

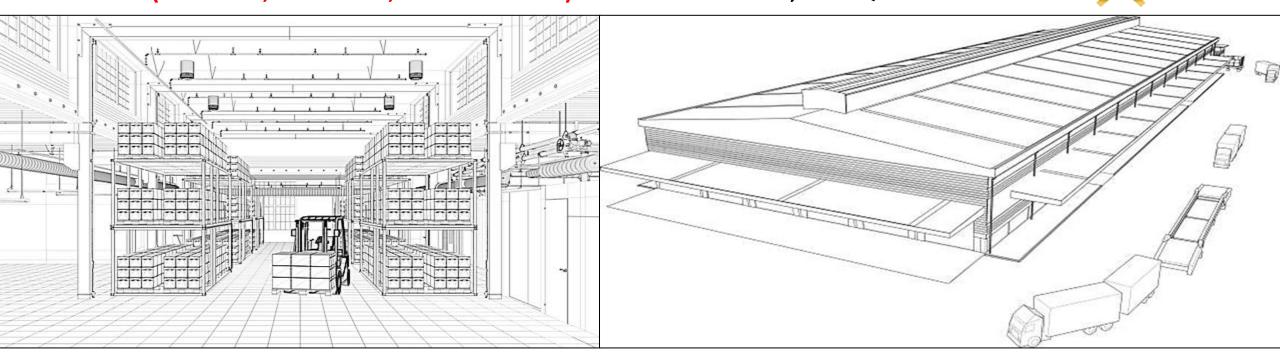


SPIN-OFF NANOTECHNOLOGY RESEARCH POLE FOR PRODUCE

HEALTHCARE DRONES & DISABLED CARS



FACTORY (PRODUCTION, OFFICE, AND LAB AREAS): APPROXIMATELY 3,000 SQUARE METERS AWAREHOUSE (STORAGE, LOGISTICS, AND SHIPPING): APPROXIMATELY 1,500 SQUARE METERS

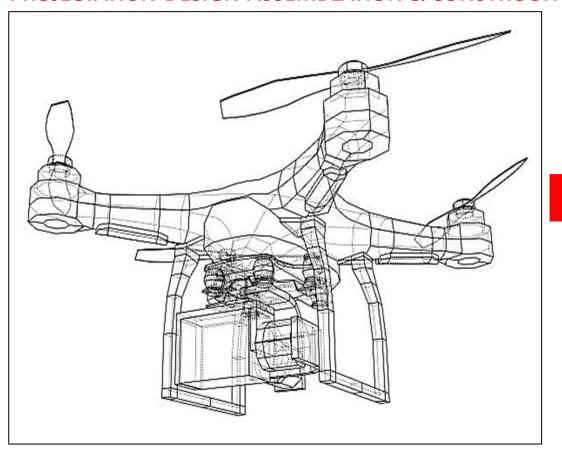


This project represents a preliminary idea and concept design for a cutting-edge infrastructure complex designed to meet the needs of an ever-changing economy. Although not yet built, the project is intended to serve as a strategic guide for the design of an integrated facility that combines innovation, sustainability, and positive social impact.





PROJECTATION-DESIGN-ASSEMBLATION & CONSTRUCTION











SPIN-OFF NANOTECHNOLOGY RESEARCH POLE FOR PRODUCE HEALTHCARE DRONES & DISABLED CARS

FUNDACIÓN DEMOCRÁTICA ITALO AMERICANA, FDIA - REPRESENTAÇÃO PERMANENTE REPRESENTED BY:

PRESIDENT: LAWYER VINCENZO CORTEGIANI

GENERAL DIRECTOR: DR. FABIO ROSATI,

THANKS TO THE EXPERIENCE OF OUR PARTNERS SUCH AS PHARMA1HUMANITAS HOLDINGS LTD WE WILL PROVIDE THE ALL PRODUCTION LINES, TESTING LABORATORIES, AND SPECIALIZED EQUIPMENT FOR THIS TURKEY ETHICAL PROJECT. OUR ASSOCIATION ACTS AS A BRIDGE BETWEEN THE WORLD OF RESEARCH AND THE SOCIAL WORLD, HELPING TO DIRECT TECHNOLOGICAL INNOVATIONS TOWARDS APPLICATIONS THAT RESPOND TO REAL NEEDS, SUCH AS HEALTH, RESEARCH AND COMMUNITY WELL-BEING.





SPIN-OFF NANOTECHNOLOGY RESEARCH POLE

- •PRODUCE HEALTHCARE DRONES, DISABLED VEHICLES WILL BE THE CONCEPT IDEA FOR FACTORY CHAIN PROJECT.
- •PIONEERING PROGRESS: BACK RESEARCH, NANOTECH & HUMAN HEALTH.
- •ETHICAL SOLUTIONS, BIG FUTURE: INVEST IN NANOTECHNOLOGY.
- •NANO INVESTMENT, MACRO IMPACT.

