



tech4you
ECOSYSTEM

INNOVATION PORTFOLIO 2025

22 DeepTech Prototypes
Sustainability & Circular Economy



ECOMONDO
The green technology expo.

Stand T4Y B6-113 5-8 November





ABOUT TECH4YOU ECOSYSTEM

Tech4You Ecosystem is the DeepTech innovation network funded by Italian PNRR (National Recovery Plan) for Calabria and Basilicata regions. Our mission is to accelerate technology transfer from research laboratories to market, connecting universities, research centers, enterprises, and territory.

We present 22 validated prototypes ready for commercial partnerships, licensing agreements, or co-development opportunities. All technologies are scientifically validated, IP-protected (patents filed/pending), and supported by expert inventor teams available for technical due diligence.

INNOVATION PORTFOLIO - SUMMARY TABLE

	Impact Area	Prototypes	Count
1>	Water Treatment & Purification	AquaPure, SolarMem, BLUEHORIZON	3
2>	Marine & BLUE Technologies	BlueNet, BlueEnergy Tools, CuBoat, Boa Skeleton, CORA-BOT, EcoReef	6
3>	Climate Risk & Territorial Resilience	CAPTURE, Hypes Piene, FiTipiC APLAND, Piattaforma Phygital	5
4>	Circular Economy, Waste Recycling & Energy Optimization	REBOOT-Li, AI ENERGY OPTIMIZER, T4Y_DIGITAL_HUB	3
5>	Healthcare, Wellness & Nutraceuticals	Edipo, Weepie, Wellness Wearable, WellFood Box, WELLSKIN	5
	TOTAL		22

AREA 1

WATER TREATMENT & PURIFICATION

*Advanced solutions
for water purification,
wastewater recycling,
and autonomous off-grid
treatment systems*

AQUAPURE

AquaPure is an innovative semi-industrial plant for the purification and recycling of waste water. With an advanced configuration of five independent filter columns and smart automatic controls, it represents the most complete and economical solution for tertiary water treatment in the industrial and municipal market. Core Functions: - Advanced wastewater purification through filtration and ultrafiltration - Intelligent management of five filter columns with customizable materials - Automatic monitoring of water quality and pressure control - Remote control system for management and predictive diagnostics Enabling Technologies: - Multi-Column System: 5 independent filter columns (vs 1 market standard) for flexibility and superior capacity - Automatic Controls: monitoring real-time pressure (max 5 atm) and quality of the water produced - IoT and Remote Management: complete remote control platform with predictive diagnostics - Optimized Tertiary Process: post-biological treatment with advanced filtration and ultrafiltration ---

SOLARMEM

SolarMem is the first completely autonomous mobile water treatment system that integrates membrane technology and self-produced solar energy. Compact, transportable and 100% off-grid, it removes pollutants from source water without depending on the electricity grid or external infrastructure, bringing drinking water wherever it is needed: remote areas, emergencies, boats and isolated communities. Core Functions: - Source water purification with membrane technology for selective pollutant removal - 100% self-produced solar energy power supply with integrated photovoltaic panels - Compact and transportable mobile system for rapid installation in any location - Complete off-grid operation with total operational autonomy without external infrastructure Enabling Technologies: - Advanced Membrane Technology: selective filtration for pollutant removal and production drinking water on-site - Integrated Photovoltaic System: solar panels with on-site energy production for total energy independence - Self-Contained Compact Design: transportable structure with small footprint and quick installation - Energy Accumulation System: storage for night/cloud operational continuity and optimized energy management ---

Developed by: DeltaMem (affiliazione suggerita da dominio email)
Inventors: Aldo Visciglia

