



**controlar**

**innovating industry**



# COMPANY PRESENTATION



ABOUT US



# COMPANY INTRO

About Us



- ▶ **Controlar in a nutshell**
  - ▶ Global company dedicated to **industrial automation** and **test systems** (core business)
  - ▶ High standard of excellency in developing hardware and software for the **Electronics Industry** with special focus in the **Automotive Industry**
  - ▶ 23 years in the market
  - ▶ More than 200 employees worldwide
  - ▶ Production facilities and technical assistance around the world
  - ▶ Stands for innovation, reliability and commitment to customers
  - ▶ ISO 9001:2015 (Quality), ISO 14001 (Environmental) and **NP 4457** (R&D+I) Management Certifications



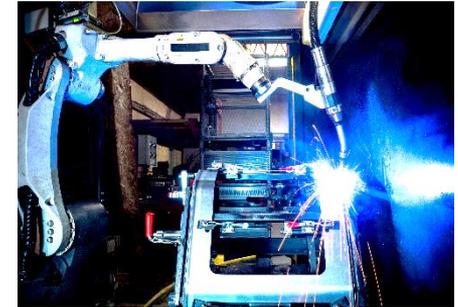


# COMPETENCES OVERVIEW

About Us



- ▶ Main areas of expertise
  - ▶ Electronics development
  - ▶ Automotive infotainment
  - ▶ Communication systems
  - ▶ Development of machines
  - ▶ Development of complete assembly lines
  - ▶ Systems integration development
  - ▶ Quality and functional test systems
  - ▶ Robotics
  - ▶ Interconnects Development
  - ▶ Mechanical Development
  - ▶ Software Development





▶ Our business units



**test**  
systems



**automation**  
systems



**auto.iD**  
systems

- ▶ Each business unit delivers a significant portfolio of products and services worldwide including to best-known multinational companies.
- ▶ The company is currently experiencing a phase of strong growth and expansion both nationally and internationally, supplying new products and services always with excellent quality, innovation at a competitive price level.





- ▶ Our location: Alfena, Portugal (North)
  - ▶ 2500 m<sup>2</sup> state-of-the art offices, situated in an Industrial Park, near Porto



Some videos of our working facilities:



Award winning architecture concept

<https://youtu.be/VOzRkevXJeE>



Working and training in Controlar by  
DUAL Academy partner  
(other companies also in the video)

<https://youtu.be/LUg9iu8ONAY>



- ▶ Our location: Alfena, Portugal (North)
  - ▶ New facilities since beginning of 2016 (automation production with assembly area, and warehouse)





- ▶ Our location: Alfena, Portugal (North)
  - ▶ New building for test systems production and assembly



