

# Invest in Portugal

## Aerospace Industry Report

2024



**AICEP**  
Portugal Trade & Invest

**EY** Parthenon

# Contents

<b>1</b>	<b>Key Insights</b>	<b>3</b>
<hr/>		
<b>2</b>	<b>Aerospace sector in Portugal</b>	<b>6</b>
<hr/>		
<b>3</b>	<b>Aerospace industry ecosystem in Portugal</b>	<b>11</b>
<hr/>		
<b>4</b>	<b>Aerospace industry subsectors in Portugal</b>	<b>17</b>
<hr/>		
<b>5</b>	<b>FDI attractiveness factors for the Aerospace industry</b>	<b>20</b>
<hr/>		
<b>6</b>	<b>Appendix</b>	<b>22</b>



# 1

## Key Insights

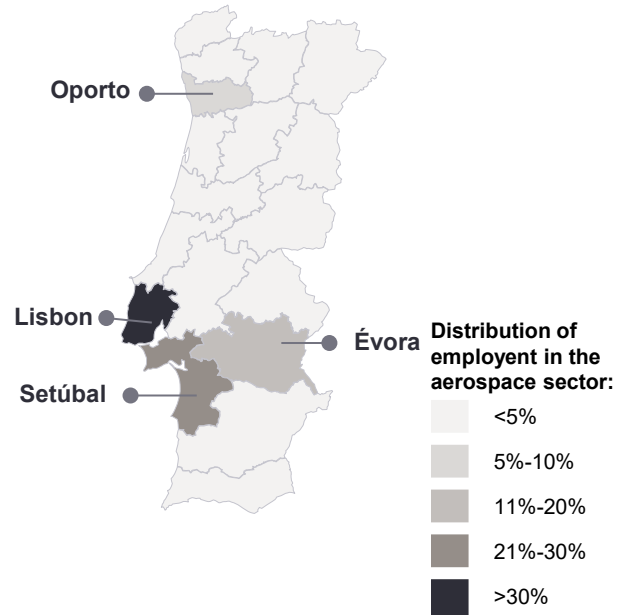
# Portugal presents an exclusive set of conditions in the aerospace industry...

For the purposes of this report, the scope of the Aerospace industry in Portugal encompasses:



## Employment in the sector | 2021

The regions highlighted in the map comprise 96% of total aerospace industry employees, in 2021.



## The aerospace industry in figures | 2021



## Industry Exports | 2022

Exports of aerospace products in 2022



2018-22 CAGR<sup>1</sup> of aerospace sector exports

- ▶ Large economies and advanced EU countries are the main destinations in this sector.
- ▶ Main export markets are: Brasil, USA, Switzerland, e Spain.

## Top 2 Exports categories | 2022

Parts of aircraft<sup>3</sup>



Parts of airplanes, helicopters or unmanned aircraft<sup>4</sup>


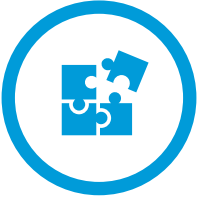




Portugal's top two main exported products account for 62% of total exports within this sector.

1. Data is regarding to CAEs 303 and 3316.  
 2. Compound annual growth rate (CAGR);  
 3. CN 8807.90.90 - Parts of aircraft, n.e.s. (excl. of spacecraft, incl. satellites, and suborbital and spacecraft launch vehicles);  
 4. CN 8807.30.00 - Parts of aeroplanes, helicopters or unmanned aircraft, n.e.s. (excl. those for gliders);  
 5. Weight on total aerospace exports, in 2022.

# ... translating into an innovative ecosystem

### Aerospace industry ecosystem

			
<b>Education</b>	<b>Innovation and Technology centres</b>	<b>Companies</b>	<b>Industry Associations</b>
<ul style="list-style-type: none"> <li>▶ In 2022, Portugal's <b>engineering, manufacturing, and construction sector accounted for 19% of total graduates</b>, ranking third in Europe for engineering graduates. Portugal also features relevant vocational training capabilities in this field, spearheaded by IEFP and CENFIM.</li> </ul>	<ul style="list-style-type: none"> <li>▶ <b>Portugal's aeronautics industry has been increasing its participation in R&amp;D projects of high value added.</b> As an example, Aerocluster Portugal has won an European investigation project worth €5.5M.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Portugal's advanced technological development and production capacity boost the industry exports and its vibrant startup ecosystem.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Business associations are involved in the development of relevant collaborative projects, <b>promoting synergies between companies, the Government and the R&amp;D system.</b></li> </ul>










### Foreign investors in Portugal

**Portugal has been chosen as an investment location by several multinational companies.**



### FDI attractiveness factors

 High skilled engineers	 Robust R&D ecosystem	 Unique infrastructures
 Participation in R&D programs: ESA, EASA, Clean Sky		 Aerospace University programs
 Unique meteorological conditions		 Airports and airfields networks
 Workforce qualifications programs		 Unrestricted airspace



A man in a grey suit and glasses is seated on an airplane, looking out the window. He is holding a magazine. The scene is lit with warm, golden light, suggesting a sunset or sunrise. The airplane's interior, including the window and overhead storage, is visible.