BOA_SKELETON

Boa Skeleton is an innovative floating platform specialized in the sampling and monitoring of microplastics and nanoplastics in the marine environment. With a non-invasive approach and high-precision ex situ analysis in the laboratory, it provides reliable data on the quantity and distribution of plastic particles, supporting scientific research and sustainability policies against marine pollution. Core Functions: - Systematic non-invasive sampling of microplastics and nanoplastics in marine waters - High precision ex situ analysis in the laboratory for quantification and characterization of plastic particles - Adaptable modular structure for integration of different sensors and components according to research needs - Reduction of impact on ecosystems and marine fauna during sampling operations Enabling Technologies: - Microplastics/Nanoplastics Sampling System: sample collection for ex situ analysis with high precision - Modular Floating Platform: adaptable structure for customized configurations and flexible deployment - Ex Situ Analysis Technologies: high precision laboratory analysis for particle quantification and characterization - Non-Invasive Sampling Systems: technologies that minimize impact on marine ecosystems during collection ---

Developed by: CNR, MARIGENTECH SRL, GEKO SPA, UNICAL
Inventors: Teresa Poerio (CNR), Alberto Figoli (CNR), Mario Petraglia, Ana Marta Lasheras, Vincenza Calabrò

AREA 2 MARINE & BLUE TECHNOLOGIES

*Underwater operations,
ocean monitoring, coastal
protection, marine
biodiversity conservation*

BLUENET

BlueNet is the first comprehensive underwater wireless network that integrates continuous environmental monitoring and acoustic localization of underwater assets. Thanks to intelligent sensors, acoustic communication and cloud platform, it provides real-time georeferenced data to know not only what is happening in the marine environment, but also where exactly. Core functions: - Continuous monitoring of environmental parameters (pH, temperature, dissolved oxygen, salinity) without the need for recoveries - Precise acoustic localization of ROVs, UUVs and divers via trilateration - Real-time data transmission from underwater nodes to surface buoys to the cloud - Automatic alarm system and early warning for critical environmental issues Enabling Technologies: - Underwater Wireless Sensor Network (UWSN): distributed multi-node network with adaptive mesh topology - Acoustic Communication: acoustic modems for reliable node-to-gateway transmission in an underwater environment - Acoustic Positioning: mobile buoys generating signals with trilateration and filtering algorithms for precise localization - Cloud Platform: data aggregation, real-time remote access, historical analysis and automatic alarm system ---

BLUEENERGY_TOOLS

BlueEnergy Tools is a compact and innovative modular system for underwater operations on marine infrastructures and submerged cultural assets. It combines controlled cleaning, protective treatment application and exploratory sampling functions in a single versatile platform, revolutionizing the efficiency and safety of underwater missions. Core Functions: - Precision cleaning with brush with fine control of speed and torque for delicate surfaces - Controlled application of protective and consolidating agents with interchangeable cartridges and precise dosage - Micro-coring and exploratory sampling integrated in the same mission - Compatibility with ROV (Remotely Operated Vehicle) for safe remote operations Enabling Technologies: - Modular System Quick-Change: rapid change of tools and cartridges to maximize operational efficiency - Fine Control: precise management of speed, torque and pressure on delicate surfaces - Specialized Underwater Hardware: ergonomic design resistant to the marine environment for expert operators - Digital Traceability: complete documentation system of materials, batches and interventions carried out ---

Developed by: Università della Calabria - DIMEG

Inventors: Loris Barbieri, Alessandro Gallo

CUBOAT

CuBoat is an innovative floating platform that revolutionizes the monitoring of marine water quality with a non-invasive approach. By integrating multiparametric probes for real-time measurement of chemical and physical parameters, it guarantees continuous high-frequency data with modularity and superior operational autonomy for scientific research and protection of marine ecosystems. Core Functions: - High frequency in situ monitoring of chemical and physical parameters of marine waters in real time - Continuous data acquisition for reliable information both in the short term and long term - Non-invasive approach that reduces impact on ecosystems and marine fauna vs traditional sampling - Modular system adaptable for integrating different sensors according to specific needs Enabling Technologies: - Multiparametric probes: real time measurement chemical/physical parameters of sea water with high accuracy - Modular Floating Platform: adaptable structure for integration of different sensors and customized configurations - In Situ Monitoring Systems: continuous high frequency data acquisition for reliable time series - IoT and Advanced Sensors: collection and transmission of environmental data with marine communication technologies ---

