

## **ALTER TECHNOLOGY GROUP**

World's leader in engineering, testing and procurement of high reliability electronic components

## ABOUT ALTER

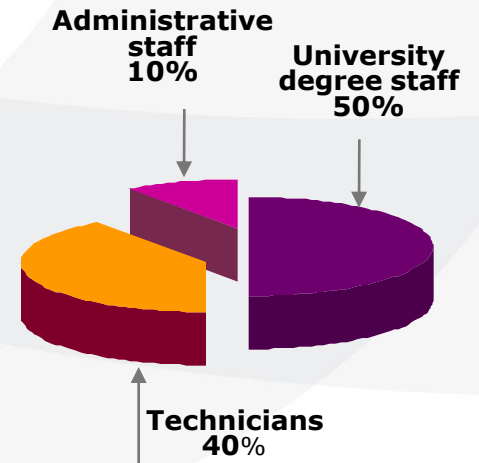
- Independently owned by private investors and by private equity fund
- Historically focused on aerospace and defence sectors
- 160 employees
- 4 laboratories
- Approximately 50 million Euros revenue

## ABOUT ALTER (contd.)

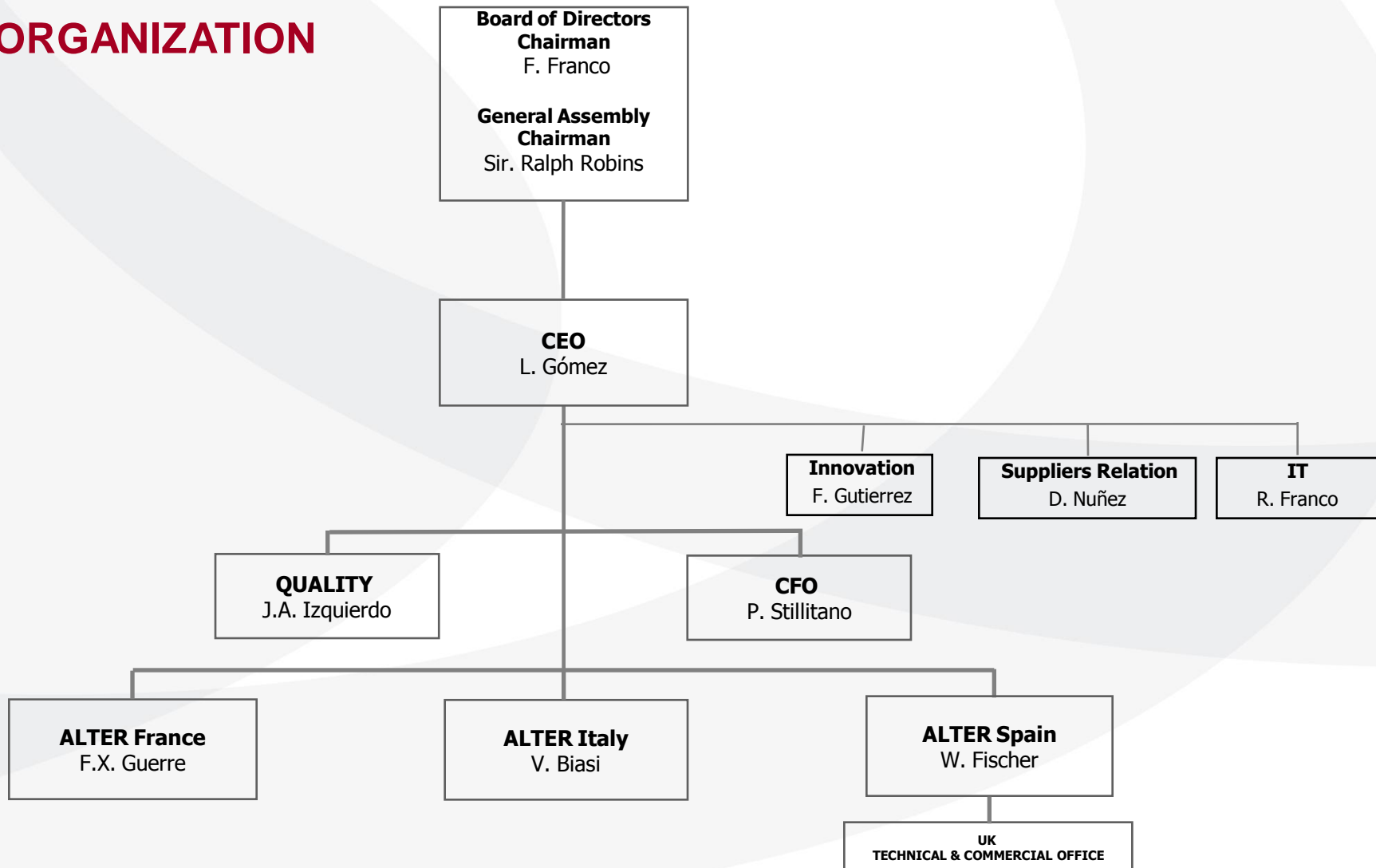
The group encompasses 3 companies in five different locations:



