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AEROSPACE INDUSTRY
IN TUNISIA, A BOOMING
SECTOR

The Tunisian Aerospace industry has experienced remarkable momentum in recent years. Over the last decade, it has recorded a **30% average added value** and **exports** have been **multiplied by 9.5.**

Today, the Aerospace industry counts:

- more than 80 companies, 90% of which operate offshore
- over 17,000 direct jobs
- over 1,500 direct jobs per year.

Tunisia is the **leader in North Africa** in terms of high-value exports.

Source: The Global Talent Competitiveness Index, 2018

Main exported products:

- Aeronautical systems, sub-assemblies, equipment and structures (lower shell, composite wings,nacelles)
- Seat parts for aircraft
- Electronic components and assemblies (interconnection systems with electrical furniture)
- Electric assemblies
- Cable harnesses
- Precision mechanical parts
- Sheet metal parts
- Technical plastic parts
- Surface treatment

Main exported services:

- Maintenance and repair
- Engineering: development of computer software, prototyping
- Training

Tunisian Aerospace Exports



Source: Ministry of Industry and SMEs & CETIME, Study on situation and development perspectives of aerospace industry in Tunisia, 2018

PRESENCE ACROSS THE ENTIRE SUPPLY CHAIN



In Tunisia, **more than 80%** of industrial companies and **nearly 20%** of service companies operate in activities related to aerospace industry. These companies cover the **entire supply chain.**

ELECTRICAL ASSEMBLY

- Converters
- Battery chargers
- Wound elements
- Engines
- Generators
- Flectrical transformers
- Measurement tools

CABLE HARNESSES

- Cabling
- · Assembly of subassemblies
- · Board assembly

ASSEMBLY OF AEROSTRUCTURES

· Assembly of aircraft

PLASTICS PROCESSING

- Injection of technical thermoplastics
- · Care and maintenance of moulds
- Integration of electrical and electromechanical subassemblies
- Wire bonding



MECHANICS

- Castings of special alloys based on cobalt, nickel and stainless steel
- · Precision engineering

SURFACE TREATMENT

- Chemical Chromatisation of Aluminium
- Passivation of stainless steel
- Sulphuric anodic oxidation, colourless and black

ENGINEERING AND DESIGN

- Embedded software for calculators
- · Inertial central test bench
- · Simulators of avionics equipment

FINE SHEET METAL

- Structural assemblies
- Structural riveting
- Formatting (CNC bending, assembling, riveting, TIG welding)

Tunisia has a major asset in terms of quality. It ensures production with a high level of compliance with the most stringent global requirements thanks to the presence of confirmed actors in the field of **3D measurements** and **equipment calibration.**

Tunisia has one of the most comprehensive aerospace supply chains in the world with the capability to make a product from A to Z.

Thierry HAURE-MIRANDE GITAS Chairman



BUSINESS ENABLING ENVIRONMENT

Tunisia benefits from a quality entrepreneurial environment that fosters productivity qains in the aerospace industry.

Several elements contribute to this, including:

- proximity between companies that are located within a radius of 160 km
- favourable business climate in industry (FDI Benchmark, 2018)
- the Upgrade, Quality and Industrial Modernisation programs
- the presence of certified actors (ISO 9001, EN 9100, ISO-TS, ISO14001, ISO 18001, EASA, CMMI and others)
- the most attractive cost of the intermediate inputs (FDI Benchmark, 2018)

The investment opportunities offered in Tunisia thanks to this environment:



Source: AIRBUS study, "GLOBAL MARKET FORECAST 2015/2034"

Tunis is the most attractive site in the aerospace industry in terms of operating costs out of six other competing sites: Bangalore (India), Beijing (China), Brasov (Romania), Casablanca (Morocco), Chihuahua (Mexico) and Plovdiv (Bulgaria).

Source: FDI Benchmark, the Financial Times Ltd, 2018 One of the biggest advantages of Tunisia is its proximity and also its culture. We have been able to deploy industries from zero to 3,000 within ten years. These are rarely found models.

Renaud GUYADER Director General, ZODIAC AEROSPACE

^{*} INS, Ministry of Industry and SMEs, CNAC, TeamSAI Consulting, Afra, Août 2018

SHOWCASE OF SUCCESS STORIES



The major groups installed in Tunisia in the aerospace industry are:

ALTRAN, HUTCHINSON, LATECOERE, PARADIGM PRECISION, SABENA TECHNICS, STELIA, SAFRAN...

The main customers of these companies are:

Airbus, AIRBUS Helicopters, BOEING, BOMBARDIER, DASSAULT, GE AEROSPACE, HONEYWELL, ROLLS-ROYCE.

Fast-growing actors:

- AD INDUSTRIE GROUP
- AEROTECH
- AGBI
- AL BADR AEROSPACE
- ALCEN
- ALTRAN
- CORSE COMPOSITE AFRONAUTIQUES
- FIGEAC AERO

- HUTCHINSON
- LACROIX ELECTRONICS
- LATELEC
- MAP
- MCSA
- MECANYVOIS
- MECAPROTEC
- MECAHERS GROUP
- SAFRAN

- SMITHS CONNECTORS
- SOGECLAIR AEROSPACE
- SOTIP
- TECHNIPROTEC METAL
- VIGNAL ARTRU INDUSTRIES

A range of highly specialised activities is perfectly mastered by subcontracting companies in Tunisia. These activities require a **high level of competence** in:



ENGINEERING

Software development, electronic components

ALTRAN ESI SOGECLAIR Aerospace TELNET



PRODUCTION

Electrical system and wiring, composite materials, foundry and mechanical machining, fine sheet metal work, aircraft assembly, plastic parts, surface treatment

SAFRAN Electronic cards, galleys, 3D wiring, motors and electrical cabinets

STELIA Aircraft structures **SOTIP** Fine sheet metal

SEGNERE Mechanical precision parts

PEC Plastic parts

HUTCHINSON Composites, thermoplastic materials **FIGEAC** Mechanical precision, mechanical subassemblies

AL BADR AEROSPACE Aircraft structures, composites AEROTECH. Surface treatment



SERVICES

Engine repair, transformation and modification, maintenance and other services

SABENA TECHNICS
TUNISAIR TECHNICS

AVAILABLE AND MULTI-DISCIPLINARY HUMAN RESOURCES

The aerospace industry has responsive, competent and competitive human resources.

