

# **S7 Technics -** leading MRO provider in Russia & CIS





# Company structure



# Production & Financial figures

**1000**

A-Cheks  
Per year

**250**

supported flights  
Per day

**200**

groups of technicians  
trained per year

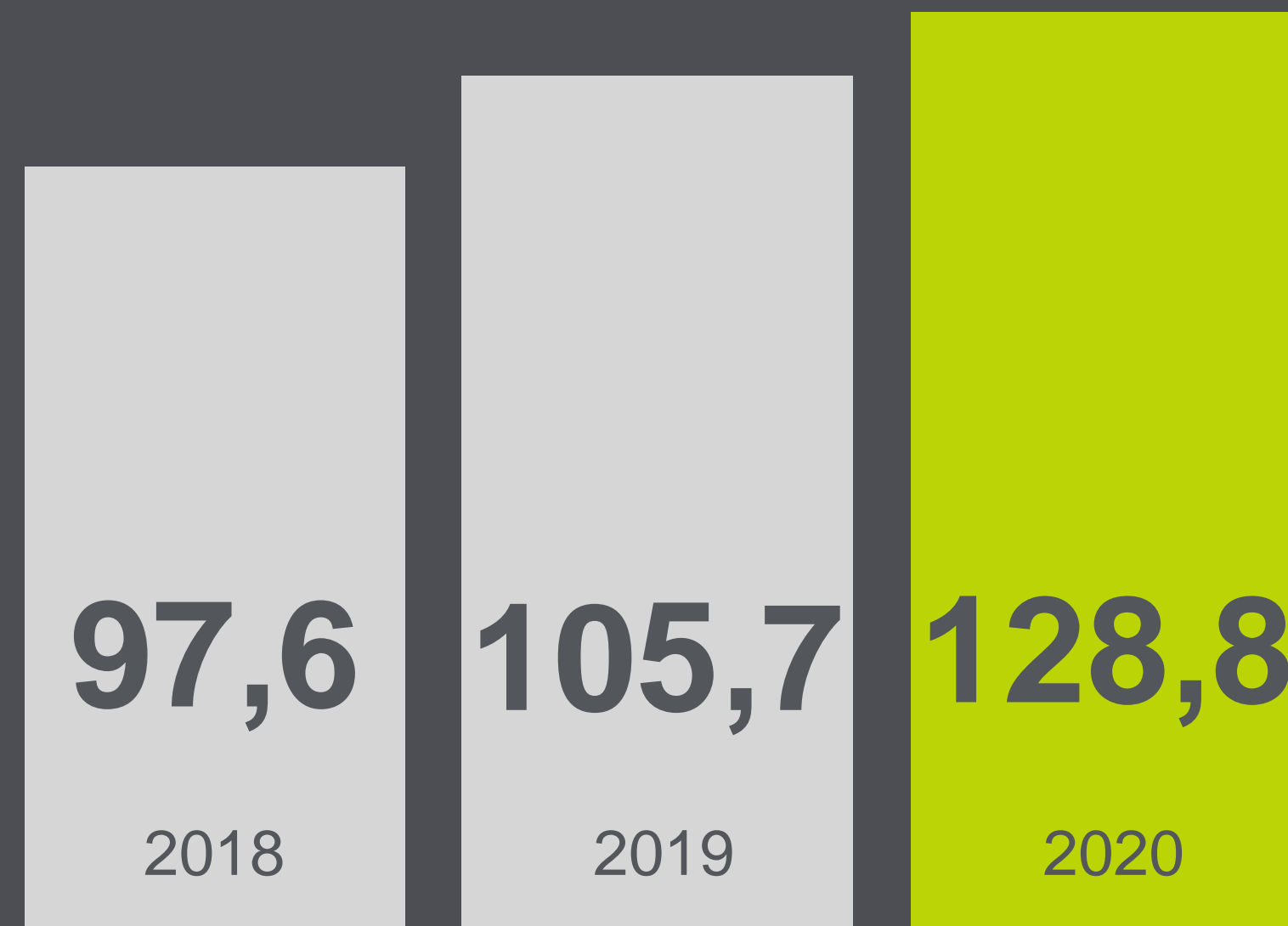
**100**

heavy maintenance  
base checks per year

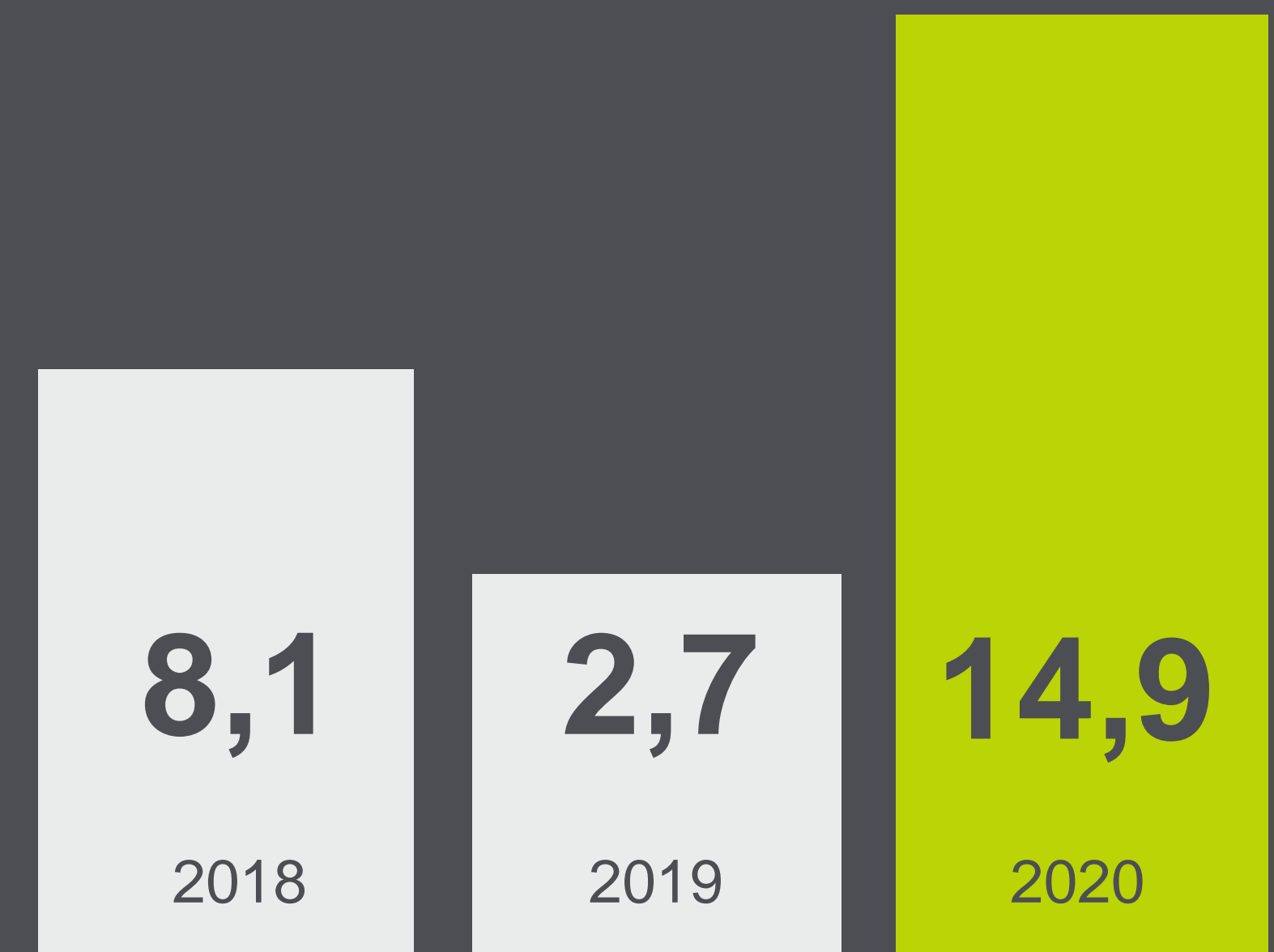
**30**

aircraft per year  
paint capabilities

Revenue, mln. USD



Investment, mln. USD



# Approvals/Certificates



Part-145  
Part 147  
Part-21J  
Part-21G



OTAR-145  
CAMO OTAR 39 Subpart F



ISO 9001-2015  
BS/EN 9110-2018



FAR-285  
FAR-289



ISO 17025 (FTL)



# Products & Services

Base & Line maintenance

Aircraft painting

Engineering support

Part 21 J & G services

Component overhaul

Engine maintenance & repairs

Structure repairs

Non-destructive testing

Production & Repair of aircraft  
interior components

Aviation training center

Flight Data analysis

Logistics support

Customs broker service

Vacuum toilet shop

Heat exchangers repair

Aircraft redelivery support





# New aircraft types: A320neo & B737MAX

- A320NEO with PW1100 engines
- B737MAX with LEAP-1B engines





# Capability list – AC types by geography

- Line maintenance
- Base maintenance

	Airbus A320 CEO	Airbus A320 NEO	Boeing 737 CL	Boeing 737 NG	Boeing 737 MAX	Boeing 757	RRJ 95	Embraer 170	MC-21 (planning to receive)
DME	● ●	● ●	● ●	● ●	● ●	● ●	● ●	● ●	● ●
MRV	● ●		● ●	● ●			●		
OVB	● ●	● ●	● ●	● ●	● ●	● ●		● ●	
IKT	●	●		●				●	
VVO	●	●		●					