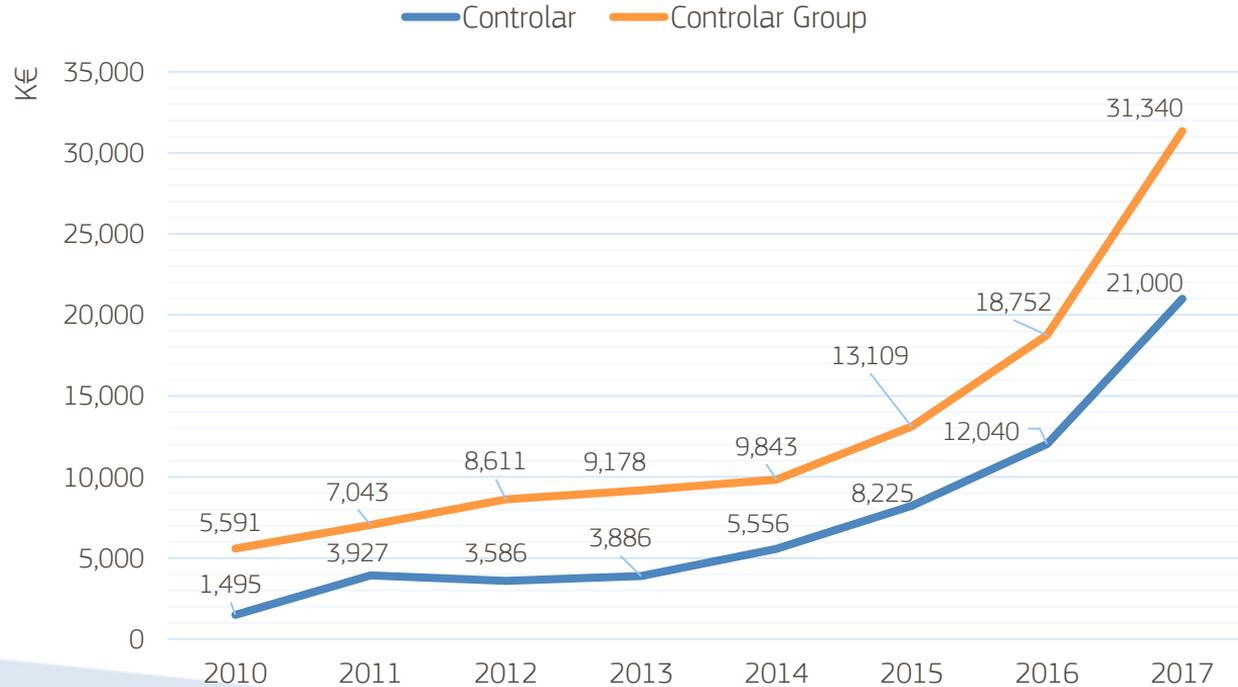


- ▶ Our location: Montijo, Portugal (South)
  - ▶ New facilities with 400 m<sup>2</sup> in Montijo (near Palmela, Lisbon)
    - ▶ This delegation is responsible for supporting customers in the south of Portugal.





## Turnover

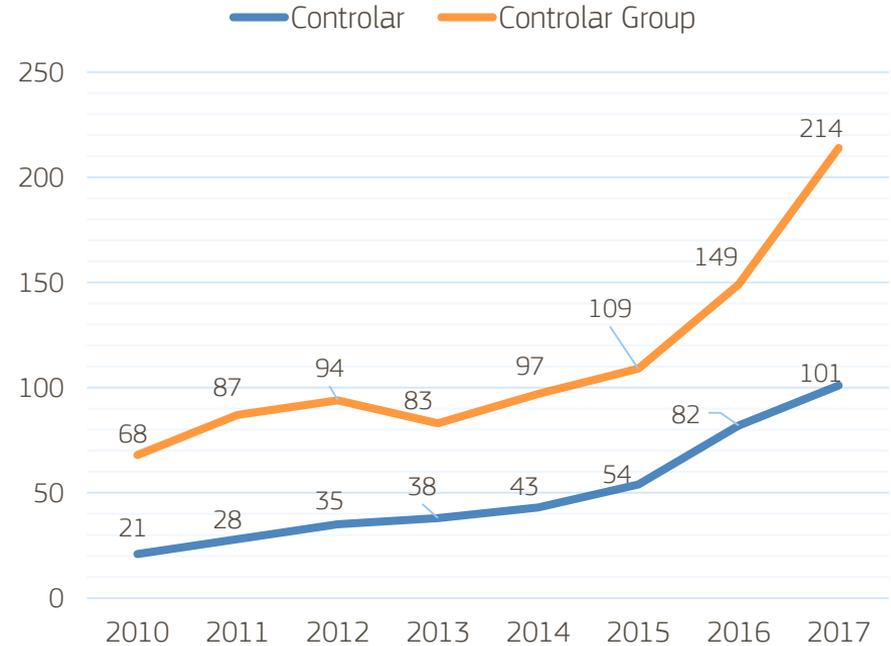




## Human Resources Distribution - Portugal

Admin., Purchasing, Accountability, Finance, HR	10
Sales Marketing & Communication	2
Quality, Environment and Safety	2
R&D & Innovation	6
Key Accounts	5
Project Management & Development	23
Software Development	5
Mechanical Development	5
Electronics Development	4
Production	41
Technical Support	4

