

# MADES



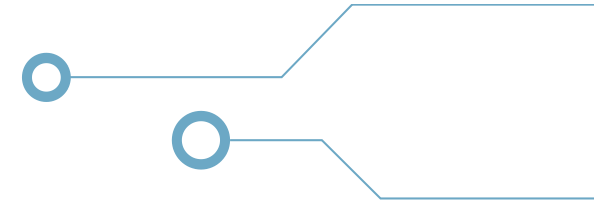
## Integrated Electronic Manufacturing Services

**25** Right Team  
Right Tools  
years Right the First Time

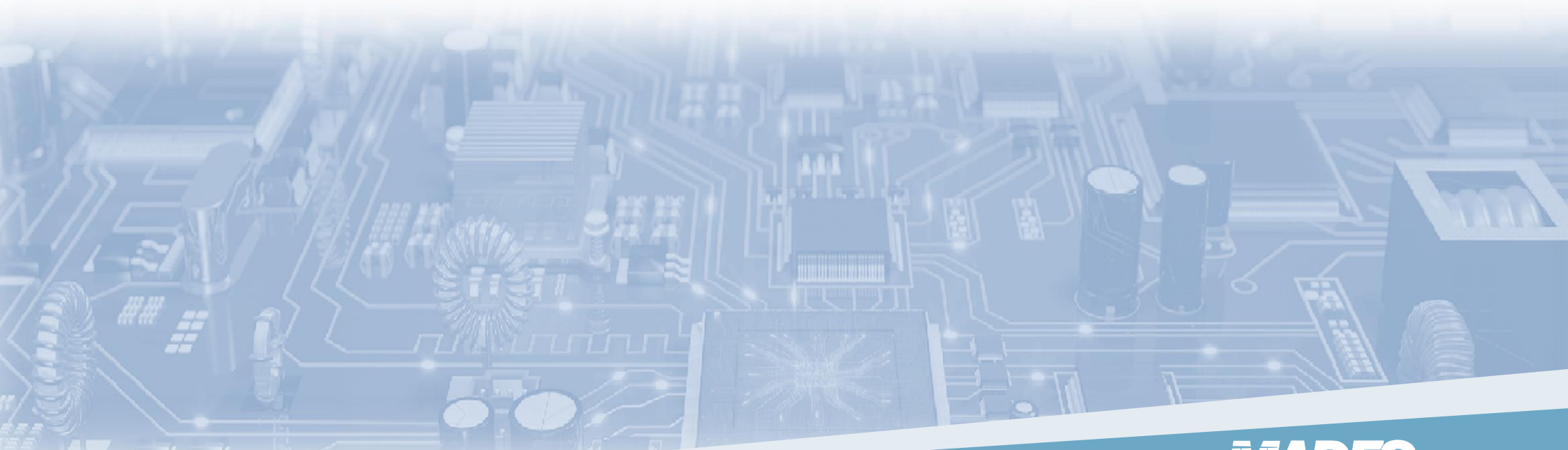
Inspiring, Discovering and Creating  
Together for over 25 years

[www.mades.es](http://www.mades.es)

# Introducing MADES



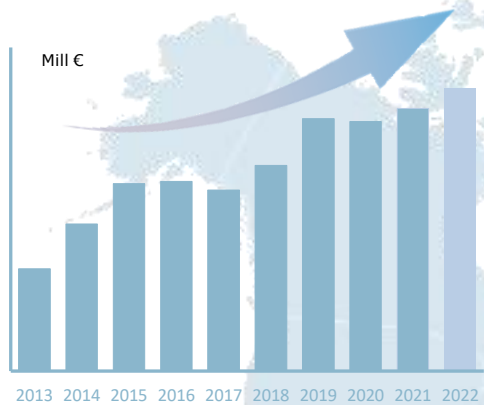
- MADES at a glance
- Applications
- Our Services
- Building Customer Trust & Operational Excellence
- Why MADES ?



“Not just manufacturing”

# MADES at a glance

- > 12 % Compound Annual Growth Rate (CAGR)



- > MADES Six Sigma: a process and culture of continuous improvement

How

Where

- > Located at Malaga TechPark, major hub of Technology companies (Malaga, Spain)

When

What

- > Major supplier of system level electronic assemblies
- > Electronic Manufacturing Services
  - > Design From Specs
  - > Industrialization
  - > Manufacturing
  - > Testing & Integration
  - > Lifecycle Support

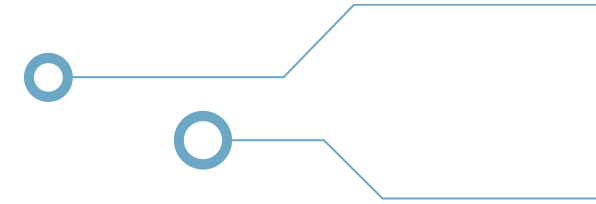
Who

- > More than 100 highly skilled professionals: engineers, technicians and operators
- > Subsidiary of Latecoere Group

- > Nearly 30 years of experience delivering customer solutions

"Starting with customer success in mind"

# About Latecoere



"Starting with customer success in mind"

# About Latecoere

Leading Tier 1 aerospace manufacturer for all major aircraft OEMs



As of December 31, 2021:

