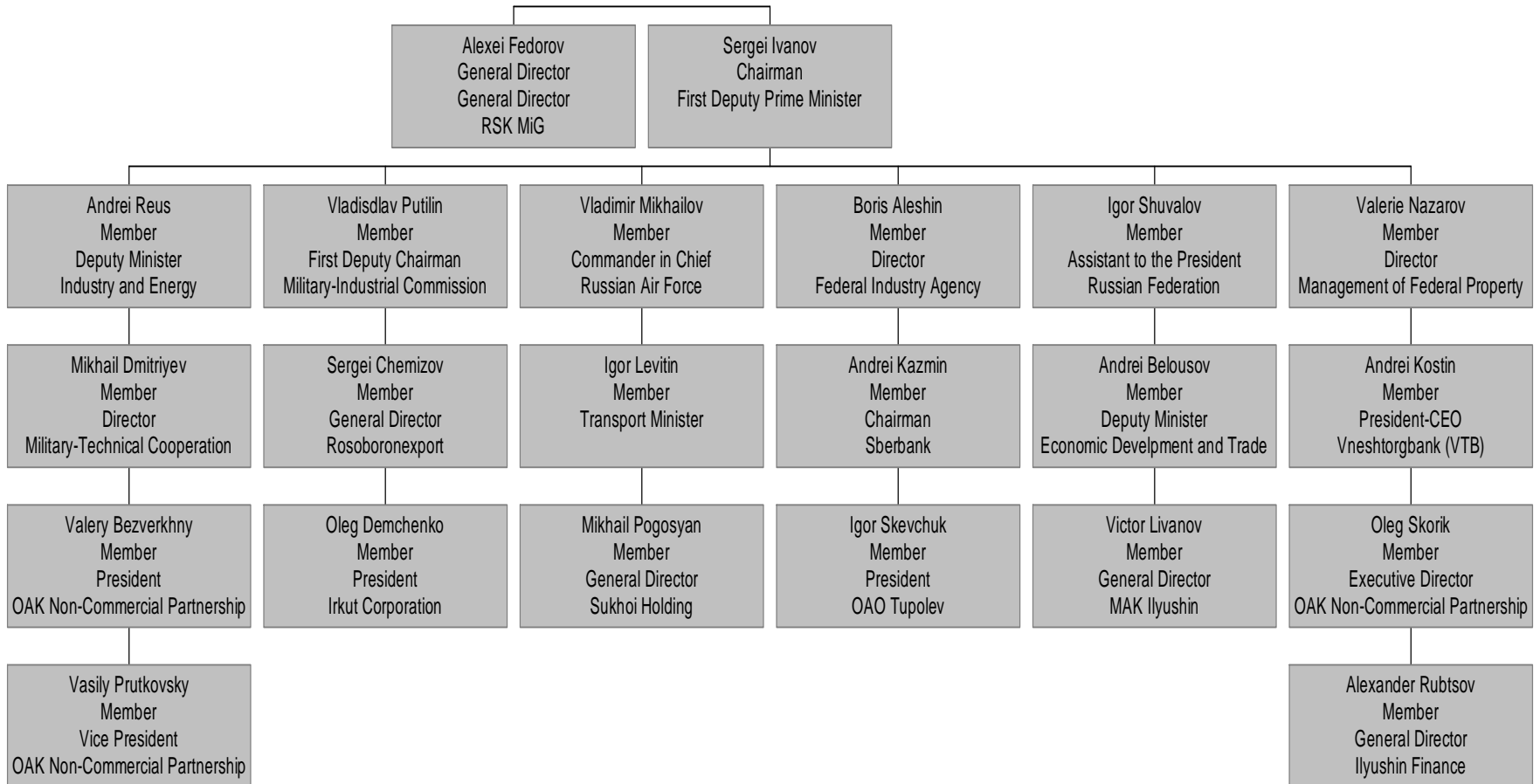
As discussed above, for political reasons UAC's board includes a number of Russian governmental and non-aviation industrial members, most notably Vladimir Mikhailov, Commander In Chief of the Russian Air Force; Igor Shuvalov, Assistant to President Putin; Boris Aleshin, head of Federal Agency on Industry; Valery Nazarov, head of Federal Agency on Federal Property; Mikhail Dmitriyev, head of the Federal

