

PAL

COLLABORATIVE PROJECTS

Enhancing People's Quality of Life through Service Robotics

BARCELONA | 2026

Welcome to PAL Robotics, where the future is being reimagined every day.

At the heart of our innovation is a commitment to co-create a better, more efficient, human-centered future.



+20 years

FOUNDED IN 2004

+120

TEAMPLAYERS

80%

ENGINEERS & PHD'S



Who we are



We are part of



Francesco Ferro
President



Francesco Ferro
Industry Robotics
Director



Francesco Ferro
Board Director



Francesco Ferro
Board Director



Francesco Ferro
Chair IFR Service
Robot Group



Mobile Interaction

RESEARCH | INDUSTRY | HEALTHCARE

ARI & TIAGo

Products and services for industry & research.



Legged

RESEARCH | UNIVERSITIES

KANGAROO & TALOS

Humanoid service platforms for state-of-the-art research.



Intralogistics

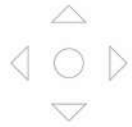
INDUSTRY | RETAIL | HEALTHCARE

StockBot & TIAGo Base

Platforms for automating inventory and transportation of goods.



Our Expertise



Navigation

SLAM
Navigation
Localization



Software

DevOps
Continuous integration
Perception



Embedded

Motor & Sensor
Control boards
Connectivity



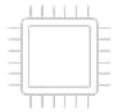
HRI

Social AI
Human Perception
Interaction Design



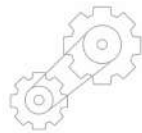
Control

Real Time
Manipulation
Walking



Electronics

Firmware
Sensor boards
Integration



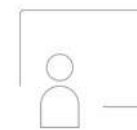
Mechanics

Bio-inspired
and actuation designs
Integration



Ad-Hoc Projects

Flexibility
Adaptation
Customized solutions



Support

Training sessions
Technical assistance
SW Integration



Community

Collaboration
Open Source
Dissemination & Events

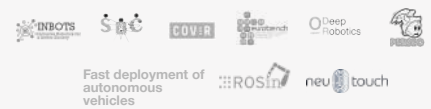
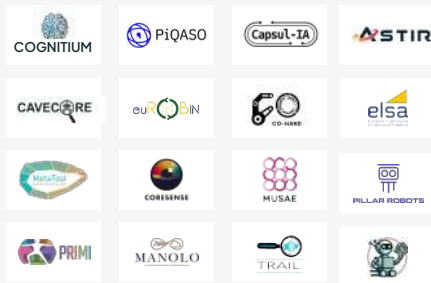
Collaborative Projects

We cooperate with other European partners in order to boost innovation in several fields through more than 25 EU-funded projects.

Horizon Europe / Eureka / FSTPs / CDTi / Spanish Ministry



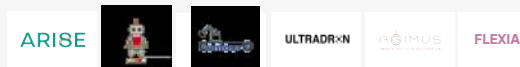
R&D Projects



Healthcare Projects



Industry Projects



Agri-food Projects



Our partners





Healthcare & Social Robots

USE CASE EXAMPLES

Social Robotic Applications to Support Active and Healthy Ageing

SUSTAINABLE DEVELOPMENT GOALS



Routine Care Automation

Medication delivery, vitals monitoring, and room sanitization | Frees human staff for higher-value care



Emotional Support

Robots engage with patients, especially elderly or isolated individuals, to provide companionship



Object Manipulation

Robots help patients or caregivers by retrieving objects, assisting in feeding, or repositioning items



Logistics and Delivery

AMRs transport medical supplies, lab samples, or meals improving efficiency and hygiene



AI Powered Personalized Care

Integrate AI to our social robots to adapt robot interactions to patient history and preferences





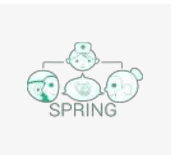
Healthcare and Social Robots

HIGHLIGHTED PROJECTS



SAFE-ly Project

Enhancing patient safety in healthcare settings through assistive robotics.



SPRING Project

Adaptation of Socially Assistive Robots, with the ability to distinguish multi-person interactions and have an open and extensive dialogue.



ALMI Project

Domestic support for patients with mild cognitive impairment (MCI) or at early dementia (Alzheimer Disease-AD) stages.



SHAPES Project

Solutions for assistive robots with pilots in care homes for healthy and active ageing.