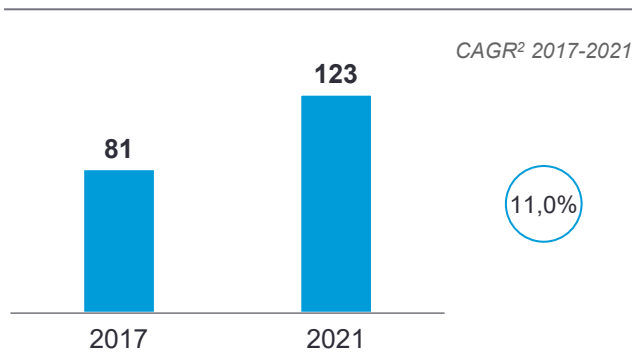
# 2

## Aerospace sector in Portugal

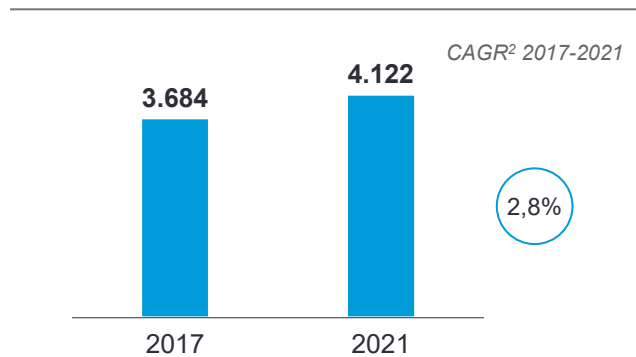
# The aerospace industry is facing a continuous growth, strengthening its position in the global market

- ▶ **Portugal boasts an advanced and highly skilled aerospace industry**, fueled by an exemplary education system, several R&D institutions and a dynamic business environment. This flourishing ecosystem is primarily built on component production, system development and services, such as maintenance, repair and overhaul.
- ▶ In this context, Portugal's aerospace industry has been achieving **international recognition, emerging as a powerhouse for R&D and Innovation**.
- ▶ There has been an **observed growth in the number of companies and employees** with a CAGR<sup>1</sup> of 11% and 3% respectively, thereby widening the pool of qualified manufacturers involved in the design and production of various aerospace elements. These include launching systems, airplanes, and satellites along with their necessary components.
- ▶ The industry's progression is further characterized by the **development of intricate systems and enhancement in the execution of comprehensive maintenance and repair activities**.

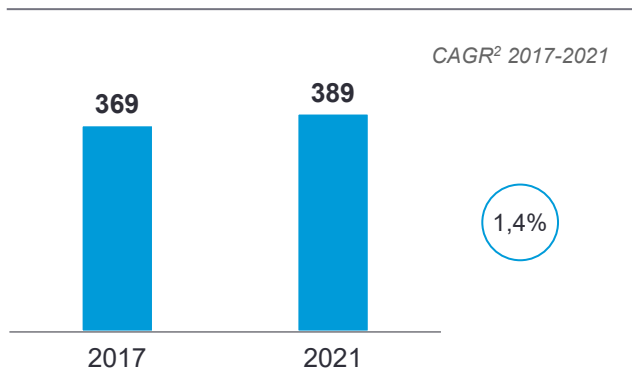
## Companies<sup>1</sup>



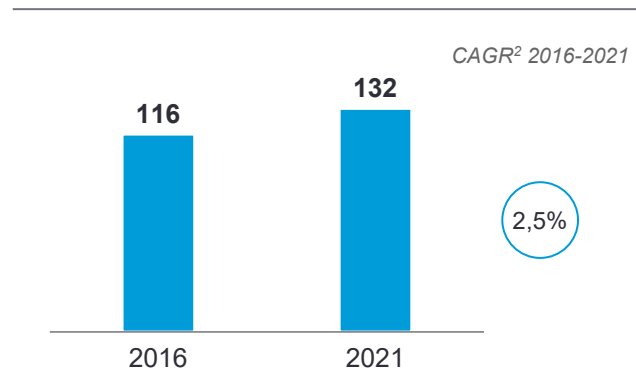
## People employed<sup>1</sup> (k)



## Turnover<sup>1</sup> (€M)



## Gross Value Added<sup>1</sup> (€M)



“ By signing a contract with Pratt & Whitney to be the new maintenance centre for aircrafts, we show the competence and experience of the Portuguese workforce.”

Alexandre Sollis, Former CEO  
Ogma (Brazilian Company) was established in Portugal in 1918

1. Data is regarding to CAEs 303 and 3316.

2. Compound annual growth rate (CAGR).

Source: Statistical Portugal.

# The aerospace industry in Portugal is considered an export-oriented industry

- ▶ The Portuguese aerospace sector **exported €358M** of aerospace products, in 2022, showing a positive steady growth since 2018, reaching a 45% CAGR<sup>1</sup>.
- ▶ Highlighting its robust global engagement, **the sector channeled over 88% of its production to international markets**. This was largely driven by substantial contributions from the maintenance, repair, and overhaul segment.

