Taking success to new heights.
STRUCTURE OF THE REPORT

About the Corporation

Letter from Chairman of the Board of Directors of PJSC UAC
Letter from President, Chairman of the Management Board of PJSC
UAC

Section 1. Strategy
1.1. UAC’s market position
1.2. Strategy and business model
1.3. Investment programme
1.4. Aircraft projects
1.5. Innovation, research and development

Section 2. Sustainable development
2.1. Human resources management
2.2. Environmental safety
2.3. CSR and charity

Section 3. Corporate governance
3.1. UAC’s corporate governance system
3.2. Securities

Annexes
Annex 1. Risk management
Annex 2. Abbreviations and glossary
Annex 3. Disclaimer

Contacts

3
19
20
22
23
30
35
38
41
47
48
54
55
57
58
73
78
79
84
85
86
The Corporation was established in 2006 to support and develop the research and manufacturing potential of the Russian aircraft industry, enhance national security and defence capability and pool the intellectual, production and financial resources to implement long-term aircraft engineering programmes.

In 2007 the UAC was included in the list of strategic enterprises of the Russian Federation. The Corporation is also one of the integrated structures that make up the country’s military-industrial complex.

The Corporation’s main areas of activity are the development, manufacturing, sales and aftersales maintenance of civil, military, transport and special-purpose aircraft, as well as the modernisation, repair and recycling of aircraft, training and enhanced training of aircrews.

The UAC member companies manufacture their products under globally renowned brands, including Sukhoi, MiG, Ilyushin, Tupolev, Yakovlev, MC-21, Superjet 100 and Beriev.

The Corporation’s majority shareholder is the Russian Federation represented by the Federal Agency for State Property Management, with an equity holding of more than 90%. The shares of PJSC UAC are traded on the Moscow Exchange under the ticker symbol UNAC.

Aircraft deliveries by year

<table>
<thead>
<tr>
<th>Category</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Military aircraft</td>
<td>79</td>
<td>124</td>
<td>124</td>
<td>103</td>
<td>94</td>
</tr>
<tr>
<td>Domestic market</td>
<td>54</td>
<td>102</td>
<td>90</td>
<td>72</td>
<td>56</td>
</tr>
<tr>
<td>Exports</td>
<td>25</td>
<td>22</td>
<td>34</td>
<td>31</td>
<td>38</td>
</tr>
<tr>
<td>Civil aircraft</td>
<td>32</td>
<td>35</td>
<td>30</td>
<td>37</td>
<td>36</td>
</tr>
<tr>
<td>Domestic market</td>
<td>18</td>
<td>26</td>
<td>25</td>
<td>26</td>
<td>34</td>
</tr>
<tr>
<td>Exports</td>
<td>14</td>
<td>9</td>
<td>5</td>
<td>11</td>
<td>2</td>
</tr>
<tr>
<td>Transport and special-purpose aircraft</td>
<td>—</td>
<td>—</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Domestic market</td>
<td>—</td>
<td>—</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Exports</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Total</td>
<td>111</td>
<td>159</td>
<td>156</td>
<td>141</td>
<td>133</td>
</tr>
</tbody>
</table>

The United Aircraft Corporation is a global leader in the civil and military aircraft market.

133 aircraft were delivered by the Corporation in 2017.
Geography

100,000+
jobs

20+
regions of Russia

4
countries of presence

Companies in Russia
Joint-venture companies abroad
### Geography

<table>
<thead>
<tr>
<th>City</th>
<th>Company</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Companies in Russia</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>1. Moscow</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Moscow</td>
<td>Headquarters of PJSC UAC</td>
<td>🏢</td>
</tr>
<tr>
<td></td>
<td>PJSC Company Sukhoi</td>
<td>🏢</td>
</tr>
<tr>
<td></td>
<td>JSC Sukhoi Civil Aircraft</td>
<td>🏢</td>
</tr>
<tr>
<td></td>
<td>PJSC Irkut Corporation</td>
<td>🏢</td>
</tr>
<tr>
<td></td>
<td>PJSC A. S. Yakovlev Design Bureau</td>
<td>🏢</td>
</tr>
<tr>
<td></td>
<td>JSC OAK-TS</td>
<td>🏢</td>
</tr>
<tr>
<td></td>
<td>PJSC Tupolev</td>
<td>🏢</td>
</tr>
<tr>
<td></td>
<td>PJSC IL</td>
<td>🏢</td>
</tr>
<tr>
<td></td>
<td>LLC UAC-Purchases</td>
<td>🏢</td>
</tr>
<tr>
<td></td>
<td>JSC Aerocomposit</td>
<td>🏢</td>
</tr>
<tr>
<td></td>
<td>LLC UAC-Integration Centre</td>
<td>🏢</td>
</tr>
<tr>
<td></td>
<td>JSC RSK MiG</td>
<td>🏢</td>
</tr>
<tr>
<td></td>
<td>LLC UAC-Capital</td>
<td>🏢</td>
</tr>
<tr>
<td></td>
<td>LLC UAC-Development</td>
<td>🏢</td>
</tr>
<tr>
<td></td>
<td>JSC Ilyushin Finance Co</td>
<td>🏢</td>
</tr>
<tr>
<td><strong>2. Zhukovsky</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zhukovsky Moscow Region</td>
<td>OJSC Myasishchev Design Bureau</td>
<td>🏢</td>
</tr>
<tr>
<td></td>
<td>JSC M. M. Gromov Flight Research Institute</td>
<td>🏢</td>
</tr>
<tr>
<td><strong>3. Kubinka</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kubinka Moscow Region</td>
<td>JSC 121 ARZ</td>
<td>🏢</td>
</tr>
<tr>
<td><strong>4. Lukhovitsy</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lukhovitsy Moscow Region</td>
<td>Voronin Lukhovitsy Aircraft Plant—branch of JSC RSK MiG</td>
<td>🏢</td>
</tr>
<tr>
<td><strong>5. Lyubertsy</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lyubertsy Moscow Region</td>
<td>JSC Aviaremont</td>
<td>🏢</td>
</tr>
<tr>
<td><strong>6. Kazan</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kazan Rep. of Tatarstan</td>
<td>Gorbunov Kazan Aviation Plant—branch of PJSC Tupolev</td>
<td>🏢</td>
</tr>
<tr>
<td></td>
<td>JSC KAPO-Composit</td>
<td>🏢</td>
</tr>
<tr>
<td><strong>7. Ulyanovsk</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ulyanovsk Region</td>
<td>JSC Aviastar-SP</td>
<td>🏢</td>
</tr>
<tr>
<td></td>
<td>AeroComposit Ulyanovsk</td>
<td>🏢</td>
</tr>
<tr>
<td><strong>8. Voronezh</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Voronezh Region</td>
<td>PJSC VASO</td>
<td>🏢</td>
</tr>
<tr>
<td><strong>9. Taganrog</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taganrog Rostov Region</td>
<td>PJSC TANTK Imeni G.M. Berieva</td>
<td>🏢</td>
</tr>
<tr>
<td></td>
<td>OJSC 325 ARZ</td>
<td>🏢</td>
</tr>
</tbody>
</table>
## Geography

<table>
<thead>
<tr>
<th>City</th>
<th>Company</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Companies in Russia</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Nizhny Novgorod</td>
<td>Nizhny Novgorod Aircraft Plant Sokol—branch of RSK MiG</td>
<td></td>
</tr>
<tr>
<td>Nizhny Novgorod Region</td>
<td>OJSC 170 RZ SOP</td>
<td></td>
</tr>
<tr>
<td>11. Novosibirsk</td>
<td>Chkalov Novosibirsk Aircraft Plant—branch of PJSC Company Sukhoi</td>
<td></td>
</tr>
<tr>
<td>Novosibirsk Region</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Irkutsk</td>
<td>Irkutsk Aviation Plant—branch of PJSC Irkut Corporation</td>
<td></td>
</tr>
<tr>
<td>Irkutsk Region</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Khabarovsk Territory</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. Pushkin</td>
<td>OJSC 20 ARZ</td>
<td></td>
</tr>
<tr>
<td>Leningrad Region</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. Belogorsk</td>
<td>OJSC 680 ARZ</td>
<td></td>
</tr>
<tr>
<td>Amur Region</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. Staraya Russa</td>
<td>JSC 123 ARZ</td>
<td></td>
</tr>
<tr>
<td>Novgorod Region</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17. Krasnodar</td>
<td>OJSC 275 ARZ</td>
<td></td>
</tr>
<tr>
<td>Krasnodar Territory</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18. Ivanovo</td>
<td>OJSC 308 ARZ</td>
<td></td>
</tr>
<tr>
<td>Ivanovo Region</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19. Vozdvizhenka</td>
<td>OJSC 322 ARZ</td>
<td></td>
</tr>
<tr>
<td>Primorye Territory</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20. Roslavl</td>
<td>OJSC 720 RZ SOP</td>
<td></td>
</tr>
<tr>
<td>Smolensk Region</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21. Volgograd</td>
<td>OJSC VZRTO</td>
<td></td>
</tr>
<tr>
<td>Volgograd Region</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22. Novocherkassk</td>
<td>OJSC 31 ZATO</td>
<td></td>
</tr>
<tr>
<td>Rostov Region</td>
<td></td>
<td></td>
</tr>
<tr>
<td>23. Ryazan</td>
<td>JSC 360 ARZ</td>
<td></td>
</tr>
<tr>
<td>Ryazan Region</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24. Rzhev</td>
<td>JSC 514 ARZ</td>
<td></td>
</tr>
<tr>
<td>Tver Region</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25. Spassk Dalny</td>
<td>OJSC 32 RZ SOP</td>
<td></td>
</tr>
<tr>
<td>Primorye Region</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Joint venture companies abroad</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Shanghai (China)</td>
<td>China-Russia Commercial Aircraft International Corporation Co., Ltd</td>
<td></td>
</tr>
<tr>
<td>2. Bangalore (India)</td>
<td>Mutilrole Transport Aircraft Limited</td>
<td></td>
</tr>
<tr>
<td>3. Venice (Italy)</td>
<td>SuperJet International S.p.A.</td>
<td></td>
</tr>
</tbody>
</table>

---

*Managing company*, *Experimental design bureau*, *Plant*
**Civil aircraft**

**Civil aircraft model range**

**MC-21**

- **Medium-haul narrow-body aircraft**
- **Status: prototype production**
- **Seating capacity of 163 to 211 passengers**

**State special-purpose aircraft model range**

**II-114-300**
- Turboprop aircraft for local routes, with a seating capacity of 52 to 64 passengers
- **Status: modernisation and re-launch**

**Superjet 100**
- Short-to-medium-haul narrow-body aircraft with a seating capacity of 87 to 103 passengers
- **Status: serial production**

**CR929**
- Long-haul wide-body aircraft with a seating capacity of 210 to 350 passengers
- **Status: initiation (negotiations with suppliers)**

**II-96-400-M**
- Long-haul wide-body aircraft with a seating capacity of 305 to 370 passengers
- **Status: modernisation and re-launch**

**State special-purpose aircraft**

**An-148**
- Aircraft designed for regional routes, with a seating capacity of 68 to 80 passengers
- **Status: serial production**

**Tu-204/214/204CM**
- Medium-haul narrow-body aircraft with a seating capacity of 210 passengers
- **Status: serial production**

**II-96**
- Long-haul wide-body aircraft with a seating capacity of 257 to 289 passengers
- **Status: serial production**
Military aircraft

**Su-57**
- Fifth-generation multifunction fighter aircraft
- Status: prototype production

**MiG-29**
- Generation 4+ multifunction frontline fighter aircraft
- Maximum payload: 4.5 t
- Status: serial production

**MiG-35**
- Generation 4++ multifunction fighter aircraft
- Maximum payload: 4.5 t
- Engineering and testing

**Su-30**
- Generation 4+ multifunction fighter aircraft
- Maximum payload: 8 t
- Status: serial production

**Su-34**
- Generation 4+ frontline fighter bomber
- Maximum payload: 8 t
- Status: modernisation and re-launch

**Su-35**
- Generation 4++ multifunction fighter aircraft
- Maximum payload: 8 t
- Status: serial production

**Tu-160**
- Strategic missile-carrying bomber
- Status: modernisation and re-launch

**PAK DA**
- Strategic missile-carrying bomber
- Status: engineering

**Yak-130**
- Combat training aircraft
- Maximum payload: 3 t
- Status: serial production

**Yak-152**
- Training aircraft
- Status: production roll-out
Transport and special-purpose aircraft model range

**II-76MD-90A**
- Heavy military transport aircraft
- Status: serial production
- Maximum payload: 60 t

**II-112V**
- Light military transport aircraft
- Maximum payload: 5 t
- Status: first prototypes assembly

**SVTS**
- Medium-lift military transport aircraft
- Maximum payload: 20 t
- Status: engineering

**Be-200**
- Multifunction amphibious aircraft
- Maximum payload: 12 t
- Status: serial production

---

**About the Corporation**

**Strategy**

**Sustainable development**

**Corporate governance**

**Annexes**

**Contacts**
One of UAC’s key projects, MC-21 is a new-generation passenger liner that targets the largest aviation segment. MC-21 took off on its maiden flight on 28 May 2017 from the airfield of the Irkutsk Aviation Plant. The 30-minute flight was performed at an altitude of 1,000 metres with a speed of 300 km/h. The aircraft was operated by a crew consisting of test-pilot Oleg Kononenko, Hero of the Russian Federation, and test-pilot Roman Taskaev, Hero of the Russian Federation. The prototype was successfully tested for stability, handling and engine controllability: all the systems operated without glitches, the engine characteristics and operational modes were confirmed.

The second stage of MC-21-300 in-plant development tests commenced in September 2017. The main objective of the second stage was to extend the flight performance range in terms of mass, centring, speed and altitude. During the test-flights, the improved systems operated without failure.

A number of the UAC member companies have been working on MC-21, including PJSC Irkut Corporation, JSC Aerocomposit, JSC Aviastar-SP, PJSC VASO and LLC UAC-Integration Centre. The aircraft featuring advanced technical solutions ensures that its passengers have a comfortable travel and presents an economically attractive offer to airlines.
It was not just a flight of a new aircraft; it was the birth of a new product that will be shaping the Russian aircraft building industry in the next 50 years. We expect a global demand for around 15,000 new aircraft in the MC-21 segment over the next 20 years. No doubt, the airlines will duly appreciate our new aircraft.

Yuri Slyusar

MC-21 will have the largest diameter of fuselage of all the available narrow-body aircraft, which will imply a totally new level of comfort: every passenger will have a larger personal space and will be able to easily walk by the trolley during meal service, while the airlines will appreciate the reduced turn-around time at airports. The aircraft will also have larger windows to bring in more light. In addition, it will have a more comfortable cabin pressure and improved cabin climate. An innovative ergonomic air crew cabin was designed for the pilots of MC-21.

In addition, advanced technical solutions in aerodynamics, engine technologies and aircraft systems were introduced – in particular, MC-21 is the first narrow-body aircraft with a seating capacity of over 130 passengers to have specially designed high-load composite wings that will improve its performance characteristics. The engine features innovative solutions that help reduce fuel consumption, hazardous emissions and noise while ensuring higher cruising speed. The weight of the aircraft will also be significantly reduced through the use of modern materials.
2017 highlights

### JANUARY

On 12 January the TANTK Imeni G.M. Berieva delivered the first production configuration aircraft Be-200ChS amphibious aircraft to the Russian Ministry of Emergency Situations. The aircraft successfully completed the flight tests. The aircraft had undergone significant upgrade—the equipment had been modernised, and there had also been serious changes in the airframe design.

### FEBRUARY

On 2 February one of the most important aircraft manufacturing stages was completed at the Voronezh Aircraft Plant (PJSC VASO): the wings were coupled to the fuselage of the Il-112V light military transport aircraft. The aircraft has a maximum payload of 5 tonnes and is designed for transporting personnel, military equipment, weapons and other kinds of cargo.

On 27 January the newest MiG-35 multifunction aircraft system had its international premiere in the city of Lukhovitsy (Moscow Region). The aircraft is designed for operation in high-intensity conflict areas characterised by dense enemy air defence and can defeat airborne, ground and surface targets.
On 10 February the contract was signed for research and development activities aimed at creating a modernised Il-96-400M passenger aircraft. The new aircraft is expected to increase the accessibility of Russian regions by transport and cover the demand in domestically produced long-haul aircraft.