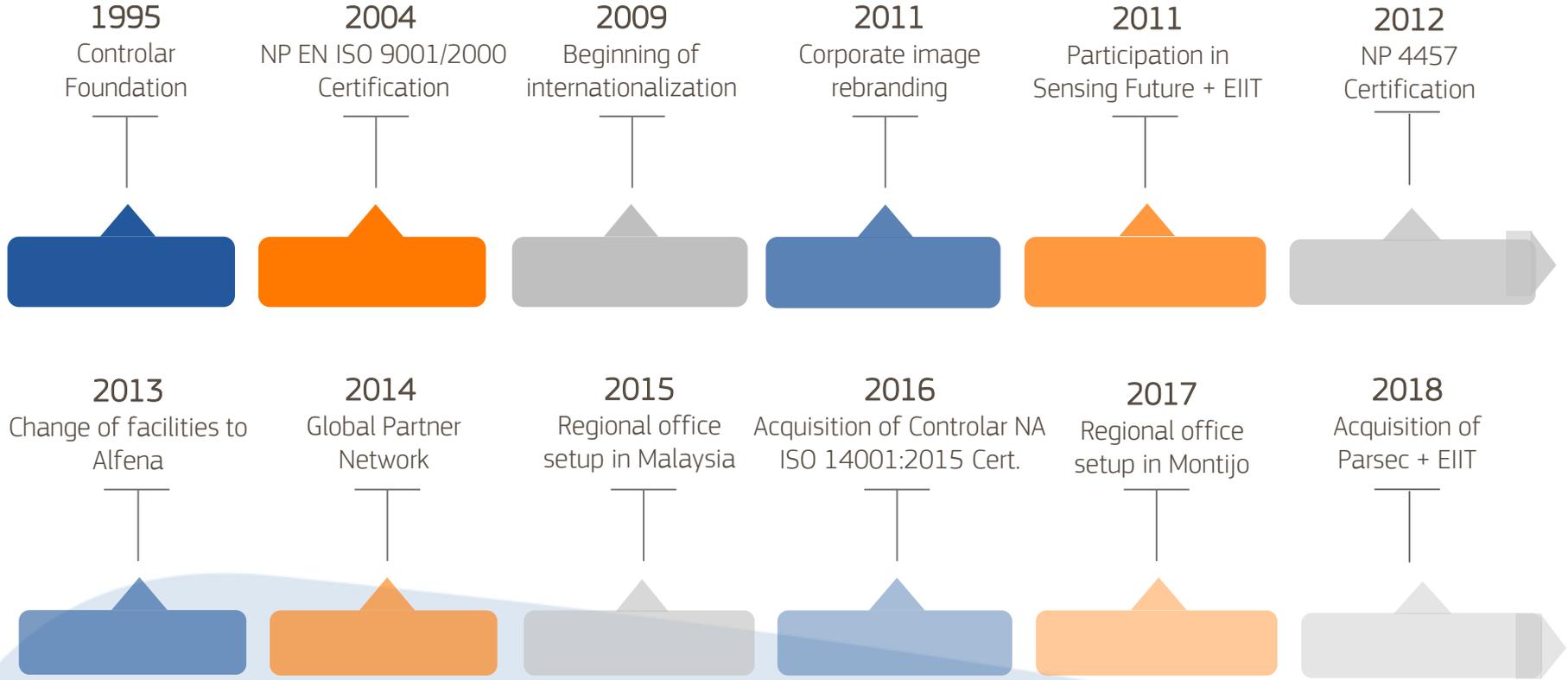
TOTAL **107**





# MILESTONES

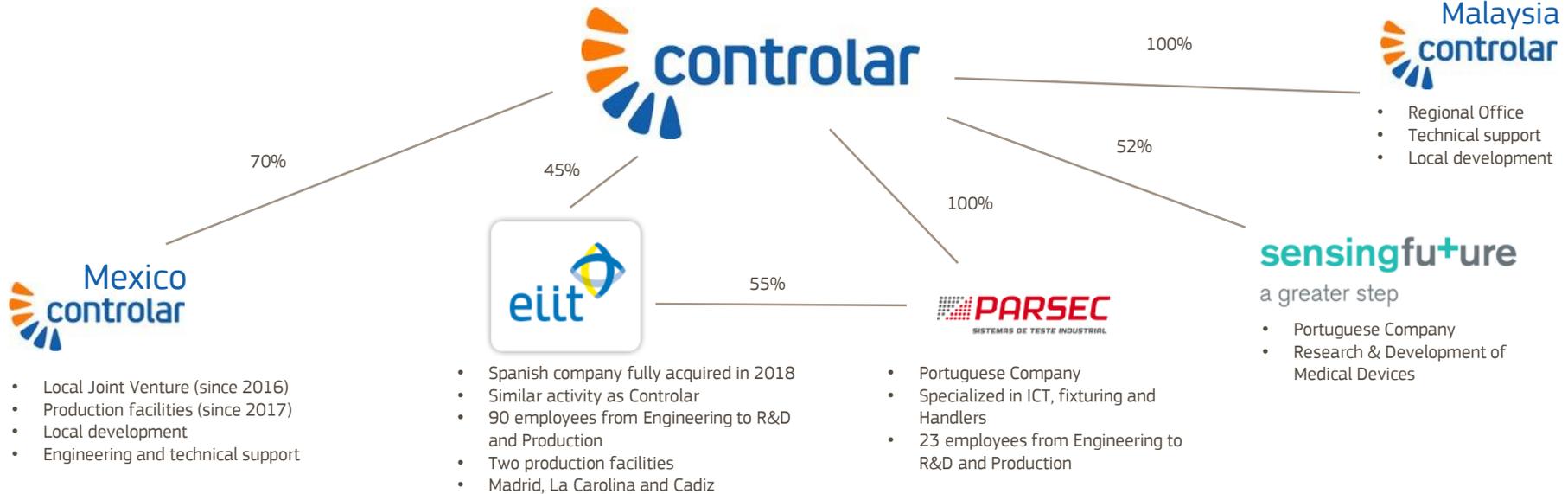
About Us





# ASSOCIATED COMPANIES

About Us



## Controlar owns other companies

▶ The EIIT Group

- ▶ Leading Engineering company with more than 30 years of experience in designing, manufacturing and commissioning test equipment for all industry fields. Activity fields:



- ▶ ELECTRONIC TEST SYSTEMS
- ▶ MODULAR ASSEMBLY SYSTEMS
- ▶ FIXTURING
- ▶ AGING AND DURABILITY TESTING (HALT)



- ▶ The EIIT Group > In-Line Handling Solutions
  - ▶ ILS series: economic in-line handlers to integrate ICT Offline Tests
  - ▶ XILS series: for demanding applications (high no. of test points, large panels and expandability)



## NEW ILS600

Fast, Compact, Versatile and Powerful Handler ideal for Critical Instrumentation



 **ILS 600**

- ▶ The EIIT Group > Reference Projects
  - ▶ **Thales Alenia Space - MTG - METEOSAT 3rd GEN:** Validation system for the high speed communication bus PXI based system for 1,5Gbit/s HS bus.
  - ▶ **Raytheon Missile Systems USA (ERAM - Extended Range Active Missile Test):** Bench for electronic cards of TVA (primary booster thrust vectoring actuators) and SCS (secondary booster steering control system).
  - ▶ **IRKUT MC-21:** Primary Flight Control Testing System (High Lift Testing System)



**Raytheon**  
Missile Systems





▶ Sensing Future Technologies is dedicated to the design, development and implementation of **medical devices**

▶ **Activity Areas:**

- ▶ Data Acquisition
- ▶ Software & Hardware & Electronic Development
- ▶ Artificial Vision, Virtual Reality and Augmented Reality
- ▶ Robotics
- ▶ Test Systems

▶ **Human Resources:**

- ▶ 10
  - | 1 PhD
  - | 9 Master



physio  
sensing



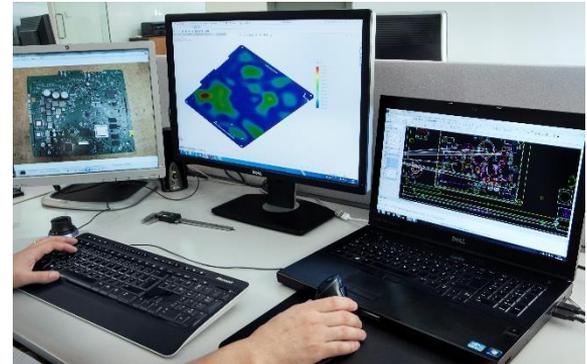


### ▶ Sensing Future Technologies > Reference Projects

- ▶ **Health Sensing Platform:** Clinic Register based on international classification of functioning for Physical Therapy and rehabilitation.
- ▶ **FallSensing System:** Evaluation of multiple fall risk factors and implementation of fall prevention exercise plans, while providing biofeedback during the execution of the exercises.
- ▶ **Rose:** System for the telemedicine market based on robotic assisted tele-echography, where physicians and patients can interact without requiring physical proximity.
- ▶ **Smart-Hip:** Development of a new intelligent hip prosthesis, enabling timely and accurate diagnosis of bone loosening, thus allowing for a fast and reliable support to the orthopedists.



- ▶ Parsec is a Portuguese supplier acquired by Controlar in 2018 and specialized in Industrial Test Systems:



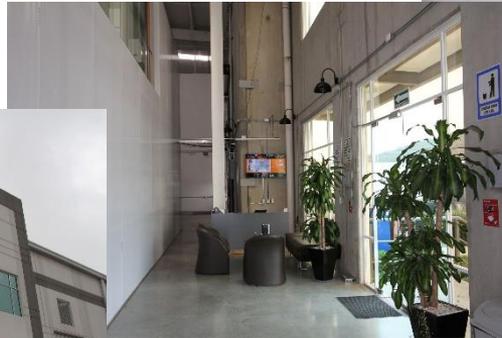
▶ Parsec > Products

- ▶ ICT (In-Circuit Test)
- ▶ Fixtures
- ▶ Offline Handlers
- ▶ Inline Systems
- ▶ Boundary Scan
- ▶ ISP (in System Programming)





- ▶ Controlar North America > Local Joint Venture in Mexico
  - ▶ Production facilities since 2017
  - ▶ Engineering and technical assistance
  - ▶ Local development
  - ▶ New plant under preparation





▶ Controlar North America > Roadmap Guidelines

▶ 2016

Company foundation → IT and HR structure concept → Commercial prospection → Core team recruitment → Core team training → First POs

