



# HELICOPTERS, DRONES, SHIPS

## PROVENCE: A MECCA FOR THE COMPLEX SYSTEMS SECTOR

**Provence's strength in the technological sectors is drawn from a tightly-knit industrial fabric:**

An industrial mechanics sector fed by major players such as Eurocopter, DCNS, Thales Alenia Space, Thales Underwater Systems, Ixsea and the CEA.

The mainstream engineering fields with areas of leading-edge expertise in the aeronautics, aerospace, marine and optical fields with companies such as ACSA Underwater GPS, Cilas, Corse Etude Ingénierie, GI Aviation, MPEB, Novadem and Oxytronic.

All the heavyweights are present in the region, with names such as **Altrans, Amesys, Assystem, Atos, Bertin, Elta and Sogéclair**. Likewise, the region hosts a number of specialist firms including **Apsys** (risk management), **Pack'Aero** (mechatronics), **Global Technologie** (software), **Sophia Conseil** (hydrodynamics), **Polymage** (image, signals), **Winlight System** (optoelectronics, optical instruments).

The requirements in the fields of electronics, software, optics/ optoelectronics, certification and consultancy services are serviced by an industrial fabric organized into competitive clusters. A pool of expertise coupled with R&D laboratories pushing the limits of technology and backed by substantial training facilities means that the PACA region today sets itself apart as a crucible of talent ready and able to take up tomorrow's most demanding industrial challenges.



## UNIVERSITIES LABORATORIES

With almost 9,500 public-sector researchers in 400 laboratories and 8,000 private-sector R&D engineers, 6 universities, important research institutions (CNRS, CEA, INSERM, INRA, ONERA, IFREMER...), numerous engineering schools and ongoing scientific work in most of the fields of research, the Provence-Alpes-Côte d'Azur region has a considerable research capacity.



### ITS 6 TECHNOLOGY PARKS HOST A NETWORK OF COMPETITIVE CLUSTERS WITH SPECIFIC THEMES SUCH AS:

- The Technopôle de l'Environnement Arbois-Méditerranée (Aix-en-Provence) for the environment;
- The Technopôle Marseille Provence à Château-Gombert (Marseilles North) for engineering sciences and optics;
- The Parc Scientifique et Technologique de Luminy (Marseilles South) for life sciences;
- The ZI des Florides (Marseilles) for helicopter subcontract work;
- Sophia Antipolis (Nice) for life and engineering sciences;
- The Aggroparc (Avignon) for the food industry.

### AMONG THE MAIN HIGHER EDUCATION AND TRAINING INSTITUTIONS, WE CAN MENTION:

- Aix-Marseille University;
- ENSAM;
- Euromed Management;
- IAE Aix-en-Provence;
- UNIMECA;
- Ecole Centrale Marseille.

## COMPLEX SYSTEMS ENGINEERING

### > SYSTEM OF SYSTEMS

(aircraft, surface ships or submarines, satellites)

### > SYSTEMS AND EQUIPMENT

and all technologies connected to the nuclear industry (ITER, CEA Cadarache)

### INDUSTRIAL MECHANICS

With the presence of major constructors such as **Eurocopter** and **DCNS**, the region has become an industrial mechanics powerhouse.

**Design:** Consultancies (CAD, design, computing, engineering), acoustics, optomechanics, sound and vibration reduction (**Sogclair, CEI, Amesys, Technofirst, Genesis**).

**Manufacturing:** Boilerwork, blanking, stamping, welding, mechanical or plastic components, surface treatment (**Bonnans SA, MPEB, Airia**).