- 1-50 employees
- 51-300 employees
- 301-1,200 employees
- Over 1,200 employees



**14 countries**  
Note: current



**+20 sites**

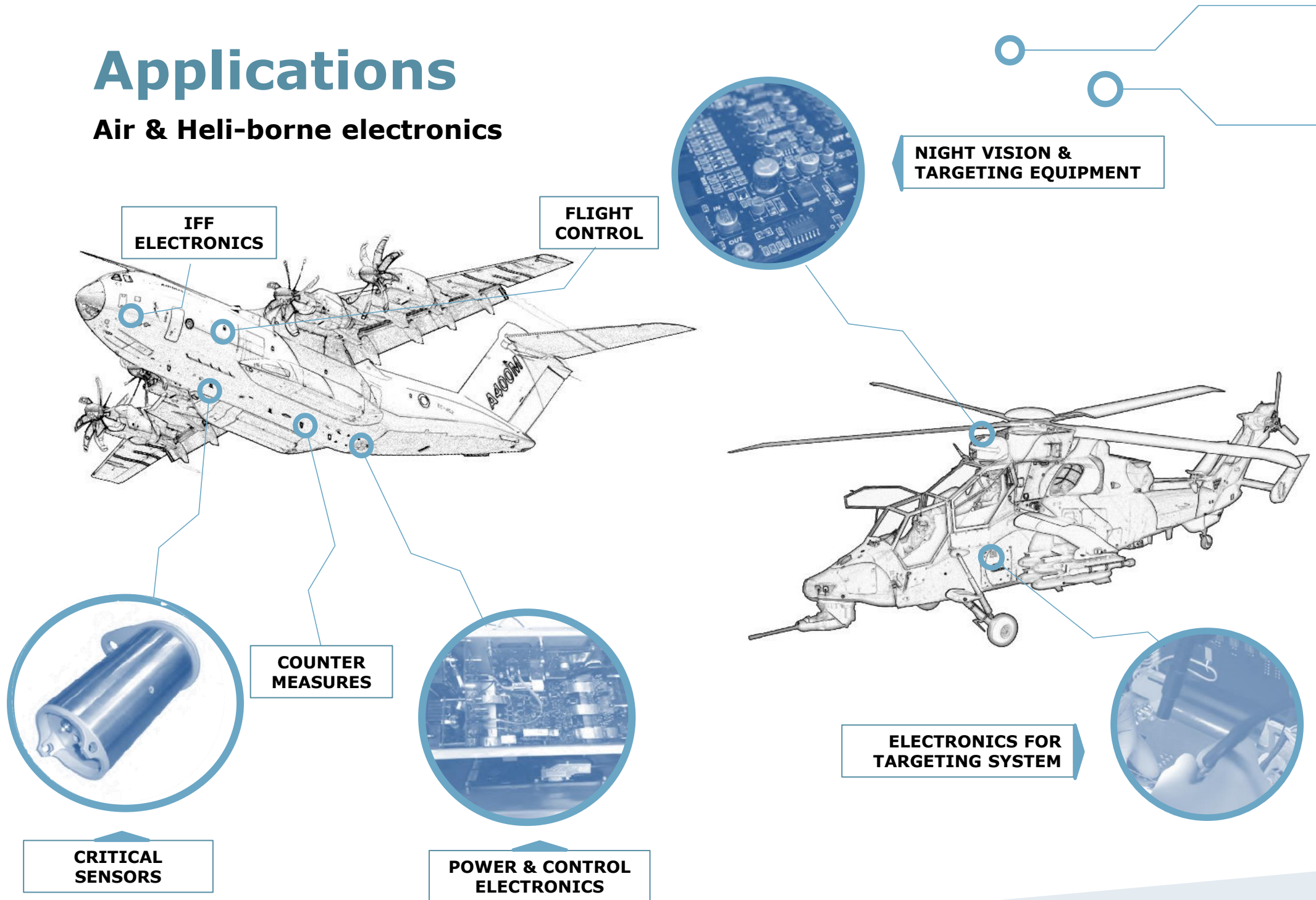


**c.4,800 FTEs**  
Note: current

"Nearly 30 years delivering high reliability electronics"