On 13 February, at the Aero India air show, the UAC presented both its well-established and latest aircraft and discussed the possibility of extending military cooperation with Indian partners on aircraft delivery and industrial cooperation projects.

On 20 March the UAC presented a wide range of its products at Malaysian’s LIMA 2017, one of the largest international maritime and aerospace exhibitions in Southeast Asia. Given the fact that for many years the country’s Air Force have used the Russian Su-30MKM and MiG-29 aircraft and that Russian aircraft have been delivered to other countries of the region, Southeast Asia is seen as an attractive region for promoting the Corporation’s military and civil products.
2017 highlights

APRIL

On 4 April the UAC represented the Russian aircraft industry at the LAAD-2017 international aviation, aerospace and defence exhibition in Brazil.

On 27 April the Kazan Aviation Plant launched a beam welding line to produce titanium parts for the new Tu-160 missile-carrying aircraft, which was one of the key stages of the enterprise's modernisation. Beam welding is used to manufacture the wing centre section beam of the Tu-160 bomber. The assembly weighs around 6 tonnes and takes the maximum load: it supports the principal swing mechanisms and the wings themselves.

MAY

On 22 May the UAC and the Commercial Aircraft Corporation of China (COMAC) opened the office of the China-Russia Commercial Aircraft Corporation, a joint-venture company that will act as the operator of the programme for building a new generation long-haul wide-body commercial aircraft. The Russian and Chinese aircraft engineers will jointly work on the new aircraft.
On **28 May** the new MC-21-300 passenger aircraft took off on a maiden flight from the airfield of the Irkutsk Aviation Plant. The 30-minute flight was performed at an altitude of 1,000 metres with a speed of 300 km/h. The flight plan included stability, handling and engine controllability tests. MC-21-300 is a new generation passenger aircraft with a seating capacity of 163 to 211 passengers that targets the largest aviation segment.

**JUNE**

On **20 June** the UAC presented a refreshed lineup in all key civil aircraft segments at the Paris Air Show in Le Bourget: Il-114-300 in the regional turboprop segment, Sukhoi Superjet 100 in the regional jet segment, MC-21 in the long-haul narrow-body segment and CR929 aircraft in the long-haul wide-body segment. At the press conference held by the Russian delegation, the President of the UAC Yuri Slyusar summarized the key priorities of the Corporation, including the increase in the share of civil products in the portfolio and capturing a sizeable share of the global market.

**JULY**

Since **early July**, Superjet 100 aircraft have been used on regular flights to the Stockholm Bromma Airport (Sweden). Though the airport has a relatively short runway of just 1,660 meters, the aircraft only needs a runway of 1,425 meters with a maximum landing weight. To achieve this, the SSJ 100 aircraft had been retrofitted to feature a B100 option that uses an increased-thrust engine, optimised avionics software and high-lift device controls.
2017 highlights

**AUGUST**

On **18 July**, at the MAKS International Aviation and Space Salon air show in the city of Zhukovsky (Moscow Region), the UAC presented advanced models of military, civil and special-purpose aircraft, held multiple business meetings and conferences, in particular, on the development of digital technologies, financing, and the industry’s talent pool. The Corporation signed an agreement for the delivery of 20 SSJ 100 aircraft to Aeroflot, as well as a number of other agreements.

On **21 August** the UAC acted as a strategic partner of the ARMY 2017 International Military Technical Forum. The Corporation presented an impressive exhibition display at the Patriot theme park of the Russian Armed Forces. The UAC demonstrated the flight technical capabilities of its latest combat aircraft.

**SEPTEMBER**

On **13 September** the UAC launched the second stage of the in-plant development flight tests of the MC-21-300 prototype. During the test-flights, the improved aircraft systems operated without failure. The test flight lasted about two hours. The main objective of the second stage of the flight tests was to extend the flight performance range in terms of mass, centring, speed and altitude.
OCTOBER

On 17 October the first MC-21-300 prototype went on a flight from the airfield of the Irkutsk Aviation Plant to the Ramenskoye airport of the M.M. Gromov Flight Research Institute in the city of Zhukovsky (Moscow region). The aircraft covered a distance of around 4,500 km in six hours of continuous flight. The aircraft flew at an altitude of 10,000 metres.

NOVEMBER

On 12 November, at the Dubai Air Show international aerospace event, the UAC presented one of the most impressive full-scale demonstration facilities: an SSJ 100 aircraft with a VIP interior, Russia’s latest supermanoeuvrable Gen 4++ Su-35S fighter, a Be-200 amphibious aircraft and an Il-76 transport aircraft. In addition, the exhibition stand provided detailed information on UAC’s ongoing programmes.

On 16 November, at the Kazan Aviation Plant, a Tu-160 aircraft that had been build using the incomplete airframe available at the Plant was rolled out to the flight-test base. It was the first aircraft to have been built under the strategic bomber reproduction programme. The upgrade focused on recovering the final assembly technology, testing a number of new technology solutions and adjusting new enhanced aircraft engines.
On 5 December, at the M. M. Gromov Flight Research Institute, Russia’s first Su-57 Gen 5 fighter featuring a ‘second-stage’ engine made its maiden flight.

On 21 December 2017 the Board of Directors of CRAIC, the Russia-China joint venture that acts as the operator of Programme CR929 for building a long-haul wide-body aircraft, approved Gate 2 results and recommended that Managing Committee of the Programme decide on proceeding to the next stage. The main objective of the Gate 2 milestone was the critical review of the aircraft family concept.
Dear colleagues,

The UAC Group of Companies was established over a decade ago to consolidate the efforts of the Russian aircraft manufacturing and engineering companies.

Today we can safely say that we have delivered on this objective. In place of the rival Soviet-style ‘enterprises’ we now have a solid corporation with shared goals, transparent governance and a well-defined structure.

In the reporting year we worked further to consolidate the success. In particular, we implemented the decisions of the Board of Directors to create four Divisions within the Corporation corresponding to its four areas of business: the civil, military, transport and strategic, and special-purpose aircraft. I strongly believe that streamlining the UAC’s structure will ensure increased transparency, improved operational efficiency and enhanced aircraft programme management effectiveness. In addition, it will facilitate the concentration of engineering and intellectual resources and the reduction of transaction and non-manufacturing costs through the centralisation of management, in particular, as the result of greater coordination in performing the obligations on building new aircraft. Ultimately, we expect that the steps we take will enable us to make a more valuable contribution to ensuring the country’s defence, and also to improve the UAC’s global competitiveness.

While in 2015 and 2016 we focused on developing and making first progress on our strategy in the new geopolitical realities, in 2017 the Corporation really gained momentum in implementing the provisions of the updated strategy.

The Board has actively contributed to the Corporation’s development. The UAC’s corporate governance system that relies on the current legislation and builds on the best practices of Russian and foreign companies makes it possible to timely detect and address threats, as well as to identify and use growth opportunities. All Board committees, i.e. the Strategy Committee, the Audit Committee, the Budget Committee, the HR and Remuneration Committee, also worked very intensively in the past year, and the Board itself made every effort to assist the Corporation.

The goals for 2018 and beyond include a number of very ambitious tasks that will require even greater concentration of effort and resources. We will do our best to facilitate the Corporation’s long-term growth and the strengthening of its position in the global market, and to ensure that the UAC’s products contribute to enhancing strategic stability and improving the standards of living.
Dear colleagues,

2017 was another year in the development of the UAC that consolidated the efforts and the potential of the entire Russian aircraft industry.

The UAC’s revenue amounted to RUB 451.8 billion, setting a new record high. The revenue increase of more than 8% from the previous year is mostly attributable to the 39% surge in aftermarket sales and requests for aircraft modernisation, including the supplies of components. In the reporting year the revenue in the civil segment went up more than 11%, exceeding RUB 75 billion.

In 2017 the military aircraft exports and the deliveries of passenger aircraft proceeded to grow on the back of the scheduled decrease in defence acquisitions, that is to say, the Corporation has remained committed to its strategic objectives—increasing the share of civil products in the portfolio and developing high-tech exports.

In 2017 we proceeded with our key aircraft programmes. One of the year’s highlights was the maiden flight of the MC-21 new-generation passenger airliner from Irkutsk. A couple of months later, the airliner made a continuous six-hour flight to Moscow where it underwent further flight tests in Zhukovsky (Moscow Region). The aircraft will enter production as soon as it has been certified. The MC-21 programme has contributed to one of our strategic goals—significantly increasing the share of civil products in the UAC’s portfolio. Late last year, at the Zhukovsky airfield in the Moscow Region, we launched a series of flight tests of Su-57, Russia’s latest fifth-generation fighter featuring a second-stage engine. With the first stage of state trials successfully completed, the Ministry of Defence is buying the aircraft for test combat use.

In 2017 the key stage of production modernisation was completed at the Kazan Aviation Plant that was essential for the Tu-160 project. In particular, the modernisation included the launch of an electron beam welding plant for the wing centre section welding which became the world’s largest plant for joining titanium alloy wing assemblies. A new Tu-160, the first aircraft built as part of the strategic bomber refitting programme, was rolled out late in 2017 and made its first flight in early 2018.
In the past year the first Be-200 amphibious aircraft serially produced at our Taganrog plant were delivered to the customer—the Russian Ministry of Emergency Situations. An international premiere of MiG-35 multifunction aircraft system took place at the MiG production facility in Lukhovitsy (Moscow Region). We made more progress on a number of other programmes, including SSJ 100, Il-96-400M, Il-76MD-90A and designing the CR929 in cooperation with China.

We moved steadily toward implementing the UAC’s updated growth strategy. We have successfully addressed various challenges, such as changing the industrial model, improving aftermarket support and labour efficiency.

In addition, in 2017 we made more headway in digitising the operations and extending cooperation with small innovation companies.

I would like to highlight the efforts of the Corporation’s team, the employees of our companies and design bureaus.

The expertise, skills and operational excellence of our employees have enabled us to steadily develop, strengthening the Corporation’s position and making it increasingly competitive in the global market.

<table>
<thead>
<tr>
<th>Year</th>
<th>UAC’s Revenue</th>
<th>Operating Profit</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>220.1 billion RUB</td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td>294.5 billion RUB</td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td>346.1 billion RUB</td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td>416.9 billion RUB</td>
<td></td>
</tr>
<tr>
<td>2017</td>
<td>451.8 billion RUB</td>
<td>21.6 billion RUB</td>
</tr>
</tbody>
</table>

Return on sales in 2017: 4.8%
Adding new destinations to the map.
The United Aircraft Corporation is one of the key players in the global civil and military aircraft market. Its competitors are the world’s largest aircraft manufacturers, such as Airbus, Boeing, Lockheed Martin, Embraer and Bombardier.

**UAC’S MARKET POSITION**

**Civil aircraft**

**INTERNATIONAL MARKET**

According to IATA, in 2017 the global air passenger market was steadily growing: with aviation fuel prices relatively low, the passenger turnover increased by 7.6% over the past year (an uptick of 1.1 p.p. from the decade’s average), whereas the average passenger load factor went up 0.9 p.p., reaching a historical high of 81.4%. The air cargo traffic in freight tonne kilometres was up 9%, the strongest growth since 2010. The current market trends have driven the airlines’ demand for new civil aircraft.

In 2017 a total of 1,754 new aircraft was delivered globally to the global market, which is 24 aircraft more than in the previous year. Most of the new aircraft (1,088 aircraft, or 62%) were long-haul narrow-body aircraft; the remaining part were wide-body and short-haul (regional) aircraft: 385 and 281 aircraft, respectively.

In 2017 the Corporation delivered 36 civil aircraft to the market and ranked the world’s No.6 with an aggregate market share of 1.8%. Notably, in the regional jets category—currently the Corporation’s key segment—the UAC ranks No. 2 with a market share of 19% (30 aircraft).

The UAC supplies SSJ 100 aircraft to the external market. In 2017 the list of SSJ 100 operators increased to include Brussels Airlines (Belgium) which wet-leased three SSJ 100 aircraft.
SECTION 1. STRATEGY

LARGEST FOREIGN SSJ 100 OPERATORS

6 SSJ 100 aircraft, as of end-2017

CityJet (Ireland)

InterJet (Mexico)

22 SSJ 100 aircraft, as of end-2017

Civil aircraft deliveries by UAC

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal market</td>
<td>18</td>
<td>26</td>
<td>25</td>
<td>26</td>
<td>34</td>
</tr>
<tr>
<td>External market</td>
<td>14</td>
<td>9</td>
<td>5</td>
<td>11</td>
<td>2</td>
</tr>
<tr>
<td>TOTAL</td>
<td>32</td>
<td>35</td>
<td>30</td>
<td>37</td>
<td>36</td>
</tr>
</tbody>
</table>
A total of 32 SSJ 100 aircraft is operated by foreign companies, including InterJet (Mexico, 22 aircraft) and CityJet (Ireland, six aircraft).

According to the Corporation’s long-term projections, in the next 20 years the average compound growth rate in air passenger traffic will amount to around 4.5%. Total demand for new passenger aircraft with a seating capacity of more than 20 passengers is estimated at 41,900 aircraft. It is expected that a total of 27,900 narrow-body aircraft, 7,500 wide-body aircraft and 6,500 regional aircraft (including 4,100 jets) will be delivered.

Given the industry's growth prospects, the Corporation aims to further strengthen its presence in the global civil aircraft market. To this end, the UAC has worked on expanding the operational capabilities of SSJ 100 and has implemented the programme for designing and building the new MC-21 aircraft. In addition, the long-haul wide-body CR929 aircraft will be built in cooperation with the Chinese COMAC aerospace manufacturer: in 2017 Russia and China established the China-Russia Commercial Aircraft International Corporation, a joint venture that will act as the programme’s operator.

Increasing the operating attractiveness of SSJ 100

Entering new markets is a key objective of JSC Sukhoi Civil Aircraft, manufacturer of SSJ 100. With this in mind, the company has worked on increasing the operating attractiveness of the aircraft. In particular, in December 2017, in the city of Zhukovsky (Moscow Region), an SSJ 100 aircraft featuring sabre-like wingtips made its first flight. The new wingtips dubbed ‘Saberlets’ reduce fuel consumption by at least 3%, and improve the aircraft’s performance during take-off and landing phases, which may be quite useful in hot climates. In addition, certification was obtained for the auxiliary fuel tanks that will extend the flight range of Sukhoi Business Jet to 7,000 kilometres.

Another milestone in expanding the operating capabilities of Sukhoi Superjet 100 was obtaining certification for a new B100 option from the European Aviation Safety Agency (EASA). The new SSJ 100 B100 has an increased thrust and can use shorter runways of airports located within the city boundaries or high in the mountains. Such characteristics could potentially be of interest to Western European and BRICS operators.

RUSSIAN MARKET

The Russian air transportation market that had been declining throughout 2015 and 2016 due to the dire economic situation finally stopped its downward trend in 2017. The key market indicators improved substantially, hitting fresh all-time highs: total air passenger traffic was up 20.3% to 259.4 billion passenger-kilometres, while the number of passengers carried increased by 18.6% to 105.1 million passengers. Russian freight turnover rose 15.4%, which is slightly below the previous year’s growth rates (20%), but is still 80% above the decade’s average.
RUSSIA’S LARGEST SSJ 100 OPERATORS

42 SSJ 100 aircraft, as of end-2017

16 SSJ 100 aircraft, as of end-2017

Russia’s largest SSJ 100 operators, as of end-2017

Aircraft deliveries to the internal market by UAC

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSJ 100</td>
<td>11</td>
<td>18</td>
<td>20</td>
<td>17</td>
<td>28</td>
</tr>
<tr>
<td>Other aircraft</td>
<td>7</td>
<td>8</td>
<td>5</td>
<td>9</td>
<td>6</td>
</tr>
<tr>
<td>TOTAL</td>
<td>18</td>
<td>26</td>
<td>25</td>
<td>26</td>
<td>34</td>
</tr>
</tbody>
</table>
According to the Federal Agency for Air Transport, as of end-2017, Russia had 110 commercial air transport operators. In 2017 the country’s five largest air carriers accounted for 65.5% of passenger traffic and carried 65.9% of passengers.