## Main export indicators

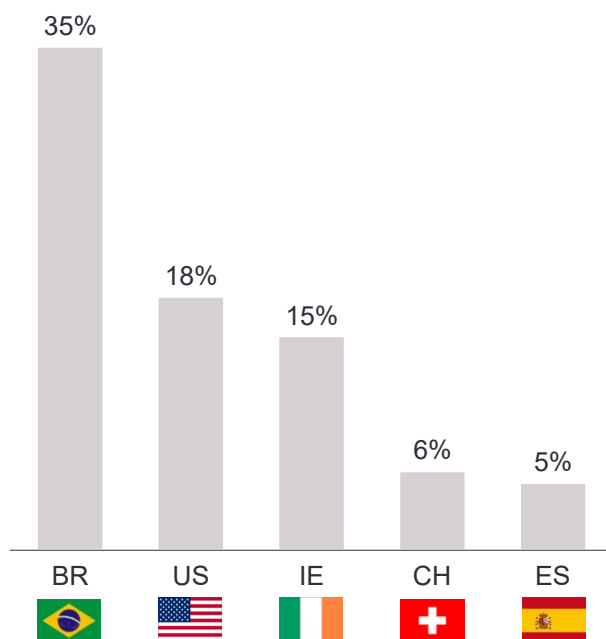
**€358M**

Exports of Aerospace products, 2022

**▲ 45%**

CAGR<sup>1</sup> 2018-22 of aerospace industry exports

## Largest export markets | 2022



- ▶ With a strong international presence, the aerospace industry exports most of its products to **Brazil**. Parts of airplanes, helicopters or unmanned aircraft are the top products exported to this market.
- ▶ **The USA has emerged as a key market**, particularly in the MRO sector.
- ▶ The presence of advanced economies (e.g., USA, Switzerland and Spain) demonstrates the specialized capabilities of the Portuguese aerospace industry in the global market.
- ▶ Additionally, it is noteworthy that the aerospace industry has outpaced the overall exports growth in Portugal, demonstrating a substantial 45% CAGR<sup>1</sup> compared to the 8% of the total country's exports.

**AIRBUS**

“ Because of its strategic location, the qualified labour force and the hospitality, Portugal is an attractive destiny to develop the aerospace sector.”

Cedric Gautier, CEO  
Airbus, (a French) company, was established in 2019

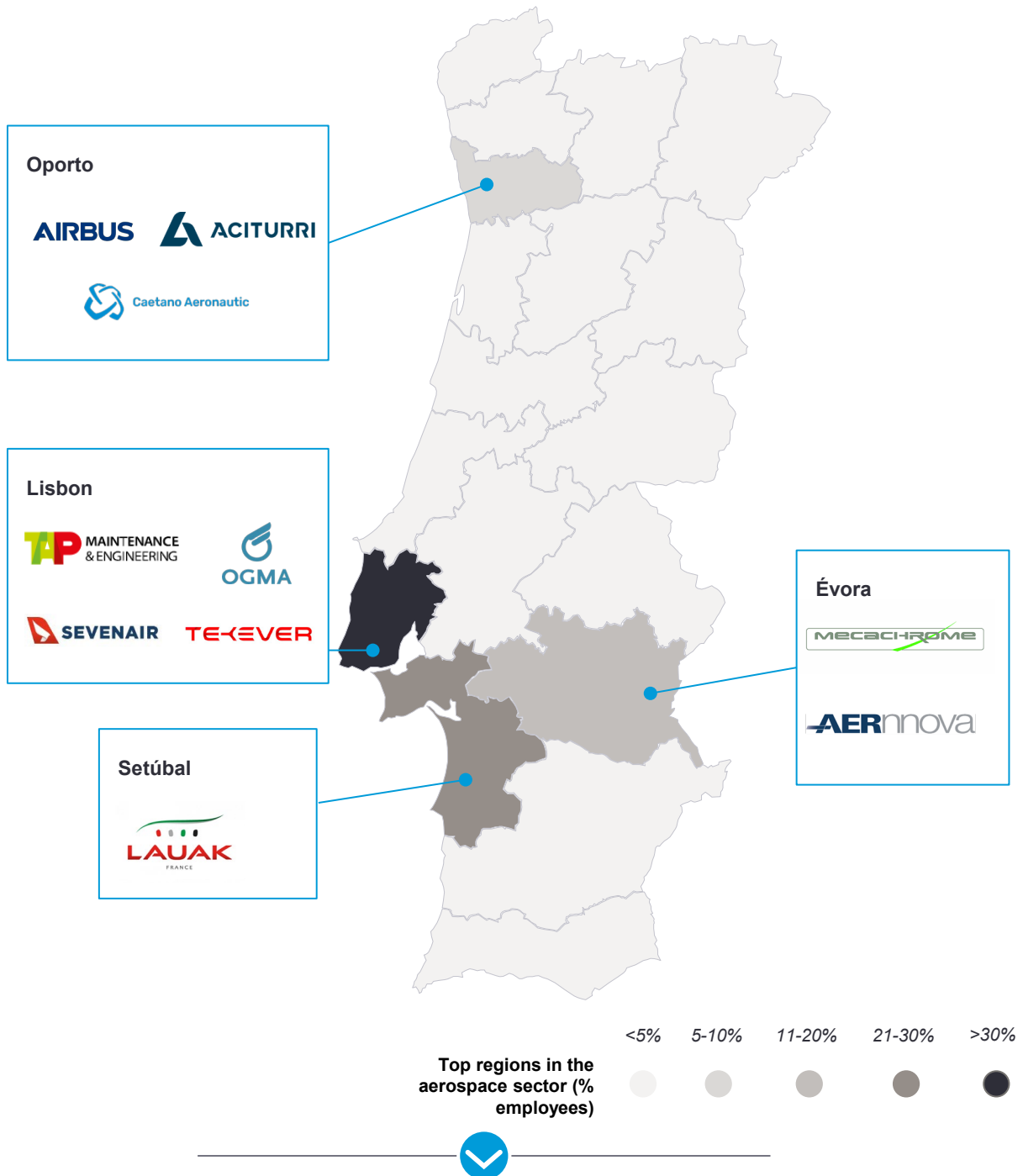
1. Compound Growth rate (CAGR).

Source: Eurostat; Banco de Portugal.