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<sup>7</sup> On October 1, 2007, Alexei Fedorov resigned from his post as general director and general designer of RSK MiG. He was replaced on an interim basis by Sergei Tsivilev, first deputy director general of the company. Tsivilev was investigated by Russia's Prosecutor General for fraud in conjunction with an alleged sale to Poland of counterfeit parts for MiG-29 aircraft but was not ultimately charged.  
<http://www.themoscowtimes.com/stories/2007/10/02/061.html>;  
[http://www.kommersant.com/p731704/MiG\\_director\\_criminal\\_case/](http://www.kommersant.com/p731704/MiG_director_criminal_case/)

# Chart 2

## Board of Directors United Aircraft Corporation (OAO OAK)



Service on Military-Technical Cooperation; Sergei Chemezov, director general of FGUP Rosoboronexport; Igor Levitin, Minister of Transport; Andrei Belousov, Deputy Minister of Economical Development and Trade; Andrei Kazmin, Chairman of Sberbank; and Andrei Kostin, President and Chairman of Vneshtorgbank (VTB).

The company will be structured into four divisions: Military Aviation, Transport and Specialized Aviation, Civil Aviation, and Parts and Components. Director Federaov has stated that although the consolidated entities' production facilities will be allocated or assigned to the division that most closely matches their core competencies and existing product lines, the company also plans to reallocate and convert some military production facilities into civil aviation to facilitate growth in that division.<sup>8</sup> UAC has not yet named the heads of the respective divisions; however, it is expected that directors general of some of the major member companies, such as Sukhoi's Pogoyan and Ilyushin's Livanov will assume these posts.

An additional note of interest is the presence of strong internal rivalries within the board and management team of UAC. Both Fedorov and Pogoyan aspired to the Presidency of UAC, and according to press reports, Pogoyan was quite unhappy he was passed over for the top post. In addition, Pogoyan has a strong rivalry with Federal Agency on Industry head Boris Aleshin. Based on prior observation, President Putin prefers to place individuals with strong rivalries in positions where they have to work with each other on the assumption that these rivalries will encourage them to work harder to forward their own individual

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<sup>8</sup> MAKS 2007 Show Program interview with Alexei Fedorov, President of United Aircraft Corporation.

agendas and thus move the organization forward.

## PRODUCTS AND PRIORITIES

In an interview conducted for release at MAKS 2007, UAC President Fedorov laid out the company's aircraft production priorities for the next ten years. According to Fedorov, UAC's priorities are as follows:<sup>9</sup>

### *Sukhoi SuperJet 100*

The SuperJet 100 is actually a family of regional jet aircraft in the 78-98 passenger size. The aircraft is being produced by Sukhoi Civil Aircraft with subcontractor assistance from Boeing, Goodrich, Ilyushin, Powerjet (a 50/50 engine joint venture comprised of Russian engine maker NPK Saturn and French engine maker Snecma), and other subcontractors. The SuperJet will compete with regional jets from Brazil's Embraer and Canada's Bombardier; no U.S. manufacturer produces a regional jet in this size category. In addition to subcontractor assistance, Sukhoi has formed a joint venture with Italian aerospace manufacturer Alenia Aeronautica to focus on SuperJet sales and after sales product support in Western Europe, North America and South America. Alenia is gearing up for a U.S. marketing drive in early 2008 with the opening of a U.S. sales office in Alenia North America's offices in Washington DC. The SuperJet product rollout occurred on September 26, 2007, and commercial delivery is scheduled for 2008.<sup>10</sup>

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<sup>9</sup> Ibid.

