

SPAIN: Business opportunities in **aerospace**

2016, Madrid

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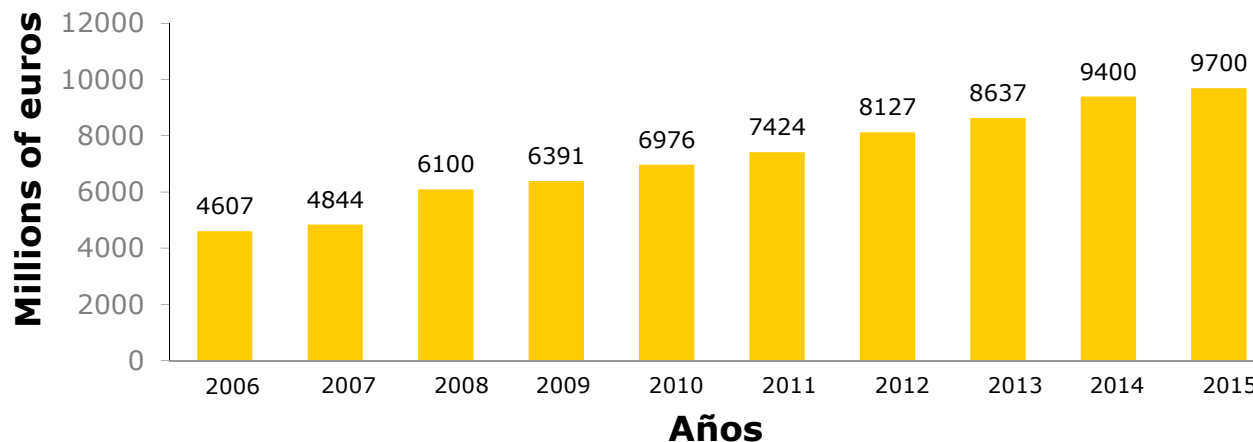
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I. Aerospace in Spain: facts and figures

I.1. Market figures

- The Spanish aerospace industry is the fifth in Europe in terms of **turnover** (9,700 million € in year 2015) and **employment** (more than 54,400 employees in year 2015)
- Exports:** 84% of turnover
- Contribution to the Spanish industrial GDP:** 5.8%
- High growth** – the industry turnover has grown 3.2% in year 2015 and almost 100% over the last decade (since year 2006). It represents 0.7% of the Spanish GDP and 5.8% of the Spanish industrial GDP.

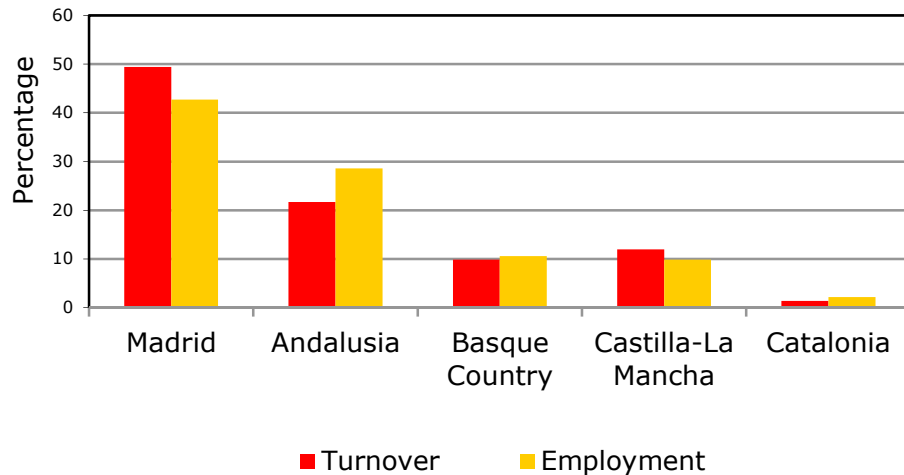
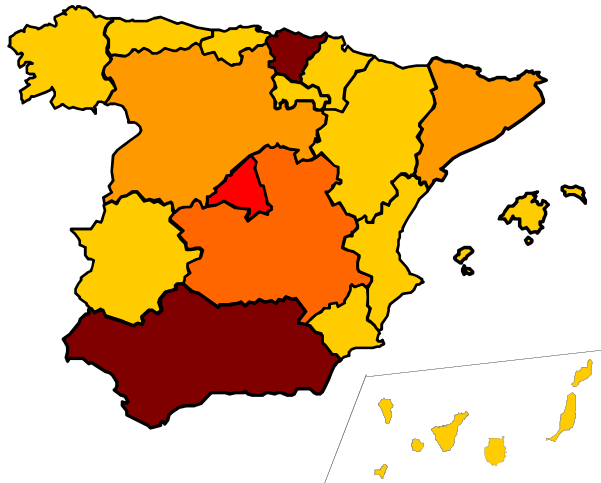
TURNOVER OF THE SPANISH AEROSPACE AND DEFENCE SECTOR