In 2015–17 Russia’s airlines increased their fleet by 318 aircraft (both new and used), including 93 (29%) domestically manufactured aircraft. New aircraft accounted for 57% of the total number of aircraft purchased (an uptick of 1 p.p. from the previous year).

In 2017 the UAC delivered 34 aircraft to the internal market, including 28 SSJ 100s. As of end-2017, 86 SSJ 100s were operated by Russian commercial companies; another 6 SSJ 100 aircraft were used by government departments and business aviation.

According to the UAC’s long-term projections, in the next 20 years passenger air traffic in Russia will be going at a compound annual growth rate of 4.1%, which is below the projected global average of 4.5%. It is expected that Russian airlines will need 1,150 new passenger aircraft in the said period (around 2.7% of the global market).

In addition to globally positioned aircraft (SSJ 100, MC-21, CR929), the Corporation’s advanced model range in the Russian market also includes the Il-114-300 regional turbo-prop and the Il-96-400M long-haul wide-body aircraft (development of the modernisation project is currently in progress).

**INTERNATIONAL MARKET**

In 2017 the UAC retained its leadership position in the global military aircraft market. It delivered 94 combat aircraft, including 38 exported aircraft. As of end-2017, PJSC UAC had a market share of 22% in terms of military, transport and special-purpose aircraft of all classes by size/type and mission delivered to customers.

It is expected that of all the UAC’s products the demand for Su-30/35, MiG-29 and Yak-130 families will be the highest in the external market in the years to come. It is also very likely that the list of combat aircraft offered for export and the number of buyers will be extended (the countries of the Middle East, Southeast Asia and Latin America are regarded as potential importers of Russian military aircraft).

In addition, the Corporation manufactures special-purpose aircraft systems and intends to put more effort in the development of this segment, in particular, the tanker support, reconnaissance, radio relay, mission control, location and strike, designation and jamming aircraft, as well as maritime patrol, anti-submarine and naval aircraft.

In the long-term, one of the UAC’s key focus areas in terms of special-purpose aircraft will be the development of versions specifically intended for exports and gradually strengthening the Corporation’s presence in the global market. It is planned that before 2035 the Corporation will deliver special-purpose aircraft for a total of no less than RUB 2 trillion. Another strategic focus of the UAC is building medium and heavy unmanned aerial vehicles for use in a wide range of missions.

---

1 The list of exportable aircraft, as well as the potential destinations for such exports from Russia, is provided in the relevant Presidential Decree: the state-level decision explicitly limits the number of potential partners of military technical cooperation.
RUSSIAN MARKET

Military aircraft
The Corporation manufactures military aircraft for the Russian Ministry of Defence under the State Armaments Programme 2020 approved by the President of Russia and finalised in the state defence order.

The UAC offers to the Ministry of Defence a wide model range of aircraft that caters to the demand of the country’s Air Force for top-grade state of the art weapons.

Transport and special-purpose aircraft
In 2017 the UAC proceeded to deliver on its contract for the manufacturing of Il-76MD-90A with the delivery timeframe specified by the customer, the Russian Ministry of Defence.

UAC’s vast experience in operating, maintaining the airworthiness of and commercialising the Il-76 family, and the current orders for the delivery of Il-76MD-90A from a number of Russian and foreign customers make it possible for the Corporation to create a balanced long-term manufacturing and marketing programme for this type of aircraft.

In 2017 the UAC continued with its Il-112V military transport aircraft programme in line with the agreed schedule, and in 2018 it began the production of two prototypes.

In compliance with the state contract of 11 May 2011, the UAC delivered three serial Be-200 ChS amphibious aircraft to the Russian Ministry of Emergency Situations.
Our mission

Develop, manufacture and provide aftermarket services for civil and military aircraft, with a focus on serving the needs of the state in protecting national security; ensure and maintain long-term competitiveness of the Russian aircraft industry on the global scale.

The strategic priorities of the UAC are defined by its majority shareholder—the Russian Federation. In line with Presidential Decree No. 140 "On the United Aircraft Corporation Joint Stock Company" of 20 June 2006, the main areas of UAC’s activities are as follows:

- Preserving and developing the scientific and manufacturing potential of the Russian aircraft industry;
- Ensuring national security and defence capability;
- Concentrating the intellectual, production and financial resources to facilitate the implementation of advanced aircraft programmes;
- Developing, manufacturing, marketing and providing maintenance, aftersales, modernisation, repair and recycling services for military and civil aircraft, upon request of the state and other parties, including foreign customers;
- Introducing new technologies and innovation in aircraft engineering.
In 2016 the strategy of PJSC UAC was revised to include the newly-launched aircraft programmes, the changes in the macroeconomic situation and the external environment at large.

In September 2016¹ the Board of Directors approved the updated PJSC UAC Strategy 2025 and 2035 and the action plan on implementing the Strategy. The main objectives listed in the Strategy are as follows:

- Serving the needs of the state in the sphere of national security, including transportation security;
- Maximising the sales on the global civil aircraft market in the regional turboprop, narrow-body and wide-body aircraft segments;
- Retaining the military aircraft market share and enhancing the presence in the transport and special-purpose aircraft market segments;
- Maintaining a balanced portfolio, in terms of life-cycle.

**OUR STRATEGIC GOALS**
The Corporation’s key strategic goal is to become a leader of the aircraft market in terms of value, carving out a distinct position in the global aircraft manufacturing market with a focus on its most attractive segments.

To achieve this goal, the UAC has worked on improving its organisational structure and operating model, developing its product portfolio and improving its aftersales services.

---

1 Minutes No. 166 of 23 September 2016.

## 2025 goals

- Achieving a 4.5% share of the civil aircraft market
- Ensuring that civil aircraft account for at least 40% of the revenue
- Achieving a military aircraft global market share of 8%
- Reaching break-even on net profit

## 2035 goals

- Maintaining a civil aircraft market share of at least 4.5%
- Ensuring that civil aircraft account for at least 45% of the revenue
- Ensuring a military aircraft global market share of 8%
- Create a profitable business that would be attractive to investors
- Reduce reliance on state funding
Implementing the marketing and product strategy
The Corporation’s main instrument in achieving its strategic goals is implementing its balanced marketing and product strategy that is aimed at carving out and securing a position in every segment of the civil and transport aircraft market while retaining its position as a leading military aircraft manufacturer.

The UAC’s marketing and product strategy rests on the following key principles:
• Addressing the needs of the state in national security, including transportation security, by covering the demand of the federal government agencies in aircraft;
• Maximising the sales on the global civil aircraft market in the regional turboprop, narrow-body and wide-body aircraft segments;
• Maintaining a balanced portfolio, in terms of life-cycle.

Transforming the industrial model
To achieve its strategic goals, in particular to increase the production of its key products, the UAC has started the structural transformation of its industrial model that is aimed at ensuring an effective upgrade of the Corporation’s production facilities. This involves turning earlier production stages into separate production facilities catering to all of the UAC companies.

The Corporation’s strategic positioning in the value chain is that of a final integrator focusing on the development, manufacturing, testing and certification of aircraft, as well as on aftermarket support and supply chain management.
Implementing the HR strategy

The HR strategy of the UAC supports the implementation of the Corporation’s Strategy as it helps build and effectively manage human resources. The HR strategy is aimed at strengthening the UAC’s employer brand, fostering personal and professional growth of the employees, attracting and retaining highly-qualified personnel (including young professionals) and managing labour efficiency through the creation of a KPI-based employee incentive system.

One of the Corporation’s key objectives before 2025 will be to achieve a fivefold increase in labour productivity by transitioning to a new industrial model and improving employee utilisation.

Implementing the financial strategy

The financial strategy of the UAC is aimed at increasing the Corporation’s operating profit margin, minimising the reliance of its civil programmes on state support, reducing the debt burden, improving business performance and increasing the attractiveness of the business. The system of strategic and financial goals also includes such indicators as revenue, share of civil sales, debt level (debt to EBITDA), EBITDA margin and net profit margin, ROA and ROIC.

Scientific and technological development

The priority areas in terms of laying research and technological groundwork that is essential for ensuring the Corporation’s competitiveness are determined by the latest international aviation, science and technology trends.

At this point, the priority areas for research aimed at achieving science and technology development are as follows:

<table>
<thead>
<tr>
<th>Civil aircraft</th>
<th>Military aircraft</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Reducing cabin noise;</td>
<td>• Improving the aerodynamic characteristics of aircraft;</td>
</tr>
<tr>
<td>• Increasing aircraft electrification,</td>
<td>• Developing stealth technologies;</td>
</tr>
<tr>
<td>in particular through the use of alternative high-capacity energy generation sources; on-board energy flow management;</td>
<td>• Using new materials;</td>
</tr>
<tr>
<td>• Mitigating the environmental impact;</td>
<td>• Increasing aircraft electrification;</td>
</tr>
<tr>
<td>• Exploring non-traditional aerodynamic designs of wing-to-fuselage integration.</td>
<td>• Increasing the strength of the airframe construction elements, in particular by managing the load through the use of passive and active systems to control the deformation of the lifting surface.</td>
</tr>
</tbody>
</table>

In addition, research is underway on various advanced dual-use technologies.
### Business model

#### FACTORS INFLUENCING THE REQUIREMENTS TO AIRCRAFT

<table>
<thead>
<tr>
<th>Civil aircraft</th>
<th>Military aircraft</th>
<th>Transport aircraft</th>
<th>Special-purpose aircraft</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>The civil aircraft market is a dynamic segment with the highest potential for growth. The key aspects affecting the marketability of aircraft are its performance and operating characteristics, the availability of a sales system and aftermarket services, as well as manufacturer’s brand strength.</strong></td>
<td><strong>The military aircraft market is characterised by fluctuating demand which reflects the cyclic pattern of developing aircraft generations and the political considerations that tend to affect the sales. A key trend dominating the global military aircraft market in the next decade will be the gradual decline in the production of fourth-generation fighters and the start of production of fifth-generation fighters. Though the number of aircraft produced is shrinking with every next generation, the market has been steadily growing in value, since the costs for producing them are rising dramatically.</strong></td>
<td><strong>Transport aircraft with a cargo ramp are delivered to two separate groups of customers: government entities and commercial airlines specialising in outsize cargo. Under the newly-approved Russian Aerospace Forces rearmament programme, heavy military transport aircraft is the top priority segment to be reequipped.</strong></td>
<td><strong>The commercial segment of special-purpose aircraft is primarily represented by public sector customers ordering aircraft to cater to their specific requirements.</strong></td>
</tr>
</tbody>
</table>

#### UAC’S PRODUCTS

- **Civil aircraft** with a seating capacity of more than 50 passengers
- **Military aircraft**
  - Multifunction Gen 4+, Gen 4++ and Gen 5 fighters, flight-training and combat-training aircraft, long-range aircraft
- **Transport aircraft**
- **Special-purpose aircraft**

#### SALES CHANNELS

- Finance leasing
- Operational leasing
- Direct sales

#### OPERATORS

- Airlines
- Government entities
- Individuals
- Financial industrial groups

#### ASSESSING THE MARKET VOLUME

- State defence order
- Sales to states partners in military-technical cooperation (through JSC Rosoboronexport)
- State procurement and state defence order
- Direct sales
- Sales to states partners in military-technical cooperation (including through JSC Rosoboronexport)
- Russian Armed Forces
- Aircraft
- Armed Forces of states partners in military-technical cooperation
- Russia’s government entities
- Foreign operators
INVESTMENT PROGRAMME

The UAC Group implements a major investment programme that is aimed at developing advanced military and civil aircraft programmes. In 2017 a large portion of the investments went to finance the Tu-160, Su-57, Su-35 and MC-21 projects that will enable the Corporation to carve out a significant position in the global aircraft market.

In 2017 the amount of investment increased by 21.9% from 2016 to RUB 105.9 million.

R&D received the bulk of the investments under the UAC’s programme (67% of total investments), with MC-21 accounting for 22% of the R&D-related investments.

Another 29% of the investments were used to upgrade the available production facilities and develop the airfield network. Other areas, such as projects on IT, energy efficiency, safety, logistics, and corporate-wide projects, accounted for no more than 4% of total investments.

UAC’s investment programme in 2015–17

<table>
<thead>
<tr>
<th>Year</th>
<th>Billion RUB</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>71.3</td>
</tr>
<tr>
<td>2016</td>
<td>86.9</td>
</tr>
<tr>
<td>2017</td>
<td>105.9</td>
</tr>
</tbody>
</table>
In 2017 the main sources of financing the UAC’s investment programme were proprietary resources and public funds (around 64%), and funds obtained under state contracts (36%).

In 2017 the funds allocated under the Federal Target Programme for the development of the Russian military-industrial complex in 2011–20 went to finance the renovation and upgrade of production facilities of the following subsidiaries and affiliates: PJSC Tupolev, JSC Aviastar-SP, PJSC Company Sukhoi, PJSC IL, JSC M. M. Gromov Flight Research Institute, PJSC TANTK Imeni G.M. Berieva, PJSC VASO, JSC RSK MiG. In the reporting year, as part of the Federal Target Programme for the development of the Russian military-industrial complex, 11 capital construction projects were completed at PJSC Tupolev, PJSC IL, JSC Aviastar-SP and JSC RSK MiG.
According to the approved plan for 2018–20, the UAC’s investment portfolio totals RUB 403 billion. The programme includes the Corporation’s own projects implemented under the Federal Target Programme for the development of the Russian military-industrial complex in 2011–20, as well as R&D projects financed under state contracts. The largest portion of the investments (around 68%) will be allocated to R&D projects; another 28% will go to the upgrade of facilities, and the remaining 4% will be used to support and develop the infrastructure, including projects on IT, energy efficiency, security and logistics.

It is planned that roughly 75% of the investments in 2018–20 will be allocated to military, military transport and special-purpose aircraft projects, with civil aircraft accounting for the remaining 25% of the investments.

The largest portion of the investments in the military aircraft projects will be used to build advanced aircraft and a supersonic bomber on the basis of Tu-160, Su-57 and Su-35.

The investments in the civil segment will go to the MC-21 programme (ca. 14% of the Corporation’s total investment programme), as well as to the SSJ 100 (3.3%), Il-114 (1.9%) and CR929 (1.8%) development programmes, including both R&D and upgrade. At this moment, the MC-21 programme is in its active investment phase; Stage 6 that involved the manufacturing of prototype subassemblies and their static tests has been completed. The next stage will include the assembly of first demonstration flight aircraft and the start of flight certification tests. Under the investment programme, the priority military transport aircraft projects are Il-76MD90A and Il-112V.

In 2018–20 around 32% of the projects will be initiated by the Corporation and will be financed with proprietary funds; another 51% of the projects will be financed from public funds under state contracts (as part of R&D projects). Around 17% of the investment projects will be financed from public funds through contributions to the charter capital under the Federal Target Programme for the development of the Russian military-industrial complex in 2011–20 and other programmes.

The reduction of the investment programme in 2020 vs 2018 will be the result of the completion of the active investment phase for a number of aircraft programmes (MC-21, Su-57, Su-35).

DEVELOPING THE MANUFACTURING CAPACITIES

In 2017 the development of the manufacturing facilities was aimed at implementing the adopted Strategy in terms of ensuring the production of goods under the State Armaments Programme, increasing the exports, and starting the manufacturing of advanced aircraft models.

TRANSFORMING THE UAC’S INDUSTRIAL MODEL

The primary objective of the corporate industrial model is to ensure a transition from a concept of an integrated facility offering a full range of technological processes related to aircraft manufacturing to a model that encourages the development of specific competitive technologies and competencies. To successfully implement such a model, the Corporation needs to create and develop a pool of final assembly plants, competence centres and centres of specialisation and technological clusters from the list of the UAC production facilities or the facilities owned by its partners in Russia.

In the reporting year the heads of the holding companies drafted and approved the divisional transformation maps. The corporate industrial model transformation programme was approved in December 2017. The activities on the establishment and equipment of the centres of specialisation and competence, as well as on outsourcing a number of processes were still in progress.

The Interagency Programme aimed at creating a priority development area in Komsomolsk-on-Amur was rolled out.
AIRCRAFT PROJECTS

Civil aircraft

**SSJ 100**

**Major focus areas and progress made in 2017:**
- SSJ 100 deliveries under the established manufacturing programme: 30 new aircraft delivered;
- New operational leasing agreements for 20 jets signed with PJSC Aeroflot.