- Seville and Madrid : 95 employees
- Portsmouth: 9 employees
- Roma : 16 employees
- Toulouse : 40 employees



# ORGANIZATION



## OUR EXPERTISE AND ACTIVITIES

### Services related to high reliability electronic components:

Our customers rely on our engineering, testing and logistics capabilities to help them to comply with the projects technical and quality requirements. We help to deliver extra value, improve quality management and performance, minimise risk and gain a real advantage over the competition

- Electronic components engineering
- Obsolescence management
- Quality requirements compliance
- Technological evaluations
- Purchasing
- Incoming inspections and acceptance
- Special testing
- Radiation Verification Testing
- SEE
- Optoelectronics testing
- Storage
- Logistics
- Consultancy

# OUR EXPERTISE AND ACTIVITIES

## **Systems and equipments testing and certification.**

Helping the customers to comply with the regulatory requirements

- Safety
- EC marking
- Mechanical and environmental
- EMC testing and engineering

## **Ground systems assembly, testing and certification**

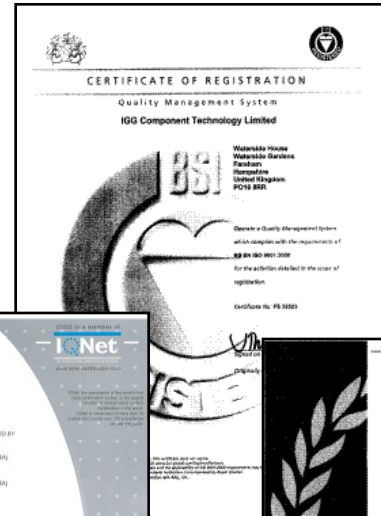
- Procurement
- Assembly
- Testing
- Certification

## BUSINESS SECTORS

The group is present in the following business sectors

- Space
- Aeronautical / Defence
- Other industries
  - Telecommunications
  - Nuclear
  - Automotive
  - Semiconductor manufacturers
  - Electromedicine

# QUALITY CERTIFICATES





## **QUALITY CERTIFICATES**

### **ISO 9001: 2000 certified**

- TECNOLOGICA : ref. ER-0603/1997
- HIREX : ref. N° 140786
- TOP-REL : ref. 9160 TOPR

### **EN 9100: 2003 certified**

- TECNOLOGICA : ref. OP-0021/20

### **EN ISO/IEC 17025 – ENAC Accredited (ILAC - International cooperation of laboratory and inspection accreditation bodies)**

- Electromagnetic compatibility testing on information technology equipment, ref. 345/LE808
- Mechanical and environmental testing on electronic and electromechanical equipment and its components, ref. 345/LE809
- Electrical safety testing on information technology equipment, ref. 345/LE810