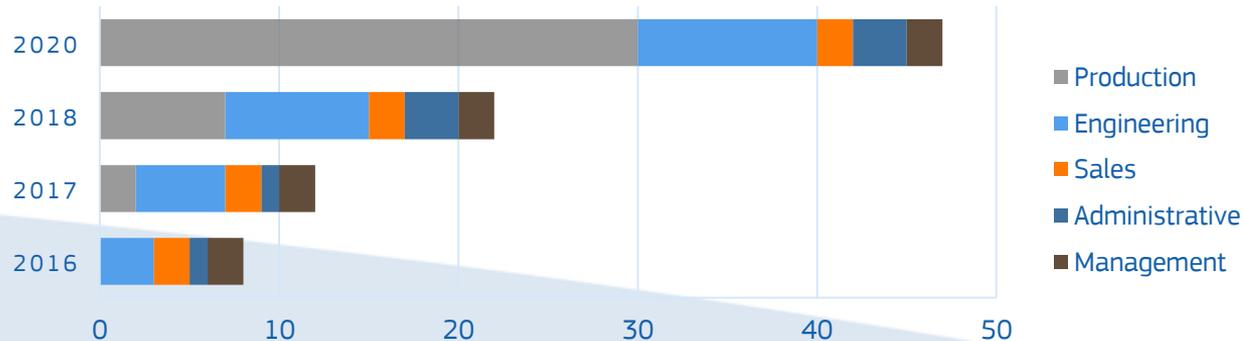
▶ 2017

Plant construction → Plant functionality → Certification → PO increase → Production procedures → Triangular purchasing → Self-sustainability

▶ 2020

Full plant activity → Low dependence from PT and ES

# OF EMPLOYEES TIMELINE



- ▶ Controlar Malaysia > Regional Office in Bayan Lepas, Penang
  - ▶ Technical support
  - ▶ Local development





# WHERE WE ARE

About Us



- ▶ **Controlar**
  - ▶ Portugal – Porto
  - ▶ Portugal – Montijo
  - ▶ Malaysia – Penang
  - ▶ México – México City (area)
- ▶ **Parsec**
  - ▶ Portugal – Porto
- ▶ **EIIT**
  - ▶ Spain – Madrid
  - ▶ Spain – La Carolina
  - ▶ Spain – Cadiz
- ▶ **Sensing Future**
  - ▶ Portugal – Coimbra





► Our Customers - Robert Bosch Worldwide

Infotainment Plants

- Portugal
- Germany
- China Suzhou
- China Wuhu
- Malaysia – Penang
- USA – Anderson

Security Systems

- Portugal

Thermo-Technology

- Portugal





# WORLDWIDE REFERENCES

About Us



## ▶ Our Customers





# WORLDWIDE REFERENCES

About Us



▶ Our Customers





# WORLDWIDE REFERENCES

About Us



## Other Worldwide References





# CERTIFICATIONS AND PARTNERS

About Us



## Certifications and Partnerships





# AWARDS AND DISTINCTIONS

About Us



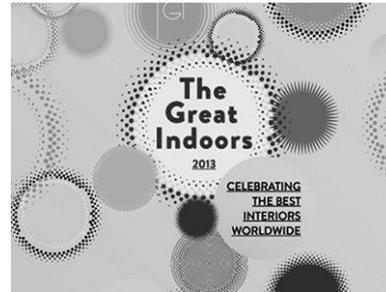
## Awards and Distinctions



2012, 14,15,16



Internationalization



"The Great Indoor Awards" de 2013





## Affiliations





### ▶ Organization Methods

- ▶ Strong and solid implementation of the **ISO 9001:2015**
- ▶ Integrated System for R&D and Innovation (**NP 4457**) within the ISO 9001:2015
- ▶ Certified Environmental Management System **ISO 14001**
- ▶ **Lean** and **5S** implementation at all levels of Engineering
- ▶ **ERP** for all the areas of Commercial, Administrative, HR, Finance, Stocks Management
- ▶ **Internal Web Platform** to support all processes





## PROJECTS & SOLUTIONS



# BUSINESS LINES

Projects & Solutions



- ▶ The Test Systems Unit is responsible for:
  - ▶ Research and development of specific electronic equipment;
  - ▶ Assembly and testing of small sets of electronic components;
  - ▶ Development of **Automatic Testing Equipment – ATE** to perform Functional Tests on electronic equipment;
  - ▶ Integration of various test levels for electronic equipment;
  - ▶ **Development of systems to monitor:**
    - ▶ Durability and Quality tests in climatic and vibration chambers;
    - ▶ HALT – High Accelerated Life Tests;
    - ▶ Noise, vibration and harshness (NVH).