# The national aerospace ecosystem is mostly concentrated in Lisbon, Alentejo and the North of Portugal

## Geographical distribution of employees and top-10 employers | 2021



- ▶ The regions highlighted in the map comprise **96% of the total employment in this sector.**
- ▶ **Lisbon** comprises **45% of the aerospace companies** and **63% of the total turnover.**
- ▶ The main employers are in **Lisbon, Setúbal and Évora.**

# Portugal has been selected as an investment destination by several multinational companies

## Most recent investments undertaken by foreign companies in Portugal

- ▶ LeoLabs inaugurated, in June 2023, the new Space Radar Station in the Azores.
- ▶ The new radar, located on Santa Maria Island, adds essential coverage in Europe. The Azores Space Radar will expand the company's tracking of LEO objects by an additional 25% and will add more timely updates on critical events in LEO.



- ▶ Airbus Atlantic, formerly Stelia Aerospace, inaugurated, in September 2022, the new facilities in Santo Tirso, occupying an area of 20,000 sqm and employing 150 people. The factory produces parts and equipment for the A320 and A350 models, representing an investment of €40m.

- ▶ Aernnova performed a strategic partnership with Embraer, in 2022, investing €174m in two Embraer facilities.
- ▶ According to the company this partnership is a new opportunity to increase the production capacity.



- ▶ In June 2021, the German RFA- Rocket Factory Augsburg officially opened an engineering development centre in the Oporto area.
- ▶ The German company targets the development and qualification of RFA ONE's (launch system composite structures) in close collaboration with Portugal's Centre of Engineering and Product Development in Matosinhos (CEiiA).

- ▶ In 2018, the French Lauak, invested almost €20m in a factory in Grândola, in Setúbal region, for the manufacture of components for aircrafts, creating 300 highly skilled jobs.
- ▶ Lauak Portugal is producing components for Airbus and Embraer, amongst others. The company exports more than 90% of its production and employs 500 people in its Setúbal plant.



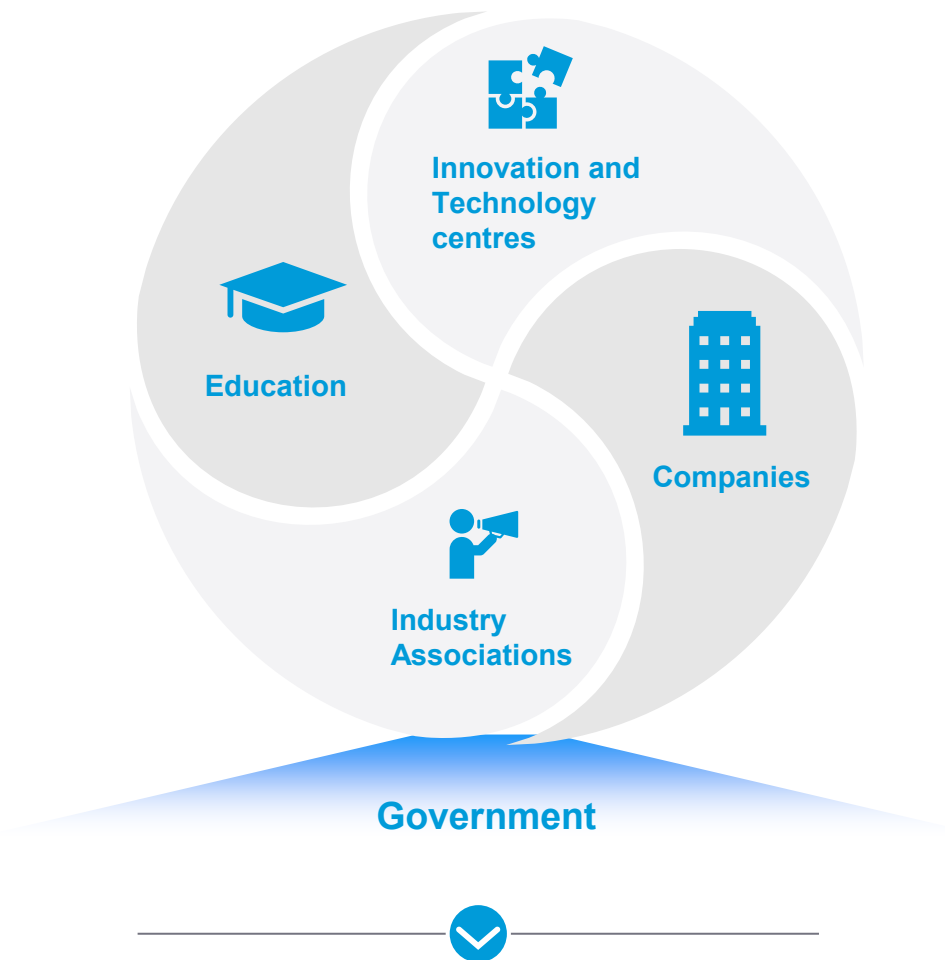


# 3

## Aerospace industry ecosystem in Portugal

# The aerospace industry is becoming more and more highly positioned in the international context

## Aerospace ecosystem in Portugal



In general, the **aerospace ecosystem in Portugal comprises four main axes, connected with each other and the Government**, key stakeholder in facilitating its grow.

