



JSC United Aircraft Corporation

Company Overview

Areas of research and technology interest

This presentation is prepared based on information, available to Joint Stock Company United Aircraft Corporation (UAC or the Company) at the moment of preparation.

Some of the information in this presentation may contain projections or other forward-looking statements regarding future events or future operating

The Company does not intend to or undertake any obligation to update these statements to reflect events and circumstances occurring after the date hereof or to reflect the occurrence of unanticipated events.

Technical data and engineering aspects are for the reference and should not be treated as the absolute information.

All data presented are limited for further distribution

The official information in case of interest should be requested from UAC Department on Public Relations and Media

JSC “ United Aircraft Corporation” was incorporated for the purposes of Russian aviation industry efficient development according to President Decree as of February 20, 2006 No. 140 ‘On Joint Stock Company United Aircraft Corporation’. UAC is on the list of strategic enterprises of the Russian Federation*

- Company’s priorities:

Design, manufacture, sales, operation maintenance, guarantee and service maintenance, upgrading, repair and utilization of military, civil, transport and special purpose aircraft for Russian state and private customers as well as foreign customers, and new technologies implementation for the aircraft construction industry

- Primary objectives:

Performance efficiency improvement by means of assets consolidation and restructuring; state and private customer orders execution; product line development; market share increase; human resources and social policy development, investment in human capital; corporate governance system improvement

- Key performance indicators in 2007-2011:

- Revenue – approx. RR 567 bln (IFRS), including RR 162 bln in 2011
- 378 aircraft delivered, including 102 aircraft in 2011

- Brends: ‘Su’, ‘MiG’, ‘Il’, ‘Tu’, ‘Yak’