**Near-term priorities:**
- Ensuring the deliveries of SSJ 100 in line with the established manufacturing programme;
- Adopting a programme for the development of the SSJ 100 family;
- Designing an aircraft version with a seating capacity of 75 passengers. In April 2018 S7 Airlines signed a letter of intent for 50 SSJ 100s with a seating capacity of 75 passengers.

**MC-21**
A family of next generation medium-haul narrow-body aircraft that targets the most massive segment of the global market. First deliveries are scheduled for 2019.

**Major focus areas and progress made in 2017:**
- Maiden flight and start of flight tests;
- Launch of the aggregate assembly and final assembly plants, completion of pre-production engineering prior to serial production;
- PJSC Aeroflot signed operational leasing agreements for 50 aircraft.

**Near-term priorities:**
- Obtaining certification;
- Launching serial production.

**PJSC UAC’s civil aircraft operated by PJSC Aeroflot**

<table>
<thead>
<tr>
<th>Aircraft</th>
<th>2016</th>
<th>2017</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSJ 100</td>
<td>30</td>
<td>12</td>
<td>50</td>
</tr>
<tr>
<td>MC-21</td>
<td>50</td>
<td>50</td>
<td>100</td>
</tr>
</tbody>
</table>

- Aircraft delivered before 2017
- New operational lease agreements signed
- Including aircraft delivered in 2017
Civil aircraft

**CR929**  
Wide-body aircraft using advanced technical solutions

**Major focus areas and progress made in 2017:**
- Gate 2 results approved;
- The CRAIC joint venture established with COMAC;
- Launch of corporate Masters’ Degree programmes in Composite Structural Design Engineering and Product Life Cycle Management Technologies in cooperation with the Moscow Aviation Institute and the Shanghai Jiao Tong University.

**Near-term priorities:**
- Agreeing with COMAC on the responsibility assignment matrix.

**Il-96-400M**  
Modernised long-haul passenger aircraft

**Major focus areas and progress made in 2017:**
- R&D contract signed for the development of Il-96-400M.

**Near-term priorities:**
- Preparing design documentation.

Military aircraft

**Su-57**  
Fifth-generation multifunction aircraft

**Major focus areas and progress made in 2017:**
- Flight tests under the GSI-1 programme (State System for Ensuring the Uniformity of Measurements).

**Near-term priorities:**
- Obtaining the Certificate of State Joint Testing.

**MiG-35**  
Generation 4++ multifunction fighter aircraft

**Major focus areas and progress made in 2017:**
- World premiere of the MiG-35 aircraft at the production facility in Lukhovitsy (Moscow Region);
- Prototype MiG-35S/UB prepared for state joint testing.

**Near-term priorities:**
- Signing contracts for the supply of the aircraft.
Military aircraft

**PAK DA**  
Advanced long-range aircraft

**Tu-160**  
Long-haul strategic missile-carrying bomber

**Major focus areas and progress made in 2017:**
- State R&D contract signed;
- R&D roll-out.

**Major focus areas and progress made in 2017:**
- The first aircraft built as part of the Tu-160 reproduction programme was rolled out at the Kazan Aviation Plant;
- The contract was signed for the serial production of Tu-160M.

**Near-term priorities:**
- Conducting the maiden flight of the new Tu-160;
- Conducting flight tests.

**Transport and special-purpose aircraft**

**Il-112V**  
Light military transport aircraft

**Be-200 ChS**  
Amphibious aircraft for use in search and rescue operations

**Major focus areas and progress made in 2017:**
- The integrated schedule for preparing the first flight of IL-112V was approved by the President of PJSC UAC.

**Major focus areas and progress made in 2017:**
- The first Be-200s serially produced at the Taganrog Aviation Scientific and Technical Complex were delivered to the customer—the Russian Ministry of Emergency Situations (3 aircraft in the reporting year).

**Near-term priorities:**
- Completing the final assembly of an IL-112V unit to be used in endurance/static tests;
- Completing the final assembly of a prototype IL-112V.
INNOVATION, RESEARCH AND DEVELOPMENT

Given the fast pace of technological change and the tight competition in the global aircraft market, the UAC has prioritised the creation and development of innovative solutions in every area of its activities. In addition to using international developments and technologies, the Corporation has worked on improving its own R&D competences and has implemented a wide range of innovation programmes.

The UAC’s innovative development priorities and the relevant implementation measures are defined by the Innovative Development Programme for 2016-20 with an outlook for 2025—a document that forms an integral part of the Corporation’s Development Strategy. The Programme is aimed at ensuring the dynamic, sustainable and balanced development while maintaining and enhancing the competitive position in the domestic and foreign markets through efficient innovative activities that significantly contribute to the Corporation’s strategic goals.

Innovation management system

*The Program was adopted by decision of PJSC UAC’s Board of Directors on 5 October 2016 (Minutes No. 167).*
The Innovative Development Programme lists the following key mid-term innovation projects of the UAC:

- Integrated Project “The Russian-Chinese advanced long-range wide-body aircraft (CR929) programme”;
- Integrated Project “Short-to-medium-haul MC-21 aircraft”;
- Projects for manufacturing aircraft as part of state procurement;
- Launching an assembly line for MC-21 with digital positioning and laser systems;
- Renovation and upgrade of the production facilities of PJSC Tupolev;
- Renovation and upgrade of the production facilities of JSC Aviastar-SP;
- Renovation and upgrade of the assembly and auxiliary production facilities of PJSC Sukhoi;
- Creation of a nacelles/pylons centre of specialisation.

In 2017, to increase the effectiveness of the Innovative Development Programme and enhance the innovation processes, the Corporation’s subsidiaries and affiliates developed their own innovative development programmes and plans.

To increase the effect of the innovative efforts, the UAC introduced a one-stop-shop system. The procedure of interaction with external partners on matters related to the use of innovative solutions by the Corporation is determined by the “Regulations on the Procedure and Rules of Introducing Innovative Solutions of Entities of External Innovation Environment by PJSC UAC” and the “Guidelines on the Operations with the Register of Innovative Solutions of PJSC UAC”.

**COMPETENCE CENTRES**

The UAC has around ten competence centres and centres of specialisation that manufacture aircraft structures from composite materials, as well as doors, fuselage panels for various types of aircraft, assemble the empennage and integrate avionics.

For example, in the city of Ulyanovsk there are competence centres for the manufacturing of composite wings for MC-21s (JSC Aerocomp), fuselage panels, doors and empennage. The Moscow-based LLC UAC-Integration Centre works on advanced aircraft: in particular, it develops the avionics for the MC-21.

In 2017 PJSC VASO (Voronezh), jointly with the United Engine Corporation, began the creation of a new centre of specialisation for the production of nacelles and pylons for transport and passenger aircraft.

There are also plans to open around ten new competence centres to focus on developing specific technologies catering to the needs of the Corporation. A programme for creating new production facilities, such as a casting and a metal working plant, is currently under discussion.

**DIGITAL TECHNOLOGIES IN ENGINEERING AND MANUFACTURING**

**Digitisation of engineering**

Digital engineering is a relatively new concept for Russia: the first ‘paperless’ products were Gen 4++ Su-35 fighter and the SSJ 100 civil airliner. In 2017 all of the UAC’s design bureaus completed the transition to the paperless office. In the last couple of years the Corporation’s key suppliers have also started to introduce digital engineering technologies.
The modern technologies make it possible to reduce the engineering time by almost 50% (from 7–8 years to 3–4 years) and increase manufacturability. The finished 3D models are used to manufacture the components with state-of-the-art CNC machine tools.

**A single information system**

In 2017 PJSC Tupolev summarised the first experiences of using the Integrated Information Environment (IIE)—a digital system that accumulates and stores the data on all the stages of an aircraft life cycle, from manufacturing to aftersales services. The IIE includes unified digital workplaces, an access to unified manuals and an automated approval workflow. Provisions have also been made to ensure digital preservation in case of emergency situations: one more server is currently being built in another city.

Using design software and virtual models is more convenient and reduces engineering and manufacturing time.

In 2017 PJSC Tupolev summarised the first experiences of using the Integrated Information Environment (IIE)—a digital system that accumulates and stores the data on all the stages of an aircraft life cycle, from manufacturing to aftersales services. The IIE includes unified digital workplaces, an access to unified manuals and an automated approval workflow. Provisions have also been made to ensure digital preservation in case of emergency situations: one more server is currently being built in another city.

**Jigless assembly**

In 2017 the professionals of the Ulyanovsk-based JSC Aviastar-SP in cooperation with the team of JSC Aviation Consulting–TECHNO (Moscow) performed the adjustment and rollout of fixtures for jigless automated section alignment to facilitate a transition to automated transport aircraft assembly technology. It was the first time this kind of technology had been developed by the Russian scientists.

The key difference between jigless assembly and the ‘conventional’ assembly is that the former uses laser optical measurement systems which ensure high process accuracy and predictable quality. In addition, such assembly fixtures help reduce the complexity of the alignment process and the dependence on the skills of the technical personnel.

**3D learning technology**

The professionals of the MIG Corporation and the Moscow Institute of Physics and Technology developed an appliance that improves the accuracy of assembly—a system that can project a full-size image of any aircraft structure directly on the shop wall. The images produced by several projection systems are joined into a single picture, while specialised laser sensors make it possible to control the image as if it was displayed on a screen.

In addition to making the assembly easier, the new technology does not require VR headsets or panels that are traditionally used for 3D visualisation and have already been applied in engineering.

**Automated operation time tracking**

The Chkalov Novosibirsk Aircraft Plant uses an automated system to monitor the operation time of the equipment (HYDRA) that helps increase machine tool productivity. The programme uses specialised hardware and software modules to track the status of the equipment and sends this data to the server for processing. The introduction of the system allows for a more detailed and continuous monitoring of machine tools operation; in addition, it improves the manufacturing process and reduces non-productive time.
Currently, the UAC is developing a Digital Factory concept: it is expected that each machine tool will have a digital copy, and machine tool operation time monitoring and performance forecasting will be performed simultaneously by all companies within the Corporation.

ARTIFICIAL INTELLIGENCE TECHNOLOGIES FOR MILITARY AIRCRAFT

The combat aircraft manufactured by the UAC use an automatically controlled airborne artificial intelligence system developed by the Sukhoi Design Bureau. The concept of an information and control system that was for the first time realised in the Su-35 became the core of the avionics of Su-57s, the modernised Tu-160 and Tu-22M3, and will be used in the avionics suite of advanced helicopters and unmanned combat aerial vehicles.

3D PRINTING

In May 2017 the UAC, jointly with the Digital Technologies Centre, launched a 3D printing facility and a casting plant in Kazan (at the Gorbunov Kazan Aviation Plant and the Simonov Design Bureau).

The 3D printer is used to print casting moulds for blanks to be used in aircraft manufacturing and other sectors of machine building industry: the machine creates a mould of any geometrical complexity with layers of sand and furan resin; the density of each layer is only 0.28 mm and the printhead has a positioning accuracy of up to 0.1 mm. The plant has an X-ray computer-tomographic scanner that makes it possible to obtain three-dimensional images, perform X-ray analysis of defects, internal structure and non-destructive testing of castings.

The digital technologies help reduce the time and financial resources required to produce the moulds for the components by 400%—500%.

NEXT-GENERATION MATERIALS FOR AIRCRAFT MANUFACTURING

Carbon fiber for MC-21

The wings of the new MC-21 are made of carbon fibre, a material that is much lighter than aluminium and is corrosion resistant. This is the first time carbon fibre has been used in a Russian civil aircraft or in any medium-haul liner (carbon fibre has previously been used only in long-haul wide-body aircraft).

A carbon wing is longer and thinner, and, consequently, has lower drag. Using carbon in aircraft manufacturing helps reduce fuel burn and increase cabin comfort.

Composite materials

In 2018, at the pilot production facility in Voronezh, the UAC, jointly with the Institute of New Carbon Materials and Technologies (which was co-founded by the Faculty of Chemistry of the Lomonosov Moscow State University) launched the manufacturing of components from composite materials that were produced with domestic raw materials.
Total investment in the development of the new technology exceeded RUB 300 million, with RUB 154 million provided by the Russian Ministry of Education and Science.

In 2018 the UAC will become part of the Composite Valley research, development and production cluster that is currently being built in the Uzlovaya Special Economic Zone in the Tula Region to manufacture next-generation polymer materials.

**AUTOMATED DIAGNOSTICS**

In 2017 further progress was made on the system for automated diagnostics of electronic components (SADEC-21). The system is designed for rapid testing of the avionics removed from an airliner and suspected to have failed; it can operate immediately at the airport and be used to test both Russian- and foreign-made units.

SADEC-21 will prevent undue removal of properly functioning equipment and materially reduce the operational expenses of airlines.

**LASER TECHNOLOGY**

In 2017 the UAC started to create competence laser technology centres to cater to the needs of aircraft repair plants. Such centres were established at the Aircraft Repair Plant No. 123 in Staraya Russa and Aircraft Repair Plant No. 322 in Ussuriysk. The modern lasers help reduce the structural repair time and significantly cut repair costs. A laser technology centre is scheduled to be opened by the UAC in 2018.

**Laser technology in Ussuriysk**

In 2017 Aircraft Repair Plant No. 322 launched a joint project with the Institute of Automation and Control Processes of the Far Eastern Branch of the Russian Academy of Sciences (IACP FES RAS) on using industrial lasers for aircraft repair.

The plant’s mechanical engineers, in cooperation with the research team of IACP FES RAS, managed to identify ways of using laser technology to repair magnesium alloy aircraft components making it possible to reduce the repair time from several months to just a week.

In addition, the aircraft repair plant now uses a portable laser tool to remove the paint before repainting instead of the aggressive paint strippers thus mitigating the environmental and occupational health effects.

There are plans to create a high-tech aircraft repair plant featuring robotic laser systems in the Far East.

**Production and technical centre in Staraya Russa**

A new production and technical centre (PTC) will be developed at the Aircraft Repair Plant No. 123 to specialise in manufacturing and repair aircraft components and subassemblies using laser technology. In addition, the PTC will have multipurpose units and general-purpose equipment for machining, and use gauging machines and 3D printing for more complicated engineering challenges.

The new PTC buildings are scheduled to be commissioned in 2018.
COOPERATION WITH THE RUSSIAN ACADEMY OF SCIENCES
In 2013 the UAC and the Russian Academy of Sciences (RAS) signed an agreement on cooperation. Under the agreement, several core institutions of the RAS will be participating in current and future research programmes covering more than 20 different areas.

In particular, the agreement provides for close cooperation of the two institutions on the development of the Russian-Chinese long-haul wide-body aircraft.

COOPERATION WITH RUSNANO
The Corporation has actively cooperated with Rusnano Group, Russia’s major nanotechnology company. JSC Prepreg-SKM, a Rusnano portfolio company, supplies composite materials for Sukhoi, and the UAC’s aircraft repair plants use the results of the research done by Plackart portfolio company.

In July 2017 the UAC and Rusnano signed a strategic cooperation agreement: the parties will be coordinating their efforts on the development of a components basis, the production of materials for the aircraft industry and the manufacturing of nanotechnology products for long-term aircraft manufacturing programmes.

In addition, the UAC and Rusnano are planning to create joint working groups to assess the economic feasibility of proposed developments and their commercialisation. Rusnano companies will participate in tenders for development engineering, production of parts and components, in particular for manufacturing a next-generation universal aircraft storage battery.

The nanotechnologies will enable the Corporation to increase the competitiveness of its products by improving their technical performance, reducing costs and increasing labour efficiency.

UAC AND SKOLKOVO
In 2017 the UAC became the first strategic investor and partner of a venture capital fund established by Skolkovo and the Russian Venture Company. The target fund value is RUB 2.5 to 3 billion, with up to RUB 300 million to be contributed by the Corporation. The investment partnership will support Russian startups consistent with the roadmaps of the National Technology Initiative which prioritise such areas as new materials, unmanned technologies, smart power energy, digital design, additive technologies and robotics.
Creating the perfect in-flight experience.
HUMAN RESOURCES MANAGEMENT

The UAC’s HR policy is aimed at creating and developing a team of professionals to drive the Corporation’s rapid growth. The philosophy underlying its HR policy is the desire to turn the UAC and the industry at large into an employer of choice.