# Applications

## Air & Heli-borne electronics

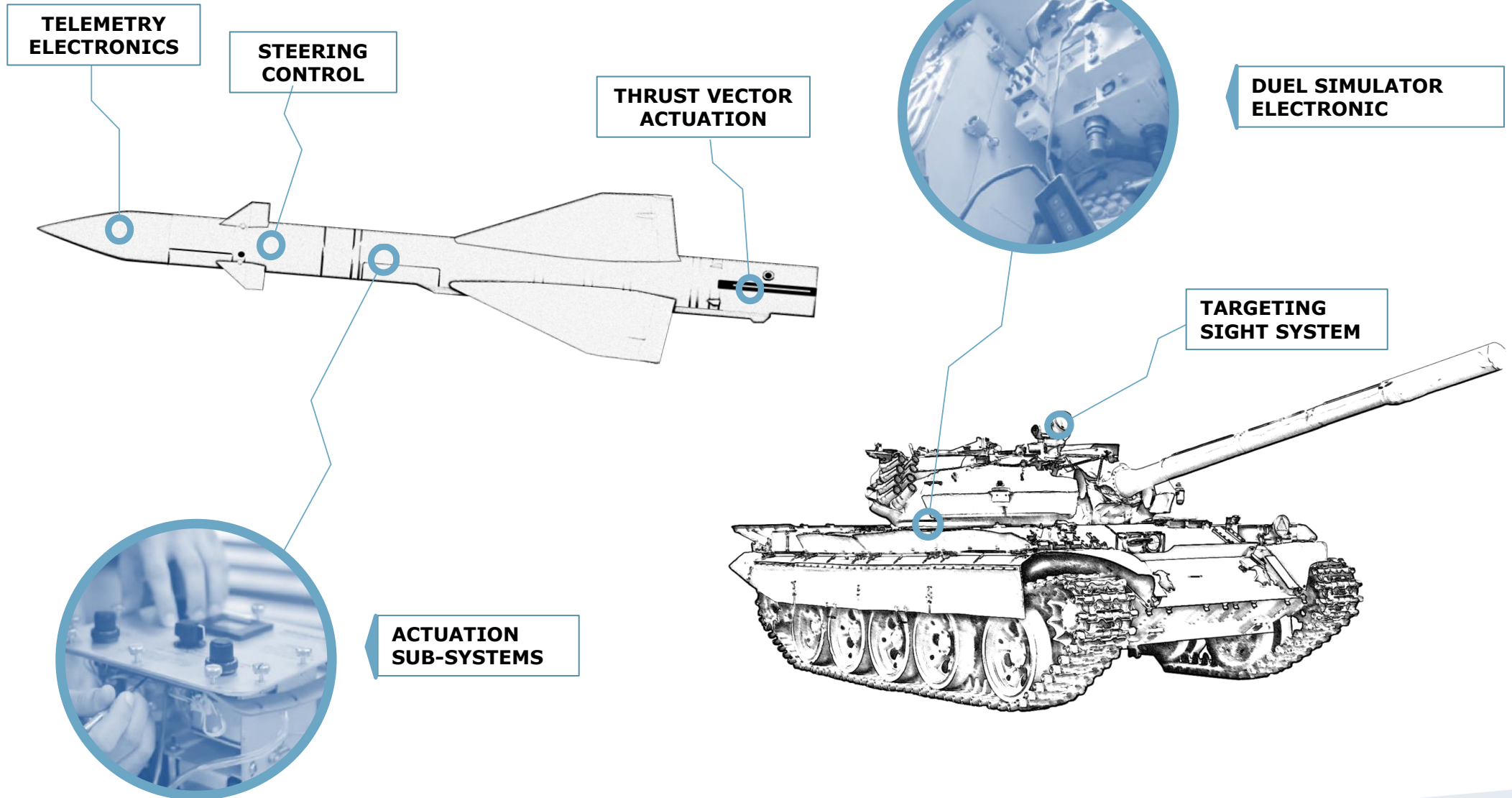


\* Actual platforms are examples for explanation purposes.

"Nearly 30 years delivering high reliability electronics"