- Headcount: over 92 thousand people

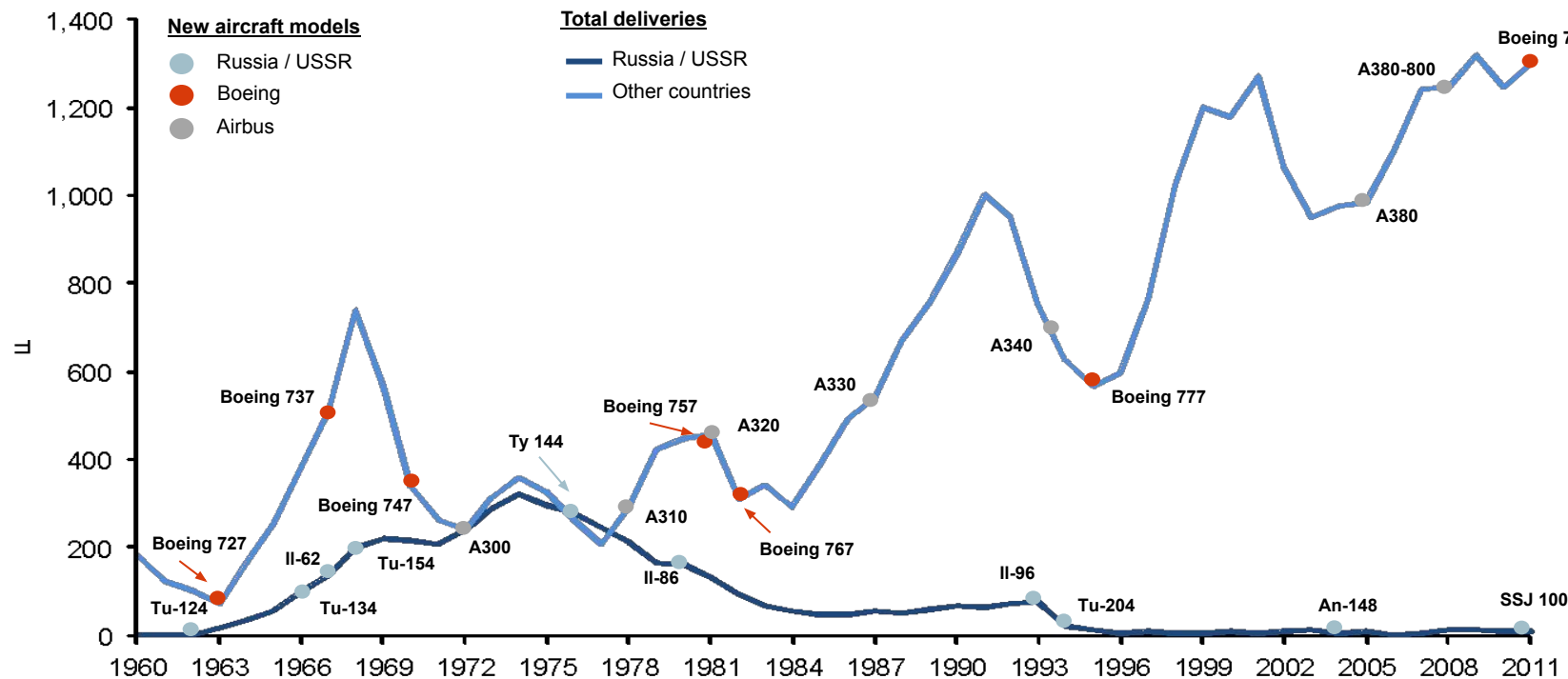


* A list of strategic enterprises and strategic joint stock companies was approved by President Decree as of August 4, 2004 No. 1009 ‘On the approval of the list of strategic enterprises and strategic joint stock companies’

** Federal Agency for State Property Management

Source: UAC

Civil aircraft deliveries



Till 1992 Russian aircraft production plants produced over 150 civil aircraft and over 620 military aircraft per year

The 1990s reforms lead to assets privatization and fragmentation, and R&D reduction

JSC UAC was incorporated in 2006 for the purposes of Russian aircraft construction industry development

1. USSR

- Industry establishment
- Strong government support
- Scientific progress
- Domestic demand orientation

1

2. Perestroika / period after collapse of the Soviet

- Accelerated privatization, government support reduction
- State military order reduction
- Domestic purchasing power decrease
- World market share decrease
- Lack of industry financing

2

3. Industry restructuring in Russia

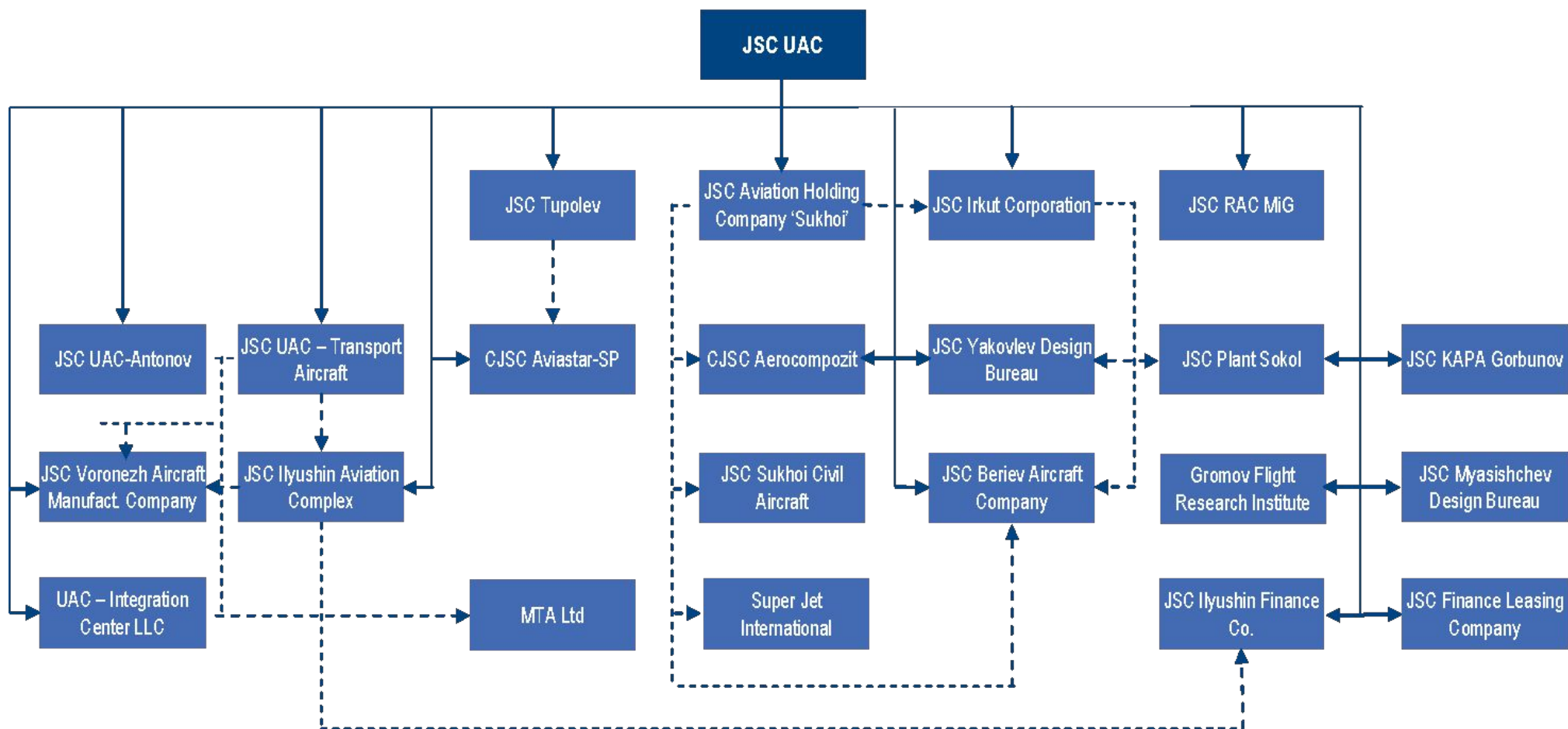
- Industry restructuring
- Selective asset consolidation
- Privatization
- Special purpose federal program for 2002-2010 and a period till 2015