The strategic goals of the Corporation’s HR policy are as follows:
- Create a continuous learning system within the Corporation that focuses on the improvement of managerial skills, facilitates professional development and communicates corporate culture;

<table>
<thead>
<tr>
<th>Category</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Over</td>
<td>102 000 employees — total headcount across all the companies of the UAC, as of 31 December 2018</td>
</tr>
<tr>
<td>More than</td>
<td>47% of the employees are primary and auxiliary production workers</td>
</tr>
<tr>
<td>More than</td>
<td>34% of the employees are specialists</td>
</tr>
</tbody>
</table>
The UAC has a Corporate Code of Ethics that stipulates the ethical standards and the rules of conduct for the employees (in particular, in situations that are not covered by company regulations).

The document is an instrument of preventing conflicts of interest; it supports the implementation of anti-corruption measures and improves the internal and external relationships of the employees. The UAC’s key values are as follows:

- Mutual respect and friendliness;
- Honesty;
- Professionalism;
- Responsibility;
- Justice.

The Corporate Code of Ethics declares discrimination of any kind as unacceptable. The Corporation is committed to observing and respecting human rights and denounces discrimination by race, gender, national origin or any other status.

UAC’s responsibility to employees

The UAC’s concept of social responsibility to employees includes measures aimed at attracting and retaining professionals, increasing labour efficiency, improving the quality of working life of the companies’ employees and strengthening the public image of the Corporation, in particular by implementing the following measures:

- Ensuring consistent workload and reducing idle time;
- Monitoring the average pay levels at the UAC companies, including low-wage workers;
- Introducing performance-related pay;
- Developing the employee reskilling system;
- Developing young talent attraction and retention programmes (career guidance, employer-sponsored educational programmes, comprehensive youth programmes);
- Developing a system of social partnership.

The employee benefits and compensations targets are specified in the Collective Agreement for 2017–19 between PJSC UAC, its subsidiaries and affiliates and the Russian Aviation Industry Workers’ Union (PROFAVIA).

REMUNERATION

To attract professionals, the Corporation strives to maintain competitive pay ranges. The remuneration depends on the professional qualifications of the employees, their level of expertise and job tenure, as well as the socioeconomic situation in the UAC’s regions of presence.

The average pay at most of the Corporation’s enterprises is equal to or above the geographic region’s average. In 2017 the average salary in the UAC companies increased by 7.7% to RUB 54,880.

1 The updated Code was enacted by an administrative order of the Corporation’s President of 16 June 2017.
The Corporation also offers an executive compensation package which includes bonuses that are tied to the KPIs based on the current strategic development objectives of the Group. Quarterly bonuses of senior executives and medium- and top managers depend on their actual performance against quarterly objectives.

**BENEFITS PACKAGE**

The comprehensive benefits package offered by the UAC enables it to stay competitive in the job market.

To increase the employees’ social safety and foster an enabling working environment, the Corporation’s enterprises offer a variety of protection plans, in particular:

- Maternity grants and retirement benefits;
- Defined contribution pension plans;
- Rehabilitation, health care resort and wellness programmes;
- Holiday opportunities for employees and their children;
- Additional leaves;
- Housing benefits for employees.

The housing benefit programme is a key element of the UAC’s social security policy. The UAC offers the following housing benefits options:

- Provision of loans for down payment on mortgage;
- Grants to cover the interest on home loans/construction loans;
- Provision of rental housing/rental assistance;
- Housing construction programmes.

In 2017 the Corporation’s enterprises spent RUB 305.5 million on their housing programmes.
Employee training and development

To meet the current and projected demand in highly-qualified personnel, the UAC has implemented multiple programmes to train or retrain its employees in the priority competencies identified by the Corporation.

The UAC’s employee training and development system includes providing career guidance for school students, encouraging them to enrol for industry-specific education curriculums at post-secondary institutions, arranging training programmes at relevant universities and vocational schools, using financial support mechanisms offered by state programmes and projects, developing and introducing occupational and educational standards, as well as training and advanced training programmes in priority competencies identified by the Corporation.

46,600

More than 46,600 employees of the UAC (45.3% of the total headcount) completed advanced training in 2017, including 22,756 workers.

50

Divisional managers of the Corporation’s enterprises were trained under the UAC’s Digital Transformation corporate education programme.

Succession planning

In 2017 the Corporation created a succession pool—a leadership team to facilitate the UAC’s strategy through the development and implementation of priority projects, establishing a corporate culture, streamlining the processes and ensuring that employees at all levels are engaged in these activities. In 2017 the UAC’s succession pool included as follows:

- Leadership talent pool (to fill the senior executive positions in PJSC UAC)—16 ppl;
- Mid-level management pool (unit managers, programme and project managers)—32 ppl;
- Bench strength (employees who can potentially fill leadership positions)—102 ppl.

In December 2017 the Moscow School of Management Skolkovo held the first module of UAC’s Digital Transformation corporate education programme that was aimed at shaping a leadership team to facilitate the Corporation’s digital transformation strategy. A total of 50 unit managers from the Corporation’s various enterprises received training. The programme won the annual Skolkovo Trend Award 2017 for development digital initiatives in the aircraft industry.

In 2017 the UAC held a third WorldSkills Open Corporate Championship to celebrate the professional excellence in the aircraft industry. The Open Corporate Championship also included JuniorSkills competitions in Aircraft Manufacturing and Maintenance for students of relevant career-oriented secondary school classes. In addition, representatives of the Corporation participated in the WorldSkills National Competition 2017 held in Yekaterinburg in November.
To ensure a stable inflow of quality engineering talent, UAC has cooperated with the country’s leading aerospace engineering schools; in particular, the Corporation has opened specialised departments at a number of universities. The main fields of education are aircraft and helicopter manufacturing, aircraft engineering, design-engineering support of mechanical engineering, and avionics systems and complexes.

In 2017 the UAC, in cooperation with the Moscow Aviation Institute, introduced an educational course for employees of Russian high-tech corporations as part of the programme “Managing the Transition of the Corporations to Organisational Life-Cycle”. The programme covers the main business processes of aircraft life-cycle management, including maintenance, design, manufacturing, servicing and knowledge management.

In order to attract young talent, the UAC has implemented a number of projects in cooperation with vocational schools and profession-oriented secondary schools, and organised academic competitions. The Corporation’s enterprises regularly hold Welcome Days for college and high school students.

Since 2016 the UAC has cooperated with Artek International Children’s Centre in the Crimea. The Corporation has also held biennial themed sessions for winners of aerospace competitions and contests with a view to introduce modern aircraft manufacturing technologies and the industry’s most promising projects to young talents. The summer camp features an aero lab that operates throughout the season, with support from the UAC. In 2017 the UAC launched a specialised Aero training course at Quantorium children’s technology parks in Moscow, Ulyanovsk, Samara and Ryazan that targets school students aged between 14 and 17. The participants in the course take a look into the basics of aircraft engineering, design and make their own model aircraft; in particular, they can use additive, laser and composite manufacturing technologies.

The participants who have demonstrated outstanding results in the programme offered by the Moscow technology park will be eligible for free enrolment at the Moscow Aviation Institute or the Bauman Moscow State Technical University, granted they have successfully passed their State Exams. There are plans to extend this practice to include the programmes at regional technology parks.

In 2017 the UAC once again participated in the Nauka 0+ science festival at the Lomonosov Moscow State University where it presented an exhibition display on advanced aircraft and technologies, held industry-specific quests for ‘air-minded’ high school students and delivered a series of lectures on aircraft engineering.

The UAC cooperated with the industry leaders on organising the Future of Aviation Industry education and discussion stream on a number of issues related to the global trends in aircraft engineering at the World Festival of Youth and Students in Sochi in October 2017. The stream brought together more than 300 industry experts from 10 countries across the globe.

In the 2017–18 academic year JSC Sukhoi Civil Aircraft, the UAC and the Moscow Aviation Institute, in partnership with the Shanghai Jiao Tong University (China), launched corporate Masters Degree programmes in Composite Structural Design Engineering and Product Life Cycle Management Technologies that are taught in English. The main objective of the project is to train the personnel for the Russian-Chinese long-haul wide-body aircraft programme (CR929).
The occupational health and safety policy of the UAC is aimed at ensuring industrial safety and protecting the health of the Corporation’s employees.

The occupational health and safety system in the Corporation is governed by internal policies and procedures (administrative orders, regulations and guidelines) outlining the authorities and responsibilities of the officials on ensuring safe working conditions and occupational health and safety, the procedure of scheduling and conducting safety drills, including on electrical and fire safety, as well as the procedure for working environment specialist assessments.

In 2017 the Corporation made further progress on building a corporate occupational health and safety system which implies introducing a unified approach on key aspects of ensuring safe working conditions and providing for industry-specific compensations for each of the UAC’s enterprises.

The Corporation has participated in working groups of the Russian Ministry of Labour on the development of occupational health and safety regulations. It has also cooperated with the Russian Aviation Industry Workers’ Union, and has actively participated in public debate on draft occupational health and safety legislation. In addition, the UAC was among the initiators and active contributors of the annual industry meeting that is held as part of the Russian National Occupational Health and Safety Week and is attended by representatives of relevant ministries and agencies, integrated structures of the aircraft industry and airlines, public organisations and trade unions.

The Corporation implements multiple measures aimed at improving organisational health and safety in line with the collective agreements, in particular:

- Working environment specialist assessments;
- Mandatory pre-placement and routine medical examinations;
- Improvement of workplace lighting, modernisation of the HVAC systems;
- Collective protection equipment;
- Protective garments and personal protective equipment, as well as cleansing and decontamination agents for the employees;
- Employee training in safe working practices;
- Sporting assistance for employees.

Occupational health and safety
ENVIRONMENTAL SAFETY

The UAC prioritises environmental safety issues and makes every effort to strictly observe environmental laws and regulations.

The factors that determine the Corporation’s responsibilities on ensuring compliance with the environmental protection principles include the strategic role played by the UAC in the country’s development, its desire to meet the high standards set by the ICAO and the proximity of some of its enterprises to the environmentally sensitive areas.

The UAC strives to continuously improve its environmental compliance and ensure rational use of natural resources. The Corporation applies environmentally efficient low impact technologies in aircraft manufacturing.

Energy efficiency
In 2017 the UAC announced a new strategy aimed at reducing energy costs. Under the new strategy, the enterprises of the holding company were to annually reduce their heat and electricity spending by an amount equivalent to 5% of the production cost. A two-day seminar that was held to facilitate an exchange of experience in energy management was attended by around 40 energy chiefs from various UAC’s enterprises, as well as by a number of experts (representatives of the Russian Association of Energy Service Companies, Evrovent (a Russian leading HVAC manufacturing company), Atomsvet and IEA-Garant).

In 2017, with the new energy saving measures in place, the UAC’s enterprises saved a total of around RUB 400 million. The energy efficiency projects implemented and currently being replicated at the Corporation’s facilities include as follows:

- Installing thermal destratification systems in the buildings. When the older heating systems are used, hot air rises up to the ceiling, resulting in a roof space temperature of 40–50°C, while the temperature near the floor does not exceed 18°C. The new system mixes the air, causing it to move downwards, from the upper to the lower part of the building, which results in a reduction of heating costs of up to 30%.
- Equipping the manufacturing areas with induction lighting systems that have a longer service life, can operate at lower temperatures and are as effective as LED lighting systems.
- Installing sectional and modular boilers that help reduce heating costs as the thermal energy produced by these boilers has lower product cost.
SUSTAINABLE DEVELOPMENT

SOCIAL RESPONSIBILITY
PROJECTS AND CHARITY

The enterprises of the Corporation implement multiple social responsibility and charity projects at federal and regional level in their regions of presence.

The main document regulating the implementation of social responsibility programmes is the Regulations on Sponsorship and Charitable Giving of PJSC UAC Activities, as updated in 2016. The Regulations outline the principles and scope of UAC’s sponsorship and philanthropy activities, as well as the procedure of accumulating and using the resources of the Sponsorship and Charity Fund.

The key areas of the Corporation’s charity activities are as follows:
- Supporting sports;
- Supporting orphanages;
- Supporting educational projects;
- Providing assistance to non-profit and religious organisations.

EDUCATIONAL PROJECTS
The UAC implements multiple youth projects.

In 2017 the Corporation supported the Ot Vinta! International Children’s and Youth Scientific and Technical Creativity Festival held as part of the MAKS 2017 International Aviation and Space Salon.

Further, PJSC UAC and PJSC Company Sukhoi supported the academic competition in unmanned aerial systems design held by the National Technology Initiative. The winners in the competition received prizes from the Corporation, and every participant received a PJSC UAC certificate qualifying them to be tried out for attending themed sessions held by PJSC UAC at Artek International Children’s Centre and Okean Russian Children’s Centre.
SUPPORTING SPORTS
Since 2010, the UAC has been the title sponsor of the CSKA basketball club. In November 2017 the CSKA and the Corporation signed another agreement for season 2017–18.

SUPPORTING CHILDREN
The enterprises of the Corporation support children and young people at orphanages.

In 2017 Yuri Gagarin Komsomolsk-on-Amur Aircraft Plant—branch of PJSC Company Sukhoi—awarded grants to the teachers of the Orphanage No. 34 territorial state educational institution. The teachers used the grants to improve their educational process.

BLOOD DONOR DAYS
In 2017 two Blood Donor Days were held for the employees of UAC’s Corporate Centre and enterprises. The events aimed at helping the patients who need a blood transfusion were held as part of the Voluntary Blood Donor Recruitment Programme implemented by the Russian Federal Medical-Biological Agency. There are plans to encourage all the Corporation’s enterprises (including aircraft repair plants) to participate in the effort, and to hold joint blood donorship marathons with enterprises of the machine building industry and other related industries.

SUPPORTING NON-PROFIT ORGANISATIONS
As part of the joint project with the Wings of Victory Foundation, the UAC enterprises have restored historic aircraft. The Corporation has co-funded the restoration of the aviation legends, with separate operations conducted by the UAC volunteer teams. In the reporting year the reconstruction of an Il-2, WWII ground-attack aircraft, was completed. The aircraft was restored to airworthy condition and took off again in June 2017.

The UAC has also provided funds to the Legends of Aviation Charitable Foundation for the erection of the Founding Fathers of the Russian Aviation memorial complex that was opened on 22 September 2017 in Zhukovsky.
Setting the proper course.
CORPORATE GOVERNANCE SYSTEM

PJSC UAC has an effective corporate governance system that is based on the requirements of the Russian legislation and builds on Russian and international best practices.

The corporate players are PJSC UAC, its majority and minority shareholders, subsidiaries and affiliates, the Corporation’s management team, partners and employees.

CORPORATE GOVERNANCE MODEL
The corporate governance best practices engaged by PJSC UAC are based on:
- applicable laws of the Russian Federation;
- requirements to issuers of securities included in Quotation List Level 2 of the Moscow Exchange;
- principles and recommendations outlined in the Corporate Governance Code.

The UAC’s corporate governance model provides for a clear delineation of authorities and assigns the responsibilities of each of the corporation’s governing bodies; it implies that the interests of all the shareholders and information disclosure standards are equally and fairly respected. The Corporate governance model facilitates the creation and operation of effective risk management and internal controls.
The UAC’s corporate governance system builds on the following key principles:

- Creating an atmosphere of mutual trust and respect for all corporate players;
- Providing the shareholders with a real opportunity to exercise their rights related to their participation in PJSC UAC and their share ownership;
- Ensuring strict compliance with the established standards of business conduct;
- Ensuring the protection of rights and interests of PJSC UAC’s shareholders, guarantee equal treatment of all shareholders, guaranteeing minority shareholders and foreign investors;
- Creating a streamlined structure and introducing modern corporate governance methods and technologies in PJSC UAC;
- Ensuring effective control over the financial and operating activities and key transactions of PJSC UAC;
- Improving the standards of corporate conduct;
- Exercising social responsibility: ensuring compliance with standards of legal and ethical business conduct.

GOVERNING AND CONTROL BODIES

The Charter of PJSC UAC lists the following governing bodies of the Corporation:

- General Shareholder Meeting—the supreme governing body;
- Board of Directors—the governing body responsible for overall management of the Corporation, with the exception of issues within the exclusive authority of the General Shareholder Meeting;
- Management Board—the collective executive body;
- President—the unitary executive body.