# MRO's - Geography



A stylized map of Russia, filled with a yellow dot-matrix pattern. Five locations are marked with green dots and labeled: Moscow, Mineralnye Vody, Novosibirsk, Irkutsk, and Vladivostok. The map shows the country's extensive territory, including its northern and eastern borders.

● Moscow

● Mineralnye Vody

● Novosibirsk

● Irkutsk

● Vladivostok



# Base maintenance stations



## Domodedovo

Capacity:	
Narrow body.....	7
Wide body.....	3
Hangar space .....	12 160 m <sup>2</sup>
Production.....	4 680 m <sup>2</sup>
Storage area.....	4 170 m <sup>2</sup>



## Novosibirsk

Capacity:	
Narrow body .....	6
Wide body.....	2
Hangar space .....	10 350 m <sup>2</sup>
Production .....	3 110 m <sup>2</sup>
Storage area.....	3 280 m <sup>2</sup>



## Mineralnye Vody

Capacity:	
Narrow body.....	4
Hangar space .....	9 830 m <sup>2</sup>
Production .....	6 790 m <sup>2</sup>
Storage area.....	1 580 m <sup>2</sup>



# Components and systems repair

Modern shops & labs of S7 Technics perform overhaul and maintenance of a variety of AC systems and components for major aircraft types, including:

- Air conditioning & pressurization
- Automatic flight control;
- Communication & navigation;
- Power & lighting;
- Onboard kitchen equipment & interior;
- Aircraft engines and APU;
- Aircraft control;
- Hydraulics;
- Landing gear;
- Oxygen equipment;
- Pressure maintenance & regulation;
- Fire extinguishing & de-icing equipment;
- Component structure repair;
- Evacuation equipment;
- Vacuum toilets.



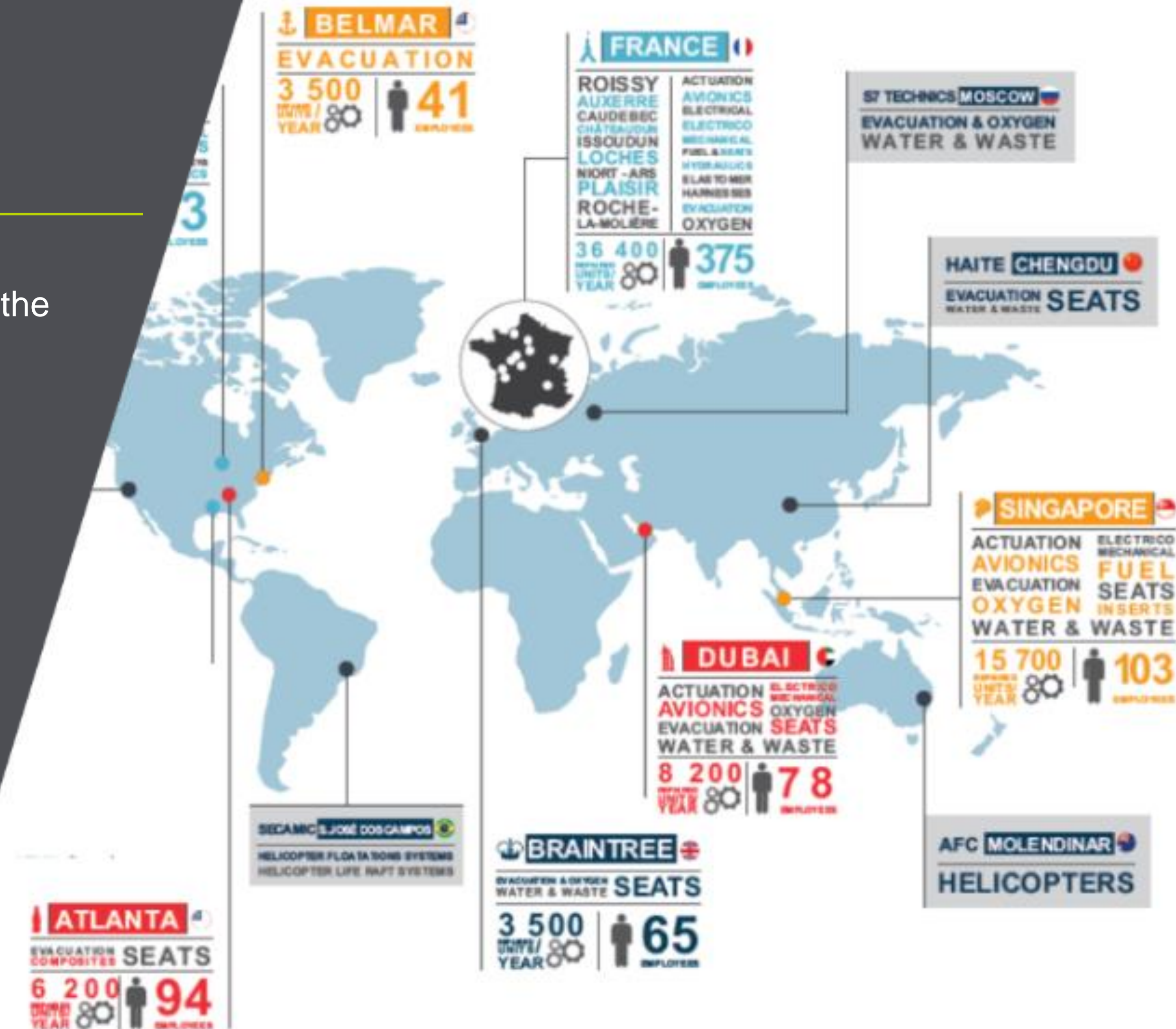


# Components and systems repair

S7 Technics is the only MRO in Russia & CIS fully authorized by Safran Aerosystems to support water & waste, oxygen & evacuation equipment on the aftermarket.