Developed by: Università della Calabria

Inventors: Amerigo Beneduci, Mario Petraglia, Vincenza Calabrò

CORA-BOT

CORA-BOT is the first ROV in the world specialized in minimally invasive and standardized sampling of coral, a priority habitat of the EU Biodiversity Strategy 2030. It eliminates the risks of deep technical diving, guarantees superior scientific quality of samples and repeatable protocols for the conservation of essential marine ecosystems. Core Functions: - Controlled robotic coring of the coral at great depth without divers - Active control of the extraction process to preserve the integrity of the core - Complete traceability of sampling parameters with georeferencing and metadata - Repeatable standardized protocol for scientific comparability between sites and periods Enabling Technologies: - Specialized Observer Class ROV: robotic platform for operations at great depths with integrated corer - Robotic Core Drilling System: precision mechanics with force/pressure control and sensorial feedback - Digital Traceability: parameter recording, sample georeferencing and complete video/photographic documentation - Protocol Standardization: certified procedures for scientific quality assurance and data comparability ---

Developed by: Università della Calabria - Biologia/DIMEG

Inventors: Elvira Brunelli, Adriano Guido, Loris Barbieri, Alessandro Gallo

ECOREEF

EcoReef is an innovative modular coastal protection system based on Nature-Based Solutions that integrates defense against erosion and regeneration of marine ecosystems. Made with large-scale 3D printing and circular biomaterials (mussel farming by-products), it overcomes the limits of traditional rigid barriers with lower environmental and maintenance costs. Core Functions: - Dissipation of wave energy for effective coastal protection against erosion - Stabilization of sediments for maintenance of the coastal profile and protection of beaches - Regeneration of marine biodiversity by encouraging the take root of benthic organisms - Modular system adaptable to different coastal contexts and ecological conditions Enabling Technologies: - Large-Scale 3D Printing (LDM): additive manufacturing with porosity and microroughness controlled to faithfully reproduce natural reef topographies - Circular Biomaterials: cement matrix with the addition of 15% mussel shell powder (CaCO₃-rich mussel farming by-product) - Biomimetic Design: complex geometries that reproduce biogenic surfaces to encourage organism colonization - Modular Architecture: flexible and scalable configuration for adaptation to specific contexts ---

Developed by: Università Mediterranea di Reggio Calabria - ABITaLab

Inventors: Consuelo Nava, Domenico Lucanto

BLUEHORIZON

BLUEHORIZON is a compact modular ROV (Remotely Operated Vehicle) that revolutionizes underwater operations by integrating high-quality 3D documentation and robotic manipulation capabilities into a single transportable platform. It eliminates the need to use different means between data acquisition and intervention, optimizing times and costs of marine missions. Core Functions: - High quality underwater 3D survey with scientific photogrammetry - Hybrid optical/acoustic vision to operate even in murky waters and low visibility - Integrated robotic arm with interchangeable end-effector for manipulation and sampling - Plug-and-play modular system for quick configurations between different missions Enabling Technologies: - Modular ROV Platform: payload compartment with standardized electrical and mechanical interfaces in a compact format (700×650×575mm) - Hybrid Vision System: scientific cameras, sonar imaging and multibeam synchronized for coherent datasets - Robotic Manipulator Arm: gripping and sampling capacity without changing medium - Adaptive Interface: configurable for different levels of operator experience, ideal for mixed teams ---

Developed by: Università della Calabria - DIMEG

Inventors: Loris Barbieri, Alessandro Gallo

AREA 3

CLIMATE RISK & TERRITORIAL RESILIENCE

*Climate adaptation,
hydrogeological risks
management, urban
and territorial resilience*