<sup>10</sup> Under terms of the joint venture agreement, Sukhoi Civil Aircraft will hold 49 percent of the registered capital, while Alenia Aeronautica will hold 51 percent. "Sukhoi Company and Alenia Aeronautica announce the foundation of a Joint Venture at the MAKS Air Show"; available at <http://www.sukhoi.org/eng/news/company/?id=1195>

### *MS-21*

The MS-21 is a family of twin engine short to medium range aircraft in the 130-170 passenger size. The MS-21 is being jointly developed by UAC member companies Tupolev, Ilyushin and Yakovlev and is being positioned as a direct competitor to next generation narrow body civil aircraft from Boeing and Airbus as well as the companies' current 737 and A320 narrow body aircraft. According to Fedorov, the MS-21 will incorporate the latest in manufacturing and materials technologies to include composite components, titanium and advanced aluminum alloys. Although initially slated for commercial launch in 2012, Fedorov indicated the more likely launch date will be somewhere between 2015-2017.<sup>11</sup>

### *Il-214 Multirole Transport Aircraft (MTA)*

The MTA is being produced under a production and design agreement between UAC members Irkut and Ilyushin and India's Hindustan Aerospace Ltd. (HAL). The aircraft is designed to replace aging Antonov An-12/24/32 transport aircraft. UAC also considers the MTA a competitor and viable alternative to the Lockheed Martin C-130 Hercules. UAC and HAL are contemplating dual production of the MTA at both HAL and Irkut facilities. Despite a long development period and some disagreement on levels of investment by the respective partners, the governments of Russia and India plan to sign an intergovernmental agreement in November 2007 formalizing the arrangement for development and production.<sup>12</sup> The MTA's

first flight is scheduled for 2012, with delivery of the first aircraft in 2014.<sup>13</sup>

### *Existing Aircraft Upgrades*

In addition to new aircraft designs, UAC also plans upgrades and improvements to existing aircraft. An updated version of the Ilyushin Il-96, the long range Il-96-400, is already in service, and an updated version of Tupolev's Tu-204, the Tu-204SM, will be introduced in 2010 to compete with the Boeing 737 and Airbus A320.

## **COOPERATION AND CROSS INVESTMENT**

UAC has stated that it expects to become the world's third largest aircraft manufacturer by 2015. Accomplishment of this goal is based in large part on a variety of cooperation agreements between UAC member companies, its direct competitors and suppliers.<sup>14</sup> In addition to previously mentioned agreements with Boeing, Alenia, HAL and others, UAC has signed a number of other agreements for cooperation in manufacturing and design:

### *Alcoa*

UAC and Alcoa International signed a memorandum of understanding (MoU) at MAKS 2007 covering "supply of advanced metallic materials, modern structural components and manufacturing technologies." The MoU also covers development of an Alcoa Aerospace Technology Center in Russia, which will open in 2008.

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<sup>11</sup> MAKS 2007 Show Program interview with Alexei Fedorov, President of United Aircraft Corporation.

<sup>12</sup> "Russia, India to sign agreement on multirole transport aircraft by November" available at <http://www.forbes.com/markets/feeds/afx/2007/09/21/afx4142286.html>

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<sup>13</sup> "Il-214 Multirole Transport Aircraft (MTA)" available at <http://www.globalsecurity.org/military/world/russia/il-214.htm>

<sup>14</sup> "Alcoa, United Aircraft Corporation Sign Technology Cooperation Agreement" available at [http://www.alcoa.com/global/en/news/news\\_detail.asp?newsYear=2007&pageID=20070822005466en](http://www.alcoa.com/global/en/news/news_detail.asp?newsYear=2007&pageID=20070822005466en)



*European Aeronautic Defense and Space Company (EADS)*

European Aeronautic and Defense Space Company (EADS) and UAC have signed four agreements, which specify possible cooperation programs under discussion between the two companies<sup>15</sup>:

- A five percent partnership in the Airbus A350XWB program for UAC for airframe component design and construction in Russia
- Establishment of a joint venture in Dresden to handle freighter conversion centers for the Airbus A320 Family both in Dresden and at Lkhovitsy near Moscow
- A joint study of the transport aircraft market and possible cooperation between EADS and the Russian industry in this field
- A shareholder exchange in EADS' Engineering Center Airbus Russia (ECAR)

In addition, EADS owns a 10 percent stake in Irkut Corporation, the sole privately held member of UAC. EADS is in negotiations to convert its Irkut holdings into UAC shares, but the company is waiting to exercise this option until the conversion rate of their holdings is set when UAC makes its initial public offering (IPO) in the 2009-2010 time frame.