Three MRO shops are up and running in close cooperation Safran Group. S7 Technics specialists perform maintenance and overhaul of:

- Oxygen equipment;
- Vacuum toilets;
- Evacuation equipment.





# Components and systems repair

Pilot seats maintenance & repair shop has been set up in close cooperation with IPECO – a leading manufacturer of aircraft components. The shop has been certified for the of the A320 Family, B737NG, RRJ-95 components repair.

Under agreement with the OEM, S7 Technics provides aftermarket support for the pilot seats installed on RRJ-95 aircraft.





# Aircraft painting

Over 50 projects successfully completed

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Aircraft painting hangar is located in Mineralnye Vody.

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Modern electrostatic painting equipment is provided by GRACO.

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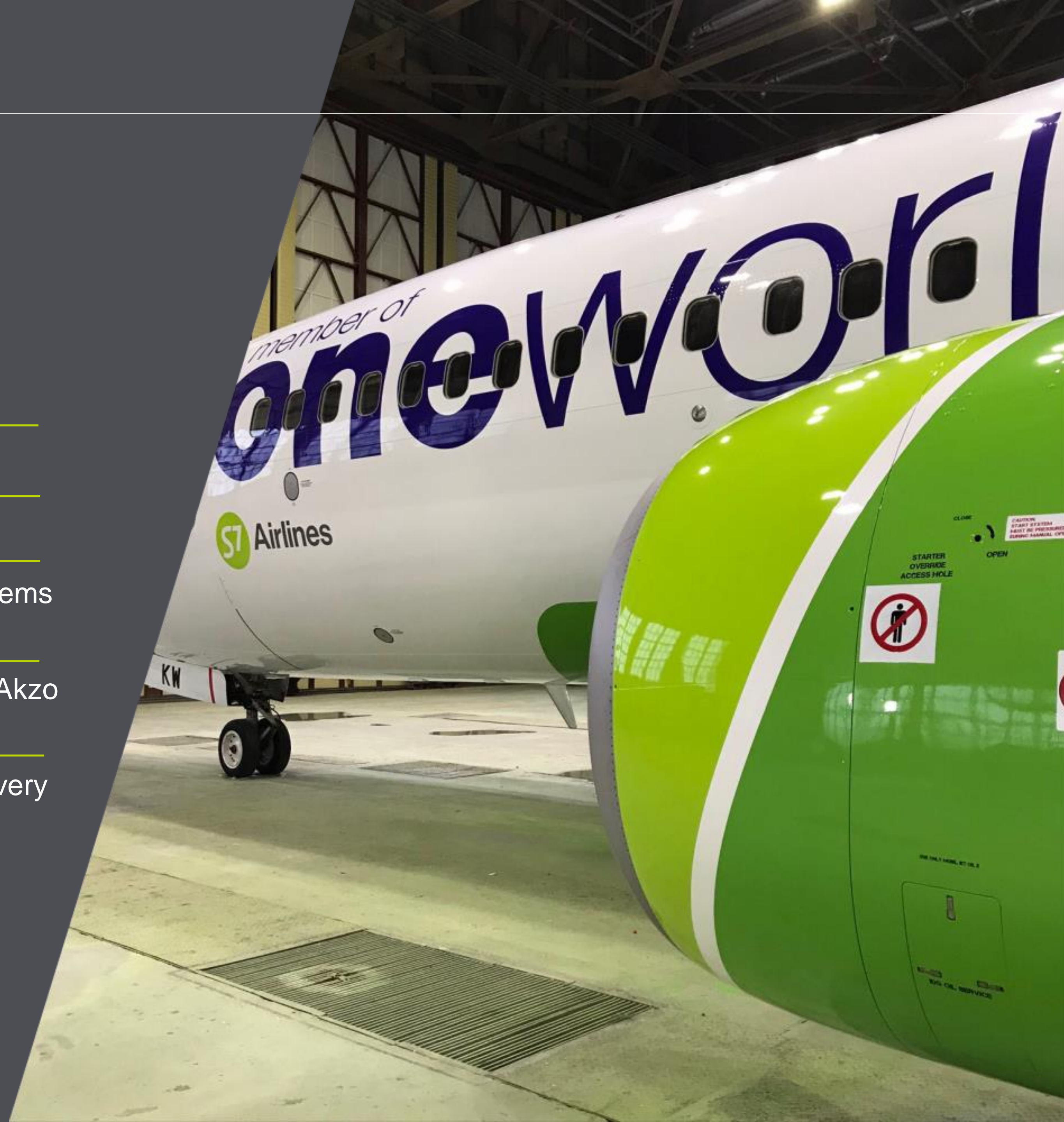
Complete painting cycle for Base Coat / Clear Coat, Finish Coat systems is the first one of the kind in Russia & CIS.

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Certified painting materials manufactured and supplied by PPG and Akzo Nobel.

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Adjacent maintenance facilities allow to combine maintenance and livery application on an aircraft for reduced TAT.