► **Competences**

ICT - In-Circuit  
Testing



ISP - In-System  
Programming



FCT - Functional  
Testing



HALT – High  
Accelerated Life  
Testing



EOL - End of Line  
Testing



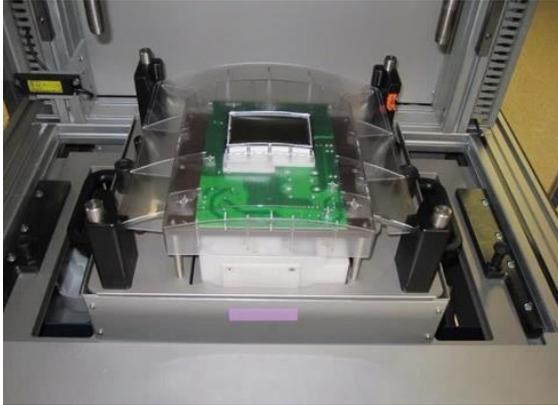
- ▶ Development Examples
  - ▶ Car Radio – Infotainment Functional Testers (1/2)



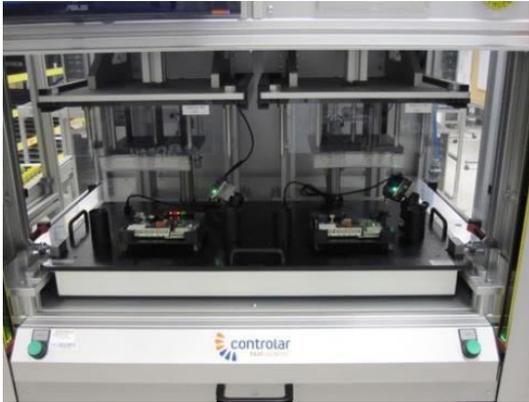
- ▶ Development Examples
  - ▶ Car Radio – Infotainment Functional Testers (2/2)



- ▶ Development Examples
  - ▶ Domestic Heater Controller and Functional and Vision Testers



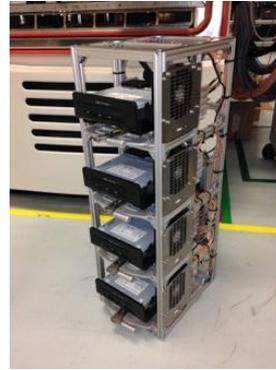
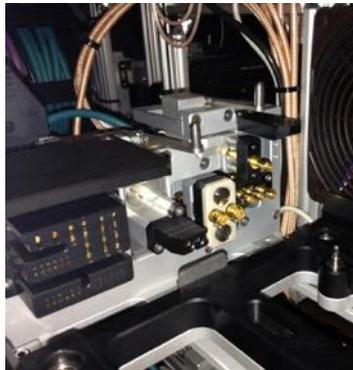
- ▶ Development Examples
  - ▶ Flash Programming



- ▶ Development Examples
  - ▶ HALT – High Accelerated Life Testing (1/2)



- ▶ Development Examples
  - ▶ HALT – High Accelerated Life Testing (2/2)



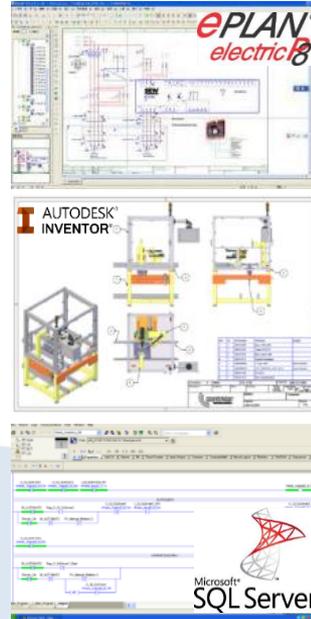
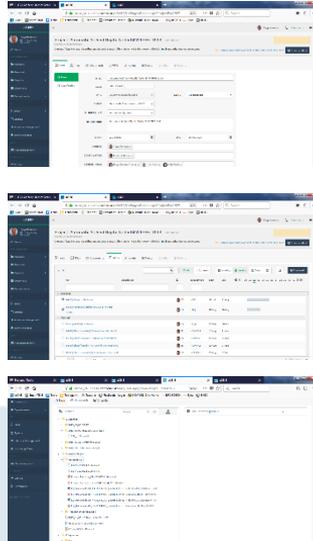
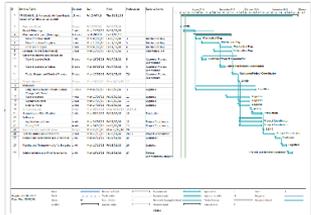
- ▶ Development Examples
  - ▶ EOL - Mechanical Fixtures



- ▶ The Automation Systems Unit is responsible for:
  - ▶ Development of machines and production lines;
  - ▶ Automation, remodelling and modernisation of machines and processes;
  - ▶ HMI and PLC programming;
  - ▶ Development of specific software to control production and monitor efficiency – OEE and MES;
  - ▶ Process monitoring solutions using SCADA, control of production lines and automation processes;
  - ▶ Projects, installation and programming of robots;
  - ▶ Industrial artificial vision systems;
  - ▶ Traceability applications.