# Applications

## Missile & Tactical Surveillance Systems

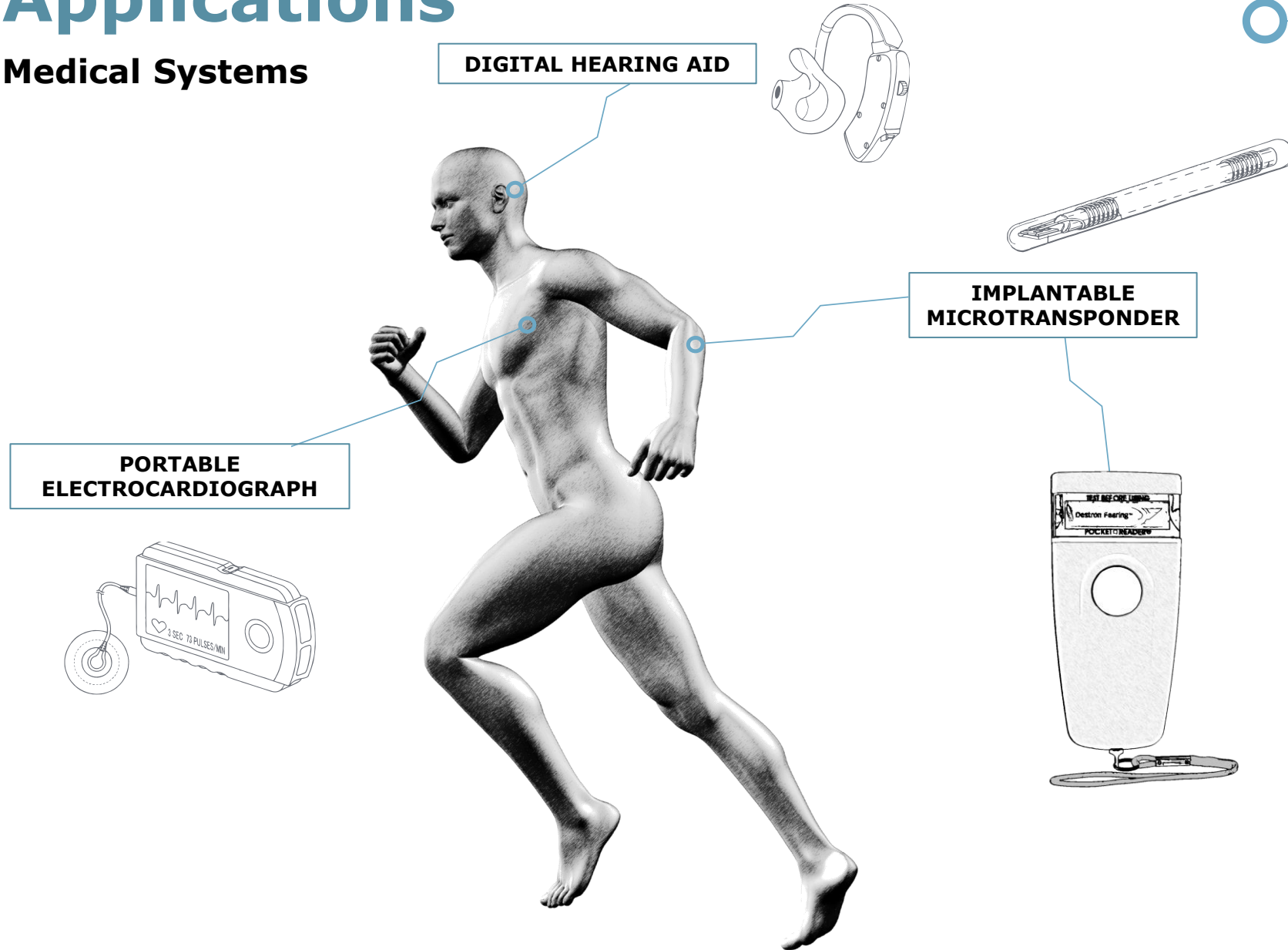


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“Nearly 30 years delivering high reliability electronics”

# Applications

## Medical Systems



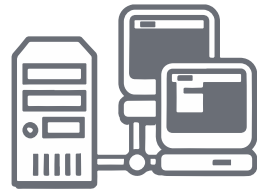
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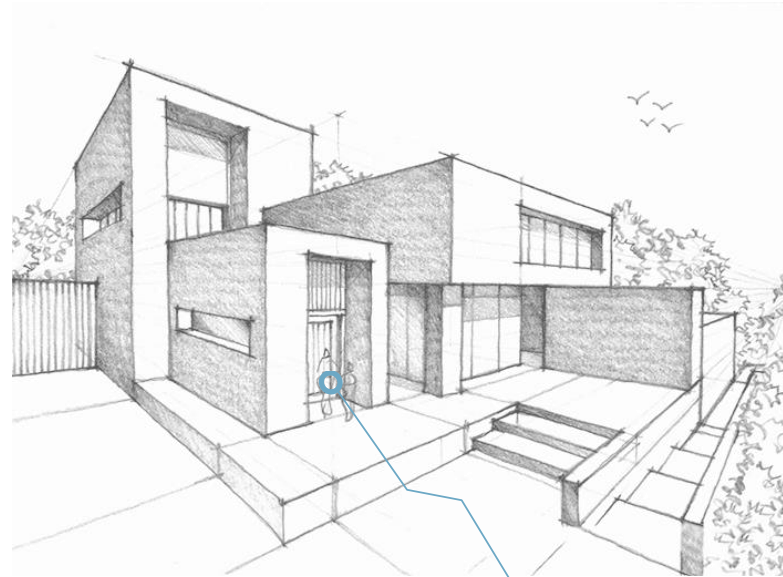
"Nearly 30 years delivering high reliability electronics"

# Applications

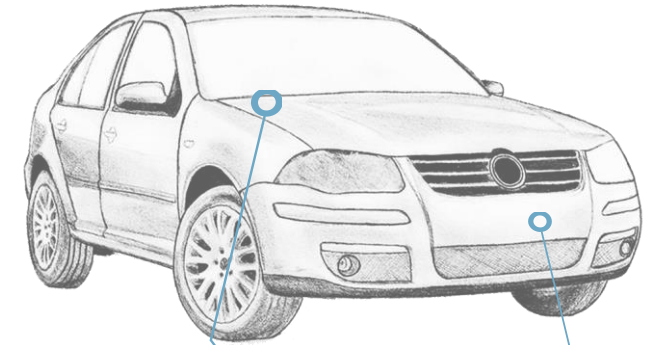
## Industrial Systems



**SUPERVISORY  
CONTROL & DATA  
ACQ. SYSTEMS**

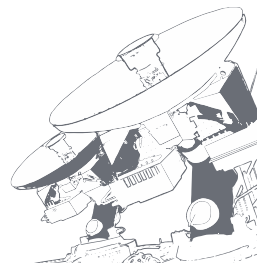
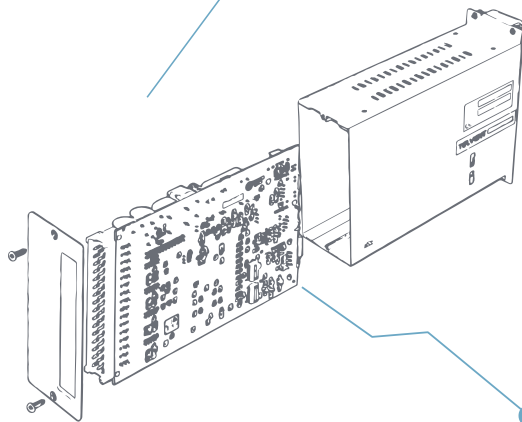
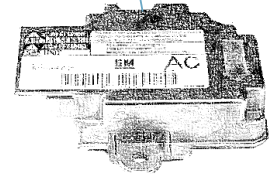
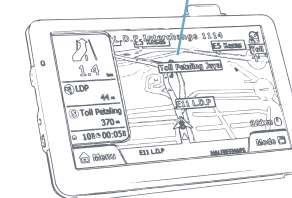