All matters of managing the current operations of PJSC UAC refer to the competence of the Management Board and the President, in line with the system of distribution of powers embodied in the Charter of PJSC UAC. The President and the Management Board are accountable to the General Shareholder Meeting and the Board of Directors.

The Board of Directors of PJSC UAC has the following committees: the Audit Committee, the Strategy Committee, the Human Resources and Remuneration Committee and the Budget Committee. To oversee the financial and operating activities of PJSC UAC, the General Shareholder Meeting elects the Revision Commission, a body of five persons that is elected for a period until the next Annual General Meeting.

IMPROVING THE CORPORATE GOVERNANCE MODEL

In 2017 PJSC UAC continued its effort on improving its corporate governance. In particular, taking into account the latest changes in the corporate legislation and the key guidelines and principles contained in the Code of Corporate Governance, an updated Charter was adopted in December 2017, as well as updated regulations on the General Shareholder Meeting, the Board of Directors and the governing bodies of PJSC UAC.

OBSERVING THE PRINCIPLES AND RECOMMENDATIONS CONTAINED IN THE CODE OF CORPORATE GOVERNANCE

An updated Code of Corporate Governance drafted in 2017 is scheduled for approval in 2018. In the reporting year PJSC UAC conducted an assessment of compliance with the corporate governance principles embodied in the Code (using the Recommendations for Reports on Compliance with the Principles and Recommendations of the Code of Corporate Governance—Annex to the Letter of the Central Bank of Russia No. 06-52/2463 of 10 April 2014).
The assessment of the implementation of corporate governance mechanisms proposed in the Code is a key element of ensuring the transparency of the Corporation’s activities, the effectiveness of communicating with its shareholders, investors and other stakeholders.

GENERAL SHAREHOLDER MEETING
Under the Federal Law on Joint Stock Companies and the Charter of PJSC UAC, the General Shareholder Meeting is the supreme management body of PJSC UAC.

The Annual General Meeting is held once a year, no less than two months prior to and no less than six months after the closure of the financial year. Any additional General Shareholder Meeting is regarded as an extraordinary general meeting, and is held by decision of the Board of Directors on its own initiative, at the request of the Revision Commission or following the results of the audit.

In 2017 PJSC UAC held three General Shareholder Meetings, including one Annual General Meeting and two extraordinary general meetings¹. The Annual General Meeting was held on 30 June 2017 (Minutes of 30 June 2017 No. No ref.). Extraordinary general meetings were held on 3 February 2017 (Minutes of 7 February 2017 No. 27) to decide on the possibility of approving related-party transactions, and on 27 December 2017 (Minutes of 28 December 2017 No. 28) to decide on the approval of the updated Charter of PJSC UAC and a number of other updated documents (such as the Regulations on the General Shareholder Meeting of PJSC UAC, the Regulations on the Revision Commission of PJSC UAC, the Regulations on the governing bodies of PJSC UAC).

¹ The documents are available at the Corporate web site
Structure of PJSC UAC as of 31 December 2017

MILITARY AIRCRAFT
- 81.25% PJSC Company Sukhoi
- 100% 0.71% JSC RSK MiG

CIVIL AIRCRAFT
- 86.95% PJSC Iluk Corporation
- 100% 8.73% JSC Sukhoi Civil Aircraft
- 6.67% PJSC A. S. Yakovlev Design Bureau
- 100% 3.05% JSC Aero composit
- 9.22% JSC KAPO-Composit
- 50% CRAC

SUPERJET INTERNATIONAL S.P.A.

STRATEGIC AND SPECIAL-PURPOSE AIRCRAFT
- 99.18% PJSC Tupolev
- 86.02% 5.84% JSC TANTK imeni G.M. Benezra

TRANSPORT AIRCRAFT
- 34.46% PJSC IL
- 96.3% 3.7% JSC Aviastar-SP
- 56.5% 0.6% JSC Aviastar-SP
- 100% 0.62% JSC Aviastar-SP
- 99.18% 0.69% JSC Aviastar-SP
- 60.03% 39.97% JSC Myasishchev Design Bureau
- 48.35% 1.24% JSC Myasishchev Design Bureau
- 49% 51% JSC Superjet International S.P.A.

OTHER
- 100% JSC M. M. Gromov Flight Research Institute
- 100% LLC UAC-Purchases
- 100% LLC UAC-Capital
- 100% LLC UAC-Development
- 15% JSC V/O Aviaexport
- 48.4% JSC Ilyushin Finance Co
- 50% LLC UAC-Antonov

AIRCRAFT REPAIR PLANTS
- JSC Aviaremont
- OJSC 20 ARZ
- OJSC 275 ARZ
- OJSC 325 ARZ
- PJSC VZTO
- OJSC 121 ARZ
- OJSC 31 ZATO
- OJSC 20 ARZ
- JSC 123 ARZ
- OJSC 322 ARZ
- OJSC 720 RZ SOP
- OJSC 680 ARZ
- JSC 514 ARZ
- OJSC 32 RZ SOP
- OJSC 170 RZ SOP
- OJSC 360 ARZ

ACTS AS THE SOLE EXECUTIVE BODY

SECTION 3. CORPORATE GOVERNANCE
About the Corporation Strategy Sustainable development Corporate governance Annexes Contacts
Corporate governance structure (as of 31 December 2017)
Board of Directors of PJSC UAC

Denis MANTUROV  
Chairman of the Board of Directors, PJSC UAC  
Born 23 February 1969, Murmansk  
Education  
Lomonosov Moscow State University (graduated in 1994 with a degree in social sciences)  
Russian State Presidential Academy of Public Administration (graduated in 2006 with a degree in jurisprudence)  
Candidate of economic sciences  
Employment history  
2008–2012  
Deputy Minister of Industry and Trade of the Russian Federation  
2012–present  
Minister of Industry and Trade of the Russian Federation

Boris ALYOSHIN  
Non-executive director, Chairman of the Strategy Committee, PJSC UAC  
Born 3 March 1955, Moscow  
Education  
Moscow Institute of Physics and Technology (graduated in 1978 with a degree in physics)  
D.Sc. in Engineering  
Employment history  
2009–2015  
General Director, Central Aerohydrodynamic Institute (TsAGI)  
2015–present  
Advisor to the President of PJSC UAC on Science and Technology

Yuri BORISOV  
Born 31 December 1956, Vyshny Volochek, Kalinin (currently known as Tver) Region  
Education  
Lomonosov Moscow State University (graduated in 1985)  
D.Sc. in Engineering  
Employment history  
2008–2011  
Deputy Minister of Industry and Trade of the Russian Federation  
2011–2018  
First Deputy Chairman of the Governmental Military-Industrial Commission of the Russian Federation  
2018–present  
Deputy Prime Minister of the Russian Federation

Evgeny YELIN  
Born 8 May 1962, Leningrad  
Education  
Leningrad Polytechnic Institute (graduated in 1994 with a degree in electrical engineering)  
Candidate of economic sciences  
Employment history  
2012–2013  
Vice Governor of the Leningrad Region—Chairman of the Finance Committee  
2013–2017  
Deputy Minister of Economic Development of the Russian Federation

¹ As approved by the General Shareholder Meeting of 30 June 2017.
Board of Directors of PJSC UAC

Andrey IVANOV
Chairman of the Budget Committee, PJSC UAC
Born on 23 November 1975, Dudinka

Education
Krasnoyarsk State University (graduated in 1997 with a degree in jurisprudence)

Employment history
2008–2012
Deputy Director of Department, Director of Department of Budget Policy in the sphere of innovations, civil industry, energy, communication and public-private partnership, Ministry of Finance of the Russian Federation

2012–present
Deputy Minister of Finance of the Russian Federation

Valery OKULOV
Born 22 April 1952, Kirov

Education
Academy of Civil Aviation (graduated in 1975 with a degree in air navigation and engineering)

Employment history
2009–2017
Deputy Minister of Transport of the Russian Federation

Vladimir POTAPOV
Non-executive Director, PJSC UAC
Born 27 October 1982, Moscow

Education
State University—Higher School of Economics (graduated in 1997 with a degree in economics)

Employment history
2009–2017
Deputy Minister of Transport of the Russian Federation

University of Chicago Booth School of Business (completed an MBA in 2016)

Anatoly SERDYUKOV
Born 8 January 1962, Kholmsky, Krasnodar Territory

Education
Leningrad Institute of Soviet Trade (graduated in 1984)
St Petersburg State University (graduated in 2001)
Sc.D. in Economics

Employment history
2007–2012
Deputy Minister of the Russian Federation

2014–2015
Advisor to First Deputy CEO, Rostec State Corporation

2013–2016
CEO, OJSC Federal Mechanical Engineering Research and Testing Centre (OJSC FiIC-M)

2015–present
Industrial Director of Aviation, Rostec State Corporation

2010–present
Member of the Management Board, JSC VTB Capital Asset Management

2013–present
Chairman of the Board of Directors, CEO of JSC VTB Capital Asset Management
Board of Directors of PJSC UAC

Yuri SLYUSAR
President, Chairman of the Management Board, PJSC UAC
Born 20 July 1974, Rostov-on-Don
Education
Lomonosov Moscow State University (graduated in 1996)
Postgraduate studies at the Russian Government Academy of National Economy (completed in 2003)
Candidate of economic sciences
Employment history
2010–2012
Director, Department of Aviation Industry
2012–2015
Deputy Minister of Industry and Trade of the Russian Federation
2015–present
President, Chairman of the Management Board, PJSC UAC
2017–present
President, PJSC Irkut Corporation

Ivan KHARCHENKO
Born 9 May 1967
Education
Krasnodar Higher Military Command Engineering School of the Rocket Forces
Kuban State University
Kuban State Agrarian University
Employment history
2008–2011
Advisor to the Governor of the Krasnodar Territory
2012–present
First Deputy Chairman of the Government Military-Industrial Commission
2012–present
Deputy Chairman of the Russian Government Commission on Preventing the Bankruptcy of Strategic Enterprises and Organisations and Defence Industry Organisations
2012–2018
Member of the Government Military-Industrial Commission

Evgeny YURCHENKO
Non-executive Director, Chairman of the Audit Committee, PJSC UAC
Born 14 May 1968, Voronezh
Education
Voronezh State University (graduated in 1992 with a degree in radiophysics and radioelectronics, and in 1994 with a degree in economics)
Sc.D. in economics, Professor
Employment history
2009–2011
General Director, OJSC Svyazinvest
2011–present
Provisional Deputy Governor, Voronezh Region–Provisional First Deputy Chairman of the Government, Voronezh Region
Committees of the Board of Directors

The Board of Directors of PJSC UAC has four committees: the Strategy Committee, the Audit Committee, the Human Resources and Remuneration Committee and the Budget Committee. Their main task is to ensure that the issues within their responsibilities are thoroughly addressed and to develop appropriate recommendations for the Board of Directors. Though the Committees’ decisions are not legally binding, they may have the status of draft BoD decisions that will be examined at the Board meetings.

STRATEGY COMMITTEE
The authorities of the Strategy Committee include as follows:
• Preparing recommendations for the Board of Directors on identifying strategic goals and priority areas of the Corporation, or on adjusting its current strategy;
• Assessing the Corporation’s performance over the longer term, assessing the relevance of PJSC UAC’s business plan to its strategic targets;
• Examining issues related to innovation development, reorganisation of business processes and changes in the corporate structure of PJSC UAC.

The current Strategy Committee includes seven members. The Committee is chaired by a non-executive director.

The Strategy Committee membership (as of 31 December 2017)
Chairman: Boris Alyoshin (non-executive Director).
Committee members: Yuri Borisov, Oleg Bocharov, Evgeny Yelin, Andrey Klepach, Valery Okulov and Yuri Slyusar.

AUDIT COMMITTEE
The Audit Committee was established in line with the federal legislation and the Code of Corporate Governance. The Committee assists the Board of Directors on the following issues:
• Ensuring the adequacy, accuracy and reliability of the Corporation’s financial statements;
• Development of and control over the implementation of accounting policy;
• External and internal audit;
• Overseeing the effectiveness of risk management and internal control.

The Audit Committee includes three directors, two of them non-executive.

The Audit Committee membership (as of 31 December 2017)
Chairman: Evgeny Yurchenko (non-executive Director).
Committee members: Boris Alyoshin and Vladimir Potapov (non-executive Director).

BUDGET COMMITTEE
The Budget Committee prepares recommendations for the Board of Director on a number of issues, including as follows:
• Developing business plans for the Corporation;
• Approving the Corporation’s business plans, budgets and funds and examination of reports on their implementation;
• Establishing the procedure of dividend payment and the amount of dividends on shares, the planning, control and accounting processes.

The current Budget Committee includes four members.

The Budget Committee membership (as of 31 December 2017)
Chairman: Andrey Ivanov.
Committee members: Oleg Bocharov, Andrey Klepach and Yuri Slyusar.

HUMAN RESOURCES AND REMUNERATION COMMITTEE
The Human Resources and Remuneration Committee prepares recommendations for the Board of Directors on a number of issues, including as follows:
• Identifying the criteria for the selection of potential candidates to fill the positions in the Corporation’s governing bodies and preparation of recommendations for the nomination of such candidates;
• Ensuring remuneration, and assessing performance of the members of the Executive Board, the Revision Commission and the Corporate Secretary, as well as determining the amount of their remuneration.

The current HR and Remuneration Committee includes three directors, two of them non-executive.

The HR and Remuneration Committee membership (as of 31 December 2017)
Chairman: Evgeny Yurchenko (non-executive Director).
Committee members: Boris Alyoshin and Vladimir Potapov (non-executive Director).
President

The President is a solitary executive body of PJSC UAC and is also Chairman of the Management Board.

On 16 January 2015, by decision of the Board of Directors of PJSC UAC, Yuri Slyusar was appointed President of the Corporation for a period of five years.

YURI SLYUSAR

Born 20 June 1974, Rostov-on-Don

Education
Lomonosov Moscow State University (graduated in 1996 with a degree in jurisprudence).

Postgraduate studies at the Russian Government Academy of National Economy (completed in 2003)

Candidate of economic sciences (2007)

Employment history
2010–2012
Director, Department of Aviation Industry, Ministry of Industry and Trade of the Russian Federation

2012–2015
Deputy Minister of Industry and Trade of the Russian Federation

2015–present
President, Chairman of the Management Board, PJSC UAC

2017–present
President, PJSC Irkut Corporation
Management Board

The Management Board is a collective executive body of PJSC UAC. The members of the Management Board are elected by the Board of Directors. In 2017 there was one change in the membership of the Management Board: another member (Alexey Rogozin) was elected by decision of the PJSC UAC’s Board of Directors of 24 July 2017. In addition to examining the issues related to the Corporation’s strategic development, the Management Board meetings deal with operating matters that require to be acted upon without delay by the governing bodies.