**Construction:** Aircraft sections, ships, drones (**Eurocopter, Novadem**).

**Complex systems:** propulsion systems (**Moteurs Baudoin**).

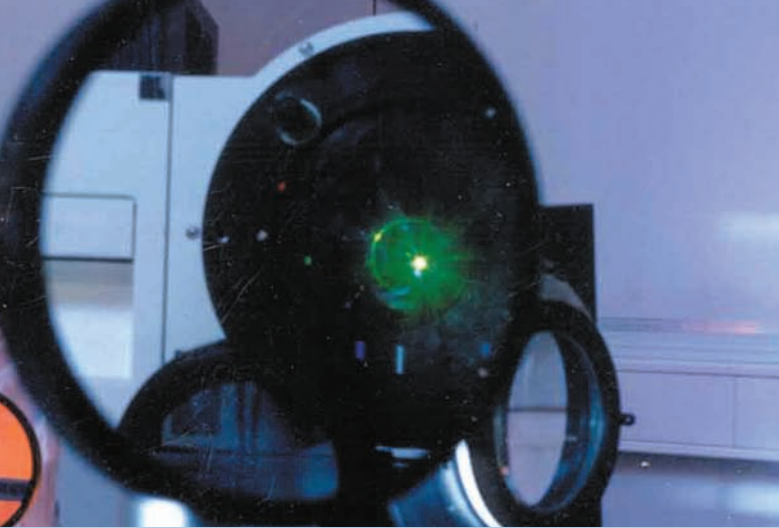
**Maintenance:** (JAR/FAR 145), (**GI Aviation**).

### SOFTWARE ENGINEERING

With its increasingly numerous applications in industry, the software field today includes both specialized SME's and major service providers.

However, the market offer is evolving and, prompted by prime contractors in all industry sectors, the specialist firms increasingly are taking the role of risk partners in fixed-price outsourced work packages.

They also are becoming involved throughout the software's lifecycle, from specifications and design through production and proofing of the onboard software. (**Eurogiel, SII, Global technologie**)



# SPECIFICITIES

The PACA region's exceptional climate provides ideal conditions for full-scale testing: 300 days of sunshine per year.

And accessible testing facilities:

- Sea trials in La Ciotat and Toulon (CEM), with access to deep sea trenches up to 2500 m deep;
- Aeronautics - Europe's largest test flight facility is at Istres;
- Optics (southern France is known as the "Land of Light") - Côte d'Azur and Marseille observatories.

# ERING

- Large-scale systems: aircraft (helicopters, drones), satellites, ships (**Eurocopter, Thales Alenia Space, DCNS**) ;
- Complex systems : avionics (**ECT Industries**), ROV's (**Subsea Tech, ECA**), sonar & antisubmarine warfare (**Thales Underwater Systems**) ;
- Equipement : optoelectronics, sensors, navigation, calculators (**Kontron, Ixsea**).

# KEY FIGURES:

**11 COMPETITIVE CLUSTERS INCLUDING PÉGASE (AERONAUTICS), PÔLE MER PACA (MARINE TECHNOLOGIES) AND OPTITEC (OPTICS AND PHOTONICS).**

- Workforce: more than 1.2 million persons employed
- Students: approximately 152,000 students in the PACA region (3rd largest pool in France), in the following disciplines:

- Engineers: 4,100
- University students: 101,000
- Senior technicians: 15,000
- Preparatory school students: 5,500
- Business school students: 8,800
- Research: 9,500+ researchers in 400 laboratories
- Overseas trade: inward € 19,400 M, outward € 10,800 M

**MORE THAN 170,000 COMPANIES AND BUSINESSES DISTRIBUTED AS FOLLOWS:**

- Industry: 9,419
- Construction: 16,683
- Trading: 34,017
- Services: 110,174
- N° of industrial or business parks: 267

*Figures: INSEE, Direccte*

Pôle aéronautique PEGASE : [www.pole-pegase.com](http://www.pole-pegase.com)  
 Pôle Mer PACA : [www.polemerpaca.com](http://www.polemerpaca.com)  
 Pôle optique photonique OPTITEC : [www.popsud.org](http://www.popsud.org)

## TRANSVERSE SKILLS AND ACTIVITIES

This technological activity also has been accompanied by the arrival of new, highly specialized VSE's in fields that are both advanced and diverse.