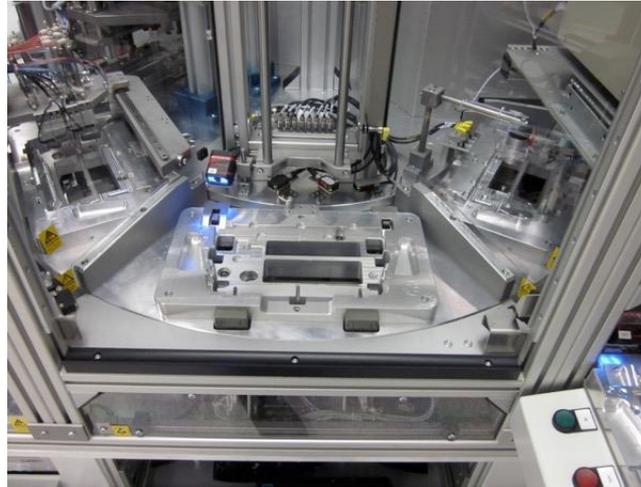
▶ **Project Development**



- ▶ Development Examples
  - ▶ HVCC – Automatic Assembly Line for Electric Compressors



- ▶ Development Examples
  - ▶ Electronic Control Unit Assembly and Test – Automotive Industry

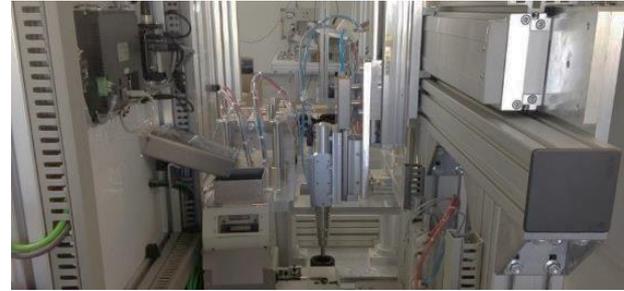


▶ Development Examples

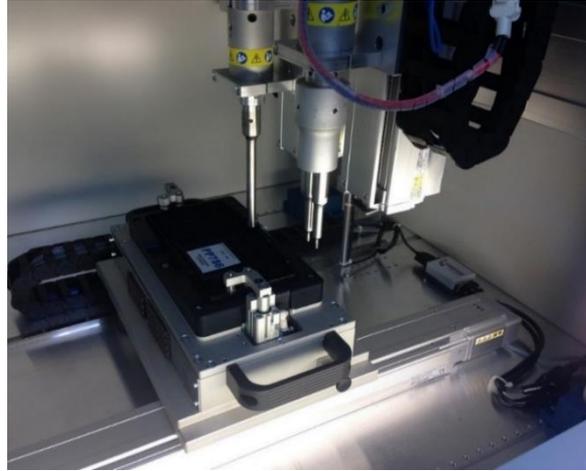
- ▶ Plastics Vision and Testing – Haptics and vision control of a radio bezel - KLC



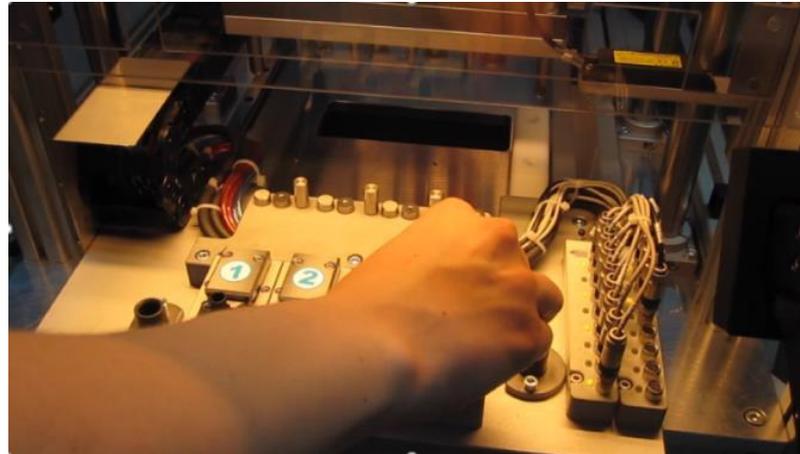
- ▶ Development Examples
  - ▶ Arm Rest Assembly - Key Plastics Portugal