**UTILITY  
METERS &  
PRE-PAYMENT**



**NAVIGATION  
AIDS**

**AIRBAG  
CONTROL  
MODULES**

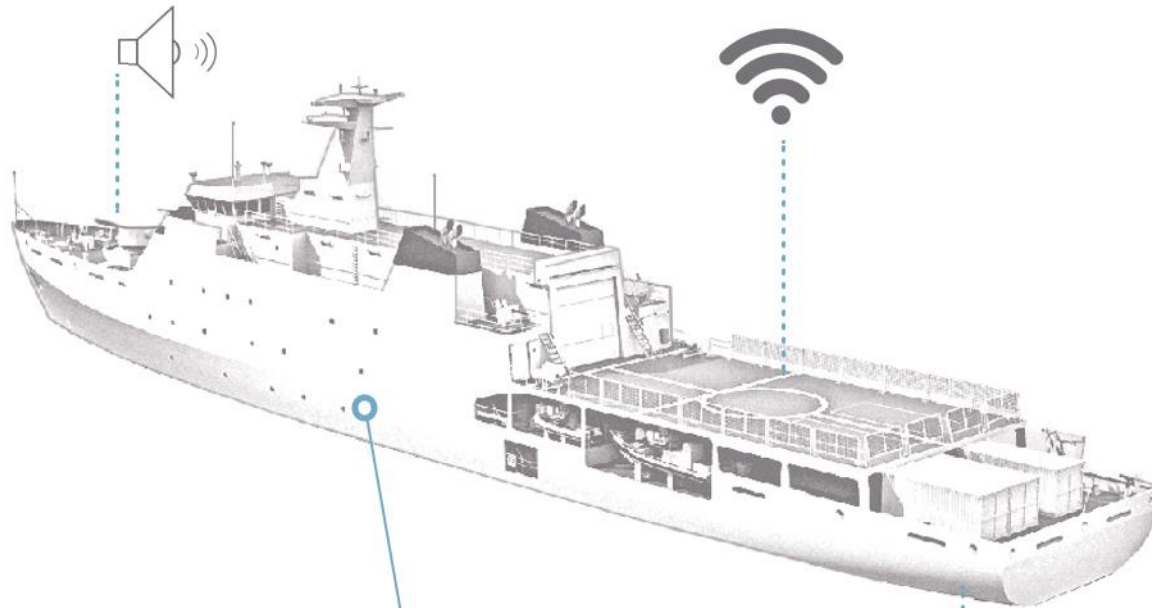


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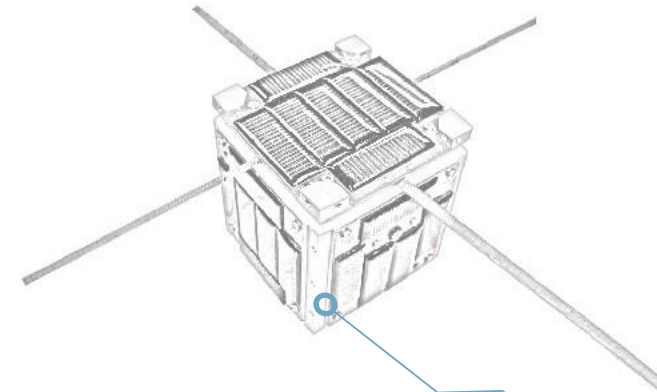
"Nearly 30 years delivering high reliability electronics"

# Applications

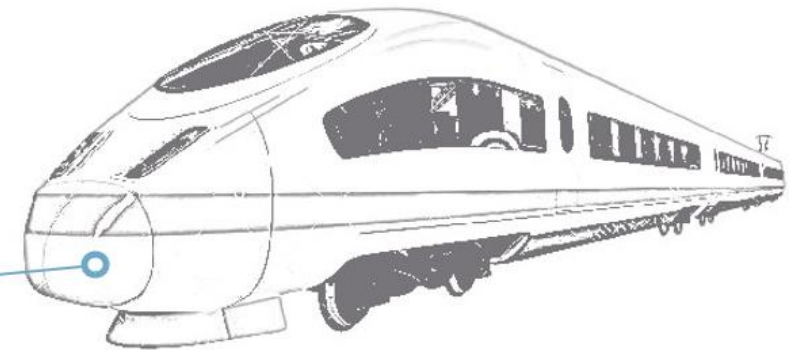
## Naval, Railway and New Space



**ON-BOARD  
COMMUNICATION SYSTEMS**



**EMBEDDED  
ELECTRONICS ON  
NANOSATELLITES**

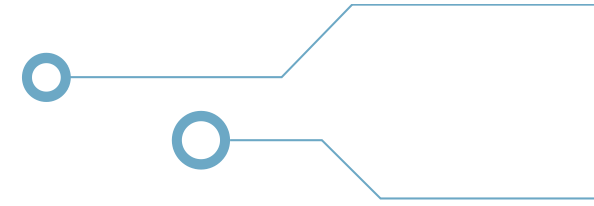


**RAILWAY SAFETY &  
TRAFFIC CONTROL**



\* Actual platforms are examples for explanation purposes.

