



# OPTITEC

Optitec was named as a competitiveness cluster in 2005 and as a PRIDES (a regional cluster for innovation and mutually supportive economic development) in 2007. Historically it focuses on complex optics and imaging systems, especially in hostile environments: space and astrophysics, optics and photonics for the nuclear industry, and optics in marine environments.

It offers a large range of abilities, from optical micro components to image processing, from light sources to detectors, from data-transmission by optical fibres to lasers, from spectacle-making to complex optical instrumentation, from telecommunications to space exploration and medicine.

The Optitec cluster arose out of the collaborative work undertaken since 2000 by the association POPsud, bringing together players from industry, research and training in the Provence-Alpes-Côte d'Azur and Languedoc-Roussillon regions.

## KEY FIGURES FOR THE SECTOR

- **14,000** jobs in the field in Provence-Alpes-Côte d'Azur
- **200** companies
- **2,000** R&D staff and **54** research laboratories
- **5** engineering schools and more than **20** higher education training courses

## EXCEPTIONAL ADVANTAGES

- **2nd region** in France for optics
- Provence-Alpes-Côte d'Azur is one of the five **most innovative areas in the world** in the field of complex photonic systems.
- **30% of R&D optical activities** in France occur in Provence-Alpes-Côte d'Azur.
- A very dynamic field: **600 jobs created** in the region between 2006 and 2009.
- **A site that is unique in France:** Technoptic, in Château-Gombert, Marseille - a purpose-built "technology hotel" of 3,500 m<sup>2</sup> (started in 2010, opening in late 2011) to house young companies in this field. This is a combination of business incubator, serviced offices and technology platform.

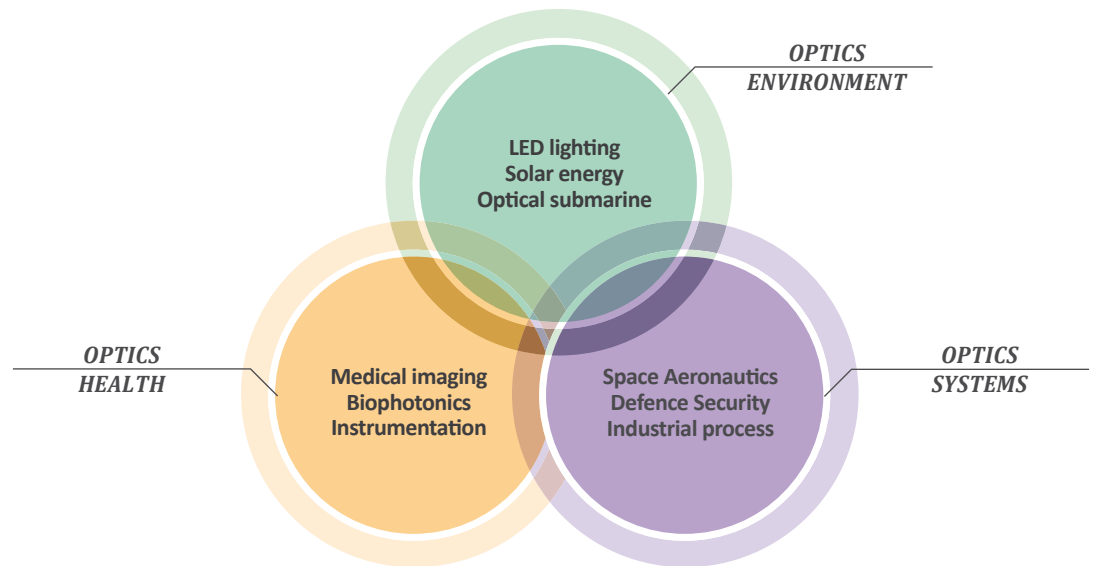
## **AIMS OF THE CLUSTER**

As part of its performance contract for 2009-2011, the cluster's strategy is based on the following objectives:

- To anticipate and build on technological breakthroughs in the field to capture profitable medium and long-term markets,
- To stimulate the economic development of the sector by opening it up to other fields and the attraction of new skills,
- To become a centre at the European and international level.