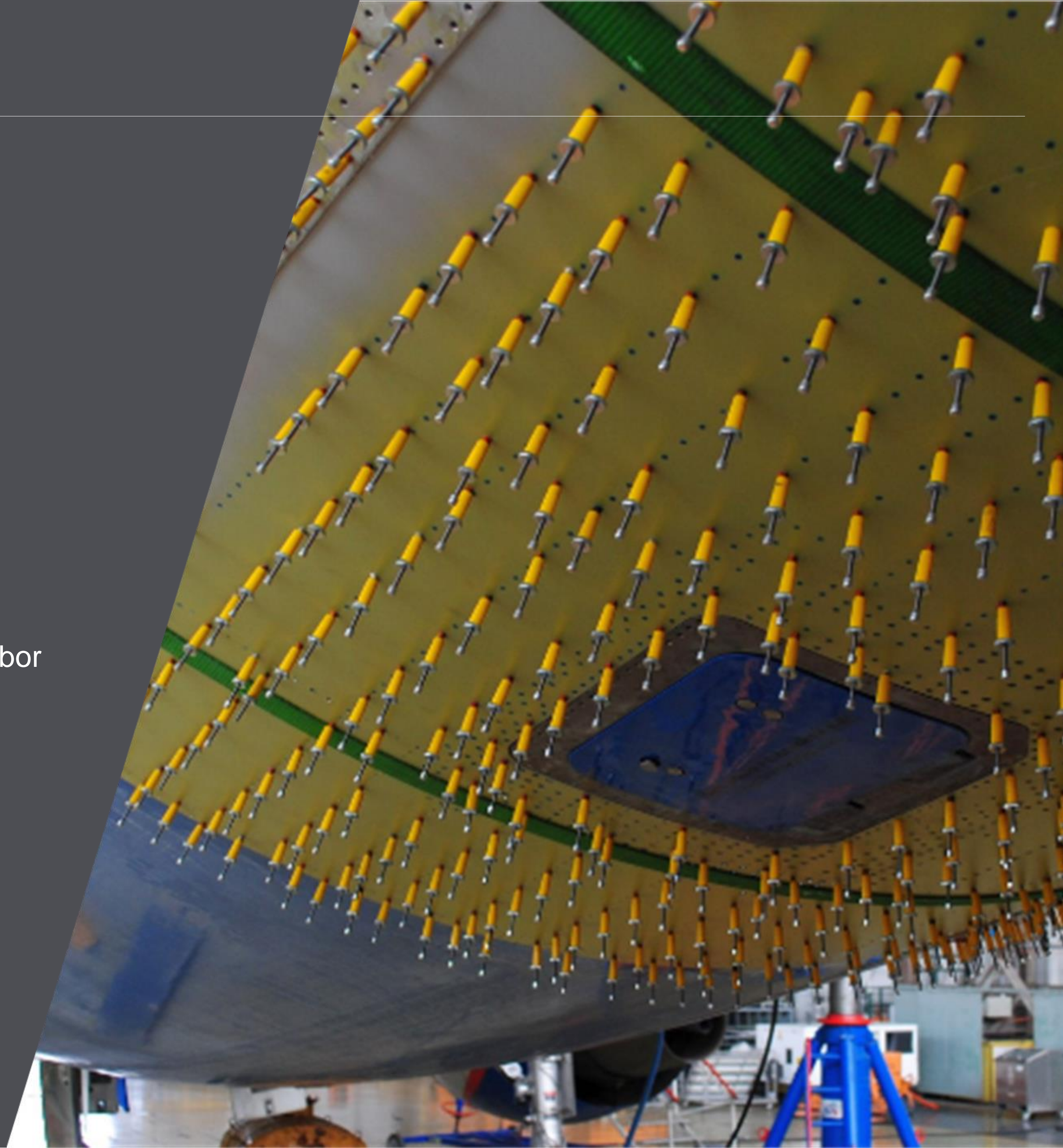
# Structure repairs

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S7 Technics is certified to make metal sheet and composite structure repairs. Structure Repair Shop personnel was trained by leading MRO training centers and received on-the-job training.

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Painting of airframe surfaces including interior parts is performed in a specially equipped spray-painting and drying booth. This improves labor productivity, economic feasibility and efficient use of resources.





# Non-destructive testing

S7 Technics' specialists use several types of non-destructive testing:

- Eddy current inspection
- Ultrasonic flow inspection
- Penetrant inspection
- Radiography inspection (X-Ray)
- Thermography inspection
- Magnetic particle inspection
- Visual inspection





# CFM56 engines repair

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Fan Disk replacement

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HPC blades, vanes and bushings replacement and repair

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LPT stg.1 NGV segments replacement

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HPT NGV segments replacement

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Combustor Chamber replacement

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Bearing №4 replacement

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Engine modules replacement:  
LPC booster, LPT major module,  
AGB and TGB modules

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Engine preservation for a period  
from 30 up to 365 days and  
preservation extension

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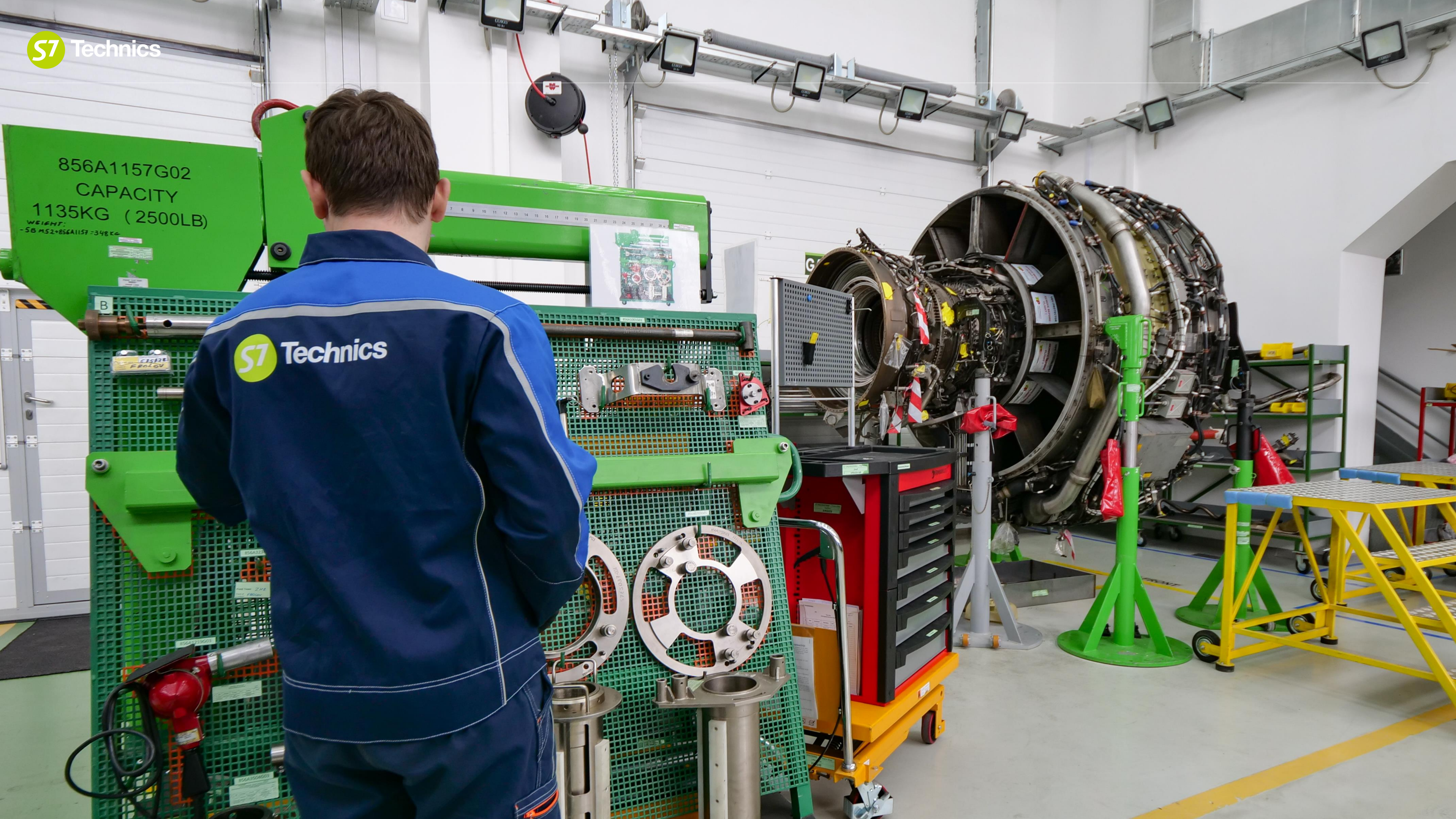
Engine lease return (redelivery)  
inspection and certification

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Engines repair at Customer's Base.