3

4. JSC UAC establishment

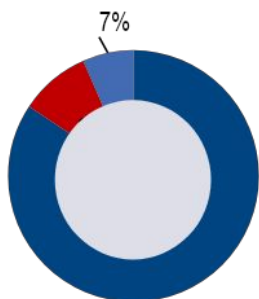
- JSC UAC incorporation, Russian aircraft construction assets contribution to the Company's share capital (2006 share capital = RR 96.7 bln)
- Additional share issues and further assets consolidation (2011 share capital = RR 204.6 bln)
- Assets restructuring and entities financial recovery

4



Share Capital

Shareholding Structure



■ Federal Agency for State Property Management
 ■ Vnesheconombank
 ■ Others

Comments

UAC share capital is composed of 219,654,789,158 shares with nominal value of RR 1 per share

UAC shares are listed on MICEX on the quotation list B (ticker: UNAC)

Board of Directors

Vladimir A. Dmitriev
(Chairman)

Boris S. Alyeshin

Yuri I. Borisov

Oleg F. Demchenko

Iliya V. Eliseev

Alexander N. Zelin

Andrey N. Klepach

Evgeny V. Lyamtsev

Valery M. Okulov

Mikhail A. Pogosyan

Vladislav N. Putin

Andrei G. Reus

Yuri A. Soloviev

Sergey V. Chemezov

Short-haul and Medium-haul Aircraft



Long-haul Aircraft



- MS-21 is Company's perspective strategic project designed for the purposes of market presence expansion

Priorities:

- Development of competitive civil aircraft product line relative to foreign counterparts
- Dynamical increase in sales of civil aircraft segment and its share of the Company's consolidated revenue
- Gaining parity positions in selected-for-positioning niches of the open foreign civil aircraft markets
- Increase in the world's civil aviation market share to 5% in the medium term, and to 10% till 2025

Front-line and Naval Aircraft



Su-27/30/34/35

Long-range Aircraft



Tu-160

Combat Trainer Aircraft



Yak-130



MiG-29/35

Priorities:

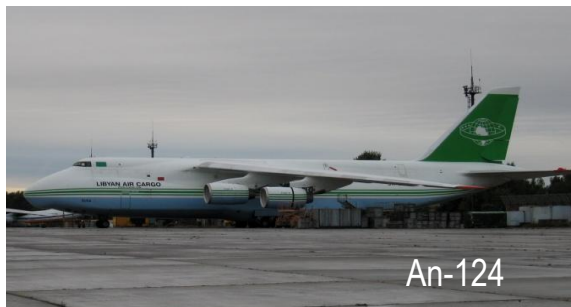
- Increase in the share of deliveries for domestic market out of total Company's military deliveries
- Satisfying the requirements of state customers
- Maintaining parity with American and European vendors in third countries' military aircraft markets
- Maintaining 15% world market share by means of annual deliveries increase