Management Board¹

Alexander BOBRYSHEV
Born 8 January 1949, Novokuznetsk, Kemerovo Region

Education
Novosibirsk Electrotechnical Institute (graduated in 1978 with a degree in aircraft engineering)
Candidate of engineering sciences (2009)

Employment history
2009–2014
President, General Director, OJSC Tupolev

2014–2015
General Director, Interstate Aviation Committee

2015–present
Vice President—Director of State Aviation Service Department, Vice President for State Defence Order and State Aircraft Servicing, PJSC UAC

Sergey GERASIMOV
Born 18 March 1969, Moscow

Education
Marshal of Aviation Sudets
Stavropol Higher Military Aviation School of Pilots and Navigators (graduated in 1990, with a degree in command tactical fighter aircraft navigation)

Employment history
1986–2014
Service in the Armed Forces of the USSR and the Russian Federation

2015–present
Advisor to the President on Cooperation with Government Agencies and Non-profit Organisations, Vice President for Special-purpose State Aviation, PJSC UAC

Alexey DEMIDOV
Born 14 March 1976, Leningrad (now St Petersburg)

Education
St Petersburg Institute of Trade and Economics (graduated in 1998 with a degree in accounting and audit)

Employment history
2009–2015
Deputy CEO, Member of the Management Board, PJSC Rosseti (before 2013—OJSC Holding MRSK)

2015–2015
Senior Vice President for Economics and Finance, JSC Sukhoi Civil Aircraft

2015–present
Vice President for Economics and Finance, PJSC UAC

¹ As of 1 January 2018, the Management Board also included Vladislav Masalov and Alexander Skokov.
Management Board

Oleg DEMCHENKO
Born 13 October 1944, Presnovka village, North Kazakhstan Region, Kazakh SSR

Education
Academician Korolev Kuibyshev Aviation Institute (graduated in 1968 with a degree in aircraft engine technologies)
Academy of National Economy, USSR Council of Ministers (now Russian Government Academy of National Economy), graduated in 1987
Candidate of economic sciences (2005)

Employment history
2011–2012
General Director—General Designer, OJSC Yakovlev Design Bureau
2012–2017
President, Chairman of the Management Board, PJSC Irkut Corporation
2017–present
First Vice President—General Designer, PJSC Irkut Corporation

Artur KOVAL
Born 22 August 1960, Tyrynauz, Kabardino-Balkar ASSR (Kabardino-Balkar Republic)

Education
Rostov Civil Engineering Institute (graduated in 1982 with a degree in industrial and civil engineering),
Dzerzhinsky Higher School of the KGB (graduated in 1990)

Employment history
2012–2015
Counsel, Embassy of the Russian Federation to France
2016–present
Vice President for Security, PJSC UAC

Alexander KONYUKHOV
Born 10 July 1975, Klin, Moscow Region

Education
Russian State University for the Humanities (graduated in 1997 with a degree in world economics)
Stockholm School of Economics (completed an MBA in 2009)

Employment history
2011–2016
Deputy Executive Director of OJSC Sukhoi Design Bureau, First Deputy CEO for Programmes, PJSC Suchoi Company Sukhoi
2016–present
Vice President for Strategic and Special-Purpose Aviation, PJSC UAC
2016–present
CEO, PJSC Tupolev

Sergey KOROTKOV
Born 18 July 1959, Aniva, Sakhalin Region

Education
Ordzhonikidze Moscow Aviation Institute (graduated in 1983 with a degree in aircraft engineering)
Russian Government Academy of National Economy (completed an MBA in 2010)
Candidate for engineering sciences (2007)

Employment history
2009–2016
First Deputy CEO, CEO, JSC RSK MiG
2016–present
General Designer—Vice President for Innovation, PJSC UAC
Management Board

Igor OZAR
Born 26 September 1961, Moscow
Education
Moscow Ordzhonikidze Institute of Management, a degree in production management
Employment history
2011–present
CEO, PJSC Company Sukhoi
2016–present
Vice President for Military Aviation, PJSC UAC

Alexey ROGOZIN
Born 21 September 1983, Moscow
Education
Moscow State University of Economics, Statistics and Informatics (graduated in 2005 with a degree in world economics)
Employment history
2010–2012
Director for Development; General Director, LLC Promtechnologiya
2012–2012
Deputy CEO for Development; Soyuz Federal Centre for Dual Technologies Federal State Unitary Enterprise
2012–2016
Executive Director, Aleksin Chemical Plant Federal Unitary Enterprise
2016–2017
Deputy Director, Department of Property Relations, Ministry of Defence of the Russian Federation
2017–present
Vice President for Transport Aviation, PJSC UAC
2017–present
CEO, PJSC IL

Alexander TULYAKOV
Born 7 September 1971, Moscow
Education
Higher School of Privatisation and Entrepreneurship (graduated in 2001 with a degree in jurisprudence),
Employment history
2008–2018
Director, Asset Management Department; Vice President for Administrative Issues; Executive Vice President; First Vice President, PJSC UAC

Sergey YURASOV
Born 4 January 1964, Dalnyi village, Kungur, Perm Territory
Education
Gorky Institute of Water Transport Engineers (graduated in 1986 with a degree in shipbuilding and ship repair)
Nizhny Novgorod State Technical University (completed an MBA in 2012)
Employment history
2009–2012
Executive Director; CEO, OJSC Ulyanovsk Automobile Plant (OJSC UAZ)
2010–2012
CEO, OJSC Zavolzhye Engine Factory (OJSC ZMZ)
2012–2014
Vice President for Production, PJSC UAC
2014–2015
CEO, PJSC VASO
2015–present
Vice President for Production; Vice President for Production and Development Engineering, PJSC UAC
2017–present
Managing Director, JSC Aviastar-SP, PJSC IL
Internal control and audit

The internal controls of PJSC UAC is a multi-level system that effectively covers multiple entities and ensures that timely and effective management decisions are taken at every management level\(^1\).

The internal controls build on the principles of cooperation and delineation of authorities of its entities that participate in the development, approval, implementation and assessment of the efficiency of internal controls procedures. The internal controls are effected by:

- the shareholders;
- the Board of Directors;
- the President and the Management Board;
- the Revision Commission;
- the BoD Audit Committee;
- the Department of Operational Audit Department led by Director of Internal Audit (established in 2017 as part of Internal Audit Department Reorganisation);
- vice presidents, Chief Accountant, Deputy Chief Accountants, department heads and other employees.

The main objective of the internal controls is to protect the interests of the shareholders and the assets of PJSC UAC. Each participant in the internal controls oversees the issues within their respective authorities stipulated by internal policies and procedures.

The most important internal control measures include allocating and delegating key authorities and responsibilities, facilitating effective cooperation of business units and employees of PJSC UAC, managing the system of data collection, processing and communication (which includes generation of reports and statements that contain operating, financial and other information on the activities of PJSC UAC), as well as identifying the best communication channels and instruments to ensure vertical and horizontal communication within PJSC UAC and provide the employees with adequate information on their responsibilities in the sphere of internal controls.

---

\(^1\) The internal controls procedures are stipulated by the Regulations on Internal Controls over the Financial and Operational Activities of PJSC UAC adopted by the Board of Directors on 24 November 2011 (Minutes No. 58).

---

REVISION COMMISSION

The Revision Commission oversees the Corporation's financial and operating activities. It is elected annually by the General Shareholder Meeting, with a quorum of 5 members. The Revision Commission informs the Board of Directors of PJSC UAC on the results of the inspections. Pursuant to the Federal Law on Joint Stock Companies, if major violations are revealed, the Revision Commission may demand an extraordinary general meeting. The General Shareholder Meeting held on 30 June 2017 to discuss the 2016 results elected the following members to the Revision Commission:

- Zaurbek Kodzoev, Deputy Head of Department of Organisations of the Industrial Complex, Federal Agency for State Property Management;
- Oksana Milovanova, Deputy Head of Corporate Technologies Department, Federal Agency for State Property Management;
- Zemfira Musina, Head of Strategic Development and Corporate Governance, Department of Aviation Industry, Ministry of Industry and Trade;
- Anna Panina, Head of Division for Programmes of Creation and Production of Civil Aviation Equipment Department of Aviation Industry, Ministry of Industry and Trade;
- Sergei Poma, Deputy Chairman of Executive Board of the National Association of Securities Market Participants self-regulatory (non-profit) organisation (NAUFOR), Council Member of the Federal Public-State Foundation for the Protection of Investor and Shareholder Rights.
Remunerations to the members of the Revision Commission are paid pursuant to the Procedure of payment of remunerations to the members of the Board of Directors and the Revision Commission of PJSC UAC of 16 June 2014, in full conformity with the provisions and requirements of the Russian legislation. The amount of remuneration is calculated by the HR and Remuneration Committee of the BoD and approved by the Board of Directors.

INTERNAL AUDIT
In April 2017, by decision of the Board of Directors, the Department of Internal Audit was reorganised into the Department of Operational Audit and the Department of Methodology and Development of Internal Audit; they are in charge of internal audit in PJSC UAC and report to the Director of Internal Audit. The two new departments were created with the aim of enhancing the internal audit function and ensuring compliance with the MICEX listing rules that require the Head of the business unit that is in charge of internal audit to be operationally accountable to the BoD of the issuer and administratively accountable to the unitary executive body (the President of the Corporation).

EXTERNAL AUDIT
To ensure unbiased assessment of the reliability of its financial accounting and reporting, PJSC UAC has its RAS and IFRS financial statements annually examined by an independent auditor.

---

1 Regulations on the procedure of payment of remuneration to the members of the Board of Directors and the Revision Commission of Public Joint Stock Company United Aircraft Corporation.
2 Approved on 5 August 2016.
As of 31 December 2017, the number of uncertificated shares of PJSC UAC totalled 447,615,343,755 (including 86,114,349,325 additional outstanding shares issued as part of the non-completed secondary offering).

The authorised capital of PJSC UAC is divided into 361,500,994,430 ordinary registered shares with a nominal value of RUB 0.86 each.

The Corporation’s majority shareholder is the Russian Federation represented by the Federal Agency for State Property Management, with an equity holding of 92.31% (of the outstanding shares). The remaining amount of shares is held by Vnesheconombank (4.47%) and private investors (3.22%). There are no preferred shares. In 2018 the secondary offering of ordinary shares was completed (state registration No. 1-02-55306-E-003D of 26 May 2016, ISIN code RU000A0JWLC2) in the amount of 86,114,349,325 shares with a nominal value of RUB 0.86 each.
Trading securities on Stock Exchanges

Since 2013, the shares of PJSC UAC have been traded on Moscow Exchange (MOEX), Russia’s leading exchange platform, under the ticker symbol UNAC (security name iAviastCao).

On 30 January 2014 the ordinary shares of PJSC UAC were included in the Quotation List “B” of the Moscow Exchange. On 9 June 2014, as part of the MICEX listing reform, the ordinary shares of PJSC UAC were transferred from the Quotation List “B” to the Second-Tier Index of the Moscow Exchange.

On 17 April 2014 the Moscow Exchange admitted the ordinary shares of PJSC UAC for trading on the Innovation and Investment Market (iIM), an exchange platform used to attract investment to the innovation active industry. Joining the iIM has enabled the Corporation to obtain comprehensive marketing, information and analytical support from the Moscow Exchange.

On 1 February 2017 the ordinary shares of PJSC UAC were included in the premium segment iIM-Prime. Pursuant to the decision of the Moscow Exchange, the shares of PJSC UAC are included in the calculation base of the following indices:

<table>
<thead>
<tr>
<th>Index</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>MICEX Innovation Index, MICEX INNOV</td>
<td>15%</td>
</tr>
<tr>
<td>State-owned Companies Index (SCI)</td>
<td>1.69%</td>
</tr>
</tbody>
</table>

Share capital structure, as of 31 December 2017

<table>
<thead>
<tr>
<th>Shareholder</th>
<th>Share, % (including additional shares issued)</th>
<th>Number of shares</th>
</tr>
</thead>
<tbody>
<tr>
<td>Russian Federation represented by the Federal Agency for State Property Management</td>
<td>92.31%</td>
<td>413,196,625,175</td>
</tr>
<tr>
<td>Bank for Development and Foreign Economic Affairs (Vnesheconombank) State Corporation</td>
<td>4.47%</td>
<td>20,000,000,000</td>
</tr>
<tr>
<td>Private shareholders</td>
<td>3.22%</td>
<td>14,418,718,580</td>
</tr>
</tbody>
</table>

Share capital structure, as of 31 December 2016

<table>
<thead>
<tr>
<th>Shareholder</th>
<th>Share, % (including additional shares issued)</th>
<th>Number of shares</th>
</tr>
</thead>
<tbody>
<tr>
<td>Russian Federation represented by the Federal Agency for State Property Management</td>
<td>91.21%</td>
<td>357,173,463,360</td>
</tr>
<tr>
<td>Bank for Development and Foreign Economic Affairs (Vnesheconombank) State Corporation</td>
<td>5.11%</td>
<td>20,000,000,000</td>
</tr>
<tr>
<td>Private shareholders</td>
<td>3.68%</td>
<td>14,418,718,580</td>
</tr>
</tbody>
</table>
Dividend policy

The dividend policy of PJSC UAC was developed in line with the Russian legislation and the Corporation’s Charter and was approved in 2013. The main objectives of the PJSC UAC dividend policy are as follows:

- Facilitating an increase of investment attractiveness and market capitalisation;
- Ensuring the increase of shareholder wealth through the payment of dividends and increased market capitalisation;
- Achieving a balance of interests between the shareholders and the Corporation in net profit distribution.
The dividend depends on the Corporation’s net profit calculated on the basis of the RAS financial statements. Under the current legislation and in line with the Dividend Policy of PJSC UAC, the Company may decide on (declare) the payment of financial year-end dividend, as well as of dividend for Q1, six months, or nine months (interim dividend).

In 2014, for the first time in five years, PJSC UAC announced its decision to pay dividend. The total amount of declared dividend for 2013 was RUB 179,653,000 or RUB 0.0007793 per share, an equivalent of 25.6% of net profit (RAS) for the year preceding the reporting period.

On 30 June 2015 the General Shareholder Meeting passed a decision to distribute 25% of net profit (RAS) for 2014 as dividends, excluding currency effects, which amounted to RUB 465,016,000, or RUB 0.001971 per share.

In line with the decisions of General Shareholder Meeting, dividend on PJSC UAC shares was not paid for 2015–17, due to the absence of net profit in the relative reporting periods.

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017†</th>
</tr>
</thead>
<tbody>
<tr>
<td>Declaration date</td>
<td>30 June 2015</td>
<td>28 June 2016</td>
<td>30 June 2017</td>
<td>-</td>
</tr>
<tr>
<td>Record date</td>
<td>11 July 2015</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Net profit in the reporting year, RUB '000</td>
<td>8,407,860</td>
<td>(9,412,244)</td>
<td>(3,160,546)</td>
<td>196,138</td>
</tr>
<tr>
<td>Amount of declared dividend, RUB '000</td>
<td>465,016</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Share of declared dividend in the net profit in the reporting year</td>
<td>5.5%</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Dividend per share, RUB</td>
<td>0.001971</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Market price per one share as of declaration date, RUB</td>
<td>0.276</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Dividend yield</td>
<td>0.7%</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

1 In 2017 the net profit of PJSC UAC was RUB 196,138,000. As of 31 December 2017, the net asset value stood at RUB 301,598,224,000, which is below the authorised capital amount (RUB 310,890,855,000) and the reserve fund amount (RUB 923,103,000). Thus, pursuant to Article 43 of the Federal Law 208-FZ “On Joint Stock Companies” of 26 December 1995, the Corporation could not make a decision on the payment of dividends.

Bonds

In 2011 PJSC UAC issued 46,280,000 interest-bearing inconvertible bonds with a nominal value of RUB 1,000 each with a maturity period of 3,290 days, with a coupon of 8% per annum (state registration date: 22 February 2011, State Registration No. 4-01-55306-E). Observance of obligations with respect to payment of the nominal value of bonds upon redemption thereof is secured by the state guarantee of the Russian Federation.
PJSC UAC series 01 bonds

<table>
<thead>
<tr>
<th>Security type</th>
<th>Interest-bearing, non-convertible</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date of state registration of the issue</td>
<td>22 February 2011</td>
</tr>
<tr>
<td>Currency of the issue</td>
<td>Russian Rouble</td>
</tr>
<tr>
<td>Issue amount (at par value)</td>
<td>RUB 46,280,000,000</td>
</tr>
<tr>
<td>Coupon percent rate</td>
<td>8.0% per annum</td>
</tr>
<tr>
<td>Coupon period</td>
<td>Coupon 1–17—182 days, coupon 18—196 days</td>
</tr>
<tr>
<td>Placement date</td>
<td>15 March 2011</td>
</tr>
<tr>
<td>Maturity date</td>
<td>18 March 2020</td>
</tr>
<tr>
<td>ISIN code of issue</td>
<td>RU000A0JRA65</td>
</tr>
</tbody>
</table>

Trading PJSC UAC Bonds on Stock Exchanges

<table>
<thead>
<tr>
<th>Trade organiser</th>
<th>CJSC MICEX Stock Exchange</th>
</tr>
</thead>
<tbody>
<tr>
<td>Issue of shares permitted for trading</td>
<td>4-01-55306-E of 22 February 2011</td>
</tr>
<tr>
<td>Security Identification Code</td>
<td>RU000A0JRA65</td>
</tr>
<tr>
<td>Security Name at CJSC MICEX Stock Exchange</td>
<td>OAK1 (UAC1)</td>
</tr>
<tr>
<td>Trading commencement date at CJSC MICEX Stock Exchange</td>
<td>15 March 2011</td>
</tr>
<tr>
<td>Listing level</td>
<td>Level 3</td>
</tr>
</tbody>
</table>

INVESTOR RELATIONS:
Tel.: +7 4959261420
E-mail: ir@uacrussia.ru

Additional information

Web pages used by the issuer for information disclosure purposes: the web site of the Corporation and the web page of the Corporate Information Disclosure Centre.