Tunisia is **Leader in North Africa** in terms of international competitiveness of talents.

Source: The Global Talent Competitiveness Index. 2018

+ 6,000 graduates per year 42% of them are engineers

Tunisia has the largest number of researchers in Arab and African countries.

Tunisia is the **most competitive country in terms of salary in the Mediterranean basin.** It has the most competitive average wage level and the most favourable average annual wage increase. [source: TAC ECONOMICS].

The aerospace industry in Tunisia benefits from **human resources with various profiles** ranging from specialised senior technicians to engineers and researchers.

Tunis's relative labour cost ranks of in 2017 in Euro*

Engineer Managerial positions Technicians and the like Production Quality Production Production Facilities/ Quality operative Production Head of operative operative (highly Office Services Engineer Accountant Manager Manager manufacturing (unskilled) (skilled) Secretary Specialist skilled) Specialist 9.340 10.346 11.577 12,258 25.601 2.260 4.566 5,283 7.085 7.204 8.155

*the 6 competitor locations in this ranking are Bangalore (India), Beijing (China), Brasov (Romania), Casablanca (Morocco), Chihuahua (Mexico) and Plovdiv (Bulgaria).

Source: fDi Benchmark, from the Financial Times Ltd. 2018

INFRASTRUCTURE DEDICATED TO AEROSPACE INDUSTRY

Tunisia has the technological assets and infrastructure to meet aerospace industry such as:

• **El Mghira Aerospace Cluster**, an integrated industrial zone located in the governorate of Ben Arous which covers an area exceeding 200 hectares.

20% of total Tunisian aeronautical exports come from this cluster.

- A Centre of Excellence for Aerospace Industry Professions « CEMIA »
- 15 sectoral training centres in the fields of metal construction, electronics, mechatronics, telecommunications, general mechanics, plastics, maintenance and energetics.

In addition to this specific infrastructure dedicated to the aerospace industry, there are two operational business parks in Bizerte and Zarzis, a competitiveness cluster in Sousse specialised in the fields of mechanics, electronics and computers, and **more than 150 developed industrial zones** distributed throughout the country.

One of the **strategic objectives** set for 2025 in Tunisia is to **develop the existing infrastructure** to be able to meet the requirements of the aerospace industry, particularly in terms of infrastructure development in dedicated industrial zones.

STELIA, a subsidiary of EADS / AIRBUS, which has chosen Tunisia to establish its 1st aeronautical components construction site outside Europe, is located in El Mghira Park occupying an area of 20 hectares.

The Aerospace Cluster of El Mghira can be considered as a unique model in the world thanks to its mode of operation since it is integrated and based on intertwined information systems functioning in lean manufacturing mode, which is quite exceptional. We are now evolving towards a center of excellence based in Tunisia.

Ouassim BERRAÏES STELIA Aerospace

INCENTIVES FOR INVESTMENT

Tunisia offers investors who choose to settle in the country the following incentives:

- several **non-double taxation agreements** and bilateral and multilateral **trade agreements** for the promotion and protection of investments
- an association agreement with the European Union that resulted in a free trade area since January 2008
- preferential agreements with North African and Arab countries
- simplified establishment procedures
- new « Fast Track » legislation for major projects
- freedom of foreign participation in the capital of offshore companies
- freedom of access to land ownership for the realisation of investment
- freedom to transfer funds (profits, dividends and assets) abroad
- possibility of recruiting up to 30% of foreign executives for the launch of the project
- state subsidy of the employer's contribution to social security schemes
- state subsidy of the cost of training programs leading to certification
- specific allowance of 15 % of the investment cost under the schemes of priority areas and economic sectors
- allowances for intangible investment and R & D expenditure in certain areas of regional development
- tax rate reduced to 10% for fully exporting companies
- facilitation of customs procedures (green corridor)
- total exemption from VAT and customs duties on the inputs of products to be re-exported
- specific incentives given upon approval from the Higher Investment Council for the projects of National Interest meeting one of the following criteria :
- Minimum investment cost equal to 50 million Dinar (≈ 18,357 million €*)
- Creation of minimum of 500 jobs

Those projects benefit of:

- Deduction of the benefits from the tax basis in the limit of 10 years period;
- Investment grant within the limit of 1/3 of the investment cost of the project capped at 30 million TND;
- State participation to the coverage of infrastructure expenditure
- * Exchange rate 2018: 1 TND = 0.378 \$ = 0.320 €

SUPPORT STRUCTURES FOR SETTLING IN TUNISIA



Government & Administrative support organisations:

- •The Foreign Investment Promotion Agency « FIPA-Tunisia »
- The Tunisia Investment Authority « TIA »
- The Agency for the Promotion of Industry and Innovation « APII »
- The Industrial Land Agency « AFI »
- The Technical Centre for Mechanical and Electrical Industries « CETIME »

Industry support organisations:

• The Tunisian Aerospace Association Industries **« GITAS »**: It represents more than 50 member companies based in Tunisia and covers all the activities in the aerospace industry.







Foreign Investment Promotion Agency



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