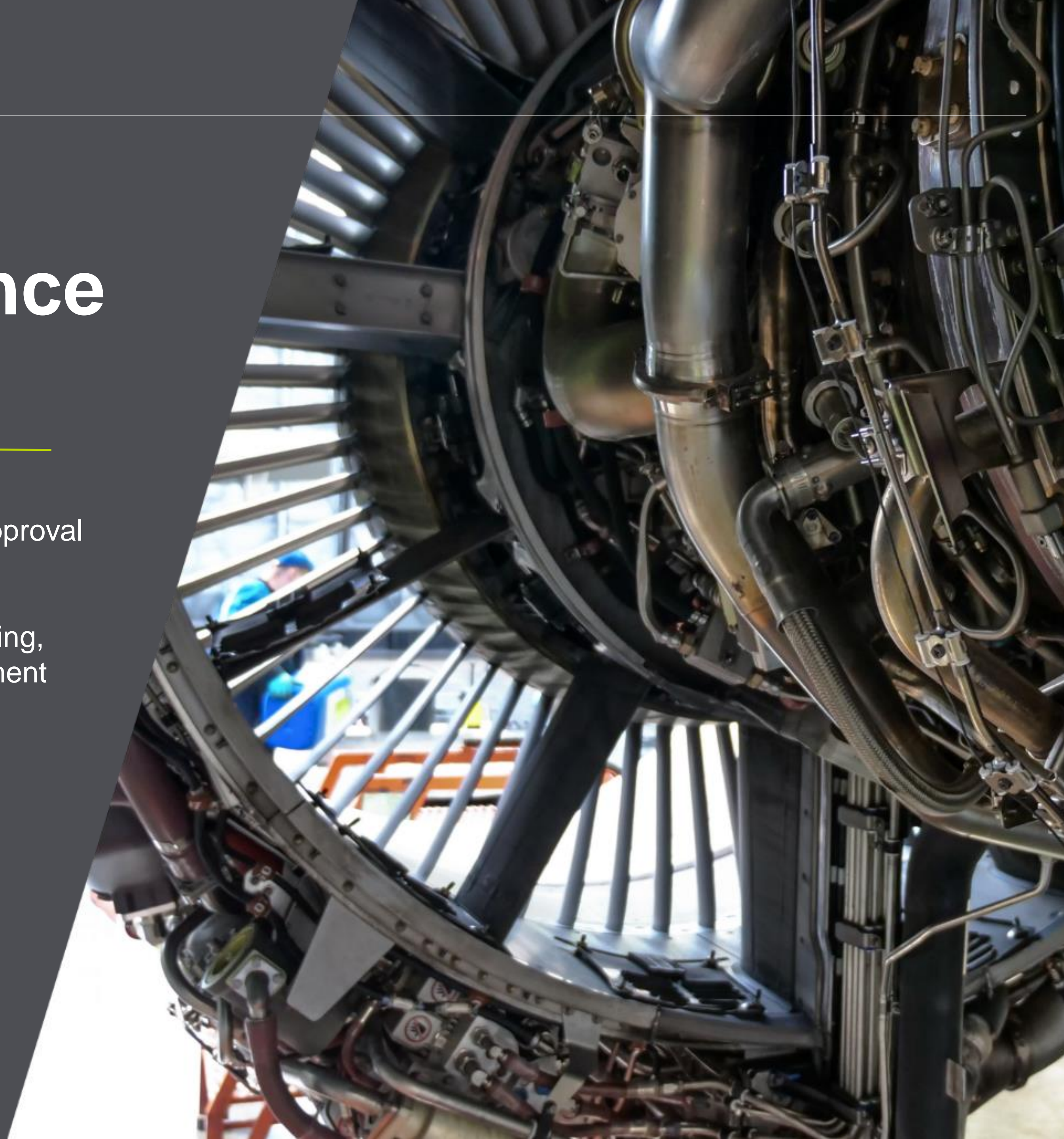
# Engines Heavy Maintenance

## CFM56 – 5B / 7B

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Since 2019 S7 Technics is investing into the ENGINE / APU Overhaul facility at Sheremetyevo airport. CFM56-5B/7B capability regulatory approval is planned for mid-2022.

The on-site repair capability will include full engine disassembly, cleaning, inspection, including NDT, selected piece parts repairs, parts replacement and engine assembly





# APU overhaul

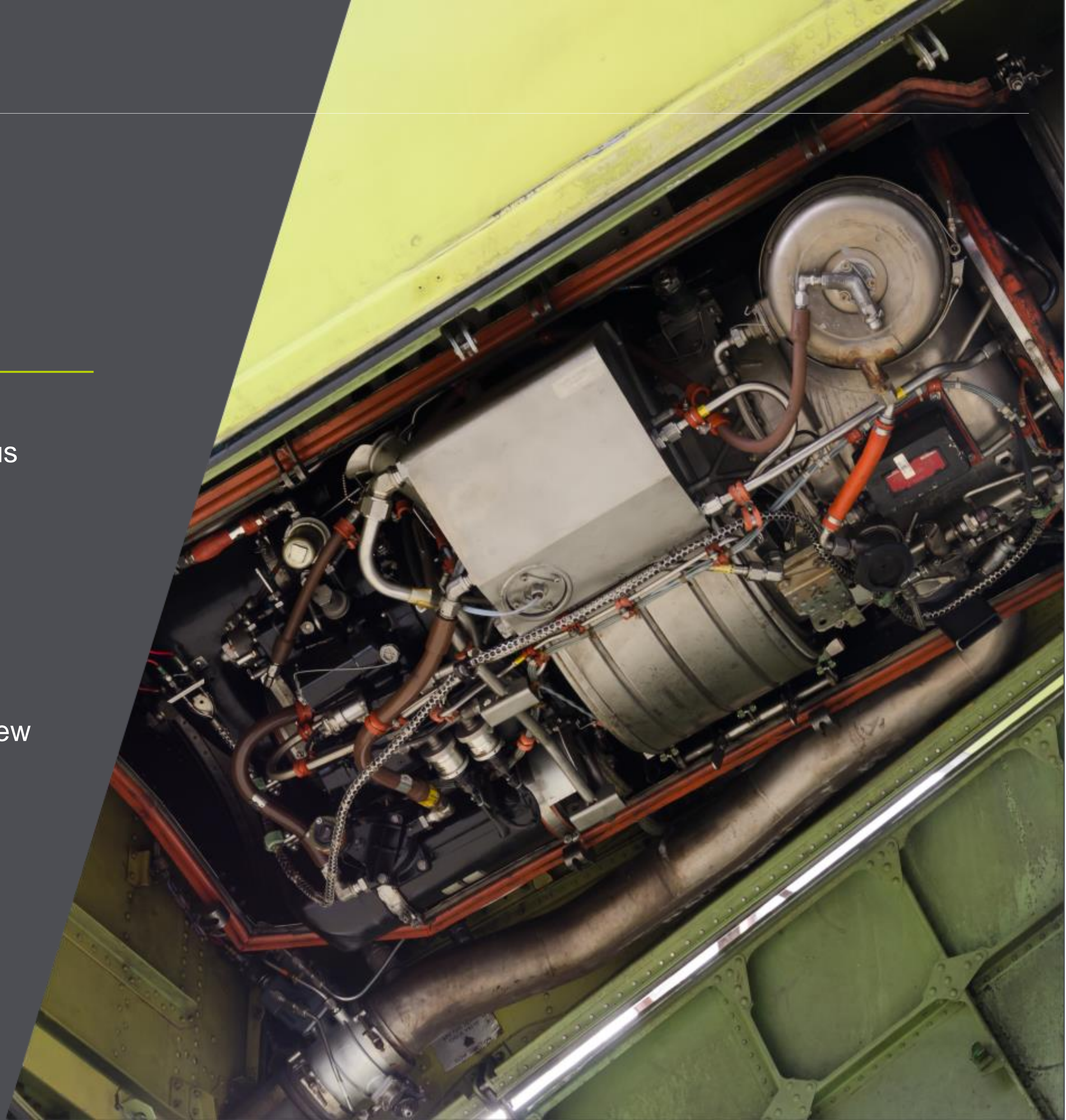
In February 2019, S7 Technics signed a license agreement with Honeywell. As part of the agreement, S7 Technics received the status of a Honeywell Channel partner for authorized repair of the following types of APUs:

- 131-9A
- 131-9B
- RE-220

These types are operated on aircraft B737 NG/MAX, A320 Family, RRJ-95. Currently, a joint project is being implemented to create a new production of S7 Technics for the overhaul of these types of APUs in the Moscow region at Sheremetyevo airport.

The APU repair facility, being established in the same building with CFM56 ENGINE Overhaul shop will share the same major lines equipment with the engine lines optimizing the total operational cost

Regulatory approval is expected for late 2021.





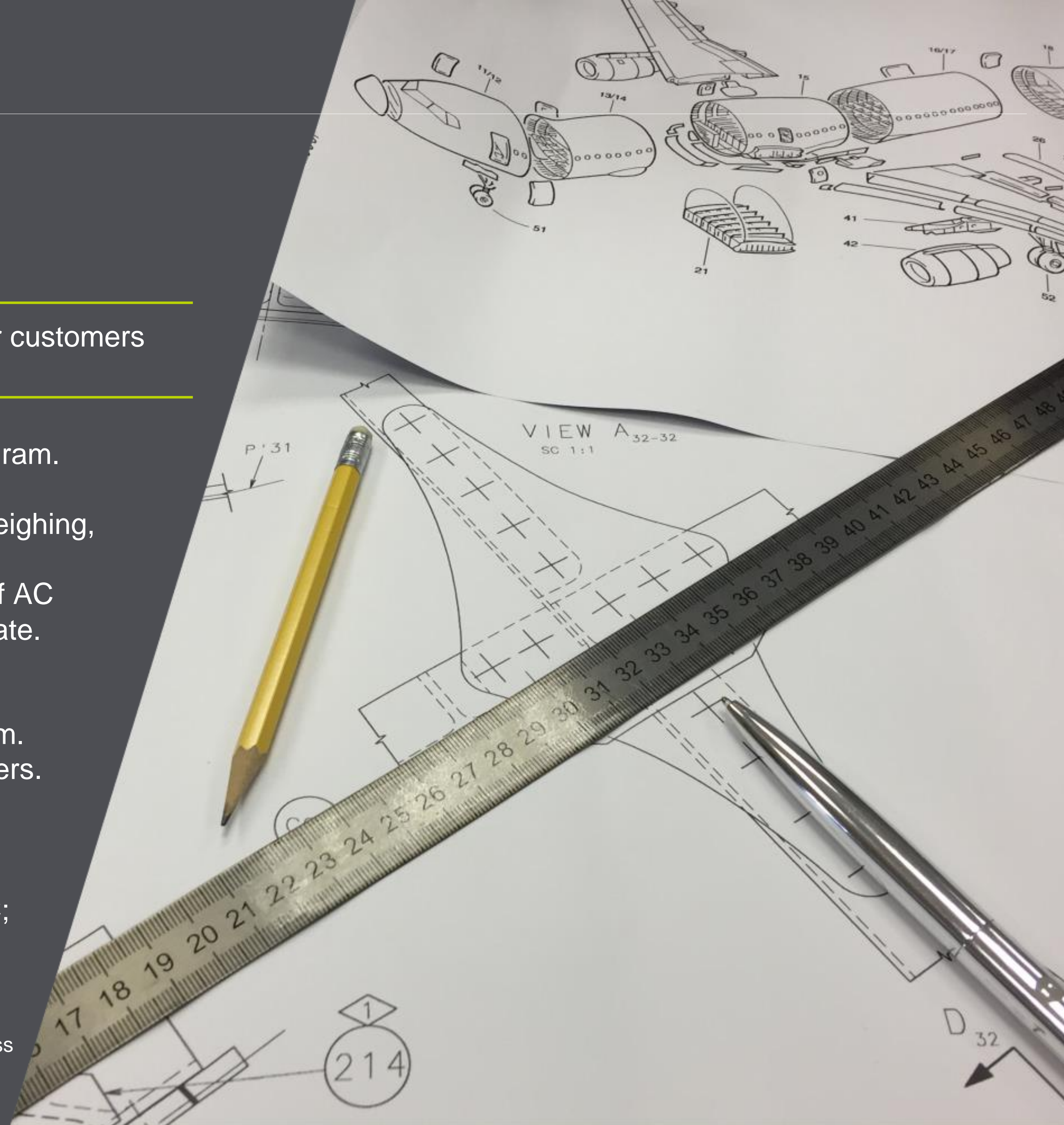
# Engineering services

Part –145, CAMO, delivery / redelivery support

S7 Technics has vast expertise and provides engineering support for customers under OTAR Part 39 Option 2 Subpart E (CAMO Approval)

- Development & support of the fleet maintenance and reliability program.
- Development & support of a minimum equipment list.
- Development & implementation of special procedures: test flight, weighing, etc.
- Consulting on delivery of AC and entering in operation, the return of AC to lessor, assistance in obtaining / renewing the airworthiness certificate.
- Development of job cards and other technical information.
- Engineering support of the AC maintenance processes.
- Organization and implementation of the AC parking\storage program.
- Solution of technical problems with AC and component manufacturers.
- Processing and analysis of flight data information.
- Continuing the airworthiness of the aircraft fleet :
  - planning of the AC maintenance;
  - maintenance, accounting and storage of technical records of the AC;
  - engine condition and performance parameters monitoring;
  - maintaining airworthiness statuses\*.