PAK FA

- PAK FA is a perspective fifth generation fighter

Heavy Transport Aircraft



Light and Medium Weight Transport Aircraft



Special Purpose Aircraft



Priorities:

- Increase in the share of transport and special purpose segments revenue of the Company's consolidated revenue
- MTA is a multirole transport aircraft developed within the framework of the Russian-Indian intergovernmental agreement
- Be-200 is a multipurpose amphibian aircraft designed for suppressing forest fires, search and rescue, ecological monitoring, passenger/ cargo transportation

Organizational structure and financials:

- Assets consolidation and restructuring
- Entities modernization and financial recovery
- Energy and resource efficiency increase
- Innovative development
- Annual revenue growth (CAGR +20%)
- Positive dynamics in financial results since 2009

Product line:

- Aircraft production and deliveries increase
- International projects in civil, military and transport aviation
- SSJ-100 development and production launch
- MS-21 development
- serial production of short-haul civil aircraft An-148
- Serial production of “4++” generation fighters, combat trainer aircraft Yak-130
- PAK FA trials

UAC is committed to provide transparency for its shareholders and investors:

- UAC discloses consolidated financial statements for the year in accordance with IFRS
- UAC plans to disclose half-year consolidated financial statements
- UAC discloses consolidated annual report for the year
- UAC enhances corporate governance level
- Company's Management participate in press conferences and are open for mass media representatives
- UAC and its companies publish news releases for mass media and investment professionals

UAC Strategy till 2025

- Transfer to target integrated structure
- Global outreach
- Satisfying the requirements of state customers
- Balanced and diversified product portfolio
- Manufacturing competitive products relative to foreign counterparts
- Building 3rd aviation industry center
- Creating conditions for government and private investment attractiveness
- Providing advanced Russian aircraft performance and economic level

Long-term goals

UAC's long-term objective is to become one of the world's largest aircraft construction centers with a broad diversified product portfolio

- #3 aircraft manufacturer in the world
- 10% share in the world's civil aircraft construction market
- 12-15% share in the world's military aircraft construction market
- Civil aircraft construction segment's revenue → 40% of Company's consolidated revenue

UAC's strategy is in compliance with the State program "Development of the Aviation Industry in 2013-2025"

Program primary
objective

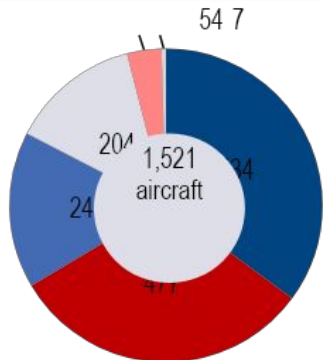
Developing competitive aircraft industry and becoming #3 player in the world's aircraft construction market*

Program issues

- Creating a world level manufacturer in key aircraft construction segments
- Designing advanced technologies to gain world leadership in aviation technology
- Improving regulatory framework of aircraft construction industry
- Human capital development in aircraft construction industry
- Promoting Russian aircraft products in domestic and foreign markets, leading foreign industry players' manufacturing allocation and import substitution

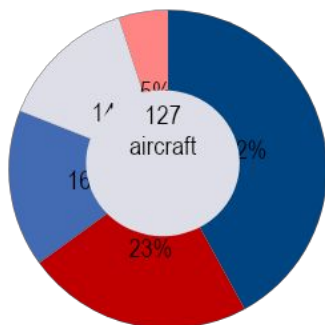
Civil segment

2011 world civil aircraft deliveries by company



■ Airbus ■ Boeing ■ Bombardier ■ Embraer ■ ATR ■ UAC

2011 civil aircraft deliveries in Russia



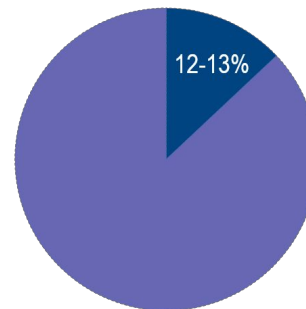
■ Boeing ■ Airbus ■ Bombardier ■ ATR ■ UAC