- ▶ **Portugal's government is strongly involved in boosting the competitiveness and internationalization of the aerospace industry.**
- ▶ The AED Cluster - Aeronautics, Space and defence has signed an agreement with the Government, which aims to develop a **more circular economy and a more efficient energy transition within this industry.**
- ▶ Additionally, these pacts comprise several action fields, such as **promoting 4.0 industry, human resources development, FDI critical factors, internationalization and R&D.**

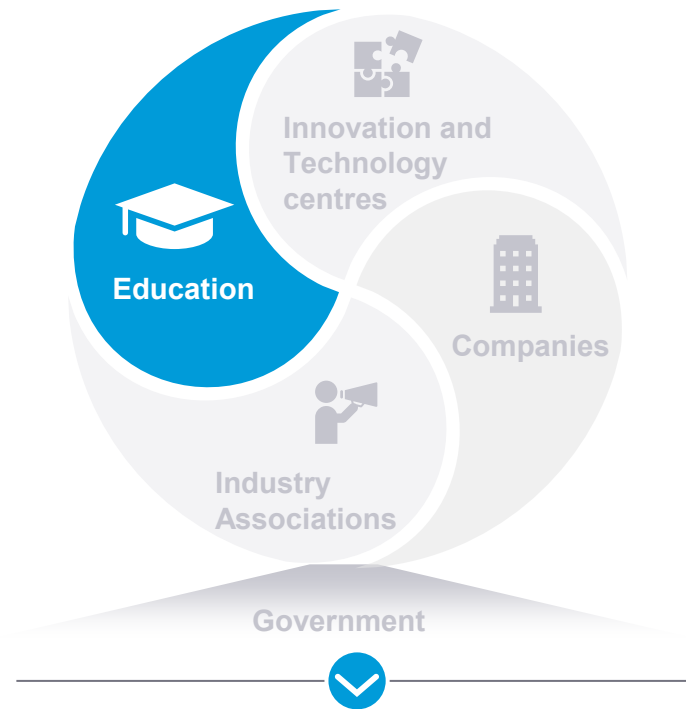


“ Portugal is one of the most attractive IT centres, an advantage in attracting international talent.”

Skander Oueslati, CEO  
Thales Alenia Space (French Group) was established in Portugal in 2018

# Education in Portugal produces a highly qualified talent pool that excels in the engineering area

## Aerospace ecosystem in Portugal | Education



- ▶ In 2022, Portugal's **engineering, manufacturing, and construction sector accounted for 19% of total graduates**, ranking third in Europe for engineering graduates.
- ▶ **More and more, Portugal has universities diversifying their educational courses into the aerospace and aeronautics fields.** Recently, the University of Aveiro and the University of Minho launched new degree programs in this area.
- ▶ Portugal also features relevant vocational training capabilities in the field, spearheaded by the National Employment and Training Agency (IEFP) and CENFIM. They are **strategic contributors to the country's aerospace landscape**, enhancing the potential and competitiveness of the industry.
- ▶ The MRO industry is observing a quick development in the defence, civil and executive aviation, due to Portugal's extensive knowledge and experience in the area.
- ▶ **The continuous investments in this area are improving interactions and synergies established between universities, R&D centres and companies.**

## Universities in Portugal offering aerospace degrees | 2022



The University of Aveiro has opened, in 2022, a bachelor degree in aerospace engineering, offering courses that focus on technology, aerospace and aeronautics.



The University of Lisbon, with its degree in Aerospace Engineering, teaches students to conceive, project, manufacture and operate systems and products.



Universidade do Minho



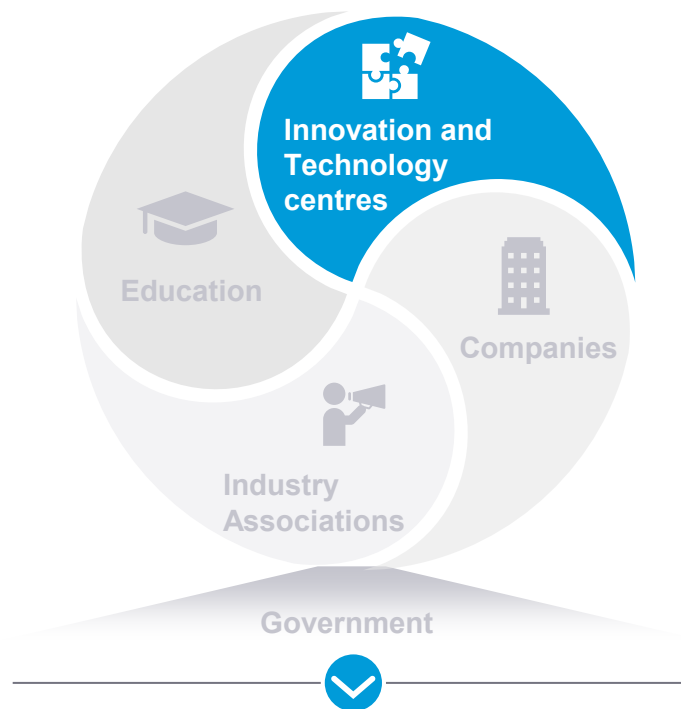
With a bachelors and masters degree in aerospace engineering, the University of Minho provides its students with a strong science base together with training in R&D.



The University of Beira Interior offers a specialized degree in Aerospace, preparing students with an advanced, multidisciplinary, and innovative curriculum

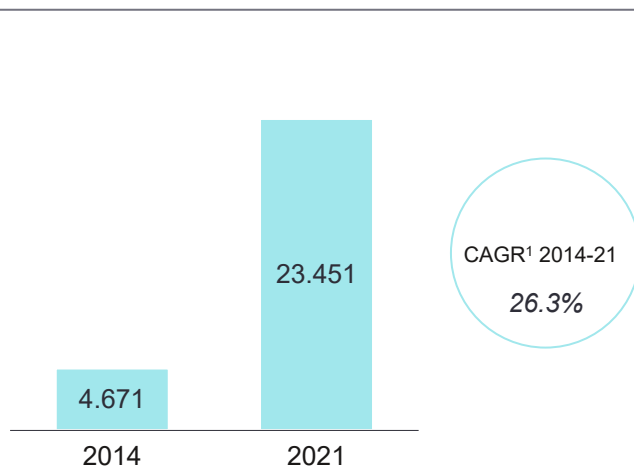
# The Innovation and Technological centres are gaining more and more international recognition