Source: TEDAE (Spanish Association of Technological Companies of Defense, Aeronautics, Security and Space).

I.2. Aerospace clusters in Spain

- Spain has significant Aerospace clusters:



- ❖ **MADRID**
49.4% of turnover
42.7% of employees
- ❖ **ANDALUSIA**
21.7% of turnover
28.6% of employees
- ❖ **BASQUE COUNTRY**
9.9% of turnover
10.6% of employees
- ❖ **CASTILLA-LA MANCHA**
12% of turnover
9.9% of employees
- ❖ **CATALONIA**
1.4% of turnover
2.2% of employees

I.3. Main Industrial Aerospace Infrastructures

Among others, in Spain you can find the following **industrial infrastructures** which house mainly aerospace companies:

- **AERÓPOLIS** (Sevilla) – Andalusia Aerospace Technology Park

It is a park exclusively for the aeronautics and aerospace industry. So far, 47 companies are established in the Park, which includes the following facilities:

- Industrial land
- Business center
- Aerospace engineering and research center
- Aeronautics Suppliers village
- Service center
- Advanced Center for Aerospace Technologies (CATEC)

- **ALBACETE AERONAUTICS AND LOGISTICS PARK** (Castilla-La Mancha)

The park has 250,000 sqm of industrial land. It specializes in motorization and helicopter construction. Companies located here, among others, include the Eurocopter plant which forms part of EADS and ITH (maintenance operations of the Group ITP).

I.3. Main Industrial Aerospace Infrastructures

- **PLATA** (Teruel, Aragón) – Airport Platform

Industrial aeronautical platform that offers the aeronautical industry an exclusive space for long-term parking, recycling and maintenance of aircraft and other related activities.

The platform installations cover an extension of 340 hectare and will be capable of operating seven-four-seven type airplanes.

- **DELTA BCN AEROSPACE AND MOBILITY PARK** (Catalonia)

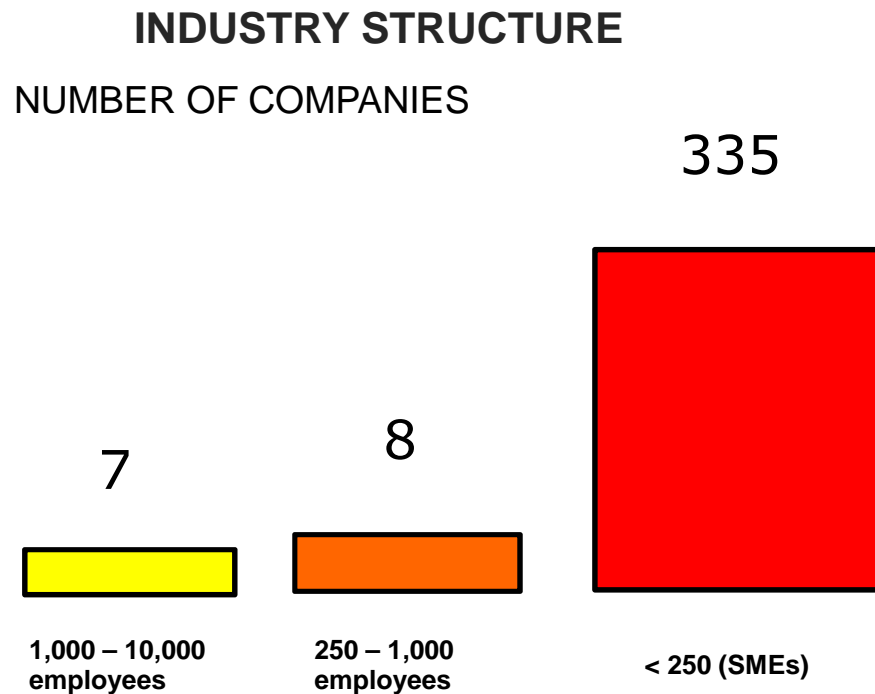
The Park will have a surface area of 55 hectares, a gross floor area of 245,000 sqm. 82% of the land is aimed to industrial activities, 13% for technology use and 5% for commercial and service activities.