CAPTURE

CAPTURE is the first integrated digital platform that combines artificial intelligence, urban digital twins and a physical climate intelligence chamber for cities to adapt to climate change. It provides local administrators with quantitative data-based decision-making tools to plan resilient cities and reduce territorial vulnerability. Core Functions: - Simulation of multi-scale urban climate scenarios (from building to entire city) with high accuracy - Predictive analyzes with AI and Generative AI to identify territorial vulnerabilities - Real-time physical validation via Climate Intelligence Chamber (CIC) - Data-driven decision support for Climate Adaptation Plans (CAP) Enabling Technologies: - Urban/Territorial Digital Twin: dynamic twin models of urban systems for scenario simulation - AI and Generative AI: predictive analysis and generation of multi-scale vulnerability scenarios - GIS and CFD: georeferenced spatial analysis and atmospheric flow simulation for urban microclimate - Climatic Intelligence Chamber (CIC): physical prototype for experimental validation of computational models ---

HYPES_PIENE

HYPES Piene is an advanced decision support system that revolutionizes flood risk prediction and management. Combining stochastic scenario generator, continuous hydrological models and geolocated mobile app for citizens, it provides reliable real-time forecasts and two-way communication to improve community safety and resilience. Core Functions: - Rapid river flow evolution forecast with immediate access to pre-calculated flood hydrographs - Generation of a wide range of scenarios considering meteorological uncertainties and initial hydrological status - Citizens' mobile app with advanced geolocation to identify devices in alert areas - Bidirectional operator-population communication with sending feedback and interactive messages Enabling Technologies: - Rainfall-Runoff Database Specific: built for the Crati river basin with local hydrological characteristics - Stochastic Generator: rainfall and temperature scenarios for complete consideration of forecast uncertainties - Continuous Hydrological Model: simulation of soil humidity and runoff conditions for reliable analysis of basin response - Geolocalised Mobile App: direct integration with platform for interactive information exchange and precise alerting ---

Developed by: Partnership CNR-IRPI e eway-solutions

Inventors: Stefania Camici, Marco Dionigi (CNR-IRPI), Pasquale Iaquina (eway-solutions)

FILTIPIC_APLAND

FilTipiC_APLAND is the first collaborative digital platform that integrates research, governance and citizen participation for the sustainable management of landslide risk. With a circular approach and virtual on-site laboratories (LabSit), it connects citizens, technicians, researchers and decision-makers to optimize resources, generate knowledge and increase the resilience of communities. Core functions: - Multi-source data integration (historical, geological, geotechnical, satellite, socioeconomic) in a single container - Multi-scale and multi-temporal analysis with AI convergence, machine learning and numerical stability models - Georeferenced virtual on-site laboratories (LabSit) for studying large, medium and small scale landslides - Adaptive communication for different users: from citizens (awareness) to researchers (innovation) Enabling Technologies: - Multi-User Virtual Platform: collaborative cloud environment with adaptive interfaces for levels of competence from citizen to researcher - LabSit (On-Site Laboratories): georeferenced virtual laboratories customizable for specific landslide sites - Methodological Convergence: geomatic integration, geostatistics, AI/machine learning and analytical/numerical models for slope stability - Integrated Databases: multi-source repository with complete metadata and Specific IT Platforms (PIS) for different purposes ---

Developed by: Partnership multi-istituzionale (9 enti): CNR, UNIRC, UNICAL, Bidata, UNISA, UNINA, Campania Sistemi, Lasting Dynamics, Lascò

Inventors: Giovanni Gullà, Roberto Coscarelli, Nicola Moraci, Andrea della Peruta (+ 10 collaboratori)

PIATTAFORMA_PHYGITAL

Phygital Platform is the first digital ecosystem that integrates physical and digital to transform scientific research into an operational tool for the management of built and natural heritage. It connects real laboratories (Structural Safety and Climate Scenarios) with user-profiled web-GIS interfaces to support PAs, professionals and citizens in territorial planning, multi-risk prevention and climate adaptation. Core functions: - Data integration from SSL (structural safety, vulnerability) and CSL (future climate scenarios) laboratories - Systemic visualization of the territory with interactive maps that correlate climate, structural vulnerability and risks - Advanced multi-stakeholder profiling: personalized content for PA, professionals, research and citizens - Decision Support System for dynamic co-design of sustainable regeneration interventions Enabling Technologies: - Integrated Web-GIS: geographic platform with structural, environmental and climatic data overlay for interactive space exploration - Phygital (Physical-Digital) Interface: double level that transfers knowledge from real laboratories to operational digital visualization - User-Profiled Profiling: adaptive system with interfaces customized by role (PA, technicians, citizens, research) - Integrated Predictive Models: climate simulations (CSL) + structural/vulnerability modeling (SSL) for holistic vision ---