## Aerospace ecosystem in Portugal | Innovation and Technology centres



- ▶ In these last few years, **Portugal's aeronautics industry has been increasing its participation in high value-added R&D projects.**
- ▶ The INESC TEC, with 655 researchers in 2020, undertakes research in various areas like robotics, telecommunications, and artificial intelligence to advance aerospace technology.
- ▶ C-MAST, a research centre based in Covilhã, focuses on developing innovative solutions in materials technology and advanced manufacturing processes, among other areas vital to the aerospace sector.
- ▶ **The capacity and excellence of credited labs, such as CEiiA and ISQ, allow the development and execution of specific trials and analysis,** namely materials, coatings, and mechanical and non-conventional thermodynamics trials.

### Investment in R&D (€k)



The french multinational **Mecachrome Aeronautics** invested **€30M** in establishing a new factory in Évora and, also has plans to invest in a new cryogenic product process (liquid nitrogen). These investments aim to increase its competitiveness levels, benefiting from R&D centres and a high suppliers network.

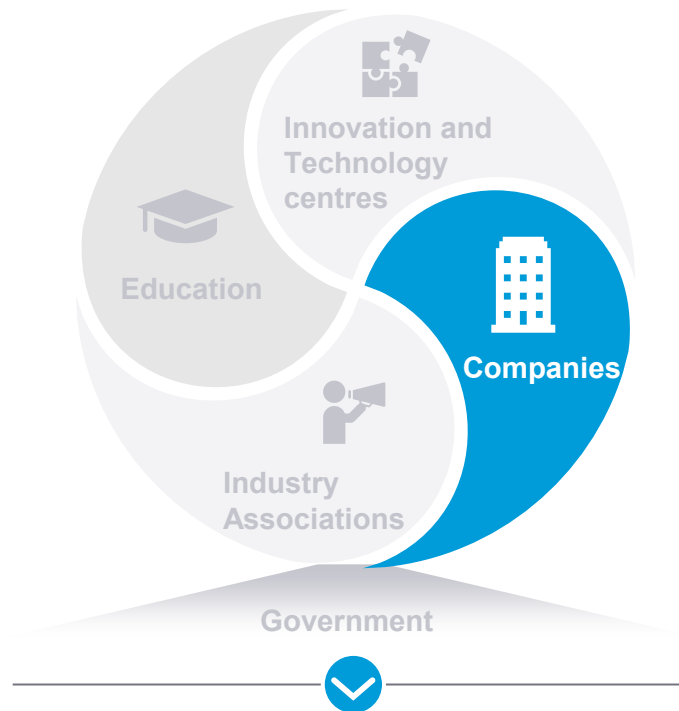
1. Compound annual growth rate (CAGR).

Source: Eurostat, AICEP Portugal Global; Relatório e Contas INESC TEC, 2020.



# The dynamism of the aerospace industry in Portugal has contributed greatly to attract international projects

## Aerospace ecosystem in Portugal | Companies



### Top 5 foreign aerospace companies | 2021

- ▶ Portugal **supplies a wide range of parts in the Aerospace industry:**
  - ▶ Aerostructures components and materials;
  - ▶ Systems, electronics and software;
  - ▶ Maintenance Repair and Overhaul;
  - ▶ Moulds and tooling
- ▶ The aeronautic sector is also experiencing significant technological development, particularly in the fields of metal mechanics, electronics, and automation.

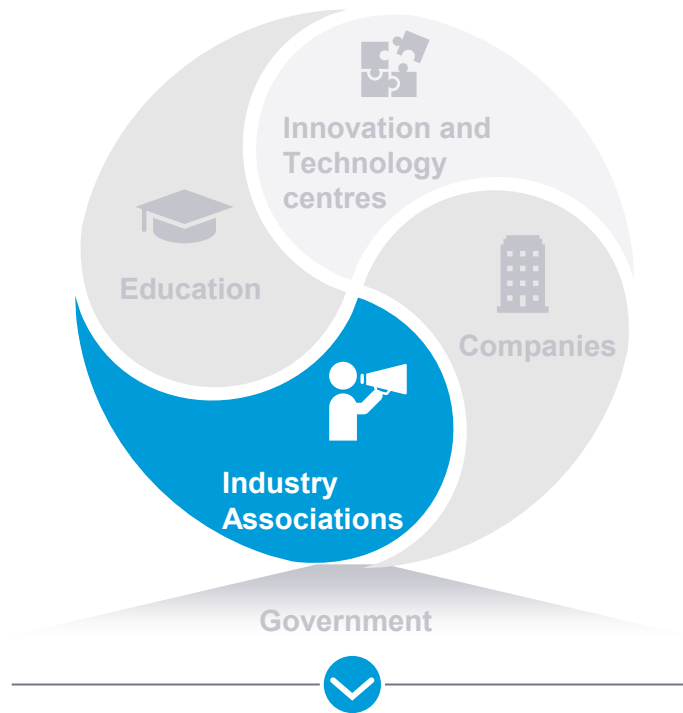
Company	Subsector
	Aeronautic
	Aeronautic
	Aeronautic
	Aeronautic
	Aeronautic

### Did you know ...

LusoSpace was founded in 2002, when "making space hardware in Portugal was not possible", being the first Portuguese space startup. Since then, Lusospace has originated two spin-offs, counting with a multidisciplinary team and making its mark in several projects and missions.

