





# WHO IS UBITECH?

UBITECH is a **highly innovative software house, systems integrator and technology provider**, founded with the vision to enable secure access to any service, data and information anytime, anywhere, providing its customers and business partners with robust, extensible and customizable security-enhanced solutions for information sharing, data exchange, services invocation and communication.

**UBITECH was established in Athens, Greece in 2005**, concentrated in the European market and acquiring several EC and national grants for novel R&D initiatives. UBITECH has extended its operations with international activities through its affiliated companies and subsidiaries in Limassol (Cyprus) and Brussels (Belgium).



# UBITECH IN NUMBERS

**20+**

Years of experience

**200+**

Participations in EC  
and national co-funded  
research projects

**€70+M**

EU & National  
Grant received

**€1 Bn**

Project Volume

**2000**

Organizations  
worldwide in  
collaborations

# PROVEN **EXPERIENCE** IN ENERGY DIGITALISATION

UBITECH has extensive experience in the energy domain with a blend of experienced R&D experts **specialised in ICT and Energy Systems Analysis & Digitalisation.**

The R&D Team is engaged in **developing, integrating, deploying, piloting, demonstrating and evaluating innovative smart grid solutions,** services, features and processes, transferring technological know-how to relevant stakeholders and adapting breakthrough solutions to end-users' demands.

The team participates in **large, multi-disciplinary consortia in complex and highly innovative projects**, including experts from universities, research institutes and industry across the enlarged Europe, which work together to provide research, technology integration and skilled project management.

These projects, which aim to develop innovative solutions by understanding the problems and needs of energy systems and digitalisation, encompass a wide range of technologies and domains including the UBITECH technologies and know-how in the energy domain.

## OUR WIDE RANGE OF TECHNOLOGIES AND DOMAINS INCLUDING:



Cloud and edge computing for energy and flexibility services



Digital twinning and large-scale simulations



Energy data management and analytics



Energy data spaces implementations and data applications



Cybersecurity and Privacy



AI and Machine learning



Blockchain-based decentralised applications



Market Integration, coordination and consumer engagement in Energy ecosystem



Stakeholder engagement, science communication and strategy design



*Besides participation as a technology and innovation partner in several EU projects, UBITECH is also the coordinator of 4 EC funded Horizon Projects in the energy domain: BEYOND, FARCROSS, D-HYDROFLEX and DIGITISE*



# RESEARCH AREAS OF OUR EXPERTISE AND COMPETENCIES

## Cloud & Edge Computing

Developing innovative frameworks for deployment of AI-driven cloud and edge computing technologies to improve the security, efficiency, and responsiveness of energy and flexibility services.

## AI & Machine Learning

Development of machine learning algorithms to analyse and optimise the operation of electrical grids. Harnessing the power of artificial intelligence to process large volumes of data generated by smart grid technologies, sensors, and other monitoring devices, machine learning algorithms predict and identify patterns in electricity consumption, detect anomalies, and optimise grid performance by making real-time decisions.

## Cybersecurity & Privacy

Developing protective measures for energy infrastructure and data systems in the realm of cybersecurity involves the construction of robust defences, digital security practices and cyber monitoring, cybersecurity and privacy risk assessments, threat Intelligence analysis, optimal safeguards & honeypots building, security by design (integrating security goals and standards during R&D processes).

## Market Integration & Coordination and Consumer Engagement

Approaches and solutions to manage challenges in energy networks and navigating markets in the EU to achieve comprehensive grid services, ensure the quality of clean energy supplied to consumers, and minimise operational risks and uncertainties for a more resilient and sustainable energy infrastructure. Designing, developing, and implementing platforms to manage Digital Energy Resources (DER), facilitate local energy markets and actively engage consumers in the energy transition.

## Smart Grid Solutions

Digitisation of the power grid. Application of various technologies to the power grid in order to support energy transition. Using ICT to enable the two-way flow of data in order to give the grid self-healing capabilities and enable electricity customers to become active participants. Large scale simulations of distribution systems that include a large fraction of smart grid technology and distributed energy resources for the validation of use-cases identified by key industry stakeholders.

## Energy Management & Analytics

AI based technologies, data driven energy services and smart grid analytics such as prediction of generation, demand, market prices and more; portfolio management through analysis of end-user data (e.g. classification of prosumers, self-consumption optimisation, energy monitoring; security analytics), real time big data engineering & analytics workbench--Innovative data space architectures.