SANDRo Project

Robotic assistance for delivering goods, as a supplier, for entertainment, tele-assistance and remote client monitoring (sound & video).

Building and integrating trustworthy and human-centric robot assistants that improve people's quality of life





USE CASE EXAMPLES

Robotic Application to Optimize Food Processing and Precision Farming

SUSTAINABLE DEVELOPMENT GOALS



Precision Farming

Cameras, sensors, and AI are used for **selective harvesting of crops**. Picking without damaging fruit and working closely with humans



Pruning & Maintenance

Automated pruning of high-value crops, reducing manual labor and improving consistency of cuts



Food Transportation

AMRs move packaged goods and raw materials **between workstations**. Improves hygiene and workflow efficiency



Cold Storage & Distribution

AMRs move goods inside **temperature-controlled warehouses** Reduces exposure and enhances supply chain tracking





Agriculture and Food Robotics Projects

Improving productivity and working conditions for farmers and workers, while optimizing agri-food processes through service robotics

HIGHLIGHTED PROJECTS



Canopies Project

This project addresses the challenges of Human-Robot interaction and collaboration in permanent crops like vineyards. Creating a mobile robotic platform for a collaborative paradigm in the field of precision agriculture



SCaFo Project

Fleet of AMRs to perform food transportation tasks in the unstructured and dynamic industry of food processing. A project created in the context of the digital transformation of the agri-food sector in Europe





USE CASE EXAMPLES

Mobile Robots to Support the Optimization of Industrial Processes

SUSTAINABLE DEVELOPMENT GOALS



Human-Robot Collaboration

Robots explore **safe collaboration** with humans in research environments to develop collaborative workflows



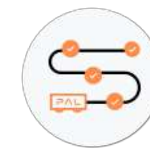
Construction & Infrastructure

Robots are used in pilot projects to explore **robotic assistance, on site inspection and task coordination** for industrial facilities



Intralogistics Automation

AMRs transport bins, tools, or goods across factory floors, improving **internal logistics** and reducing manual load



Quality & Safety Research

AMRs are used to monitor environments, assist in data capture, and help in testing **safe integration protocols** for robots working in human-shared spaces





USE CASE EXAMPLES

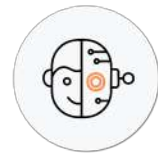
Mobile Robots to Support the Optimization of Industrial Processes

SUSTAINABLE DEVELOPMENT GOALS



Cybersecurity & HRI Validation

Our robots are used to test and validate safe interaction protocols, **cyber-secure frameworks** and HRI models for future smart factories



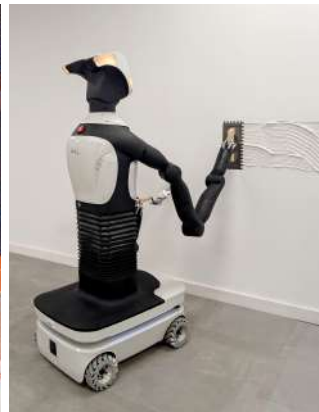
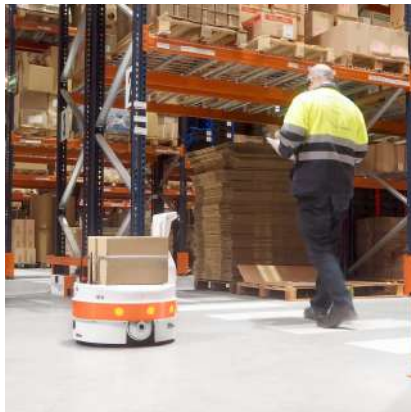
AI-Driven Task Exploration

Our Robots serve as platforms for developing and validating **AI algorithms and GEN-AI** for tasks in industrial environments: **object recognition, navigation in dynamic layouts and process monitoring**



Autonomous Inventory Management


StockBot is used in industrial and retail environments to **scan and record shelf inventory** - Navigates aisles, scans barcodes and RFID Tags, and sends reports, improving **accuracy** in your stock






Industry and Intralogistics Robots


HIGHLIGHTED PROJECTS




ARISE Project
Expanding industrial HRI across Europe by developing Agile HRI, an open-source middleware that enhances efficiency, sustainability, and human-centric collaboration.




AGIMUS Project
Deliver an open-source AI-driven innovation for agile production, enhancing robotics in perception, planning, and control for fast setup, autonomy, and adaptability.