It will include the following facilities:

- The Wind Tunnel for aerodynamics research
- Centre of excellence for aerodynamics research
- Centre of excellence for pilotless aircraft
- The laboratories of the Aerospace Technology Centre (CTAE)

I.4. Main players

The Spanish aerospace sector has companies covering the whole industry chain: : prime contractors, OEMs, Tier 1, auxiliary industry and maintenance centers:



Fuente: TEDAE (Spanish Association of Technological Companies of Defense, Aeronautics, Security and Space).

I.4. Main players – Aerospace companies ranked by turnover in Spain

COMPANY	TURNOVER (€)
AIRBUS OPERATIONS SL	1,298,890,000
INDUSTRIA DE TURBO PROPULSORES SA	594,206,000
AERNNOVA AEROSPACE SA	374,006,000
AIRBUS HELICOPTERS ESPAÑA SA	266,478,384
ACITURRI COMPOSITES SL	183,710,000
COMPAÑÍA ESPAÑOLA DE SISTEMAS AERONÁUTICOS SA	93,981,866
INTERNACIONAL DE COMPOSITES SA	81,693,000
ACITURRI METALLIC PARTS SL	57,105,000
AERNNOVA COMPOSITES SA	55,548,000
AEROMETALLIC COMPONENTS SA	54,069,000
COMPUTADORAS, REDES E INGENIERÍA SA	43,020,284

Source: El Economista (Companies ranking based on the data base Informa)



GOBIERNO
DE ESPAÑA

MINISTERIO
DE ECONOMÍA, INDUSTRIA
Y COMPETITIVIDAD

ICEX España
Exportación
e Inversiones

INVESTIN
SPAIN

II. Industry drivers in Spain

II.1. Local Strengths



- Aeronautics companies located in Spain are **leaders** in:

- Composite aerostructures



- Low pressure turbine engines



- Air Traffic Management systems

3 out of 5 flights in the world use Spanish software for landing

- Military Transport Aircraft

- **Space**: development of systems of medium technological capacity, technological support in electronics, telecommunications, mission analysis, instrumentation, satellite-based navigation systems, ...

II.2. R&D Activities

- Aerospace in Spain is a very innovative industry:
 - ❖ Investment: 970 M. € in 2015
 - ❖ 11% of turnover in the case of aeronautics and 12% in the case of space companies
 - ❖ High quality public R&D Centers:



- Public Research Organization specialized in aerospace research and technology development



Foundation for the Research, Development and Applications of Composites

Other important centers:



II.2. Participation in international programs



- Both AIRBUS and BOEING have developed important facilities in Spain:
 - ❖ AIRBUS: more than 3,250 employees in Spain
 - Illescas, Toledo (Castilla-La Mancha):
 - Excellence Center for Composite Materials
 - Fuselage sections, parts of the landing gear and stabilizer components for all the Airbus aircraft.
 - Key parts of the A380 programs
 - Production of the section 19 of the A350 XWB aircraft
 - Getafe, Madrid:
 - A380: the 525-seat double-decker's huge horizontal tail plane was designed here and undergoes its initial assembly in Getafe.
 - Getafe is also responsible for this section's lateral boxes and A380's main landing gear doors, dorsal fin, rear fuselage portion and fuselage tail cone.
 - Assembly and testing of the horizontal tail planes for families A350 XWB, A330 and A320.
 - Puerto Real, Cádiz (Andalusia):
 - A380: Final assembly and testing of the A380's horizontal tail plane.
 - Production of parts for the A350 XWB and the A330.

