

Horizon Europe Brokerage Event Cluster 6 Calls 2024

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# CL6 BEIA Expertise

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**BEIA Consult International** 







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**Topic(s) addressed:** HORIZON-CL6-2024-COMMUNITIES-01-1 - Unlock the potential of the New European Bauhaus in urban food system transformation

#### Other topics of interest:

- CALL BIODIVERSITY AND ECOSYSTEM SERVICES (HORIZON-CL6-2024-BIODIV-01)
  - HORIZON-CL6-2024-BIODIV-01-7: Reintroduction of landscape features in intensive agricultural areas
  - HORIZON-CL6-2024-BIODIV-02-1-two-stage: Demonstrating Nature-based Solutions for the sustainable management of water resources in a changing climate, with special attention to reducing the impacts of extreme droughts
  - HORIZON-CL6-2024-BIODIV-02-2-two-stage: Demonstrating the potential of Naturebased Solutions and the New European Bauhaus to contribute to sustainable, inclusive and resilient living spaces and communities
  - HORIZON-CL6-2024-BIODIV-02-3-two-stage: Promoting minor crops in farming systems
- CALL FAIR, HEALTHY AND ENVIRONMENT-FRIENDLY FOOD SYSTEMS FROM PRIMARY PRODUCTION TO CONSUMPTION (HORIZON-CL6-2024-FARM2FORK-01)
  - HORIZON-CL6-2024-FARM2FORK-01-4: Climate change and food safety: effects of climate change on food safety across food systems
  - HORIZON-CL6-2024-FARM2FORK-01-7: Impact of the development of novel foods based on alternative sources of proteins
  - HORIZON-CL6-2024-FARM2FORK-02-7-two-stage: Minimising climate impact on aquaculture: mitigation and adaptation solutions for future climate regimes

#### CALL - CLEAN ENVIRONMENT AND ZERO POLLUTION (HORIZON-CL6-2024-ZEROPOLLUTION-01)

- HORIZON-CL6-2024-ZEROPOLLUTION-01-3: Environmental impacts of food systems
- HORIZON-CL<mark>6-2024-ZEROPOLLUTION-02-1-two-stage: Holistic approaches for effective monitoring of water quality in urban areas</mark>
- HORIZON-CL6-2024-ZEROPOLLUTION-02-2-two-stage: Innovative technologies for zero pollution, zero-waste biorefineries





#### Other topics of interest:

- CALL LAND, OCEAN AND WATER FOR CLIMATE ACTION (HORIZON-CL6-2024-CLIMATE-01)
  - HORIZON-CL6-2024-CLIMATE-01-1: Improving irrigation practices and technologies in agriculture
- CALL INNOVATIVE GOVERNANCE, ENVIRONMENTAL OBSERVATIONS AND DIGITAL SOLUTIONS IN SUPPORT OF THE GREEN DEAL
  - HORIZON-CL6-2024-GOVERNANCE-01-13: Developing EU advisory networks on sustainable livestock systems
  - HORIZON-CL6-2024-GOVERNANCE-01-2: Regional ecosystems of innovation to foster food system transformation
  - HORIZON-CL6-2024-GOVERNANCE-01-6: Develop innovative applications to support the European Green Deal, building on meteorological satellite data
  - HORIZON-CL6-2024-GOVERNANCE-01-7: Enhancing working conditions and strengthening the work force through digital and data technologies the potential of robotics and augmented reality in agriculture
- CALL CIRCULAR ECONOMY AND BIOECONOMY SECTORS
  - HORIZON-CL6-2024-CircBio-02-4-two-stage: New circular solutions and decentralised approaches for water and wastewater management
  - HORIZON-CL6-2024-CircBio-02-5-two-stage: Circular design of bio-based processes and products
- CALL RESILIENT, INCLUSIVE, HEALTHY AND GREEN RURAL, COASTAL AND URBAN COMMUNITIES
  - HORIZON-CL6-2024-COMMUNITIES-02-1-two-stage: Innovating for climate-neutral rural communities by 2050







# Project idea

- The Green Urban Evolution project proposes the creation of an innovative urban garden, where Internet of Things (IoT) technology plays a key role in the effective monitoring and management of the environment.
- This smart garden concept combines elements of nature with technological advances to create an urban space where plants and technology collaborate in harmony.
- Core consortium from U-GARDEN.
- Expertise sought in New European Bauhaus







# Main expertise offered:

- BEIA is a R&D performing SME with focus on time critical Artificial Internet of Things (AIoT)
- Team with experience in
  - service innovation (AI, blockchain, Cloud, Big Data, quantum security)
  - o hardware and software integration (sensors, actuators, IoT, drones)
  - information technologies (data analytics, back end, interfaces, front end)
  - o communication technologies (speech processing, ASR/TTS, NLP/NLU, sentiment analysis, emotional computing)
  - environment telemetry (monitoring of water, soil and air quality)
  - smart agriculture (frost warnings, disease alert for plants, evapotranspiration calculations, measurement of accumulated degree days, aqua/hydroponics, urban farming),
  - o accurate water data (water sensors for hydrographical purposes, from precipitation to water level monitoring of lakes, rivers, wells),
  - **efficient water management** (leak and burst detection, pressure, flow, level and well monitoring),
  - fert-irrigation management (including sensors for measuring soil moisture, monitor water uptake)

Over 8000 commercial projects and **over 100 R&D** and Innovation projects regarding different development areas such as Smart Agriculture, Smart Water Management, Climate Change, Smart City, Cyber Security and Digital Interactions







# Involvement in previous/ongoing projects in the area:

- iPREMAS Intelligent PREdictive Maintenance for Aquaculture Systems (ERA-NetMarTERA)
- IPSUS Climate smart food innovation using plant and seaweed proteins from upcycled sources (ERA-Net SUSFOOD2)
- U-GARDEN Promoting capacity building and knowledge for the extension of urban gardens in European cities (ERA-Net ENUTC)
- SWAM Smart Water Management system for better environmental sustainability (Eureka E\*)
- DISAVIT Development of an Intelligent decision support System for smart VITiculture (Eureka E\*)
- NGI-UAV-AGRO Next Generation Internet based on 5G and UAV for precision agriculture (PED)
- WINS@HI Wearable IoT Network Solution for WoSafety in Hazardous Industrial Environments (Celtic)
- FARMSUSTAINABI Enabling Smart Livestock Farming Technologies for Environmental Sustainability using Blockchain (ERA-Net ICT-AGRI)
- TelMonAer Mobile system for telemonitoring air quality (POC-G NETIO)
- SmartAgro Telemetry system for intelligent agriculture (POC-G NETIO)
- SA-TERRA Energy Efficient System for Automation and Telemetry for Resource Management in Precision Farming (Bridge)
- WATER-M Unified Intelligent WATER Management (ITEA)
- SARWS Real-timelocationawareroad weather services composed from multi-modal data (Celtic labelled running)
- PIMEO AI Pollution Identification, Mapping, and Ecosystem Observation with AI-powered water quality USV (ERA-NetMarTERA)
- CarbaDetect Imuno-biosensors for fast detection of carbamic pesticide residues (carbaryl, carbendazim) in horticultural products





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