“Bringing your products to life”



# Our Services



Design From Specs



Industrialization



Manufacturing + Testing

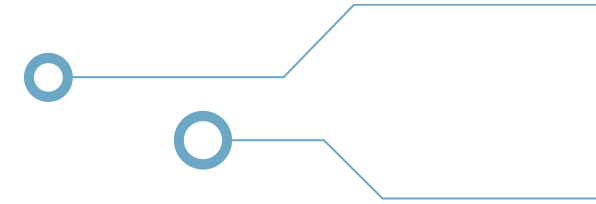


Integration and Other Services

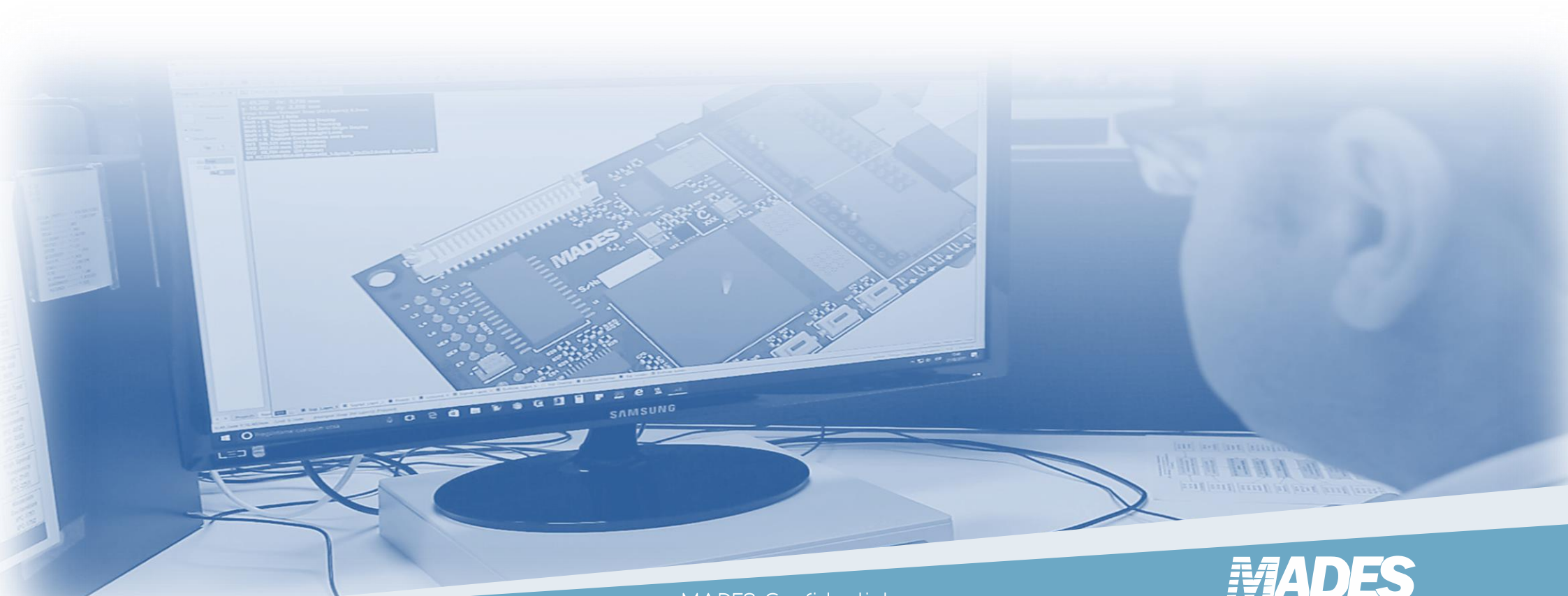
## PRODUCT LIFECYCLE SUPPORT

Full Supply Chain Management. Extended Warranty, Obsolescence & Counterfeit contingency, REACH, Repairs & Logistics Support

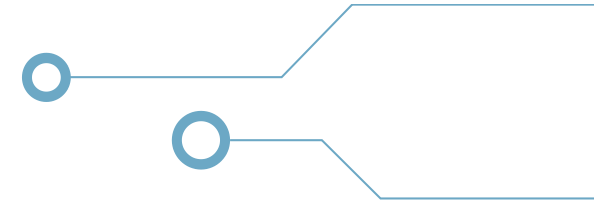
# Development from Specs



- From Specs through detailed Design and prototyping to volume production and life-cycle support
- Design partner integrated with Manufacturing to minimize time to market & cost
- Internal resources & best selected collaborators to optimize manufacturing, testing and product performance



# Industrialization



**FAST-TO-MARKET**  
From Design to Prototypes & Qualification



Specs



Design



Rapid  
Prototyping

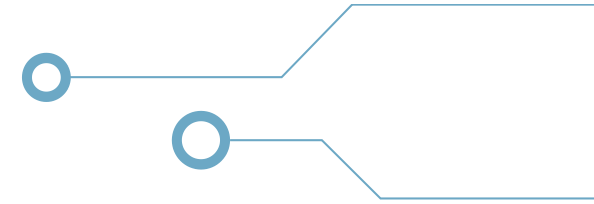


Product  
Qualification



Industrialization

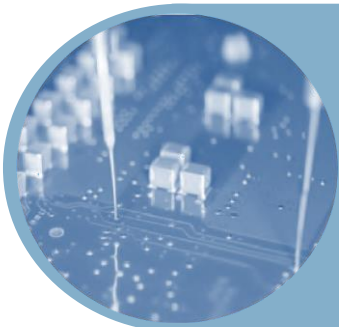
# Testing & Integration



## PRODUCT RELIABILITY

High frequency testing  
High power system testing

### PARAMETRIC ELECTRICAL TEST



- In-Circuit Test
- Flying Probe Technology

### FUNCTIONAL TEST



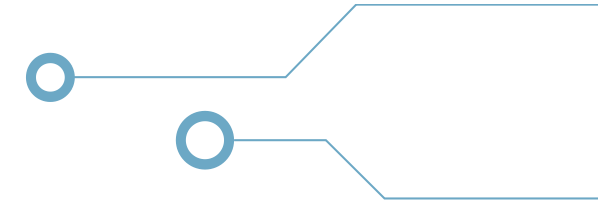
- J-Tag Boundary Scan
- Complete systems or CCAs
- General Purpose or Product-Specific customized platform