II.2. Participation in international programs



- ❖ AIRBUS DEFENCE AND SPACE: 7,700 employees in Spain
 - Sevilla (Andalusia):
 - Final assembly line, simulation and training center for the military transport airlift A400M.
 - Final assembly line for the light and medium-sized tactical aircraft CN235s and C295s
 - Getafe, Madrid:
 - Final assembly of Eurofighters for Spain and production of starboard wing for all the Eurofighter aircraft.
 - Maintenance and overhaul of high-performance military aircraft, trainers, transporters and maritime patrol aircraft.
 - Transformation of A330 civil aircraft into MRTT (Multi Role Tanker Transport).
- ❖ AIRBUS HELICOPTERS: more than 500 employees in Spain
 - Centers in Albacete (Castilla-La Mancha) and Getafe (Madrid):
Design and development of avionics system and fuselage parts, flight testing and certification and final assembly of the helicopters Tiger and NH90 and assembly for the EC135s intended for the Spanish market.

II.2. Participation in international programs

- Both AIRBUS and BOEING have developed important facilities in Spain:

- ❖ Boeing Research & Technology Europe



- ❖ First R&D center of Boeing outside the US (established in 2002)

- ❖ Main scientific-technological fields:

- ❖ Air Traffic Management
- ❖ Unmanned Aerial Systems
- ❖ Safety
- ❖ Environmental Technologies

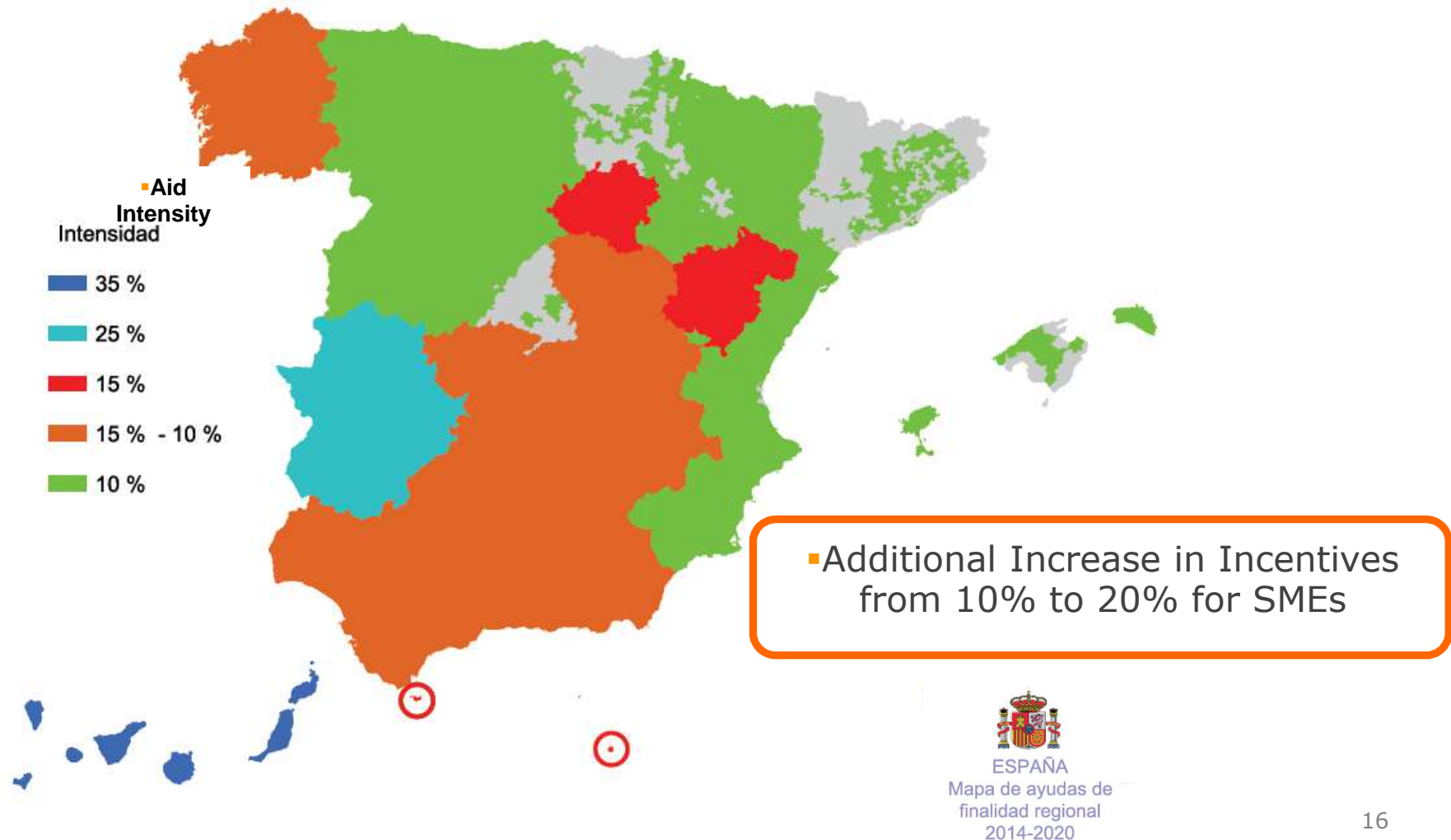
According to Boeing:

*“The reason for choosing Spain was the country’s **outstanding role** in the **EU** and as a reference point with the **Latin American** countries.*

*It also shows the **relevant position** the Spanish Aerospace industry has acquired in the last few years and the country’s capabilities in **environmental** and **ATM** technologies”*

II.3. Governmental support

- **European Union Incentives Scheme for Large Companies in Spain**
 - Grants from Ministry of Financial and Public Administration



II.3. Governmental support

AEROSPACE SECTOR COMPETITIVENESS PROGRAM: Ministry of Industry, Energy and Tourism

- **Beneficiaries:**
Companies that are developing or will develop a productive industrial activity in Spain in the aerospace sector.
This program is aimed at already existing industrial investments in order to improve or modify production lines.
- **Type of projects and actions:**
 - Civil works: material investments, except investments in land
 - Building: material investments to acquire, build, extend or adapt industrial buildings and its equipments
 - Production equipment: acquiring material fixed assets directly related to production
 - Production process engineering: own staff expenses, required materials, and external collaborations needed for the design of industrial procedures.
- **Requirements:**
 - Minimum budget of 75,000 €.
 - The activities cannot be started before the application.
 - Maximum financed will be 75% of the budget, or 3 times the equity of the company if it has been established maximum one year before the call. The returning period will be 10 years with a three year waiting period.
 - The interest rate will be between 3.062 and 4.53%

II.3. Governmental support

R&D PROJECTS (granted by CDTI)

A. Individual R&D projects:

Beneficiaries: Companies

Project length: From 12 to 36 months

Project budget: Minimum budget: 175,000 €.

B. R&D projects in National Cooperation:

Beneficiaries: Economic Interest Groups (**EIG**) or **consortiums** made up by, at least, two and maximum, six companies. If at least one of them is a SME, the project would have a bonus in the non-reimbursable section.

Project length: From 12 to 36 months.

Project budget: Minimum budget by project 500,000 €, with a minimum budget by company 175,000 € (no company can take more than 65% of the total budget of the project).

C. International Technological Cooperation Projects:

Beneficiaries: Companies or EIGs or consortiums made up by at least two companies

Project length: From 12 to 36 months.

Project budget: Minimum budget: 175,000 €. In case of projects run by consortiums or EIGs, the minimum budget will be 500,000 €.

II.3. Governmental support

R&D PROJECTS (granted by CDTI)

FEDER - INNTERCONECTA

- Integrated **experimental development projects**, of a large-scale, strategic nature, and whose aim is the development of new technologies in forward-looking technological areas with economic and commercial prospects at the international level.
Support may also be given to **Industrial Research projects** if, during the course of their assessment, the objectives of the project are considered to fulfill the definition of Industrial Research according to the General Exemption by Categories Regulation.
- **Beneficiaries:** EIGs or consortiums governed by a private cooperation agreement, formed of, at least, 3 companies that are independent, of which one has to be large or medium-sized and another has to be an SME. If there is no small company, at least one shall participate under the modality of subcontracting by any of the companies in such grouping.
Relevant participation of, at least, one research body under the modality of subcontracting is necessary.
- **Maximum number of companies:** 10
- **Project duration:** Two calendar years.
- **Project budget:** It will be set in each call for applications. The budget shall be distributed equally over the years the project lasts.