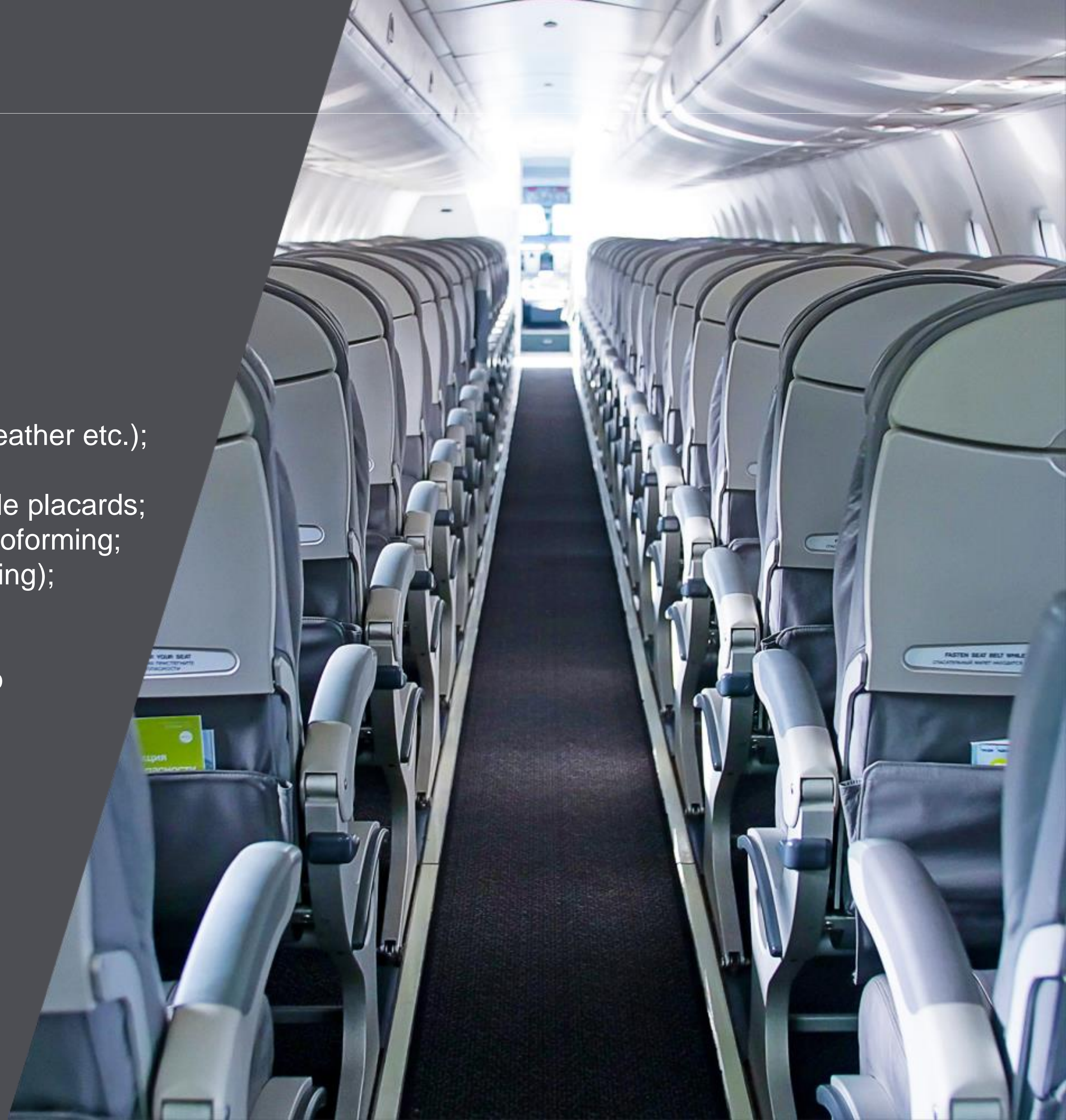
\* - statuses of hard time component, on condition \ condition monitoring components, airworthiness directive, service bulletins, modification and STC, structure repair, last done next due, etc.





# Cabin Interior Sewing & Production

- Production of pilot and passenger seat's cover (fabric, leather, e-leather etc.);
- Production of curtains, carpets, bags, divider curtain etc.;
- Production of exterior and interior placards, incl. stencils and Braille placards;
- Production of plastic parts by injection molding and vacuum thermoforming;
- Production of metal parts (brackets, suitcase, literature pocket spring);
- Production of seat cushions;
- Production of lavatory floor pan;
- Flooring & side walls composite panel manufacturing for AC cargo & passenger compartments.





# Part 21 J & G

S7 Technics specialists carry out a comprehensive modification of the AC interiors, from the development of design documentation to the practical implementation of the entire system.

## **Design (engineering) of AC components - EASA Part 21J.**

This certificate authorizes the development, approval and release of design documentation for minor Modifications and Minor Repairs (Minor Changes and Minor Repairs), in relation to the passenger cabin, cargo compartments, external and internal structure of the aircraft.

## **Testing Laboratory for determining the fire resistance of aircraft interior materials.**

Laboratory specialists conduct tests to determine the fire resistance of AC interior materials in accordance with the requirements of AP-25, CS-25, FAR-25 and DOT/FAA/AR-00/12.

## **Production of AT – EASA Part 21G components.**

The aircraft components production shop operates on the basis of the EASA Part 21G certificate, which allows the production of components with EASA Form 1.





# Delivery / Redelivery

S7 Technics supports 10 AC Redelivery projects per year

Scope of services includes:

- AD / SB Status update and correction;
- MPD Due List update and correction;
- OCCM / HT Components status update and correction;
- Redelivery WS optimization to meet Redelivery conditions;
- Complete structure repairs assessment, status update and findings rectification;
- Structure repairs;
- Engine management and repairs prior to Return;
- Preliminary cabin inspection, parts supply and complete cabin refurbishment under EASA Part 21 J & G standards;
- Aircraft complete repainting;
- Communications with aircraft manufacturer, aviation authorities;
- Qualified negotiation between Lessor and Lessee, representing Lessee interests;
- Presenting aircraft and records to the next Lessee.

*NOTE: The scope of work on the AC delivery is very similar, but more inclined on the checking of documents and physical condition of AC.*





# Service for Lessors

S7 Technics provides engineering and consulting services.

Audit of technical records in accordance with the requirements of the lease agreement and the aviation authorities, verification of all airworthiness data and preparation of comments for the aircraft operator:

- Statuses of airworthiness directives and service bulletins for aircraft, engines, APU's, and components;
- Statuses of modifications and structural repairs of the aircraft structure;
- Airframe and component utilization;
- Performing all routine maintenance items;
- AC configurations, hard time component and life limited parts status.
- Documentation of the operator (maintenance program, ETOPS manual, minimum equipment list, etc.);
- Traceability of all life limited parts;
- Maintaining the software status of the aircraft;
- Load changes (ELA) as a result of performed modifications;
- Monitoring of aircraft center of gravity and weight;
- Preparation of Burn Certificates for cabin equipment.





# Service for Lessors

S7 Technics provides engineering and consulting services:

**Representation of the lessor in communications with the AC operator, aviation authorities and the manufacturer of AC and components.**

**Physical inspection of the AC for compliance with the lease agreement, as well as the requirements of the aviation authorities:**

- Verification of damages and repairs for compliance with the manufacture's manuals, lease agreement and the requirements of the aviation authorities;
- Validation and verification of the installed components;
- Inspection of interior elements for compliance with the manufacture's manuals, lease agreement and the requirements of the aviation authorities;
- Inspection of all markings for compliance with the manufacture's manuals, lease agreement and the requirements of the aviation authorities.