## RADIATION ENGINEERING AND TESTING

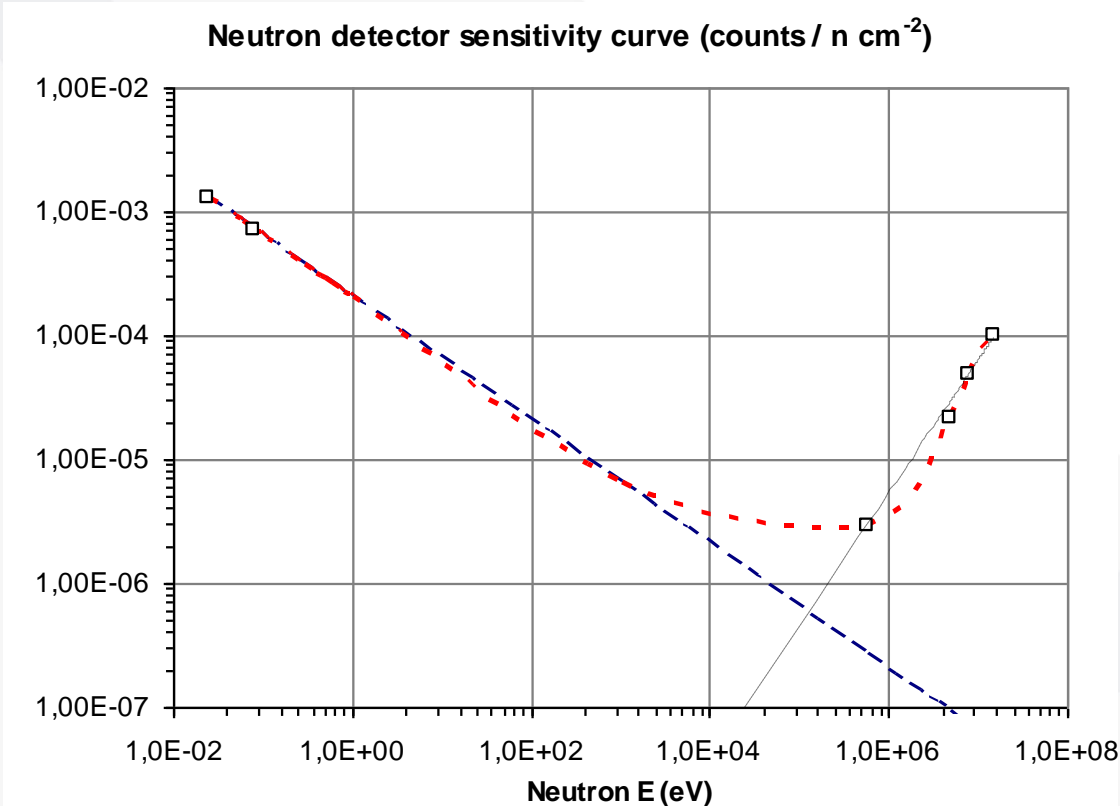
### Engineering

- Analysis of potential radiation sensitivity of electronic components on the basis of its technology.
- Radiation databases.

### Testing of electronic devices, opto-electronic devices and materials.

- Gamma rays.
- Protons,
- Neutrons,
- Heavy Ions,
- Electrons,

# NEUTRON DETECTORS (FOR RADIOTHERAPY)



*Estimated spectral sensitivity curve (dotted line) of the neutron monitor, obtained as superposition of slow neutron sensitivity ( $1/vE$  dependence, dashed line) measured with thermal neutrons and moderated  $^{252}\text{Cf}$  source, and fast neutron sensitivity measured with calibrated quasi-mono-energetic neutron beams of 0.565 MeV 5 MeV, 8 MeV and 14.8 MeV respectively.*

## **ATG interest**

We are developing real time neutron detectors for radiotherapy based on semiconductor technologies.

In addition, we have a high interest in any evaluation/certification activity that may require testing and/or certification of parts or equipment supposed to work under radiation environment.