II.3. Governmental support

R&D PROJECTS (granted by CDTI) - FEDER - ININTERCONECTA

- **Eligible expenditure:** Equipment and instrument costs (amortization), personnel expenses, external services and subcontracting costs, general additional expenses and running costs.
- **Modality, funding amount and compatibility:** The project funding modality will be awarded under the subsidies modality and will be jointly financed on account of the Technology Fund - FEDER funds
- **Maximum subsidy:** the maximum subsidy and maximum intensity limits will be adhered thereto:

	SMES		Large enterprise
	Small enterprise	Medium-sized enterprise	
Experimental development with effective cooperation between enterprises:	60%	50%	40%

- As an exception, and on being considered as industrial research in the assessment of the proposal, the following limits may be reached:

	SMES		Large enterprise
	Small enterprise	Medium-sized enterprise	
Industrial research with effective cooperation between enterprises:	80%	75%	65%

II.3. Governmental support

ICEX-INVEST IN SPAIN'S TECHNOLOGICAL FUND

CHARACTERISTICS:

Set of measures aimed at promoting R&D&I in companies with **foreign capital** wishing to set up operations in Spain or those already established in the country who wish to begin R&D&I activities

AID CATEGORIES:

- ✓ Aid for **pilot studies** aimed at setting up company activities
- ✓ **Setting up** company activities

ITEMS ELIGIBLE FOR AID:

- Staff costs
- Equipment and material costs
- Buildings and land costs
- Costs pertaining to contractual research, technical knowledge and patents acquired or obtained under license
- General supplementary costs
- Other operating costs

BASIC PERCENTAGE ELIGIBLE FOR AID:

Depending on the type of projects implemented by the company, the eligible percentage will be as follows:

- Maximum 80% of the eligible investment for small companies in industrial research
- Maximum 60% of the eligible investment in experimental development

II.3. Governmental support

❖ ICO FACILITIES: COMPANIES AND ENTREPRENEURS 2015

ICO is a State-owned bank attached to the Ministry of Economic Affairs and Competitiveness through the Secretariat of State for Economy and Business Support. It has the status of the **State's Financial Agency**.

This facility is aimed only for Spanish companies or companies with a majority of Spanish capital.

Project's amount: up to 12.5 M€ per company, in one or more projects.

Eligible expenses:

- ✓ **Liquidity:** current expenses, salaries, providers, etc.
- ✓ Productive **investment** within Spain: fixed assets, vehicles, companies acquisition, VAT, etc.

Loans/leasing for investment and **loans** for liquidity purposes.

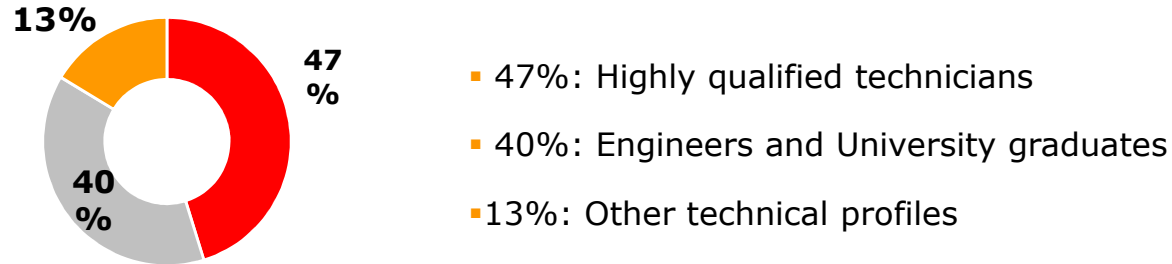
Interest rate: fixed or variable interest rate plus differential, established depending on the returning period.

Repayment and grace period:

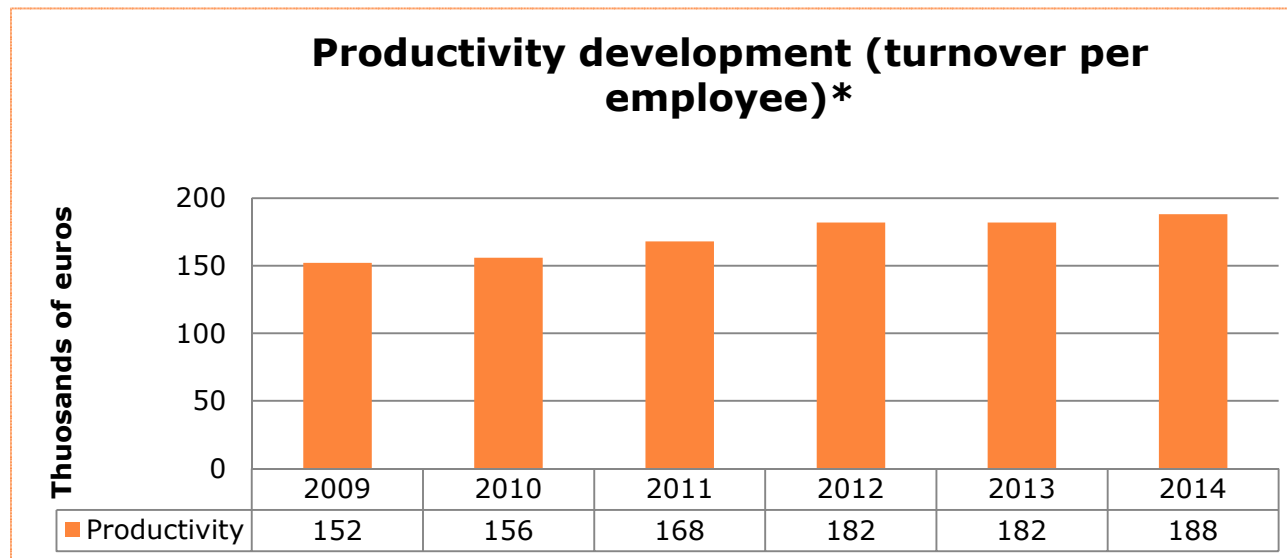
- ✓ **Liquidity:** 1, 2, 3 and 4 years, with possibility of having a 1-year grace period if 100% is financed.
- ✓ **Investment:** 1, 2, 3, 4, 5, 7, 10, 12, 15 and 20 years with a 2-year grace period.

II.4 Human resources availability

■ Distribution of qualified employees by professional groups



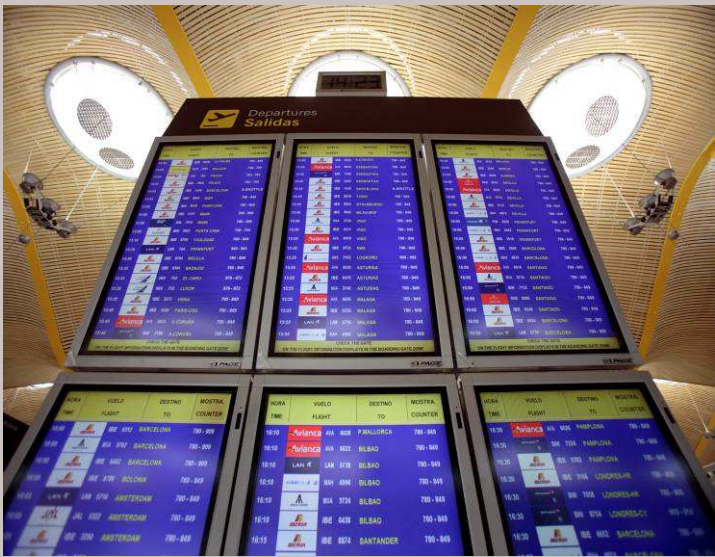
The **productivity** of the Spanish aerospace industry has been increasing in the last few years, amounting by 38% since year 2005:



Source: TEDAE (Spanish Association of Technological Companies of Defense, Aeronautics, Security and Space). *2014: last figure available

■ IV. BUSINESS OPPORTUNITIES

BUSINESS OPPORTUNITIES



- ✓ Navigation and avionic systems
- ✓ Helicopters (engineering services, electronics and systems, maintenance)
- ✓ Engines and propulsion engineering
- ✓ Training centers: pilots and maintenance engineers
- ✓ MRO (Maintenance, Repair and Overhaul) centers for aircrafts
- ✓ Low cost flight simulators' manufacture
- ✓ Aviation safety and human factor research
- ✓ Unmanned Aerial Vehicles
- ✓ Airport services: aircraft coating and end of life aircraft dismantling
- ✓ ATM Systems
- ✓ Aerostructures and composites
- ✓ Airport liberalization plan and liberalization of tower air traffic control

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