## **THE CLUSTER'S AXES OF EXCELLENCE**

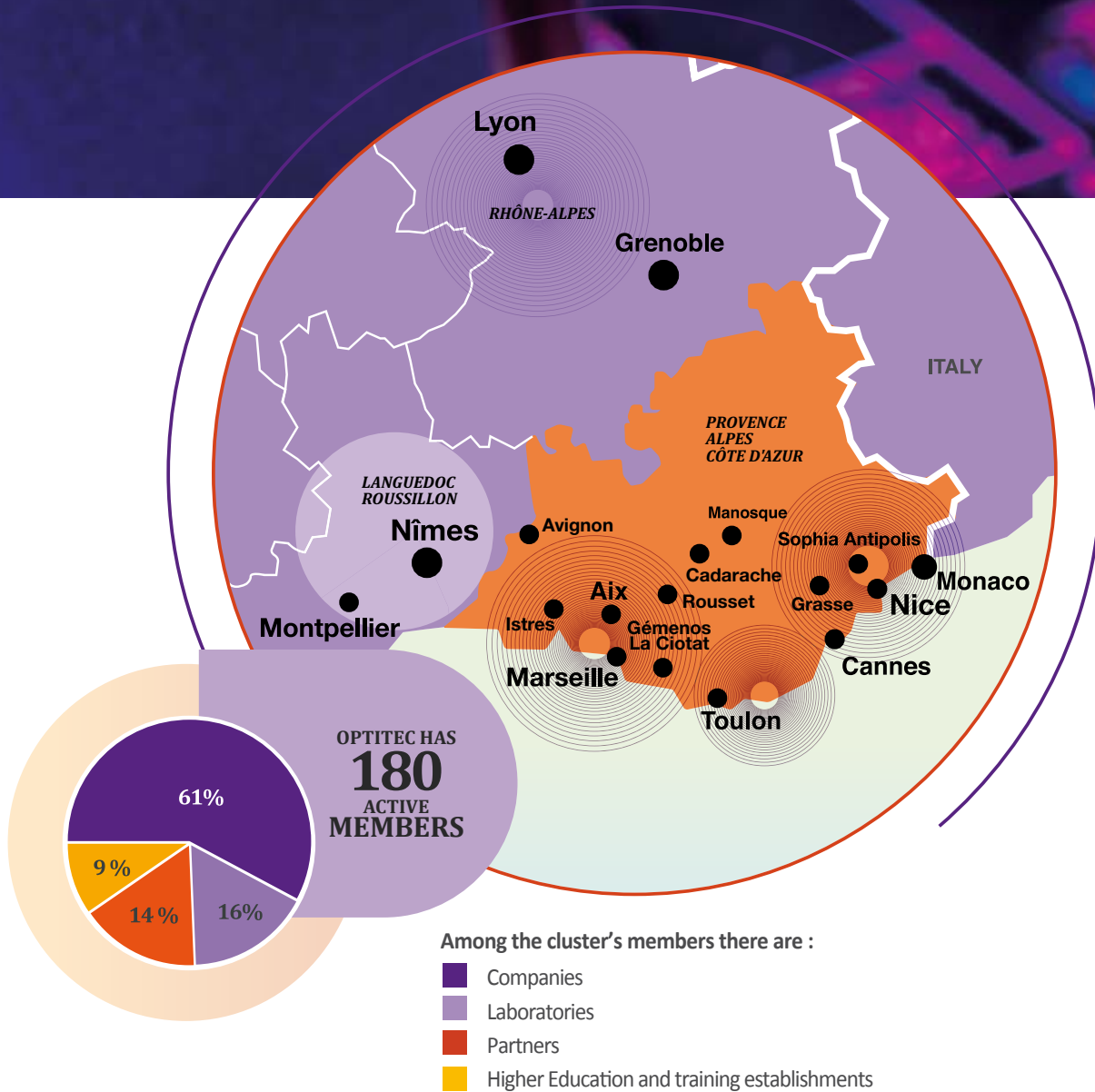
The cluster's future plans involve three major domains:



With the aim of being a European cluster for technological forward planning on complex optics and imaging systems, the Optitec competitiveness cluster is developing along four major principles:

- Maintaining scientific and technological excellence on target and prestige markets, such as astrophysics, space research, defence and nuclear power;
- Strengthening complementarity between optical systems and components, with a view to industrialising the sector;
- Investing in emerging technologies and growth with strong market promise: photonics for medical imaging, intelligent lighting systems, optical materials for photovoltaic power, artificial vision;
- Strengthening the economic development of the cluster, aiming at wider application markets: medical imaging, LED and OLED lighting, green photonics.

**107 PROJECTS APPROVED SINCE 2006, OF WHICH 52 PROJECTS FULLY FINANCED: 41 M€ OF PUBLIC FUNDS AND 36 M€ OF PRIVATE FUNDS. TOTAL BUDGET SINCE 2006: 280 M€**



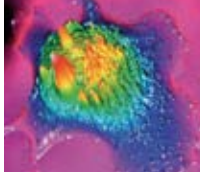
## PARTNERSHIPS

- Partnerships with other regional competitiveness clusters, cross-disciplinary: Pégase (aeronautics), Capenergies (energies of the future), Risques (risk management), Eurobiomed (life sciences)
- In June 2009, Optitec signed a partnership agreement with two other clusters in France specialising in photonic optics: Elopsys (Limousin) and Route des Lasers (Aquitaine).
- POPsud is a member of the CNOP (National Optics and Photonics Committee), which brings together all the regional optical clusters and professional associations
- Partnership with Transfert LR for collaboration in health, the environment, farming and food production.

## INTERNATIONAL STRATEGY

- Optitec is a leader in European programmes: "Réseau Optique Méditerranéen" (the INTERREG programme) and "European Network of Optical Clusters" (the INNOVA programme) and is also present in European R&D structures: Photonics 21 platform, Photonics unit of the European Commission.
- R&D Partnerships and business with the principal countries in the field:
  - European countries: Germany, Great-Britain, Italy, Spain
  - North America: Boston (agreements with MIT and the Boston Photonic Center), Canada: partnership with the Réseau Photonique du Québec
  - Brazil: collaborations with the state of Sao Paulo
  - Africa: north African countries, Burkina-Faso

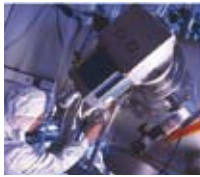
## EXAMPLES OF INNOVATIVE PROJECTS



### QUITO Project: *Theme HEALTH*

A new system of dynamic microscopic 3D imaging for applications in healthcare (cellular biology) and industry (characterisation of materials)

Consortium: project led by the PME Phasics, with Institut Fresnel, Silios, CIML.



### MADRAS Project: *Theme SPACE DEFENCE*

Adaptation of the technologies of active optics to the context of the space environment to develop the observation satellites of the future.

Consortium: project led by the Thales Alenia Space, with SESO, Shaktiware, Laboratoire d'Astrophysique of Marseille.



### IDEALBIS Project: *Theme ENVIRONMENT*

Development of a portable system for sorting and recycling metals, and analysing soil pollution and waste electronic and electrical equipment.

Consortium: project led by Bertin Technologies with Pellenc ST and the LP3 laboratory.

## EVENTS

Photonics West (San Jose, USA), Optatec (Frankfurt, Germany), PRI-Opto (Paris, France).

## CONTACTS

The Optitec cluster is run by the association POPsud.

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Provence-Alpes-Côte d'Azur