- Process certification & assurance (aeronautical & industrial standards...)  
**(IEA, C3, DMAP).**
- Optics; lasers, fiber optics;  
**(Clavis, Seso, Cilas).**
- Marine technologies: energies; biotechnologies; marine environment, oceanography, underwater work, propulsion systems.
- Artificial vision systems  
**(Mermec Group).**
- Innovation and R&D in physics  
**(Ekkyo).**
- ATR/Airbus pilot and maintenance crew training  
**(Magellan).**
- Simulation  
**(VSM).**

## ELECTRONIC ENGINEERING

A less dense network of companies providing services for major prime contractors.

- Electronics design consultancies.
- Component manufacturing  
**(Oxytronic).**
- Semi-conductors  
**(STMicroelectronics).**
- Smart card manufacturing  
**(Electronique Prototype Service).**
- Electronic engineering (power electronics, digital, analogical...)  
**(Cybernetix, ELTA).**

# INFRASTRUCTURE

- 10 ports, including the main ports of Marseilles and Toulon;
- 7 airports, including Marignane (the site of Eurocopter) and Nice (close to the Sophia-Antipolis science park);
- A dense rail network.

## CLIENTS TESTIMONIALS

### Fabrice PALUMBO CEO of Aeromecanic

Aeromecanic is an EASA-certified supplier specialized in the repair and maintenance of commercial and private aircraft. Aeromecanic also is the French importer of Cessna aircraft and is one of the constructor's most successful distributors worldwide.

We set up in Provence after having bought out a local company in bankruptcy and with just one main client based in Marseilles. Today, the client portfolio is international. Setting up in Provence offers many advantages, with a diversified industrial make-up that makes it easy to find subcontractors. Also, the quality of life is a real confort. Obtaining the Cessna distributorship and other State and/or military contracts contributed to our success. When we set up, we obtained aid and guarantees from OSEO, the FEDER funds and the region.



### Benjamin PEAN PACA region manager at SOGECLAIR Aerospace

The SOGECLAIR group covers three areas of expertise : simulation and virtual reality, vehicle design and construction and engineering and consulting. *"We're a consultancy that mainly works in the fields of mechanical and electrical engineering and support services for major players in the air and space industry,"* explains Benjamin Péan. As a Tier-1 certified supplier for Eurocopter and the EADS group, SOGECLAIR decided to move closer to its principal customer and set up in Provence.



*"As soon as we announced our move, we received assistance from Provence Promotion in making an inventory of all the local players, institutional, industrial and SME's."*

Already, partnerships with regional SME's are in the process of being signed. These partnerships provide a "backdoor" for SME's and VSE's to clients that normally would be inaccessible. Further to it joining the Pégase competitive cluster, SOGECLAIR Aerospace makes available feedback on a human resources planning study, which could be carried out in partnership with schools and universities in Provence.

## PROVENCE PROMOTION

Provence-Promotion is an economic development agency working to promote the region's industries. Its aim is to provide you with the means to succeed and to assist you through all the steps in the setting-up process: finding premises, financing your project, introducing you to key players, finding partners, business takeovers etc. This service is publicly-funded and free, with a guarantee of confidentiality.

## THE PROVENCE PARTNERSHIP

**The Provence Partnership is the partnership offered by the Provence region to ensure the success of your business and that allows you to fully benefit from the advantages the region has to offer:**

- Quality of the business environment, infrastructure, transport and communication connections...
- Quality of the technological and industrial environment...
- Quality of the human resources, research centers, schools and universities...
- Few regions can match what Provence has to offer. And another thing: open your eyes and breathe in deeply; where else could your company and co-workers find this kind of working environment combined with such a quality of life?

### CONTACT THE PROVENCE PARTNERSHIP

Laurence SOLDERMANN - + 33 (0)4 96 11 60 15 - l.soldermann@provence-promotion.fr  
www.theprovencepartnership.com

### PROVENCE PROMOTION

Economic development agency  
Les Docks - 10 place Joliette  
BP 45607 - 13567 Marseille  
CEDEX 02 - FRANCE