*Vneshtorgbank (VTB)*

Vneshtorgbank (VTB), Russia's second-largest state owned bank, purchased a five percent stake in EADS in 2006. After VTB floated their EADS shares on the market for a year, the bank announced its intention to sell its stake. Andrei Kostin, President and Chairman of Vneshtorgbank (VTB) is a board member of UAC, and some industry

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<sup>15</sup> [http://www.eads.net/1024/es/pressdb/pressdb/EADS/20070322\\_eads\\_uac\\_partnership.html](http://www.eads.net/1024/es/pressdb/pressdb/EADS/20070322_eads_uac_partnership.html)

analysts think VTB may hand its shares over to the UAC as a method of gaining influence in EADS. This possibility was publicly suggested by President Putin, and Industry and Energy Minister Khristenko also mentioned this potential transfer at the rollout ceremony for the Sukhoi SuperJet on September 26, 2007.<sup>16</sup> However, most experts feel that UAC would need at least a 20 percent stake in EADS to exert any meaningful influence. In addition, EADS management has stated it is not interested in Russian holdings in the company exceeding current levels.<sup>17</sup>

In addition to its investment in EADS, VTB is taking a more direct interest in UAC. On August 22, 2007 at MAKS 2007, VTB signed an agreement with UAC to help finance its development, including upgrading plants and consultation on the company's initial public offering (IPO). In addition, VTB has expressed interest in becoming a UAC shareholder and has agreed to finance international sales of the Sukhoi SuperJet.

*Other Cooperation*

A number of other aerospace manufacturers are closely involved with existing and future UAC products. For example, Goodrich Corporation is designing landing gear and escape slides for the SuperJet 100, and the Honeywell Corporation provides avionics the Il-96 family of aircraft. In addition, Pratt

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<sup>16</sup> The National Reserve Corporation (NRC), a Russian multi-industry conglomerate owned by billionaire entrepreneur Alexander Lebedev, has also been mentioned as a possible purchaser of the VTB-owned EADS stake. Lebedev owns a one third stake in flag carrier OAO Aeroflot, and in September 2006 Lebedev, through NRC, paid Boeing a deposit of USD 40 million to reserve production slots and contract terms for the purchase of 22 Boeing 787 Dreamliner aircraft by Aeroflot until the end of the year while the carrier considered offers from Boeing and Airbus.

<sup>17</sup> <http://www.russiatoday.ru/business/news/13656>

& Whitney, which has a long-standing presence in Russia's aerospace industry that predates the formation of UAC, is looking at cooperation with the MTA consortium to provide engines for that aircraft.

## **OPK OBORONPROM**

Similar to the consolidation of the aviation industry under UAC, the Russian Federation has also brought the country's helicopter industry under a single, majority state-owned entity (See Chart 3). In November 2004 President Putin issued a Presidential Decree directing the assets of Russia's helicopter industry to be consolidated under OPK Oboronprom's Helicopter Group. A diverse corporation with multi-sector investments in high technology and defense, OPK Oboronprom assumed the assets of the various member companies' under its newly established Helicopter Group. OPK Oboronprom is majority owned by the Russian Federation (51 percent). Members of the Helicopter Group include<sup>18</sup>:

- Mil Moscow Helicopter Plant
- Kamov Company Russia
- Ulan Ude Aviation Plant
- Kazan Helicopter Plant
- Moscow Machine Building Plant "Vpered"
- Stupino Machine-Building Production
- Novosibirsk Aircraft Repair and Overhaul
- R.E.T. Kronstadt
- Helicopter Service Company Moscow
- Oboronprom Middle East

Russian helicopters are not easily adapted for use and integration in western countries due to difficulty with power sources,

different instrumentation and other compatibility issues. It is those exact differences, however, that provide opportunities for international cooperation with OPK Oboronprom member companies for those companies that have mastered these challenges. Some of the more prominent existing cooperative ventures include:

- Honeywell Corporation's "westernization" of Mi-8/Mi-17 military helicopters for use outside Russia
- Rolls-Royce Corporation (North America) provides an engine for the Kamov KA-226 light multipurpose helicopter. The Model 250 engine is manufactured in Indianapolis, IN.

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<sup>18</sup> <http://www.oboronprom.com/en/show.cgi?business/holding.htm>

# Chart 3