Source: UAC

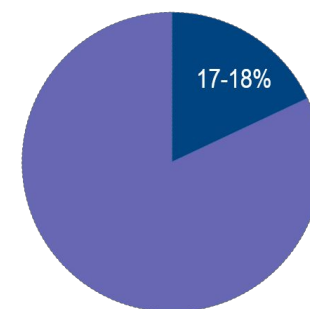
Military segment

UAC share of the world military aircraft market in 2011

by revenue



by quantity



Domestic market military aircraft deliveries

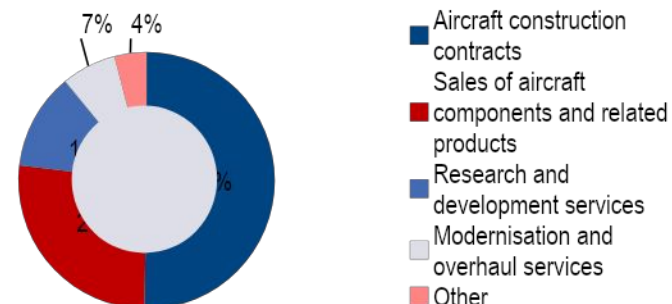
Military aircraft deliveries for the Ministry of Defense of the Russian Federation are planned according to the State Armaments Program till 2020 and State Military Order for 2011-2013. The requirements are increasing in terms of delivery volumes and product range

The Company successfully fulfilled the state order for military aircraft in 2012

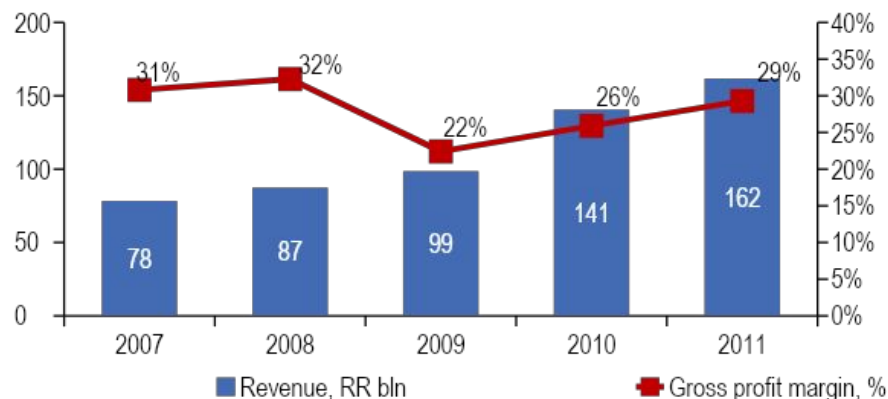
Key financial data for 2007-2011 (IFRS), RR bln

| | 2007 | 2008 | 2009 | 2010 | 2011 |
|--------------------------------------|-----------|------------|------------|------------|------------|
| Revenue | 78 | 87 | 99 | 141 | 162 |
| Cost of sales | -54 | -59 | -76 | -104 | -114 |
| Gross profit | 24 | 28 | 22 | 36 | 47 |
| Gross profit margin | 30.8% | 32.3% | 22.4% | 25.9% | 29.3% |
| General and administrative expenses | -20 | -25 | -30 | -34 | -39 |
| Other income and expenses | 0 | -12 | -7 | -15 | -7 |
| Profit (loss) from operations | 5 | -9 | -15 | -12 | 2 |
| Operating profit margin | 5.8% | -9.7% | -15.2% | -8.4% | 1.1% |
| Financial income and costs | -3 | -13 | -15 | -8 | -11 |
| Income tax (expense) benefit | -1 | 1 | 2 | 0 | -3 |
| Loss (profit) for the year | 1 | -21 | -28 | -20 | -12 |
| Net profit margin | 0.6% | -23.6% | -28.1% | -14.3% | -7.3% |

UAC revenue structure for 2011



Revenue and gross profit margin



Source: UAC

Operating segments

UAC's reportable segments:

- Sukhoi holding (development and production of military combat aircraft and development of the civil aircraft programme SSJ-100)
- over 45% of total revenue for 2011
- Irkut Corporation (production of military combat aircraft, development of the training military aircraft Yak-130 and civil aircraft programme MS-21)
- over 25% of total revenue for 2011
- Other units (designing and manufacturing of various types of aircraft, repair and maintenance of existing civil and military aircraft produced in Russia and the former Soviet Union)
- over 25% of total revenue for 2011