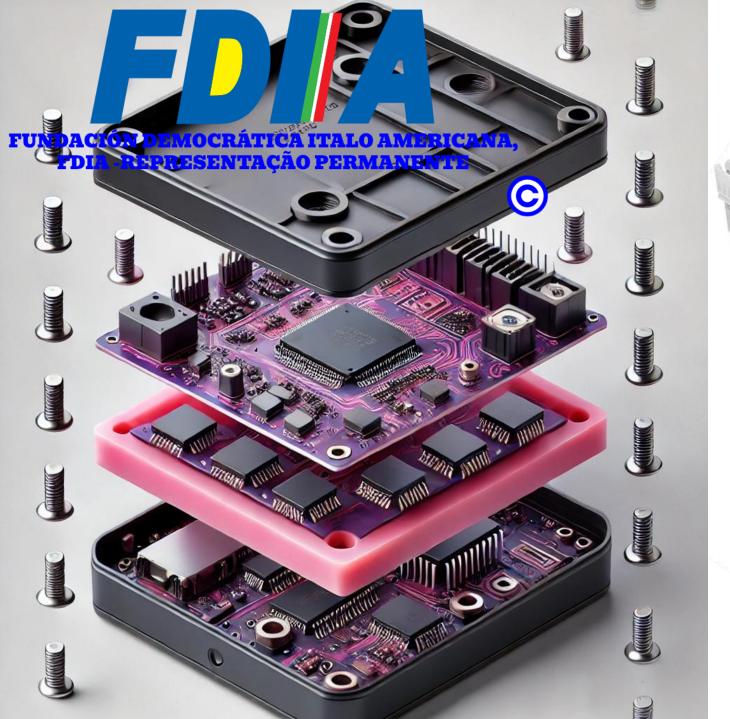


SPIN-OFF A ETHICAL FACTORY IN COOPERATION WITH ITALIAN UNIVERSITIES & SCHOOLS FOR CREATE HEALTHCARE DRONES



FUNDACIÓN DEMOCRÁTICA ITALO AMERICANA WILL ESTABLISH THANKS OUR CONSULTING TECHNICAL SERVICE A **HUMANITARIAN CUTTING-EDGE** NANOTECHNOLOGY HUB THAT CATALYZES BREAKTHROUGHS IN MATERIALS SCIENCE, ELECTRONICS, HEALTHCARE, AND ENERGY BY LEVERAGING INTERDISCIPLINARY RESEARCH AND INNOVATIVE MANUFACTURING TECHNIQUES.





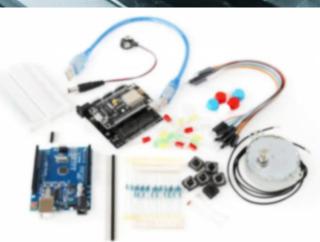




SPIN-OFF NANOTECHNOLOGY RESEARCH POLE









ACADEMIC AND RESEARCH INSTITUTIONS:



- ❖ LEVERAGE EXISTING RESEARCH ON ROBOTICS, NANOTECHNOLOGICAL ENGINEERING & HEALTHCARE SYSTEMS.
- ❖ FACILITATE KNOWLEDGE EXCHANGE THROUGH JOINT RESEARCH PROJECTS, INTERNSHIPS & INNOVATION LABS.
- ❖ INVOLVES STUDENTS AND FACULTY IN REAL-WORLD TESTING, PROTOTYPING, AND DEVELOPMENT.

*** ENGAGE WITH LEADING ITALIAN INSTITUTIONS OTHER TECHNICAL SCHOOLS:**

- INDUSTRY AND HEALTHCARE PARTNERS:
- COLLABORATE WITH HEALTHCARE PROVIDERS, OTHER NGOS.
- ❖ DEFINE DRONE SPECIFICATIONS THAT MEET REAL MEDICAL NEEDS IN RAPID DELIVERY OF VACCINES, BLOOD, OR MEDICINES FIELD.
- ❖ PILOT THE DRONES IN CONTROLLED ENVIRONMENTS AND URBAN-RURAL SETTINGS.
- ❖ ENSURE REGULATORY COMPLIANCE AND SMOOTH INTEGRATION WITH EXISTING HEALTHCARE LOGISTICS.







PROJECT OVERVIEW – RE-FACTORY INITIATIVE

- •Establish a state-of-the-art manufacturing facility specializing in drones & disabled cars
- •Deliver innovative aerial solutions to support medical logistics and emergency services
- •Enhance rapid response capabilities in remote and underserved areas



Technological Infrastructure and Manufacturing Capabilities

- •Develop a smart production line tailored to advanced drone assembly
- •Incorporate automated systems, quality control labs, and testing facilities
- •Implement robust research and development platforms for continuous innovation







- •Invest in R&D to create versatile, highperformance drones
- •Establish partnerships with academic institutions, tech innovators, and healthcare organizations
- •Focus on scalable solutions that adapt to evolving humanitarian needs





•PHASE 1 – FEASIBILITY STUDY AND CONCEPT DESIGN:

- CONDUCT MARKET RESEARCH AND FEASIBILITY STUDIES.
- HOLD WORKSHOPS WITH ACADEMIC AND INDUSTRY PARTNERS.
- DEVELOP INITIAL PROTOTYPES AND CONCEPT VALIDATION.

•PHASE 2 – DEVELOPMENT AND PROTOTYPING:

- FORM SPECIALIZED RESEARCH TEAMS FROM PARTNER INSTITUTIONS.
- BUILD PROTOTYPES INCORPORATING FEEDBACK FROM HEALTHCARE PROFESSIONALS.
- INITIATE PILOT PROJECTS IN SELECTED REGIONS.

PHASE 3 – ETHICAL CERTIFICATION AND REGULATORY APPROVAL:

- DEVELOP AND ADHERE TO ETHICAL CERTIFICATION STANDARDS.
- ENGAGE WITH LOCAL AND NATIONAL REGULATORY BODIES FOR DRONE OPERATION APPROVAL.
- SET UP PILOT TESTING IN COMPLIANCE WITH SAFETY AND ETHICAL GUIDELINES.