Developed by: Università Mediterranea di Reggio Calabria - ABITAlab
Inventors: Consuelo Nava, Domenico Lucanto

BIOCUBE

BioCube is an innovative continuous air quality biomonitoring system that uses the *Tillandsia usneoides* plant as a natural bioindicator inside a portable controlled climate chamber. With passive monitoring 24/7 and costs reduced by over 80% compared to traditional stations, it enables widespread monitoring networks for ARPA, PA and industry, providing data compliant with European regulations for environmental compliance. Core functions: - 24/7 continuous passive biomonitoring with natural accumulation of pollutants (heavy metals, particulate matter, VOC) through leaf trichomes - Portable controlled climatic chamber (2L, <10kg) with PID system for standardization of plant physiological conditions (18-30°C, 60-80% RH) - Bioaccumulation conversion into mass/m³ concentrations compliant with the Directive 2008/50/EC for direct regulatory compliance - Universal-access IoT web interface for remote control, real-time intelligent dashboard and CSV data export Enabling Technologies: - Continuous Passive Biomonitoring: *Tillandsia usneoides* as a living filter accumulates pollutants 24/7 providing integrated exposure measurement without discontinuous operating cycles - PID Climate Control System: precise temperature control ±5°C and humidity ±3% RH to maintain biomonitor effectiveness regardless of external conditions (5-36°C) - Distributed IoT Architecture: multiplatform web interface, automatic firmware/UI synchronization, predictive alarms, no data loss during interruptions - Hybrid Energy System: mains/LiFePO₄ 100Ah/solar battery power supply with 48h autonomy and consumption 100W vs 500-2000W traditional stations ---

Developed by: Università della Calabria
Inventors: Lucio Lucadamo, Anna Corapi, Massimo Guccione, Francesco Lago, Diego Mazzei, Giuseppe Gencarelli, Stefano Rodinò, Elio Matteo Curcio

AREA 4

CIRCULAR ECONOMY, WASTE RECYCLING & ENERGY OPTIMIZATION

Battery recycling, circular materials, energy optimization, scalable business models

REBOOT-LI

REBAT is the first modular franchising solution that democratizes the recycling of lithium batteries, transforming a safety and cost problem into a territorial circular supply chain. With 150 ton/year "Factory-in-a-Box" micro-plants, AI for pre-sorting, digital passport and revenue-sharing model, it recovers >95% of critical metals (Li, Co, Ni) breaking down entry barriers for small and medium-sized WEEE operators. Core functions: - Modular self-contained micro-plant in 40 foot shelter with low-carbon dry process - Presorting with AI for automatic battery classification and throughput stabilization - Recovery >95% critical metals (Li, Ni, Co, Mn) with qualified anhydrous black mass - "Re-Charge Verified" digital passport for end-to-end traceability and compliance with EU Battery Regulation Enabling Technologies: - Lean Dry Process: optimized disassembly without solvents with reduction in fire risk and environmental impact - AI Presorting: artificial intelligence for pre-selection and automatic classification for battery chemistry/state - Digital Passport: complete traceability, composition data, recycled content, ready audits, automatic LCA reports - MES Cloud + AR Training: Manufacturing Execution System in cloud for remote assistance and augmented reality training ---

AI ENERGY OPTIMIZER

AI Energy Optimizer is an intelligent system that revolutionizes energy management in photovoltaic systems with storage. Thanks to artificial intelligence and advanced predictive models, it automatically optimizes the use of batteries and maximizes the self-consumption of the solar energy produced. Core Functions: - Accurate forecasting of photovoltaic production based on meteorological data - Intelligent optimization of storage battery management - Minimization of energy exchanges with the external electricity grid - Reduction of energy purchase costs Enabling Technologies: - Machine Learning: predictive algorithms for solar production and electricity consumption based on historical and local data - Answer Set Programming (ASP): advanced optimization with quick search for the optimal solution - Data Analytics: integration of historical, meteorological and local data for precise predictive analysis ---