# The industry associations promote synergies among the industry stakeholders

## Aerospace ecosystem in Portugal | Industry Associations



- ▶ **Institutional entities, such as the AED Cluster Portugal and Portugal Space play a key role in promoting synergies between companies and the R&D system.** These entities enable innovation, technology and capabilities sharing among project's participants.
- ▶ Portugal Space Agency is working in conjunction with the European Space Agency (ESA) on critical areas like earth observation and space safety and with the European Southern Observatory (ESO) on the development of advanced instrumentation.
- ▶ Concurrently, AED Cluster Portugal is contributing to European collaborative projects that emphasize internationalization, further substantiating the proactive involvement of these associations in the broader development of Portugal's aerospace industry.
- ▶ **These associations have also established industry pacts with Government entities** to foster a friendlier business environment, increase exportations and promote FDI attraction, as well as R&D and entrepreneurship.
- ▶ Portugal's involvement in ESA and EASA's international programs, protocols with NASA, and partnerships with MIT and UT Austin further bolster its role in global space research endeavours.



### AED Cluster Portugal focus on the Aeronautics, Space and defence Industry.

This cluster includes more than 130 entities established in Portugal and gathers the main stakeholders from each subsector.

It usually participates in several international events, such as Paris Space Week.



### Portugal Space operates in the space security, Earth observation, telecommunications and navigation, science and exploration, technology and space transport domains.

This agency organized, in May 2024, with UNOOSA<sup>1</sup>, a conference on Management and Sustainability of Space Activities.

1. English acronym for United Nations Office for Space Affairs.

# 4

## Aerospace industry subsectors in Portugal

# The aeronautic sector in Portugal has been facing important technological developments

## Aeronautics subsector

- ▶ **Portugal has a consolidated aeronautic industry**, with players in different areas, such as components' manufacturers, interior cabin design, moulds and tooling, electronics, software and maintenance, repair and overhaul (MRO). These capabilities were enhanced with the participation in the Embraer's KC 390 project.
- ▶ The **aeronautic sector in Portugal has been observing an important technological development**, emerging as an exporting industry.
- ▶ Several multinationals **have invested in Portugal in the past few years**, such as Aernnova, Lauak, Mecachrome or Airbus Atlantic. The latter performed a €40M investment in a new industrial unit that focuses on the assembly of aeronautics structure subsets.
- ▶ Highly qualified talent, extensive engineering expertise, the existence of R&D centres and a strong suppliers base further strengthens Portugal's appeal to these multinational organizations.
- ▶ **The MRO industry is observing a quick development in the defence, civil and executive aviation** which is thriving because of the country's extensive knowledge and experience in the area. OGMA and TAP Maintenance and Engineering, key players in this area, provide a wide range of MRO services in aircraft services with solid skills to external clients.

# €389M

Turnover | 2021

Source: Statistics Portugal

# 2%

Turnover growth | 2016-2021

Source: Statistics Portugal



... By earning the trust of Pratt and Whitney - world leader in the design, manufacture and service for aircraft engines – **OGMA<sup>1</sup> developed an airships motor maintenance centre for Raytheon Technologies...**

... In 2022, **Aernnova<sup>2</sup>** concluded the acquisition of two Embraer industrial plants in Évora, performing an investment of €151m...



... The French company **Lauak<sup>3</sup>** invested, in 2019, €32m in Setúbal to **produce state-of-the-art components to aeronautic industry**, namely to Airbus planes...

•... **Mecachrome<sup>4</sup>** has installed a factory in Évora **that specializes in high precision. high pressure of hard metals, stamping & Folding, equipment, NDT (including Penetrant) & and integrated automated ST and Painting chain...**



1. Case-study chosen for the Highest employment (2021) in the sector.

2. Case-study chosen for the Highest turnover (2021) in the sector.

Source: Statistics Portugal, Eurostat; ITC Trade Map.

3. Case-study chosen for the Highest Turnover (2021) in the sector.

4. Case-study chosen for the Highest Turnover (2021) in the sector.

# Portugal's space industry is observing a development, boosted by the unique infrastructures

## Aerospace subsector

- ▶ **The space industry is observing a steady growth**, with a strong focus on technology development and innovation, supported by the country's strategic location and unique infrastructures.
- ▶ **Its ecosystem is diverse and dynamic.** According to the Portuguese Space Agency, the country has 48 companies and 25 R&D centres with a special focus on space safety, earth observation, telecommunications and navigation, science and exploration, technology and space and transportation.
- ▶ **The country's Atlantic positioning opens new opportunities for investment by making available infrastructures** that are not reachable or replicable in other countries.
- ▶ **Portugal hosts Azores Spaceport**, one of the few planned spaceports in Europe, **being one of the first European Space Agency stations that can track a launcher during the propulsion phase.** It presents a privileged location in the middle of the Atlantic Ocean, a safe distance from populated areas and proximity to sentinel data reception infrastructures<sup>1</sup> supporting the Copernicus and Galileo programs.
- ▶ **The Portugal Space 2030 Program** (under the scope of Portugal's Space Agency) aims to strengthen Space's ecosystem and value chain in Portugal, promoting Space as a business, as well as proposing the development of an R&D and innovation unit for universities, research entities and companies. For example, RAEGE Azores is an R&D association responsible for managing space stations installed in the Azores, and LAETA, from IST, addresses complex challenges in the field of aerospace.

### Did you know ...



... with over 2 million hours dedicated to space's study, **Activespace has contributed to 30 space missions, most of them performed by the European Space Agency**, by manufacturing high precision components for satellites?