- ▶ Development Examples
  - ▶ Ultra-sonic welding machine of a radio bezel - Key Plastics Portugal



- ▶ Development Examples
  - ▶ Other operations – Springs Cutting





- ▶ The Auto-ID Unit is responsible for:
  - ▶ Representation and distribution of **automatic identification solutions**, such as barcode readers (1D and 2D) and machine vision systems from various international manufacturers (e.g. **Omron Microscan** and **Honeywell**)
  - ▶ Representation and distribution of **Kinova Robotics**
  - ▶ Representation and distribution of **Göpel Electronic** products (automotive test solutions)
  - ▶ Direct sales of industrial computers: **Advantech**, **Adlink**, **IEI** brands, among others
  - ▶ Direct sales of **Drew Technologies** products





R&D+I



- ▶ The R&D+I Department
  - ▶ Ensures the correct development of internal, commercial and funded projects, according to certificated guidelines and in coordination with our partners, to meet the highest technological innovation potential.
- ▶ R&D Projects (some examples)
  - ▶ **ICM** – Intelligent Condition Monitoring
  - ▶ **SmartEnergy** – Efficiency smart management of industrial machines and line production
  - ▶ **Modular Test Machine** – Modular, flexible and versatile inspection system, including hardware and software
  - ▶ **BroadR Reach Ethernet Test System** – System for several types of equipment that use the BroadR-Reach protocol
  - ▶ **EuMETfast** – Earth Observation Platform
  - ▶ **AR/VR** – R&D project proposal under the “Bosch Suppliers Club”
  - ▶ **NUVX.IQ** – Cloud based RF Infotainment Testing Platform





### R&D for Industry

- Developed systems based on AI
- Collaborative Robotics
- AR/VR applications
- Energy efficiency
- Eco-Design and Innovation
- Seek opportunities to engage into European-wide projects

### R&D for Automotive

- Distributed test system approach to reduce the test cost
- Radar/Lidar testing and sensor fusion
- Adding value to existing solutions to match customer needs
- Seek opportunities to engage into European-wide projects

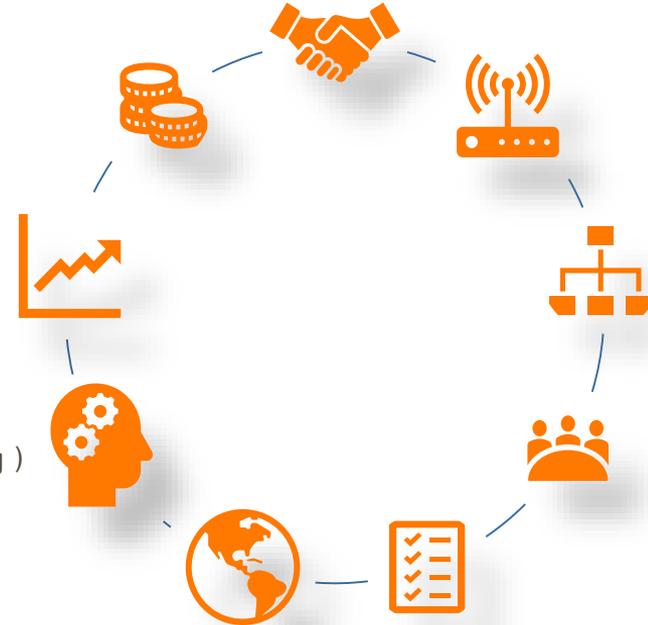
### RF Products & IIoT

- New RF and IIoT solutions
- IoT/II.0 products for industrial applications
- EMI/EMC pre-compliance, PCB design, RF design & simulation, Spectrum compliance, etc.
- Seek H2020 opportunities on R&D proposals



## Why Controlar?

- ▶ **23 years of experience** in the Infotainment and Automotive Industry
- ▶ Well-established partnership with reference **OEM partners worldwide**
- ▶ Engineering and manufacture organization with **continuous improvement**
- ▶ Solid development process and **design validation** in joint collaboration with the customer
- ▶ Commitment to **quality and specifications**
- ▶ Supported by other companies and structures worldwide to provide **technical assistance around the world**
- ▶ Experience with high levels of specification (**WCM - World Class Manufacturing**)
- ▶ Experience with **high levels of validation requirements**
- ▶ Experience with industry methodologies (**OEE, FMEA, EEM**)
- ▶ Attractive **labour cost**





## CONTACTS

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Thank you!