## Stakeholder Engagement and Raising Awareness

Energy Data Value Creation, Stakeholder Engagement and Science Communication, Strategy Design (e.g. design jams, co-design / creation workshops), Dissemination, Communication and Training





# OUR PROJECTS



## Our Contribution:

- ✓ Energy-aware Behavioral & User-centric Data Analytics
- ✓ Self-generation and Storage Optimization
- ✓ End-users' and ESCOs' (Energy Services Companies) Analytics Dashboard
- ✓ Big Data Engineering & Analytics
- ✓ Continuous Integration

**eu-phoenix.eu**

H2020 Innovation Action (GA No 893079) 2020-2023



## Our Contribution:

- ✓ Project Management & Coordination
- ✓ Energy-aware, Spatio-Temporal and Behavioral Analytics
- ✓ Building Portfolio Analytics & Management
- ✓ Spatio-Temporal Analysis of Retailer's Portfolio
- ✓ Smart Pricing

**beyond-h2020.eu**

H2020 Innovation Action (GA No 957020) 2020-2023



## Our Contribution:

- ✓ Data- and Intelligence- driven Energy Services
- ✓ Blockchain-Based Local Flexibility Pooling and Sharing Application
- ✓ Flexibility Analytics and Monetization Services
- ✓ Energy Data Value Chain Creation

**synergies-project.eu**

Horizon Europe Innovation Action (GA No 101069839) 2022-2026



## Our Contribution:

- ✓ Privacy and Cybersecurity Management & Compliance Tools Development
- ✓ Monitoring and Analytics Dashboard
- ✓ Vulnerability Assessment
- ✓ Security Behavior Analysis

**onenet-project.eu**

H2020 Innovation Action (GA No 957739) 2020-2023



## Our Contribution:

- ✓ Big Data Mining & Analytics Workbench
- ✓ IoT Streaming Statistics
- ✓ Trusted Execution Environment

**synergh2020.eu**

H2020 Innovation Action (GA No 872734) 2020-2023



## Our Contribution:

- ✓ Data Management Platform Design & Implementation
- ✓ Data Handling
- ✓ Privacy and Security

**enflate.eu**

Horizon Europe Innovation Action (GA No 101075783) 2022-2026



## Our Contribution:

- ✓ Energy Management and Flexibility Analytics
- ✓ Self-Consumption Optimisation
- ✓ Virtual Power Plant (VPP) Configuration
- ✓ Consumer-Centric Demand Response
- ✓ ESCOs' and Aggregators' analytics dashboard

**fresco-project.eu**

H2020 Innovation Action (GA No 893857) 2020-2023

#### Our Contribution:

- ✓ Data space implementation
- ✓ Data Interoperability
- ✓ Anonymisation Services
- ✓ Privacy and Security

**sinnogenes.eu**

Horizon Europe Innovation Action (GA No 101096992)  
2023-2026

#### Our Contribution:

- ✓ Project Management & Coordination
- ✓ AI-driven Cloud-based Monitoring & Diagnostics
- ✓ Digital Twins

**d-hydroflex.eu**

H2020 Research and Innovation Action (GA No 101122357)  
2023-2026

#### Our Contribution:

- ✓ Secure Data Collection & Management
- ✓ Active learning and Collaborative AI models for hybrid decision support in power grids

**humaine-horizon.eu**

Horizon Europe Research & Innovation Action  
(GA No 101120218) 2023-2026

#### Our Contribution:

- ✓ Cybersecurity Monitoring and Assessment
- ✓ Data security and Orchestration
- ✓ End-user requirements and Data Landscaping

**odeonproject.eu**

Horizon Europe Innovation Action (2024-2027)

#### Our Contribution:

- ✓ Cybersecurity & Privacy Risk Assessment
- ✓ Threat Intelligence Analysis
- ✓ Optimal Safeguards & Honeypots Building

**sdnmicrosense.eu**

H2020 Innovation Action (GA No 833955) 2019-2022

#### Our Contribution:

- ✓ Big Data management
- ✓ Data-driven AI Analytics
- ✓ IDSA-compliant Federated Catalogue

**twineu.net**

Horizon Europe Innovation Action (GA No 101136119)  
2024-2026

#### Our Contribution:

- ✓ Collaborative Risk Assessment & Vulnerability Analysis in EPES

**electron-project.eu**

Horizon Europe Innovation Action (GA No 101021936)  
2021-2024

#### Our Contribution:

- ✓ Project Management & Coordination
- ✓ AI-Enabled Baseline Analytics
- ✓ Open-source Household Digital Twin Models
- ✓ Flexibility Marketplace Implementation

**digitise-horizon.eu**

Horizon Europe Innovation Action (GA No 101160671)  
2024-2027

#### Our Contribution:

- ✓ Project Management & Coordination
- ✓ Electrical Power and Energy Systems Analysis

**farcross.eu**

H2020 Innovation Action (GA No 864274) 2019-2023

OUR  
PROJECTS

Cyprus:

**95B Archiepiskopou  
Makariou C'  
3020 Limassol, Cyprus**

 **00357.257.74410**

Greece:

**Thessalias 8  
15231 Chalandri  
Athens, Greece**

 **0030.216.500.0500**

 **0030.216.500.0599**

 **/company/ubitech**

Let's collaborate!

**Contact us:** [digitalenergy@ubitech.eu](mailto:digitalenergy@ubitech.eu)

**[www.ubitech.eu](http://www.ubitech.eu)**