# Aviation training center.

## Part 147





# Aviation training center. EASA Part 147

S7 Technics Training Center (EASA Part 147, FAR-289) provides training for aircraft maintenance engineers, both in-house (Moscow DME) and its clients' facilities.

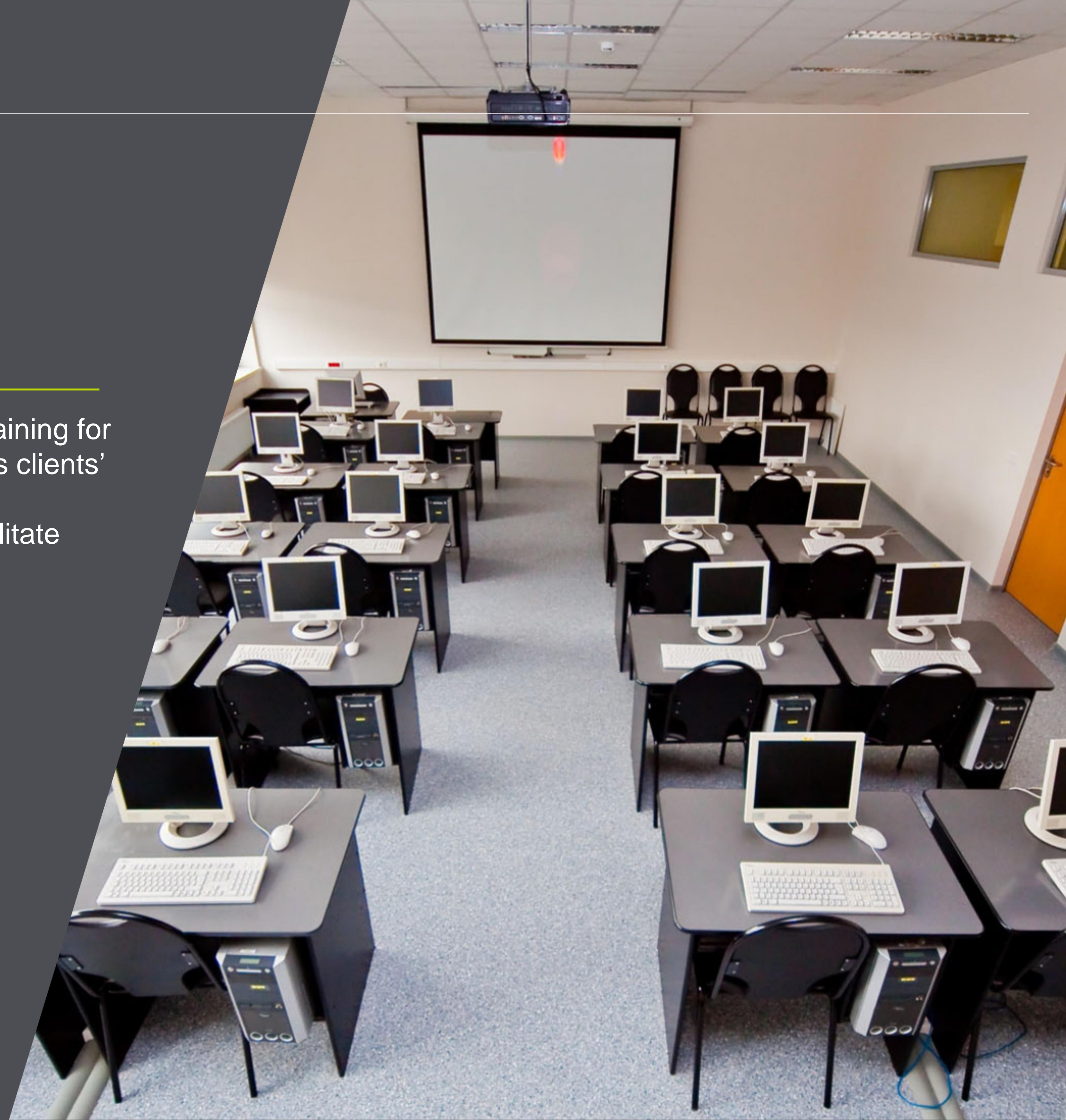
The courses are supported by modern software and hardware to facilitate comprehension and simplify access to training materials.

## **Ratings:**

B1.1, B2, B1.1+B2, C

## **Supported aircraft types:**

- Airbus A318/A319/A320/A320/A321 (All engines)
- Boeing 737-300/400/500
- Boeing 737-600/700/800/900
- Boeing 737-7/8/9
- Boeing 757-200/300 (All engines)
- Boeing 767-200/300/400 (All engines)
- Embraer ERJ-170 Series





# Cooperation Projects with leading OEM's & MRO's



**SAFRAN Group** a world leading manufacturer of hi-tech AC systems & equipment, and a tier-1 supplier in Aerospace industry. Aftermarket support is a top priority of the group.

**S7 Technics** is the only MRO in Russia & CIS fully authorized by SAFRAN to support water & waste, oxygen & evacuation equipment on the aftermarket.



**Limco Airepair** is a subsidiary of TAT Technologies Ltd. which specializes in providing heat exchanger units repair services. All operations are approved by the Federal Aviation Administration.

Heat exchangers maintenance service offered by joint venture **TAT ENGINEERING** ranges from minor repairs to complete overhauls.

Service is available at **S7 Technics** Novosibirsk facility.



**SR Technics** – one of the world's leading MRO providers. Engine maintenance shop was set up in cooperation between the two MROs.

Maintenance of **CFM56-3/5B/7B** engines during AC heavy check to reduce turn-around-time (TAT) for Russia- and CIS-based clients.

Service is available at **S7 Technics** facilities in Moscow DME, and Mineralnye Vody.

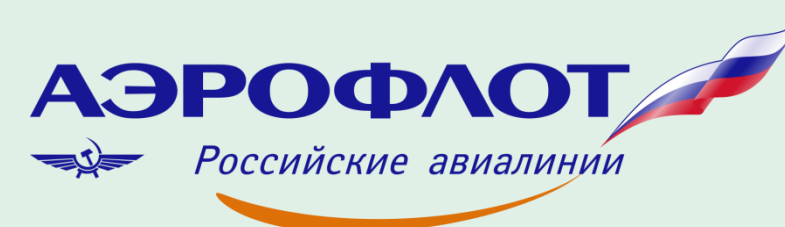


**Honeywell** - Fortune 100 technology company that delivers industry specific solutions that include aerospace products and services.

**S7 Technics** and **Honeywell** are contracted to launch a new APU repair facility in the next two years. It will be the first one of its kind in Russia and CIS, supporting Honeywell auxiliary power units (APUs) 131-9A/B, RE-220 installed in the most popular aircraft types: Airbus A320, Boeing 737 and RRJ-95 families.



# S7 Technics domestic clients





# S7 Technics international clients





**Thank you for your attention!**