



## Intelligent Solutions for Zero and Positive Energy Buildings



# The IsZEB Cluster



Research & Development / Innovation Management / Ecosystem Development / Training & Education

## IsZEB Company Profile

The IsZEB Cluster was founded in 2020 with special focus on the Construction sector, aiming to provide tools and guidelines for the entire lifecycle of a smart zero or positive energy building. Established in the region of Central Macedonia, it offers multiple services, covering the phases of planning, commissioning, construction, renovation, demolition and recycling of buildings and building components.

With focus on smart, zero and positive energy buildings, as active building blocks of the new smart grid paradigm, IsZEB aims to explore in depth how smartness (i.e. SRI) and energy efficiency combine through a unified label.



### Goal

To provide tools, guidelines and services for the (re)construction of smart and energy efficient buildings for their entire lifecycle.



### Vision

To support and upgrade the Digital Construction in Greece, while strengthening every company related to the construction sector.

“One of the main functions of IsZEB is the **standardization** of the (re)construction process of smart and energy efficient buildings. Towards that direction, the cluster is working on the combination of Information and Communication Technologies (ICT) with Energy Solutions, through the development of the **Standard and the IsZEB Methodology**, which eventually will determine the creation of the **IsZEB Quality Mark of the building.**”

### The Future: Creating **smarter** and **more efficient** buildings

The Cluster fully conforms with the **Greek legislation** and the wider European policy for the protection of the environment (EU Green Deal), through the establishment of strictly defined standards for smart and energy efficient buildings, not only for the design and construction of brand-new buildings, but also for the more efficient management of existing building infrastructures.

## nZEB Smart Home

*The first nearly zero-energy building in Greece*

Among the most important assets of IsZEB is a state-of-the art pilot building in the premises of CERTH/ITI. The nZEB Smart Home combines enhanced construction materials and intelligent ICT solutions, creating a future-proof, sustainable and active testing, validating, and evaluating ecosystem.



### Through IsZEB we visualise the future of the **construction sector**



#### Digitalization

Building a new digitalized sector, giving a new boost to the economy.



#### Opportunities

Increasing cooperation along the value chain, for all the ecosystem players.



#### Technology

Designing and producing innovative products, services, standards & procedures, thus leading the development of the sector.



#### Knowledge

Disseminating state-of-the art knowledge, stemming from the research projects and the professionals incorporating the team.

## Offered Services

IsZEB is based on the triple helix “Industry – Research Institution – Public Association” and provides distinguished services. The expertise of the founding partners ranges from the development and exploitation of emerging technologies, to product and services commercialization, covering many sectors including Research, Energy, Informatics, Constructions, Building Materials, Automation Systems, Security, Waste Management & Recycling, Advisory services, Extroversion etc.

## Research & Development

Creation of innovative products & services

Exploitation of cutting-edge technologies and innovative ideas, through the **deployment of National and European research projects**. In addition, IsZEB lays the foundations for high technology production through the development of specialized research and development projects, in collaboration with the founding partners.

## Innovation Management

IsZEB Standard, IsZEB Hub

The tools developed by IsZEB are available through the online platform “**IsZEB Hub**”, and include a wide range of support services for engineers, both in the construction and the energy sector.

The online platform “IsZEB Hub” offers **complete and flexible solutions** including:

- Issuance of Energy Performance Certificates (EPCs) using BIM technologies,
- Smart Readiness Indicator Assessments (SRI) using BIM technologies,
- Evaluation according to the IsZEB Standard,
- Support services for buildings’ renovation and upgrade featuring AR technologies,
- Smart EV charging points and services (also via mobile app), and much more.

## Ecosystem Development

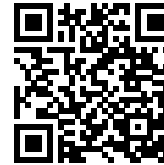
Trade fairs, Conferences, B2B support, Networking, IsZEB Membership

IsZEB offers **specialized international networking services**, which are designed to provide access to a wide network of companies and professionals, promote cooperation among the community and provide access to state-of-the-art knowledge and cutting-edge infrastructure.

## Training & Education

Seminars, Workshops, On-site Educational Opportunities

IsZEB offers educational opportunities to professionals through the provision of specialized knowledge sessions such as seminars & workshops, by disseminating state-of-the art knowledge in theoretical and practical level, with real-time demonstrations in specialized facilities.



More information about the available educational opportunities can be found at the “**Training & Education**” section at [www.iszeb.gr](http://www.iszeb.gr).

## The development of the IsZEB Standard

The IsZEB Standard is a **dynamic framework** for energy efficient and smart buildings. It takes into account both the existing and emerging technologies and aims to evaluate, provide guidelines and highlight solutions for the upgrade of buildings’ intelligence, energy efficiency and sustainability for the complete building lifecycle.

The first version of the IsZEB Standard will provide a **complete evaluation** of Smart & Energy Efficient Buildings. It deploys National and European standards of both energy efficiency (KENAK, European Directives, etc.) and smartness of a building (SRI). Future versions will introduce new fields such as building pathology, Lifecycle Assessment and Life Cycle Costing of the building infrastructure.

The implementation of the IsZEB Standard will lead to the evaluation of building infrastructures performance, the **issuance of a quality badge**, as well as the creation of a database of buildings certified according to the IsZEB Standard.

Offered Services:

- Consulting services based on the implementation and results of the IsZEB Standard
- Provision of software, Building assessment and Certification services according to IsZEB Standard
- Training on the implementation of the IsZEB Standard and the certification process

## Founding Partners

The IsZEB Cluster is comprised of SMEs, large companies, research institutions and public associations, all working in the construction field and representing the entire value chain. They have a vast experience in fostering innovation and cooperation, while helping other partners improve their competitiveness.

That holistic approach is needed to define the construction value chain, so all relevant stakeholders can jointly develop strategies, exploit emerging technologies and commercialize services and products.



## An Innovative Ecosystem

IsZEB is a constantly evolving cooperative formation at a National and European level, which contributes to the smart, sustainable, extroverted and without exclusions development of its founding partners and its members.

To create a strong ecosystem, the activity of IsZEB is **based on 4 pillars**.

- 1 Creation of a modern, innovative and dynamic network for collaboration
- 2 Design, development and provision of cutting-edge products, services and technologies, stemming from the research and development actions
- 3 Dissemination of specialised knowledge for the Construction sector
- 4 Certification of the next generation smart and energy efficient buildings

## Become a member of IsZEB

Join the innovation ecosystem and benefit from the cluster's activities. Find the most suitable membership package according to your needs


Members can become Start-ups, SMEs, freelancers and self-employed professionals, who are active across the spectrum of smart zero and positive energy buildings.


More information at [www.iszeb.gr](http://www.iszeb.gr).

Smart. Sustainable. Efficient

## CONTACT

Intelligent Solutions for Zero and  
Positive Energy Buildings  
- Digital Innovation Hub

 6<sup>th</sup> km Charilaou - Thermi Rd, P.O. Box 60328,  
GR 57001, Thermi, Thessaloniki, Greece

 (+30) 2311 257 505

 [info@iszeb.gr](mailto:info@iszeb.gr)

Find us



[www.iszeb.gr](http://www.iszeb.gr)

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