•PHASE 4 – FULL-SCALE PRODUCTION AND DEPLOYMENT:

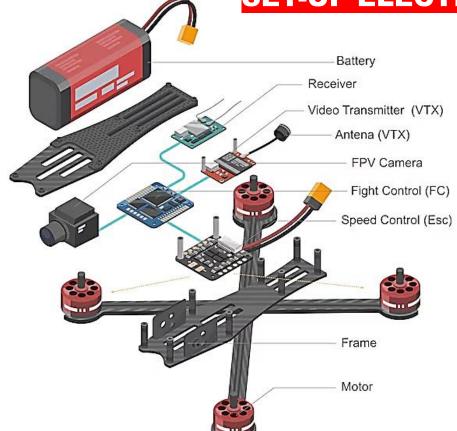
- SCALE UP MANUFACTURING AT THE ETHICAL FACTORY.
- LAUNCH A REGIONAL DEPLOYMENT PROGRAM.
- CONTINUOUSLY MONITOR PERFORMANCE AND IMPACT, REFINING PROCESSES BASED ON REAL-WORLD DATA.

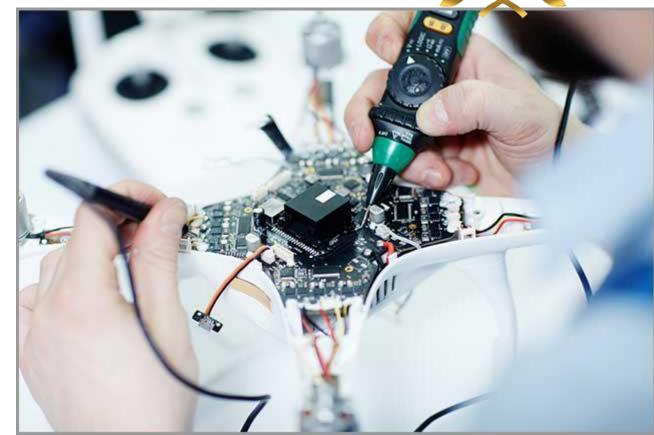




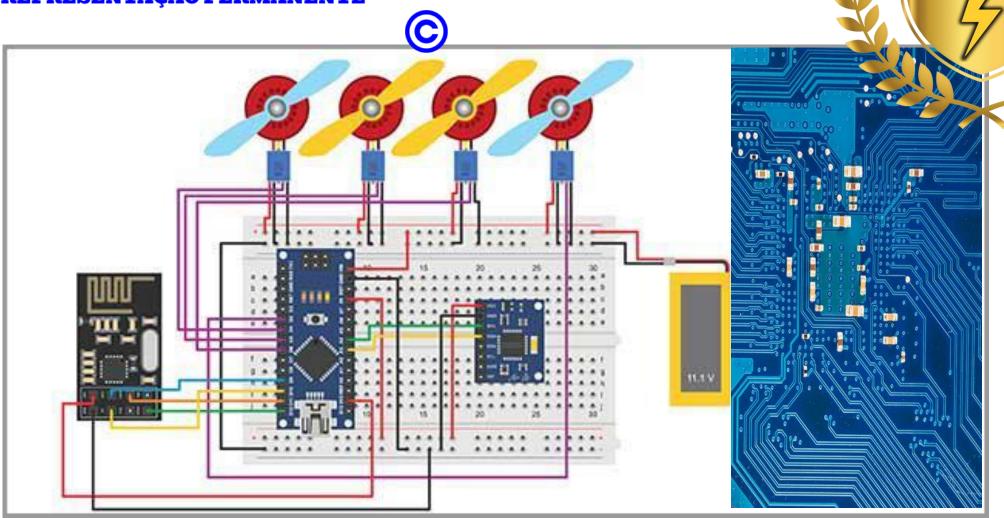










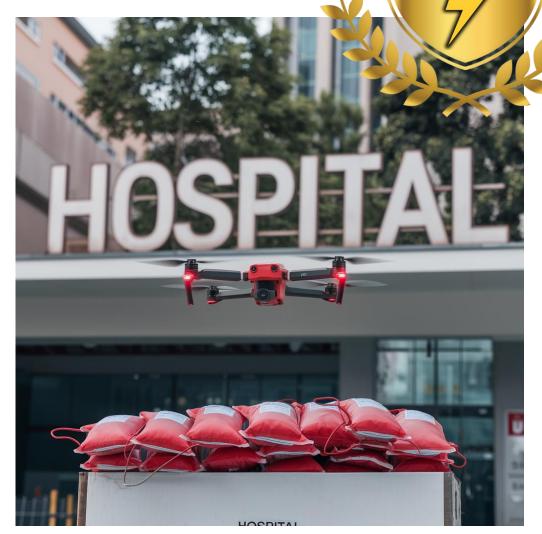


FDIA

FUNDACIÓN DEMOCRÁTICA ITALO AMERICANA, FDIA -REPRESENTAÇÃO PERMANENTE



SPIN-OFF A ETHICAL FACTORY
IN COOPERATION WITH
ITALIAN UNIVERSITIES &
SCHOOLS FOR CREATE
HEALTHCARE DRONES





FUNDACIÓN DEMOCRÁTICA ITALO AMERICANA, FDIA -REPRESENTAÇÃO PERMANENTE



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Communications systems

For a drone carrying medical supplies, a reliable telemetry link (often in the 2.4 GHz or 5.8 GHz band) and/or cellular networks (4G/5G) for real-time monitoring is essential.