Developed by: Università della Calabria
Inventors: Kristian Reale, Fabrizio Lo Scudo

T4Y_DIGITAL_HUB

T4Y Digital Hub is the modular enabling platform that accelerates territorial innovation by orchestrating services for the environment, energy, health and mobility. With cloud-native architecture, standard protocols and DevOps paradigm, it acts as a “TRL booster” quickly transforming prototypes into real solutions, supporting spin-offs and creating a digital ecosystem for environmental resilience and social innovation. Core functions: - Orchestration of multi-domain thematic services (environment, energy, smart farm, smart factory) with coherent integration - Multi-source data integration (IoT, satellite, open data, legacy) with automated processing and predictive analysis - Service Manager framework for configuring processing chains, product publication and catalog management - Digital twin for environmental simulation and early warning systems for real-time risk management Enabling Technologies: - Cloud-Native with Docker: containerization for flexible deployment, elastic scalability and reusable decoupled components - DevOps GitLab: versioning, CI/CD, DevOps paradigms for development speed and operational continuity - Standard Protocols: OGC, STAC, CSW for geospatial interoperability, data exchange and legacy systems integration - Services Orchestration: configurable processing chains for managing complex data flows and generating value-added products ---

Developed by: UNICAL e ENGINEERING Ingegneria Informatica SpA
Inventors: Alfredo Garro (UNICAL), Maurizio Cosmai, Giampaolo Pascali (ENGINEERING)

AREA 5

HEALTHCARE, WELLNESS & NUTRACEUTICALS

*Medical devices,
diagnostics, wellness
tourism, functional foods,
science-backed
nutraceuticals*

EDIPO

EDIPO (Electronic Device for the Evaluation of Diabetic POlineuropathy) is the first portable and wearable medical device that revolutionizes the diagnosis of diabetic neuropathy. It integrates multiple sensors, complete automation and artificial intelligence to transform a qualitative, operator-dependent and fragmented assessment into a quantitative, standardized test that can be performed in a few minutes by non-specialist personnel. Core Functions: - Automated and quantitative evaluation of diabetic neuropathy in a single session of a few minutes - Multiple acquisition of clinical parameters via integrated sensors with elimination of operator subjectivity - Predictive analysis with Machine Learning and AI on a cloud platform for neuropathy evolution - Accessible use by non-specialist personnel (GPs, pharmacies) for mass screening Enabling Technologies: - Device Multi-Sensor Wearable: ergonomic "foot rest" design with integrated sensors for quantitative parameter acquisition - Automation and Intelligent Guidance: automated execution of tests with operator guidance and standardized protocol - Mobile Control App: diagnostic session control panel with real-time results display - Cloud Platform with AI/ML: data processing with predictive algorithms, patient history archiving and analytics neuropathy evolution ---

WEEPIE

WEEPIE (WEearable Programmable device for compliance Enhancement) is the first integrated wearable system that revolutionizes pharmacological compliance by combining smart bracelet, smart dispenser, mobile app and web platform. Low energy, low cost and easily usable, it constantly monitors therapeutic adherence 24/7, reducing forgetfulness, avoidable hospitalizations and NHS spending. Core functions: - Wearable bracelet for discreet continuous monitoring 24/7 with low energy consumption - Programmable smart dispenser for automatic dispensing of medicines at pre-set times with alerts - Mobile app for therapy planning, intake alerts and compliance history viewing - Web platform with dashboard for doctors and caregivers for remote monitoring of multiple patients Enabling Technologies: - IoT System Integrated Healthcare: bracelet-dispenser-app-cloud connectivity with real-time synchronization - Innovative Sensors: detection of drug intake and monitoring of patient behavior - AI and Machine Learning: analysis of compliance patterns and prediction of therapeutic adherence for preventive interventions - Biomaterials: biocompatible materials in contact with the skin for safety and discreetness ---