SESAME Project
Developing advanced technologies that will deliver an open, modular, configurable, model-based approach for the systematic engineering of dependable multi-robot systems.

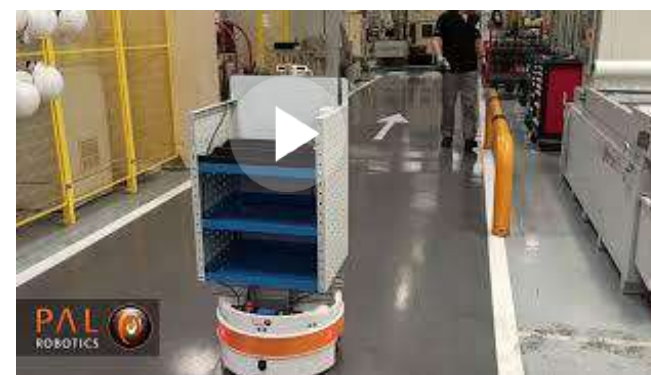


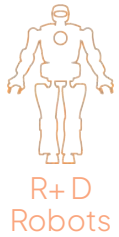
CyberFactory#1 Project
Cybersecurity and learning by demonstration for robots to promote optimisation and resilience of the Factories of the Future (FoF)



COVR Project
Protocols to reduce the complexity in safety certifying cobots in retail. This project aids the progression of robots operating in crowded spaces with lots of people.

Building collaborative mobile robots to work directly alongside humans to improve both productivity and working conditions





USE CASE EXAMPLES

Robotic Platforms to Enhance your Research Projects

SUSTAINABLE DEVELOPMENT GOALS



Co-creating the Future of Robotics and Sharing Innovation

Our reliable and **cutting-edge** humanoid and mobile robots help **boosting R&D projects** providing the best robotic companion and the engineering services to have the right tools in your research.



Open Source and Customizable Robots

- Fully ROS-compatible robots where you can install your own packages, drives and controllers.
- Open-source libraries for simulation, control and perception.
- Hardware and software adaptation.

Our Robots work with:

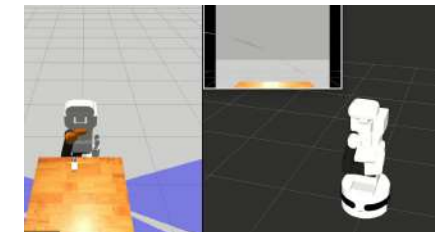


Open Software

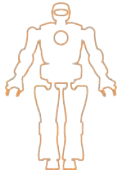
Use your own packages, drivers and controllers

Open source simulation for Gazebo:

URDF models / Controllers / Tutorials




Available on [TIAGo ROS Wiki](#)




Research & Development Robots


HIGHLIGHTED PROJECTS

- 


PIQASO Project

Deliver a fully operational and optimized platform-as-a-service solution that implements an ensemble of quantum-safe cryptographic algorithms.
- 


OpenDR Project

Deep learning open source toolkit to provide advanced perception and cognition abilities in robotics.
- 

PRIMI Project

Merges neuroscience, psychology and AI to develop advanced, socially interactive robots to be tested in stroke rehabilitation to enhance precision, speed, safety.
- 

PILLAR Project

Purpose acquisition and learning of skills and models by the robot for purpose-related deliberative and reactive decision processes.
- 

euROBIN Project

European ecosystem of robots that share data and knowledge to jointly learn to perform tasks in human environments.

Creating the best robots, components and tools to boost your research project to the next level



LOOKING FOR PARTNERS?

Working together is key to innovation

Strong partnerships are essential to demonstrate research excellence and tackle societal challenges through robotics.



SMART INDUSTRIES
INTRALOGISTICS AUTOMATION
HUMAN-ROBOT COLLABORATION



COMPETITIONS
RESEARCH AND DEVELOPMENT
HUMANOID ROBOT



SMART AGRICULTURE
FOOD SAFETY PROTOCOLS



ARTIFICIAL INTELLIGENCE
INTERNET OF THINGS



STOREFLOOR AND WAREHOUSE
TASK AUTOMATION
STOCK/INVENTORY CONTROL



SMART HOSPITALS OR CENTERS
ASSISTED LIVING
HEALTHCARE ASSISTANCE



thank you

LET'S KEEP REIMAGINING THE FUTURE, TOGETHER

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euprojects@pal-robotics.com
pal-robotics.com