Some have an integrated video or telemetry transmission system, so that an operator can constantly monitor position, altitude, battery status and other parameters.

Safety systems

Drones in this category can integrate emergency parachutes, navigation lights, audible warnings and auto-return systems (Return to Home) in the event of signal loss or low battery.

Redundancy of components (dual IMU, dual GPS, multiple engines) is often present to increase reliability in critical missions.





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SPIN-OFF A ETHICAL FACTORY IN COOPERATION WITH ITALIAN UNIVERSITIES & SCHOOLS FOR CREATE HEALTHCARE DRONES

High-capacity battery

These drones use LiPo (or sometimes Li-ion) batteries with many ampere-hours, to provide the power needed for takeoff and flight with a heavy payload.

Flight time varies based on the total weight (drone + payload), but typically ranges between 15 and 30 minutes for rapid delivery missions.

Flight Controller (FC) and navigation systems

The electronic heart is an advanced flight controller, equipped with IMU sensors (accelerometers, gyroscopes), barometer, GPS and often magnetic compass to stabilize flight and maintain course.

Professional models integrate multiple positioning systems (GPS/GLONASS/RTK) for greater precision, as well as proximity sensors (Lidar, radar or stereoscopic cameras) to avoid obstacles.



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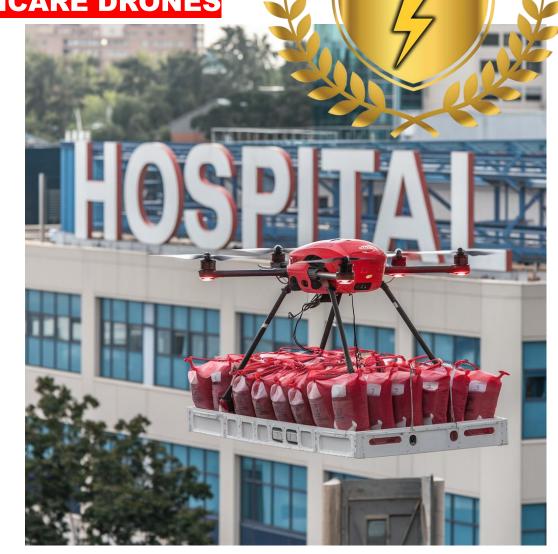
SPIN-OFF A ETHICAL FACTORY IN COOPERATION WITH ITALIAN UNIVERSITIES & SCHOOLS FOR CREATE HEALTHCARE DRONES

ROBUST FRAME

The frame is usually made of composite materials (carbon fiber or similar) to provide a good strength-to-weight ratio. The landing gear or lower supports are designed to support the weight of the payload (in this case, medical bags or containers) and to cushion the impact during takeoff/landing.

MOTORS AND PROPELLERS

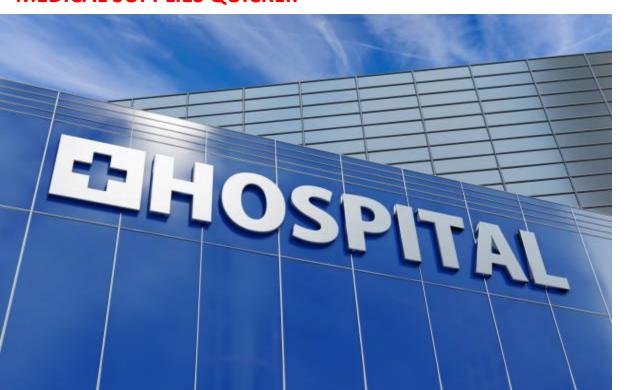
To lift heavy loads, transport drones use high-power brushless motors, combined with large-diameter propellers. The number of motors (4, 6 or 8) depends on the need for redundancy and the load capacity: a hexacopter (6 motors) or an octocopter (8 motors) is more stable and safe than a quadcopter, especially in the event of an engine failure. From the image it looks like a quadcopter or a hexacopter, but in any case we are talking about a multirotor capable of managing a considerable medical load.





FUNDACIÓN DEMOCRÁTICA ITALO AMERICANA, FDIA -REPRESENTAÇÃO PERMANENTE

IT USES PROFESSIONAL FLIGHT CONTROLLER,
POWERFUL MOTORS, HIGH-CAPACITY BATTERY AND
ADVANCED NAVIGATION SYSTEM
(GPS/IMU/BAROMETER) TO FLY SAFELY AND DELIVER
MEDICAL SUPPLIES QUICKLY.



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Specialized Mobility Solutions for Diverse Needs

- •Development and commercialization of a dedicated vehicle designed for indoor and outdoor mobility
- •Tailored for users with various disabilities, offering enhanced accessibility and comfort
- •The product is positioned as a breakthrough solution in shared mobility services

















- •Wide-opening doors or sliding mechanisms for easy wheelchair entry.
- •Adjustable, automated seats for effortless transfer from wheelchair to driver's seat.
- •Low-floor architecture for comfortable boarding and disembarking.
- •Cutting-Edge Technology: Employ electric propulsion, modular design, and advanced ADAS to stay future-ready.







ADVANCED MOBILITY TECHNOLOGIES

- Integration of autonomous driving features across diverse vehicle types
- Emphasis on advanced driver-assistance systems (ADAS) and full connectivity
- •Adaptive cruise control, lane-keep assist, and collision avoidance for safer journeys.