### ENVIRONMENTAL STRESS SCREENING (ESS)



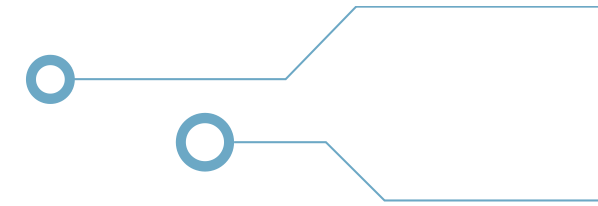
- Wide range of Environmental Screening
- Thermal cycling and shocks
- Stability assurance under humidity conditions

# Testing & Integration

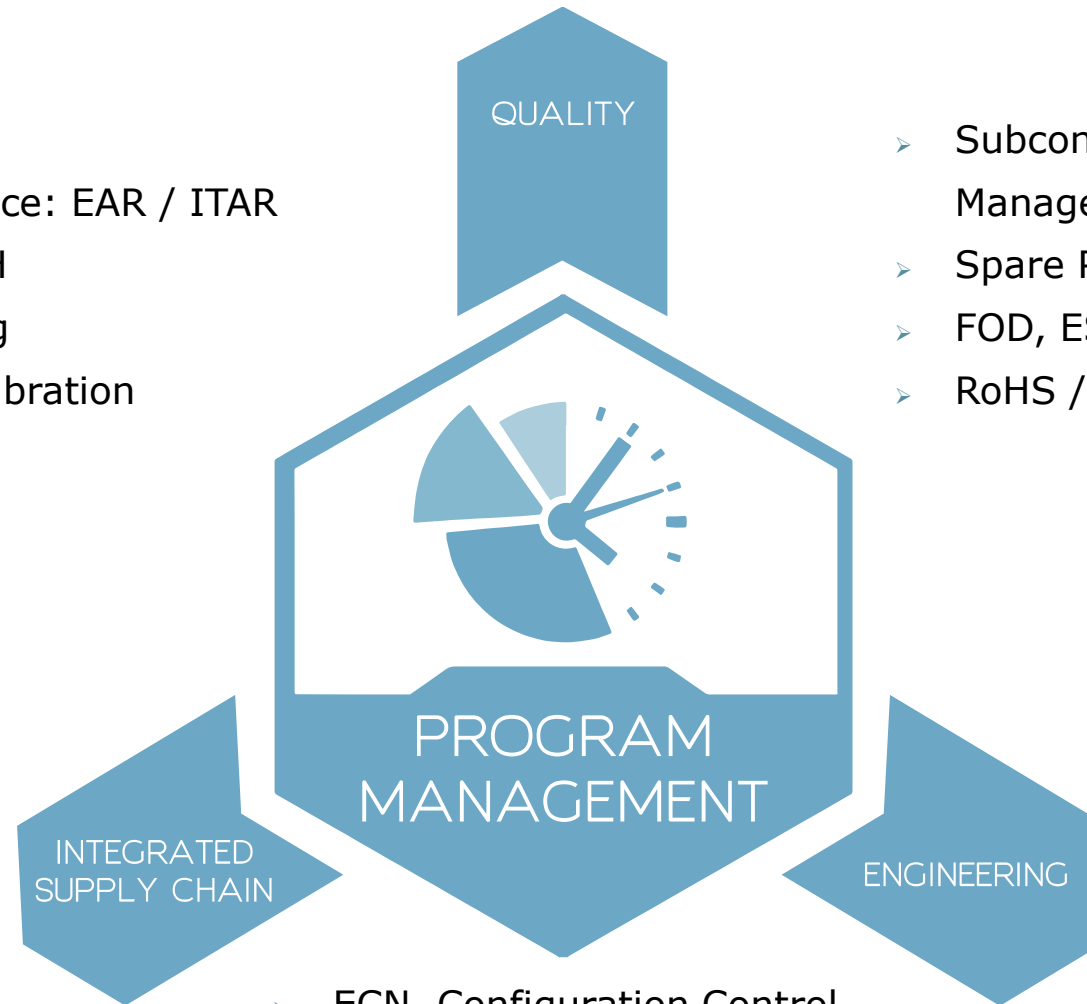


- Customer's Virtual Factory at MADES' premises
- Electro-mechanical Assemblies
- Complete Box-Build - Cables & Harnesses
- Development of custom-made equipment & Special Processes Automatization





# Product Lifecycle Support



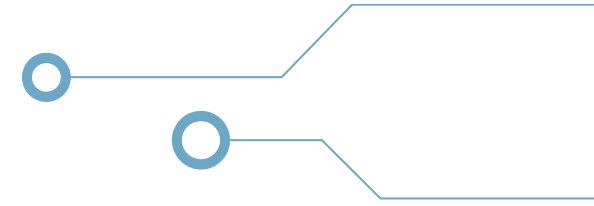
- Counterfeit
- Import/Export Compliance: EAR / ITAR
- Conflict Minerals, REACH
- Obsolescence Monitoring
- Equipment control & calibration