Developed by: Biotechnomed SCARL
Inventors: Antonio Augimeri

WELNESS_WEARABLE

Wellness Wearable is the first intelligent wearable device that revolutionizes the Wellness Farm experience by planning and managing guests' activities with personalized strategies based on real biometric data. Transforms wellness tourism from a generic offer to data-driven tailor-made itineraries, increasing guest satisfaction, competitive differentiation and operational optimization of the facilities. Core Functions: - Continuous acquisition of guest biometric data with sensors integrated into the wearable device - Intelligent planning of personalized wellness activities based on real biometric profile - Data-driven guest experience management with dynamic adaptation of programs during the stay - Wellbeing analytics for managers with insights on activity effectiveness and offer optimization Enabling Technologies: - Wearable device: comfortable design for continuous monitoring of wellness parameters during wellness activities - Multiple Biometric Sensors: acquisition of health parameters in real time for guest profiling - AI and Machine Learning: data processing for strategy customization, pattern recognition of wellness status and activity recommendations - Integrated Management System: personalized schedule planning, coordination of farm activities and optimization of structure resources ---

Developed by: Biotechnomed SCARL
Inventors: Antonio Augimeri

WELLFOOD BOX

WellFood Box is the first complete line of 11 scientifically validated functional foods and nutraceuticals that transforms the prevention of chronic diseases (osteoporosis, sarcopenia, metabolic diseases) into a pleasant daily food experience. With 100% Calabrian raw materials (PDO bergamot, ancient grains, hazelnuts), a short sustainable supply chain and familiar formats (pasta, juices, spreads), it fills the nutritional gap of ageing. Core functions: - Prevention of osteoporosis with lycopene and polyphenols (tomato sauce, pomegranate-bergamot juices) - Prevention of sarcopenia with proteins and amino acids (protein pasta, whey cheese, nutraceuticals) - Prevention of metabolic diseases with antioxidants (bergamot jam, hazelnut cream, blueberry juice) - Gastrointestinal health with grains ancient Calabrians (functional pasta with fibre) Enabling Technologies: - Innovative Formulations: combination of traditional foods + bioactive molecules with high bioavailability (whey protein, potato proteins, essential amino acids) - Validated Bioactive Compounds: lycopene, polyphenols, natural antioxidants, vitamin D for scientifically proven effectiveness - Raw Materials Calabrian: DOP bergamot, pomegranate, hazelnuts, ancient grains, local tomatoes for short zero km supply chains - Scientific Evidence: formulation and validation based on reliable experimental data for safety and effectiveness ---

Developed by: Università Magna Graecia di Catanzaro (UNICZ)
Inventors: Arturo Pujia

WELLSKIN

WELLSKIN is the first dermocosmetic line that transforms citrus waste into scientifically validated natural products with high added value. With 4 formulations (day/night face creams, body cream, cushion spray) that recover bioactive compounds from peels, pulps and seeds, it demonstrates that circular economy, sustainability and high cosmetic performance can coexist with verified safety. Core functions: - Valorization of agri-food waste (peels, pulp, citrus seeds) rich in bioactive compounds transformed into premium ingredients - 4 complete dermocosmetic formulations (day, night, body face cream, cushion spray) with citrus extracts - Rigorous scientific validation with in vivo tests on healthy volunteers for safety and tolerability - Complete traceability of the supply chain from agricultural waste to finished cosmetic product Enabling Technologies: - Extraction of Natural Active Ingredients: technologies for extraction, purification and concentration of bioactive molecules from waste while preserving biological activity - Functional Dermocosmetic Formulations: proprietary qualitative-quantitative composition with high added value ingredients - Scientific Characterization: physico-chemical analysis, formulation stability and scientific quality control - In Vivo Test: validation on volunteers healthy for safety, tolerability and verified efficacy ---

Developed by: Università Magna Graecia di Catanzaro (UNICZ)
Inventors: Donatella Paolino

LET'S CONNECT AT ECOMONDO 2025

Visit our stand:
T4Y B6-113, Hall B
5-8 November 2025

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