EMPOWERING SUSTAINABLE MOBILITY IN EDUCATION

- •In collaboration with others automotive companies, the "Carbon Zero" initiative is set to roll out educational activities in sustainable mobility
- •The program provides both training modules and hands-on resources:
 - Overview of the electric vehicle market and production processes
 - Design and functional integration of vehicles in urban & rural settings
 - In-depth modules on electrical systems, battery technology, maintenance, logistics, fleet management, and infrastructure for charging stations
- •EXCLUSIVE PARTNERSHIPS ENSURE THAT SCHOOLS WILL RECEIVE RENTAL KITS COMPRISING ELECTRIC SCOOTERS, CHARGING POINTS.









RE-FACTORY – THE NEW SUSTAINABLE MOBILITY CENTER

- •Also acquisition and transformation of an existing facility for vehicle refurbishment
- •Specialization in the regeneration of electric vehicle traction batteries and the reconditioning of powertrain systems
- •Establishment of a comprehensive plant focused on circular economy principles and connected mobility services









ADVANCED DRIVER ASSISTANCE AND CONNECTIVITY

- •The collaboration covers automotive & technological products development, integration of autonomous systems, and leverages a globally recognized future brand identity to create.
- •The innovative solution is designed to complement existing shared mobility fleets by:
 - Enhancing urban transportation for disabled people, options for users with mobility challenges
 - Incorporating proprietary safety and connectivity features for improved user experience



INDUSTRIAL RESEARCH POLE HUB FOR SUSTAINABLE MOBILITY

•FOCUSED ON INNOVATIVE SOLUTIONS IN SUSTAINABLE TRANSPORTATION

Investment and Operational Strategy

- •The project is structured to create a multifunctional center that supports further development projects and meets market demands
- •Addresses the needs of major automotive and mobility service providers across the production and post-sale spectrum
- An integrated approach involving:
 - Re-Trofit Center: Refurbishing used vehicles and producing special series
 - Re-Energy Center: Repairing and innovating battery applications for second-life energy storage
 - Re-Cycle Center: Overseeing resource recycling and developing advanced transmission systems
 - Re-Start Center: Offering training and research for circular economy initiatives and advanced vehicle adaptations







HI-TECH SOLDERING STATION











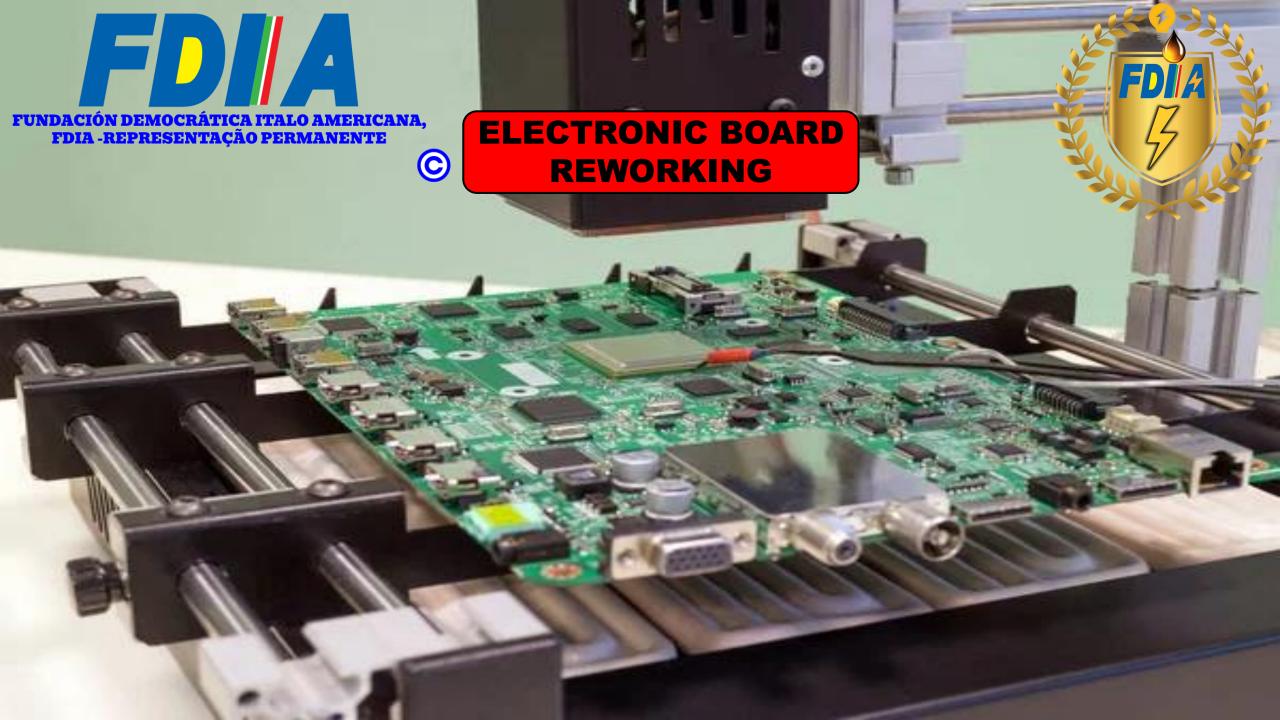
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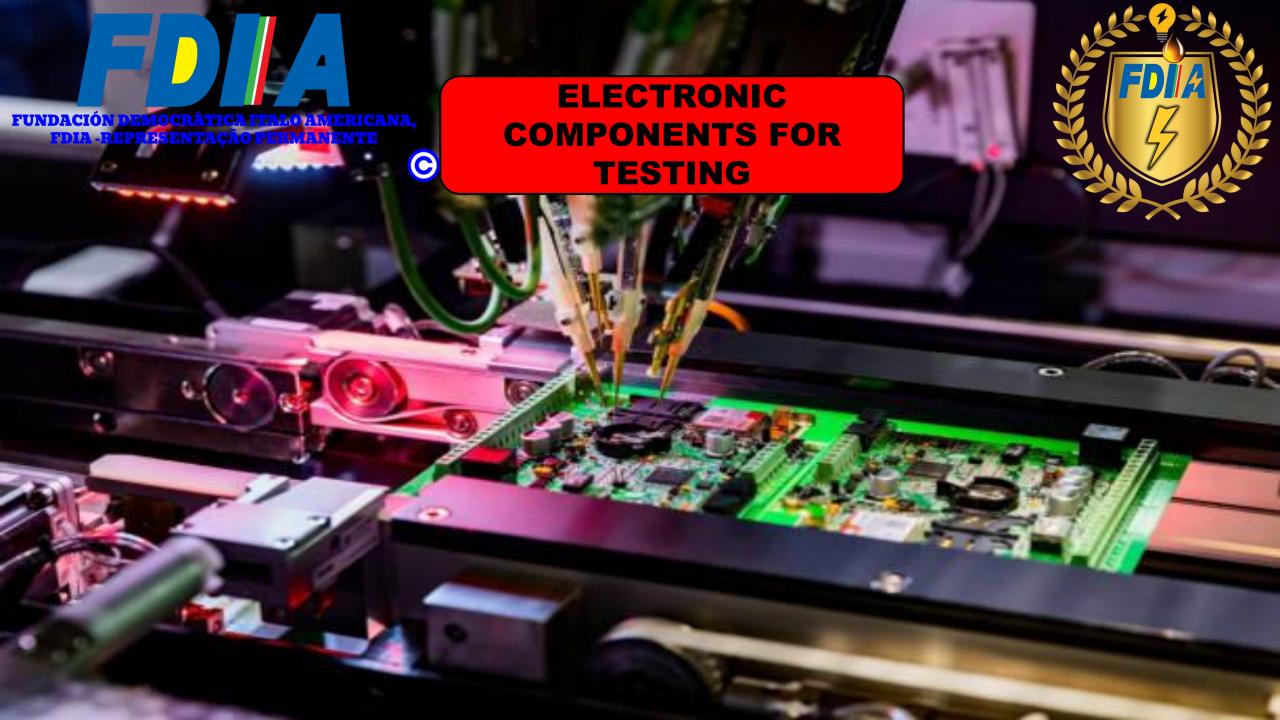