... **EDISOFT Teleport** in Santa Maria Island in Azores, has a **valuable infrastructure in a geostrategic position** serving space missions through a range of ground segment services (e.g., satellite navigation and communication solutions) supported by specialized engineering team, operating in several domains, such as aeronautics, mobility, transportation and earth observation?



... the Spanish space company **Deimos Engineering together with Deimos Space UK were selected to develop the "Prime" micro-ship flight control system of Orbex**, British low-cost space launching private company?

1. Data storage program with information about the Copernicus and Galileo programs.

Source: Statistics Portugal, Eurostat; ITC Trade Map.



A blue-toned photograph of a modern industrial setting. In the center, a robotic arm is positioned over a workbench. In the foreground, a person's hand is pointing towards a document on the table. The background shows blurred computer monitors and factory lights.

# 5

## FDI attractiveness factors for the Aerospace industry



# Portugal has a set of factors that enhance the attractiveness for international companies in the Aerospace sphere



### Highly skilled talent

Well-educated and highly-skilled talent pool, fortified by an education system that emphasizes practical applications. The high standard of engineering education prepares graduates to meet the demands and complexities of the evolving global aerospace industry.



### Robust R&D ecosystem

The rise of immersive technologies (aiding in visualization of navigational, air-traffic control, and weather information) and Portugal's active role in ESA, EASA, and Clean Sky R&D initiatives, underscores the nation's dedication to aerospace innovation and technological progression



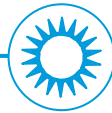
### Unique infrastructures

The Azores Spaceport is in a privileged location, in the Atlantic ocean, for the LEO operations. Also, construction area at different airfields is being made available for hangar and maintenance facilities implementation as well as manufacturing facilities.



### Increasing University degrees

Increase in the number of universities offering degrees in aerospace engineering. Recently, University of Aveiro and University of Minho inaugurated degrees in this area.



### Unique meteorological conditions

Portugal climate, clear skies, and optimal atmospheric conditions provide an ideal environment for aerospace operations and activities, contributing to the efficiency and reliability of flight schedules, satellite launches, and overall aerospace industry operations.



### Airports and airfields networks

Portugal benefits from a substantial network of airports and airfields. The country's well-connected and efficient aviation infrastructure facilitates domestic and international operations, thereby stimulating growth, innovation and consistent performance in the sector.



### Growing MRO industry

The MRO industry is observing a quick development in defence, civil and executive aviation, which is thriving due to Portugal's extensive knowledge and expertise in the area.



### Workforce qualifications programs

Portugal has an array of intensive workforce qualification programs tailored to the aerospace industry. They are founded on rigorous academic and practical training and ensure the development of skilled professionals that elevate the nation's standing in the global aerospace landscape



### Unrestricted airspace

The unparalleled level of aerial freedom enables more flexible flight operations, encourages innovation in airspace management, and enhances the country's capability to accommodate increased air traffic, facilitating substantial growth and development within the Portuguese aerospace sector.



## External challenges to which the aeronautical industry in Portugal is responding



Companies are **restructuring their supply chain and pursuing vertical integration** to reduce operating costs

**New manufacturing materials** (e.g., integrated computational, engineering of materials) **and new design tools** (e.g., generative design)

**The aerospace industry is reducing its carbon footprint** (e.g., biofuels, electric flight technology, energy-efficient integrations and innovative designs)



# 6

## Appendix

## Aerospace Economic Activity codes

NACE	Description
303	Manufacture of air and spacecraft and related machinery
3316	Repair and maintenance of aircraft and spacecraft

AICEP is a one-stop shop entity responsible for attracting top foreign companies to invest in Portugal. It offers comprehensive support services, including guidance and coordination with Portuguese entities involved in the investment process.

AICEP works as a flexible government business entity with streamlined free-of-charge services, offering a dynamic approach focused on the client/investor and allowing direct negotiation with companies through a tailored approach to their requirements.

AICEP is a single point of contact for foreign investors in all phases of the decision process:

- **Enquiry-handling phase:** provides comprehensive, accurate information, data, and benchmark reports.
- **Site Location:** provides different site proposals according to project specifications. Help partnerships with local entities.
- **Fact-finding visits:** organizes site visits to meet local authorities, recruitment firms, office space providers, and universities, among others.
- **Aftercare:** a key account manager will assist regularly.

---

## EY | Building a better working world

EY exists to build a better working world, helping to create long-term value for clients, people and society and build trust in the capital markets.

Enabled by data and technology, diverse EY teams in over 150 countries provide trust through assurance and help clients grow, transform and operate.

Working across assurance, consulting, law, strategy, tax and transactions, EY teams ask better questions to find new answers for the complex issues facing our world today.

EY refers to the global organization, and may refer to one or more, of the member firms of Ernst & Young Global Limited, each of which is a separate legal entity. Ernst & Young Global Limited, a UK company limited by guarantee, does not provide services to clients. Information about how EY collects and uses personal data and a description of the rights individuals have under data protection legislation are available via [ey.com/privacy](https://ey.com/privacy). EY member firms do not practice law where prohibited by local laws. For more information about our organization, please visit [ey.com](https://ey.com).

EY-Parthenon is a brand under which a number of EY member firms across the globe provide strategy consulting services. For more information, please visit [ey.com/parthenon](https://ey.com/parthenon).

© 2023 Ernst & Young, S.A. All Rights Reserved.

This material has been prepared for general informational purposes only and is not intended to be relied upon as accounting, tax, legal or other professional advice. Please refer to your advisors for specific advice.