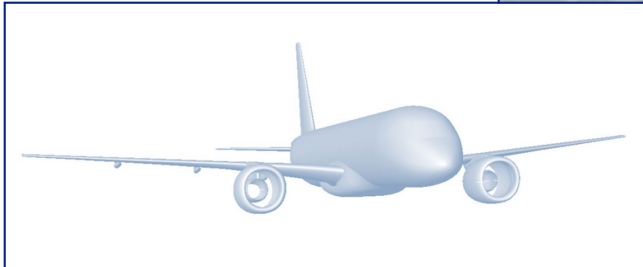
RESEARCH for KEY AVIATION PROGRAMS

SSJ – 100

MS-21

NG

2020 Program



- Extended research program covers new aviation programs and modifications
- Covers Engineering\ Design technology \ manufacturing technology \ Services
- Innovation Development program introduced aimed to incorporate the advance technologies to ensure high level of product quality.



Composites in MS-21 structure

МС-21 кооперация

ИНТЕРЬЕР

- «Авиастар-СП» (Ульяновск, Россия)
- C&D (Франция)

АВИОНИКА

- Концерн «Авионика» (Россия)
- «Авиационный приборостроительный завод» (Россия)
- Rockwell Collins (США)
- Goodrich AS (Франция)

ШАССИ

- «Гидромаш» (Россия)

СИСТЕМЫ

- Hamilton Sundstrand (США)
- НПО «Наука» (Россия)
- Zodiac Aerospace (Франция)
- Eaton (США)

ПЛАНЕР

- Иркутский авиационный завод (Россия)
- «Авиастар-СП» (Ульяновск, Россия)
- ВАСО (Воронеж, Россия)

- КРЫЛО И ХВОСТОВОЕ ОПЕРЕЕНИЕ
- «Аэрокомпозит» (Россия)

ДВИГАТЕЛИ

- PW1400G Pratt & Whitney (США)
- ПД-14 ОДК (Россия)

- Металл
- Углепластиковые композиционные материалы нового поколения
- Стекловолоконные композиционные материалы



Composites in SSJ 100 structure

Design optimizations regarding to available
advanced technologies

Advanced materials

Math modeling for
structure\detail\component

Composite structure manufacturing

Certification

Testing

Operation



Advanced materials

Include different proposals to improve the properties of existing materials, their modifications, an perspective materials for future application:

- Material qualification
- Improvements for epoxy characteristics
- Improvements for impact damage properties
- Special Qualification tests
- Test for repairs technologies while AC operation
- Nano-composites
- QMS for materials
- Improvements for environmental effects and time-related degradation of properties for composite materials

Math modeling for
structure\detail\component

Mathematic modeling \analysis of:

- Material properties at lamina\laminate level
- Material engineering and properties modeling
- Defects in manufacturing
- Defects \damage propagation
- Impact damage growth\ development scenarios
- Probability modeling for damages
- Time-related degradation modeling of properties for composite structures
- Repairs behavior modeling

Composite structure manufacturing

- Manufacturing technologies for CPRF Primary structure
- CPRF structure vacuum infusion process for manufacturing primary structures: recommendations, optimization, requirements for equipment etc
- Modeling of manufacturing processes, optimizations
- Requirements and recommendation for the given process
- QMC System and procedures
- CPRF Materials advanced technologies
- Technical requirements for detail\part manufacturing.
- Manufacturing standards, certification.
- CPRF details mechanical processing
- Detail design optimization, multidisciplinary design (including smart structure)

Certification

- Manufacturing technologies \ manufacturing process certification
- Certification issues for composite structure \components , overall
- Issues on methods and analysis to substitute certification tests
- FAA \EASA related requirements for composite structure : practice , experience, forthcoming requirements
- QMC System and procedures

Testing

- Tests to validate modeling
- Certification test for
 - structure
 - Components
 - Detail
 - Material
- Test methods, recommendations, equivalents etc
- Material special qualification tests

Operation

- Health monitoring management system
 - structure with built-in control\gauges\ optic fibres
 - Inspection programme
 - NDI technique and advanced methods
 - NDI equipment for in-field inspection and planned checks
- Operational damage probability\ scenarios
- Repairs of composite structure\ detail
- Surfaces\ finishes to decrease environmental effects and damage