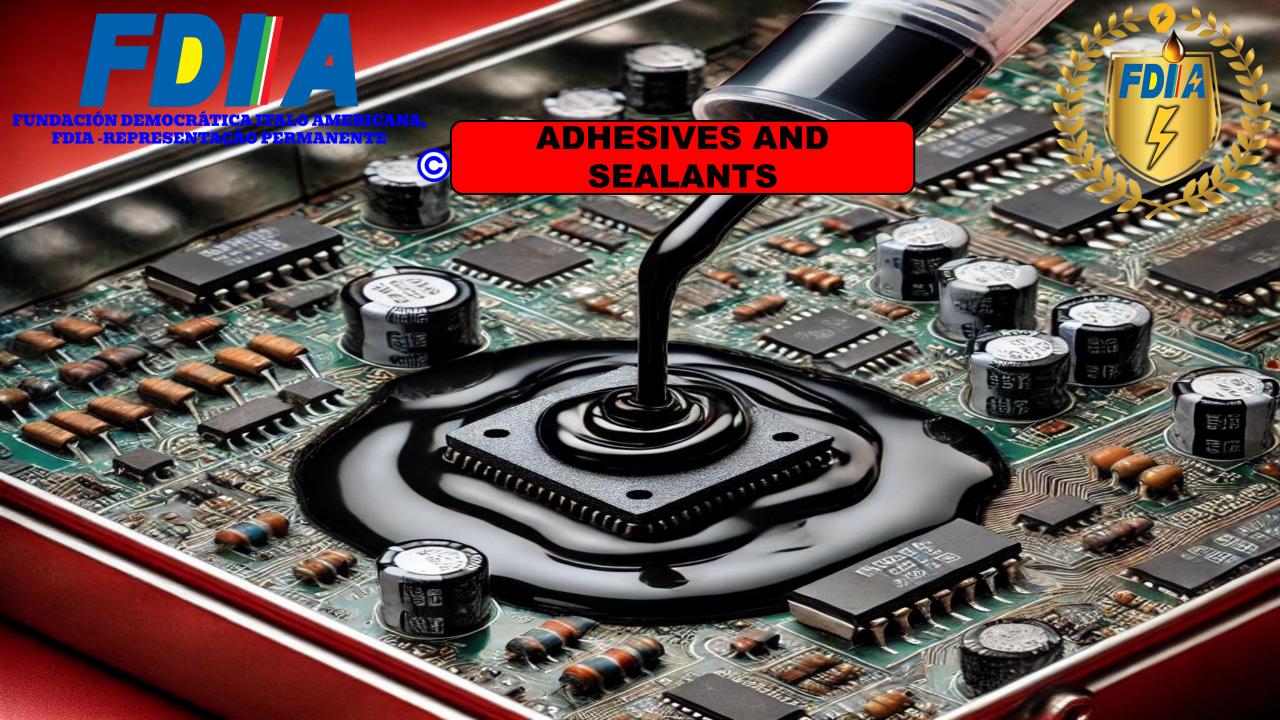


















INDUSTRIAL INNOVATION PURPOSE:

TO PRESENT AN INTEGRATED SUITE OF **EQUIPMENT AND SOLUTIONS DESIGNED** TO SUPPORT THE MANUFACTURING AND **MAINTENANCE OF SENSITIVE ELECTRONIC COMPONENTS.FOCUS AREAS:SAFETY & ESD MANAGEMENT** LABORATORY INFRASTRUCTURE **SOLDERING & REWORK PROCESSES ASSEMBLY TOOLS & CONSUMABLE STRAINING AND SUPPORT SERVICES FOR ETHICAL PURPOSE IN FACTORY SUPPLY** CHAIN.







•ESD Products:

 Apparel, furniture, stationery, and packaging designed for safe handling of electrostatic-sensitive components.

•Cleanroom Solutions:

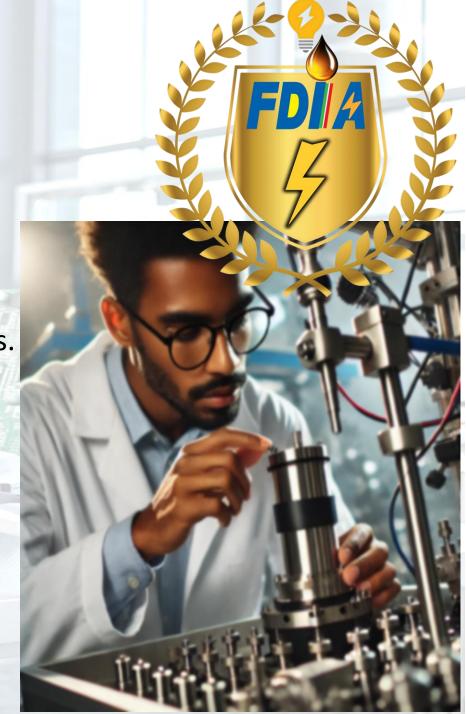
 Complete systems for maintaining a sterile, dust- and contaminant-free work environment.

•Personal Protective Equipment:

Devices ensuring operator safety during critical procedures.

•Liquid Containment Systems:

Spill kits, barriers, and other systems to manage accidental liquid releases.







Laboratory Infrastructure & Instrumentation

•Lab Furniture & Layout:

 Solutions for configuring electronics laboratories to optimize workflow and safety.

•Fume Extraction Systems:

 Specialized equipment for removing soldering fumes and ensuring a safe working environment.

Vision Systems:

 Innovative microscopes and ergonomic observation tools for precise inspections.

General Instrumentation:

 Precision scales, pliers, and testers for accurate measurements and quality control.





Soldering & Rework Equipment



Professional-grade manual soldering stations for precision work.

•Hot-Air Stations:

 Systems designed for controlled soldering and rework processes.

•Desoldering Tools:

 Equipment (e.g., desoldering pumps and tips) for effective removal of solder.

•Rework Equipment:

 Tools for repairing and modifying electronic boards, ensuring circuit integrity.







Assembly and Fastening Solutions

Industrial Screwdrivers:

 Tools with torque control for assembling and securing components.

Semi-Automatic Fastening Equipment:

 Feeding systems and inserts designed to streamline assembly processes.





Consumables and Auxiliary Equipment

- •Soldering Accessories:
 - Sponges, brushes, bottles, tapes, lubricants, and replacement parts.
- Soldering Materials:
 - Solder, wires, fluxes, conformal coatings, and other essential consumables.
- Adhesives & Sealants:
 - High-resistance industrial-grade products for bonding and sealing.
- •Fluid Dosing Systems:
 - Precision systems for dispensing liquids and viscous materials.
- •Packaging Equipment:
 - Tools (e.g., moisteners, precision cutters, safety blades) to ensure compliant and effective packaging.









Training and Support Services

- Electronics Training Courses:
 - Professional programs in industrial electronics, telecommunications, and automotive applications.
- Design & Testing Laboratory:
 - A dedicated facility for the design, qualification, and durability testing of electronic assemblies.











SPACES EQUIPPED FOR THE PRODUCTION OF ELECTRONIC COMPONENTS AND ADVANCED DEVICES, AS WELL AS LABORATORIES DEDICATED TO RESEARCH AND DEVELOPMENT.

WAREHOUSE AND LOGISTICS:

STRUCTURES FOR THE MANAGEMENT AND STORAGE OF MATERIALS AND FINISHED PRODUCTS, WITH AUTOMATION SYSTEMS FOR INTELLIGENT AND INTEGRATED LOGISTICS.