The Investor Calendar and the list of upcoming events with the participation of PJSC UAC are available at the Corporate web site in the Investors and Shareholders section.

Web pages used by the issuer for information disclosure purposes: the Corporation's web site and the web page of the Corporate Information Disclosure Centre.

The Investor's Calendar and the list of upcoming events with the participation of PJSC UAC are available at the Corporate web site in the Investors and Shareholders section.
When there’s a goal, there’s always a way.
# ANNEX 1.

## RISK MANAGEMENT

### 1. Country and regional risks

<table>
<thead>
<tr>
<th>1.1. Risks related to the political and economic situation in the country.</th>
<th>These risks mainly result from the activities of government agencies and third parties. The key risks related to the economic and political situation in the country in the near term may arise in case the state funding of aircraft programmes is reduced.</th>
<th>It is accepted that the most effective way of mitigating the risks related to the political and economic situation is to increase the efficiency of management and production.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.2. Risks of military conflicts, imposing a state of emergency and risks of terrorist threats.</td>
<td>The risks of military conflicts, imposing a state of emergency and risks of terrorist threats can be qualified as nation-wide risks. The terrorist threats are addressed by the relevant law enforcement agencies (including the agencies in charge of the territory where a specific facility is located), and the relevant functions of PJSC UAC that implement scheduled activities under the direction of the said agencies.</td>
<td>In the event of occurrence of any of these risks, PJSC UAC will act in line with the current legislation.</td>
</tr>
<tr>
<td>1.3. Geographic risks in the regions of presence.</td>
<td>Various disruptive events of general nature, such as persistent climate change, natural disasters, epidemics, transport accidents and man-made disasters that may materially affect the production efficiency of PJSC UAC.</td>
<td>At the moment, these risks are forecasted, approved by the Russian Ministry of Emergency Situations for the planning period (calendar year), and are used as the basis for planning the resources that may be required to address potential emergencies. The subsidiaries of PJSC UAC participate in implementing the plan provided by the Russian Ministry of Emergency Situations.</td>
</tr>
</tbody>
</table>

### 2. Industry risks

<p>| 2.1. Risks of potential changes in the price of goods and services. | Changes in the foreign contract prices due to a decrease in the rouble-denominated export revenues as the result of the strengthening of the Rouble to the main foreign currencies (US Dollar, Euro) will lead to an imbalance of cash flows. An increase or decrease of market prices for the Corporation’s products and services will cause fluctuations in the demand, which will affect the business performance of the Corporation. | To mitigate the risk of potential changes in the export contract prices that may affect the business performance, a number of specific steps are taken, such as contracting and obtaining export loans in the currency of contract. To mitigate the risks of changes in the market prices for the Corporation’s products (services), fixed prices are set for the contracts signed. In addition, measures are implemented to improve the legislation on the internal aircraft market protection and ensure state stimulation of demand. |</p>
<table>
<thead>
<tr>
<th>N°</th>
<th>Risk</th>
<th>Description</th>
<th>Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.2</td>
<td>Risks of potential changes in the price of commodities and services used by the Corporation in the course of its operations and the potential effect of such risks on the Company’s operations and the execution of its obligations on securities.</td>
<td>Significant changes in the internal market prices for main materials and parts, price growth rates above the predicted national average (industry forecasts by the Russian Ministry of Economic Development).</td>
<td>To mitigate the risks, the Company maintains long-term partnership relations with the suppliers of key parts and materials, explores the possibilities of cooperation and import substitution and considers alternative suppliers who are not dependent on imports.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Financial risks</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| 3.1 | Currency risks.                                                                                                         | The subsidiaries and affiliates of PJSC UAC conduct export and import transactions and are therefore affected by the fluctuations of currency exchange rates, primarily, the US Dollar and the Euro. In addition, currency risks may arise when joint venture companies are established to support international cooperation. | To mitigate currency risks, the following measures are implemented:  
• To ensure advance financing of its business operations, the UAC Group obtains credits in foreign currency that will be repaid with the revenues from foreign currency export contracts;  
• As a remedial measure, the UAC Group strives to reduce the amount of contracts for its products denominated in the US Dollar and other foreign currencies.                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 3.2 | Interest rate risks.                                                                                                   | The interest rate risks are the risks associated with interest rate fluctuations that may have an adverse effect on the financial performance of the Company and the UAC.                                                                                                                                                                                                                                           | Target financing from the federal budget, state contracts and state guarantees of the Russian Federation and subsidies to cover the interest on loans obtained to deliver on the state defence order and the Federal Target Programme for the development of the Russian military-industrial complex in 2011–20 enable the Corporation to increase its reliability as a borrower and minimise the cost of credit and thus streamline its interest expenses. |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 3.3 | Liquidity risks.                                                                                                        | Liquidity risks may arise if the available financial resources are not sufficient enough to meet the current liabilities. Given the current financial position, these risks may be considered as negligible.                                                                                                                                                                                                                                           | To mitigate liquidity risks, detailed budgeting and cash flow forecasting procedures are used. In addition, finance and production plans are developed for the Corporation’s enterprises that make it possible to timely identify liquidity gaps and attract the required financing.  
Another liquidity management instrument is the unsecured renewable line of credit at partner banks that the UAC Group can use if there is an urgent need to cover the liquidity shortage.  
The risks of non-payment by buyers that can also result in liquidity issues are mitigated through advance payment.                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
<table>
<thead>
<tr>
<th>№</th>
<th>Risk</th>
<th>Description</th>
<th>Mitigation</th>
</tr>
</thead>
</table>
| 3.4 | Inflation risks.                         | Inflation processes may affect the business performance and financial results of the UAC Group. In some cases the UAC Group delivers the products (transfers the results of the work, provides services, etc.) on deferred payment terms. In this case there is a time lapse between the delivery of products (work, services) to the customer and the payment in full. The negative effect of inflation on the operations of the UAC Group is associated with the following risks:  
  • risk of losses due to the change in the actual value of receivables if there is a significant deferral or delay in payment;  
  • risk of increase of interest expense on borrowed funds;  
  • risk of non-implementation of investment programmes due the decrease of the actual value of the allocated funds. | The plans of PJSC UAC to increase the price of its products are based on the projections of the Russian Ministry of Economic Development on the dynamics of inflation that is reflected in the Forecast of Social and Economic Development of the Russian Federation for 2018 and for the forecasting period of 2019–20.  
  The UAC Group implements remedial measures aimed at receiving advance payment for the products (work, services) to be delivered, and at reducing the settlement period. In addition, the financial strategy of the UAC Group provides for a possibility to adjust the plans for the gradual increase of price for the products in a timely manner: the price to be fixed in the contracts is determined taking into account the real-time inflation. The financial strategy also implies that inflation should be factored in when calculating the cost of products and services, which contributes to the sustainability of operations.  
  If there is an escalation of inflation, the UAC Group will focus on increasing the current assets turnover, primarily by introducing changes in the existing contractual relations with the customers to reduce the accounts receivable. On the whole, the effect of inflation on the financial stability of the UAC Group in the longer term appears insignificant and is taken into account in the financial plans of the UAC Group. |
| 4. | Legal risks                               |                                                                                                                                             |                                                                                                                                          |
| 4.1 | Risk associated with the changes in the legislation and regulations. | The risk of losses due to non-compliance with the legislation, failure to timely reflect the changes in the Russian legislation in company regulations and procedures, and changes in the legislation that may have a negative effect on the Company’s operations. | To mitigate these risks, the Company constantly monitors the changes in the legislation.                                                                                                                      |
| 4.2 | Risks associated with changes in law-enforcement practices. | The risks associated with the negative effect of changes in the law-enforcement practices on matters related to the operations of the Company, including the positions of supreme judicial authorities, on the Company’s performance and on the outcome of the ongoing judicial proceedings. | To mitigate these risks, the Company regularly monitors the decisions of supreme courts, analyses the trends in law-enforcement practices, their application in the settlement of disputes arising in the course of operations. |
### 5. Strategic risk

The strategic risk is understood as non-achievement of goals outlined in the Development Strategy of PJSC UAC.

**Mitigation**: The projects aimed at achieving strategic goals and objectives are assessed on a regular basis.

### 6. Risk of damages to the reputation (reputational risk)

The reputational risk is related to losses incurred by the Company due to the decrease in the number of customers (clients) as the result of a negative opinion on the Company’s financial stability and financial standing, on the quality of its products, work, services, its management of deadlines for delivering products, performing work or providing services, or on the nature of its activity at large.

**Mitigation**: One of the Company’s priorities is to provide timely and accurate information to the public on its financial performance and future development plans. The Company’s market position depends on how the Company is presented in the mass media and how it is perceived by the professional and expert communities and the general public. In line with the established procedure and in compliance with corporate rules and regulations, the Company representatives disseminate the information on the Company’s activities, give comment and explanations to mass media on specific data and facts. The Company also regularly monitors mass media publications.

### 7. Risks related to the activities of the Company

#### 7.1. Risks related to the termination of licence.

There is little risk of license termination, except where a license has to be reissued to continue to perform licensable activities that were rendered impossible or overly expensive due to newly established requirements.

**Mitigation**: The Company regularly assesses its compliance with the licensing requirements.

#### 7.2. Risks related to potential liabilities for debts of third parties, including the Company’s subsidiaries.

Risks related to potential liabilities of the Company for debts of third parties, including the subsidiaries of PJSC UAC may be defined as potential financial losses incurred by the Company due to the failure of a subsidiary (borrower) to fulfil its obligations on the repayment of debts secured by the surety of the Company, and the transfer of the obligations on the agreement from the borrower to the guarantor (surety), i.e. the Company.

In this case, the Company and the borrower will be jointly liable to the creditor, unless the agreement provides for secondary liability.

**Mitigation**: There is little risk of potential liability for debts of third parties, including the subsidiaries of PJSC UAC, since the Company has a system of intra-group financing and a centralised function overseeing the external financing of subsidiaries that ensures that decisions are taken at the Company level, with due account for the financial and economic performance of the subsidiaries, their financing needs, the terms and cost of financing and availability of sources of repayment, including alternative sources. PJSC UAC constantly monitors the financial and economic performance of the subsidiaries through their governing bodies; it implements a set of measures aimed at optimising the volume and value of debt and controlling the sources of repayment, thus sufficiently minimising the risk of potential liabilities for debts of the subsidiaries of PJSC UAC.
<table>
<thead>
<tr>
<th>№</th>
<th>Risk</th>
<th>Description</th>
<th>Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.3</td>
<td>Risks of losing key customers.</td>
<td>Given the support from the Russian government, there is every sign that major customers are becoming increasingly interested in the products of PJSC UAC.</td>
<td>To mitigate this risk, the Company seeks to make its customers base more diversified, in particular, by extending its geographic reach, attracting new operators, expanding the list of partner leasing companies, signing long-term contracts for the delivery of products (provision of services). Seeking to consolidate the benefits of cooperation with Russian and foreign customers, PJSC UAC has worked on continuously improving its aftersales services to ensure that they meet the highest global standards.</td>
</tr>
</tbody>
</table>
ANNEX 2. ABBREVIATIONS AND GLOSSARY

ARZ – Aircraft Repair Plant
BoD – Board of Directors
COMAC - Commercial Aircraft Corporation of China
CRAIC – China-Russia Commercial Aircraft Corporation
EBITDA – Earnings before interest, taxes, depreciation and amortization
IAC FES RAS – Institute of Automation and Control Processes of the Far Eastern Branch of the Russian Academy of Sciences
IATA – International Air Transport Association
ICAO – International Civil Aviation Organisation
IFRS – International Financial Reporting Standards
IIE – Integrated Information Environment
MBA – Master of Business Administration
PAK DA – “Prospective aviation complex for long-range aviation”, the next-generation strategic bomber being developed by the Tupolev Design Bureau
Su-57 – Advanced fifth-generation front-line aircraft
PTC – Production and Technical Centre
R&D – Research and Development
RAS – Russian Academy of Sciences
RAS – Russian Accounting Standards
ROA – Return on Assets
ROIC – Return on Investment Capital
ANNEX 3.
DISCLAIMER

This Annual Report of PJSC UAC (hereinafter “the Annual Report”) is not an offer, nor an invitation to make an offer (advertisement) in relation to the purchase of, or subscription to the securities of PJSC UAC. Neither the Annual Report, nor any of its parts, nor the fact of its presentation or distribution, shall be the basis for entering into any contract or taking an investment decision, so the Annual Report should not be relied on in this respect.

PJSC UAC does not bear responsibility for the consequences of use of the opinions or statements contained in the Annual Report, or for the incompleteness of the information.

FORWARD-LOOKING STATEMENTS
The Annual Report may include forward-looking statements. These forward-looking statements can be identified by the fact that they do not relate to past or current events. Forward-looking statements often use words such as “anticipate”, “target”, “expect”, “estimate”, “intend”, “expected”, “planned”, “intended”, or other words of similar meaning.

By their nature, forward-looking statements involve risk and uncertainty because they relate to future events and circumstances a number of which are beyond the control of PJSC UAC. As the result, actual future results may differ materially from the plans, goals and expectations set out in these forward-looking statements.

Any forward-looking statement made on behalf of PJSC UAC shall be valid only at the moment when this statement was made. Save as required by any applicable laws or regulations, PJSC UAC undertakes no obligation to publicly release the results of any revisions to any forward-looking statements in this document that may occur due to any change in the expectations of the Corporation or to reflect events or circumstances after the date of this document.

INFORMATION OBTAINED FROM THIRD PARTIES
In addition to the official information on the activity of PJSC UAC, the Annual Report contains information obtained from third parties. This information was received from sources which PJSC UAC deems to be reliable. This being said, PJSC UAC does not guarantee the accuracy of this information, as it may be abridged or incomplete.

USING MANAGEMENT REPORTING INFORMATION
The information presented in the Annual Report is based, among other things, on the Corporation’s management accounting and reporting, and may therefore deviate from the rules and principles that apply under IFRS. The Corporation believes that these management reporting indicators may provide investors with additional information on the current business performance of the Corporation. The management reporting indicators contained herein may not be considered separately or instead of the relevant IFRS norms and principles. In addition, there is a possibility that other companies in the industry keep a record of these indicators in other ways. The Corporation encourages investors to consider all financial statements of PJSC UAC in their entirety, instead of relying on any separate financial figure in this Annual Report.
CONTACTS

FULL CORPORATE NAME

In Russian: Группа предприятий «Объединенная авиастроительная корпорация»

In English: United Aircraft Corporation

STATE REGISTRATION DETAILS

Certificate of State Registration: 77 008502150

Issued by the Interdistrict Inspectorate of the Federal Tax Service No. 46 for the city of Moscow on 20 November 2006

Primary State Registration Number (OGRN): 1067759884598

Date of OGRN issue: 20 November 2006

Taxpayer Identification Number (INN)/Tax Registration Reason Code (KPP): 7708619320 / 997450001

ABBREVIATED NAME

In Russian: ПАО «ОАК»

In English: PJSC UAC

CONTACT DETAILS

Subject of Russian Federation where the Company was registered: city of Moscow

Company seat: 101000, Moscow, Ulansky pereulok, 22, bldg 1.

Telephone: +7 4959261420
Fax: +7 4959261421
E-mail: office@uacrussia.ru
Company web site: www.uacrussia.ru

INFORMATION ABOUT THE REGISTRAR

Full company name: Joint Stock Company R.O.S.T. Registrar

Abbreviated name: JSC R.O.S.T. Registrar

Registrar seat: Moscow, Stromynka st., 18, bldg. 13

Postal address: 107996, Moscow, Stromynka st., 18, P.O.Box 9

Telephone: +7 4957717336
Fax: +7 4957717334
E-mail: rost@rost.ru

IR CONTACTS

E-mail: ir@uacrussia.ru

PR CONTACTS

Twitter: @UAC_Russia
Facebook: UAC.RUSSIA
E-mail: press@uacrussia.ru