- Subcontract Development and Management
- Spare Parts, Repairs
- FOD, ESD & MSL Programs
- RoHS / No RoHS Control

- ECN, Configuration Control
- Production Planning
- Traceability
- Design Upgrade
- Mission Assurance Plan



“Tailored solutions that best adapt to each customer”



# Program Management

Project Planning

Scope Definition

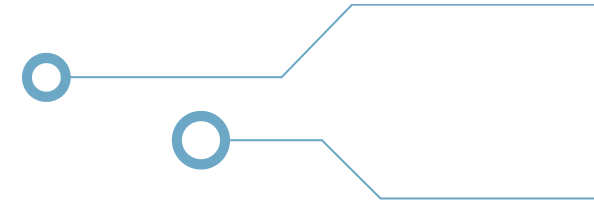
Cost Effectiveness



Balanced Resources

Record Time

Risk Management



# Building Customer Trust

Examples of long-term customer relationships



+ 24 Years  
+ 105 Million Transponders  
USA & EU



+ 23 Years  
+ 23 Million Utility Meter Applications  
UK



+ 20 Years  
+ 600 thousand Automotive Navigation Aids  
EU & USA



+ 15 Years  
+ 20 thousand Actuation Systems  
EU & USA

# Operational Excellence

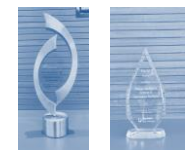
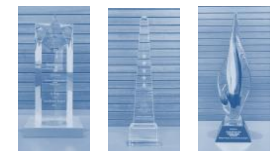
- Center of Excellence for Electronic Manufacturing Services
- State-of-the-art technology and continuous investment in talent and R&D
- Member of associations focused on Operational Excellence



- Manejo y procesamiento incorrecto
  - Fallos o cambios en valores de ESDS componentes
    - Inmediato o Latente
- Importante construir protección para ESDS componentes hacia diseños de circuitos y embalaje (packaging).
- Información adicional
  - J-STD-001, ANSI/ESD-S-20.20 y documentos pertinentes

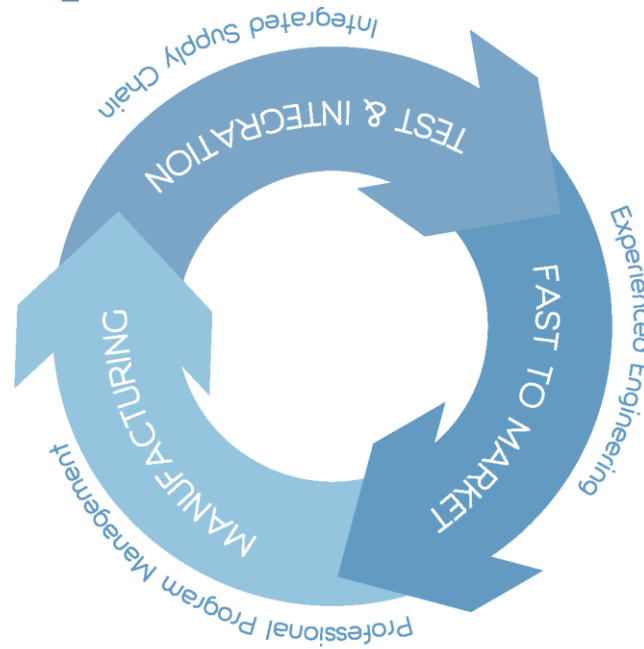
# Certifications & Accreditations

- ISO 9001
- Nadcap 7120 Electronics
- NATO AQAP 2110
- EN9100 – Aerospace and Defense
- Customer Special Process Facility Qualified
- Certified US Export Compliance Officer (CUSECO)
- IATF 16949\* – Automotive
- ISO 13485\* – Medical

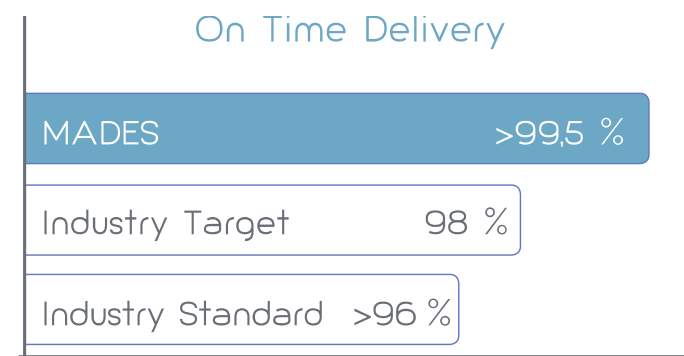


\*MADES manufacturing processes and Quality System are aligned with the requirements of ISO 13485 and IATF 16949

# Why **MADES**?



- Mature and strong processes, compliant with industry policies and certifications
- Proven experience in major multinational programs for nearly 30 years



# MADES

**Strategically located in the Malaga TechPark, an innovation and development cluster in Malaga.**

- Pablo Picasso international airport (AGP)
- High Speed train (AVE) hub
- Malaga port

 Avda. Juan López de Peñalver, 12  
Malaga TechPark  
29590 Malaga (Spain)  
+34 952 249 200