SPACES FOR TRAINING AND INNOVATION:

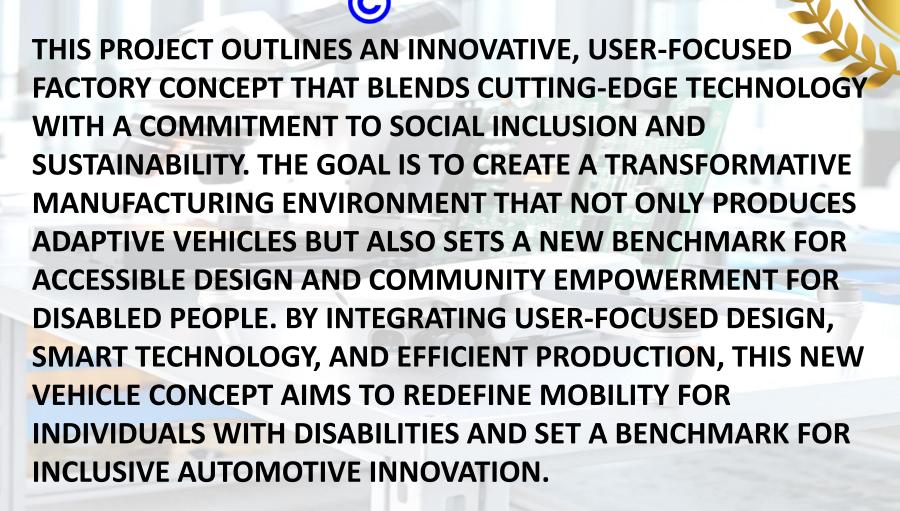
MEETING ROOMS, CLASSROOMS AND TRAINING CENTERS FOR SPECIALIZED COURSES AND WORKSHOPS, AIMED AT TRANSFERRING SKILLS AND PROFESSIONAL DEVELOPMENT.

SERVICE AND SUSTAINABILITY AREAS:

INFRASTRUCTURES FOR WASTE MANAGEMENT, RENEWABLE ENERGY SYSTEMS AND SPACES DEDICATED TO WORKER WELL-BEING, IN LINE WITH THE HIGHEST STANDARDS OF ENVIRONMENTAL AND SOCIAL SUSTAINABILITY.









OUR ASSOCIATION IT IS A COMMITTED WARDIAN OF HUMAN RIGHTS AND DIGNITY IN THE WORKPLACE. AS WE PREPARE TO LAUNCH OUR FUTURE SPIN-OFF FACTORY, WE REAFFIRM OUR UNWAVERING COMMITMENT TO THE RIGHTS AND WELL-BEING OF EVERY WORKER.

IN OUR VISION FOR A SUSTAINABLE, INNOVATIVE FACTORY, ETHICAL PRINCIPLES FORM THE CORNERSTONE OF OUR OPERATIONS. WE ARE DEDICATED TO ENSURING THAT EVERY INDIVIDUAL WORKING WITHIN OUR FACILITIES IS TREATED WITH RESPECT, FAIRNESS, AND DIGNITY. OUR MISSION IS TO CREATE A WORK ENVIRONMENT THAT NOT ONLY FOSTERS INNOVATION AND EFFICIENCY BUT ALSO CHAMPIONS THE FUNDAMENTAL HUMAN RIGHTS OF OUR WORKFORCE.

THIS MEANS ENFORCING SAFE WORKING CONDITIONS, GUARANTEEING FAIR WAGES, AND OFFERING CONTINUOUS OPPORTUNITIES FOR PROFESSIONAL GROWTH. IT MEANS NURTURING A CULTURE OF TRANSPARENCY AND ACCOUNTABILITY WHERE EVERY EMPLOYEE'S VOICE IS HEARD AND VALUED. AS AN ASSOCIATION, WE WILL WORK TIRELESSLY TO ENSURE THAT OUR FACTORY IS A MODEL OF ETHICAL PRACTICE, WHERE THE RIGHTS OF WORKERS ARE PROTECTED, AND WHERE THEIR CONTRIBUTIONS ARE RECOGNIZED AS THE BACKBONE OF OUR SUCCESS.









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THIS FEASIBILITY STUDY MATERIAL & HUMANITARIAN PROJECT IT IS FOR THE PERSONAL USE OF THE PROJECT DEVELOPER: PHARMA1HUMANITAS HOLDINGS LT AND FUNDACIÓN DEMOCRÁTICA ITALO AMERICANA, FDIA - REPRESENTAÇÃO PERMANENTE REPRESENTED BY PRESIDENT LAWYER VINCENZO CORTEGIANI, GENERAL DIRECTOR DR. FABIO ROSATI AND IS COVERED BY COPYRIGHT. REPRODUCTION OR REUSE, EVEN PARTIAL, IS STRICTLY PROHIBITED, PURSUANT TO AND FOR THE PURPOSES OF THE COPYRIGHT LAW (L. 22.04.1941/N. 633). ANY REPRODUCTION, MODIFICATION, DISTRIBUTION, PUBLICATION OR USE, IN WHOLE OR IN PART, IN ANY FORM AND BY ANY MEANS, IS PROHIBITED WITHOUT THE WRITTEN CONSENT OF THE AUTHORS PRESENT IN THIS DOCUMENT

SUPPLIER/STARTUP INCUBATOR

IT IS REPRESENTED BY PHARMA1HUMANITAS HOLDINGS **LTD**



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Email:pharma1humanitas@gmail.com

PROJECT OWNER/PROJECT DEVELOPER

FUNDACIÓN DEMOCRÁTICA ITALO AMERICANA, FDIA -REPRESENTAÇÃO PERMANENTE REPRESENTED BY: PRESIDENT: LAWYER VINCENZO CORTEGIANI **GENERAL DIRECTOR: DR. FABIO ROSATI,**

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Website: www.fdiangopermanente.pt/index.html **Projects & videos:**www.fdiangopermanente.pt/download.html

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