



nZEB Roadshow

Bulgaria | Croatia | Romania | Greece | Italy

nZEB Roadshow - increasing demand for skilled building professionals

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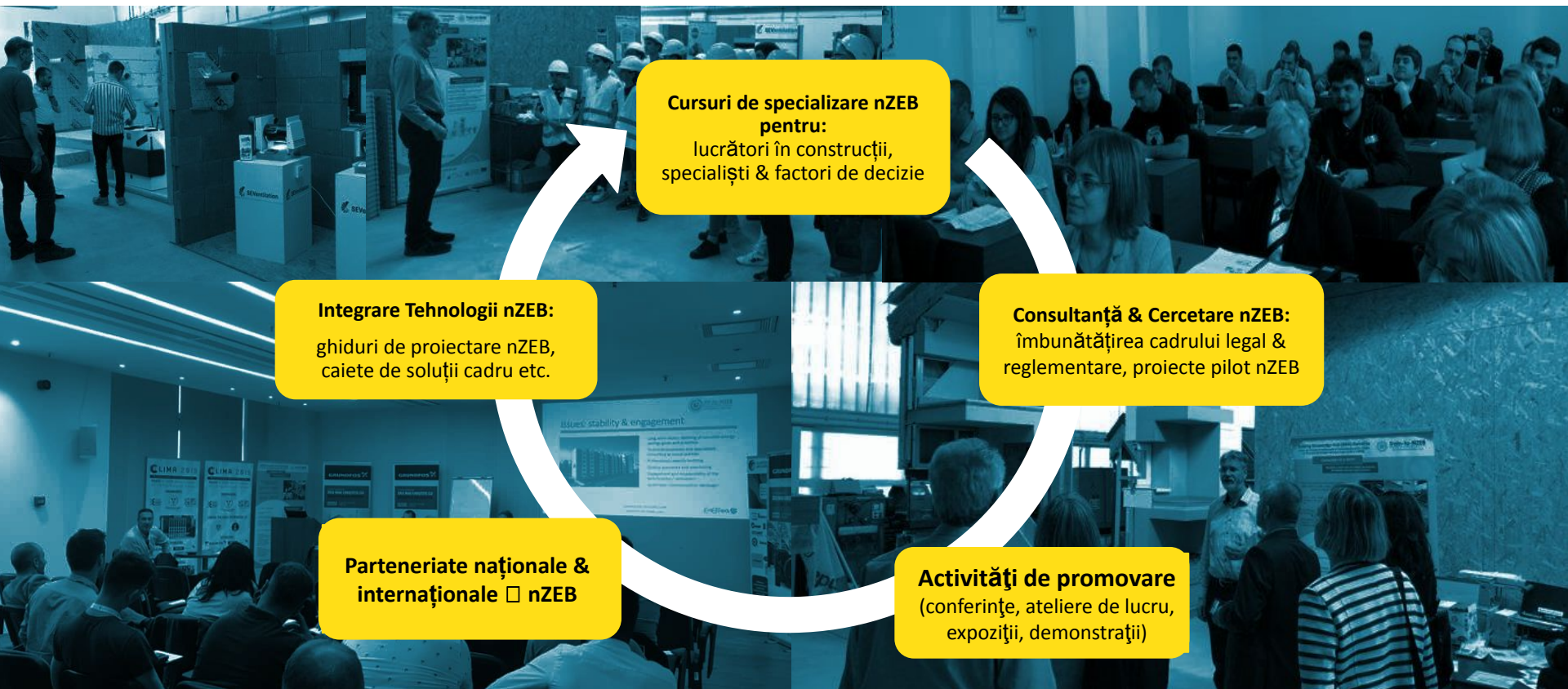
Pro-nZEB Cluster is a non-profit association, established in early 2016, with the main objective to promote the **nearly zero energy building concept (nZEB)** in Romania in order to reduce the greenhouse gas emissions generated by the use of buildings, aiming at the development of market-oriented research in the field of energy efficient buildings in Romania.

The aim of the Pro-nZEB cluster is to bring together key players from the building materials market, research and development institutions, educational representative organizations, public authorities, professional associations and other organizations having a catalyst role, in order to create and improve collaborative relationships for developing and implementing in Romania the concept of nZEB.



So far Pro-nZEB numbers 33 members (10 founding members and 23 associates) from different fields, actively involved in promoting the nZEB concept in Romania.







Promovarea unor masuri de renovare inteligente si integrate NZEB pe piata europeana de renovare



SMART4NZEB - Strengthening clusters Management Activities and Running Trans-national for implementation of nearly Zero Energy Buildings



Strategia pentru Cladiri cu Energie aproape Zero 2020



Scheme inovative de instruire pentru renovarea cladirilor la nivel nZEB



Managementul acviferelor locale pentru stocaj termic ca tehnologie curata pentru cladiri cu consum de energie aproape egal cu zero



Centre de consultanta si formare profesionala in NZEB



Foi de parcurs individuale pentru renovarea cladirilor



Meeting of Energy Professional Skills



Instrument de monitorizare a progresului reabilitarii termice a cladirilor



Renovarea fondului existent de cladiri publice în directia nZEB



Asistenta pentru modernizarea, adaptarea, repararea si dezvoltarea cladirilor, în vederea aducerii acestora la stadiul de cladiri energie zero si crearea unei pietei a renovarii capitale



Hoteluri aproape Zero Energie



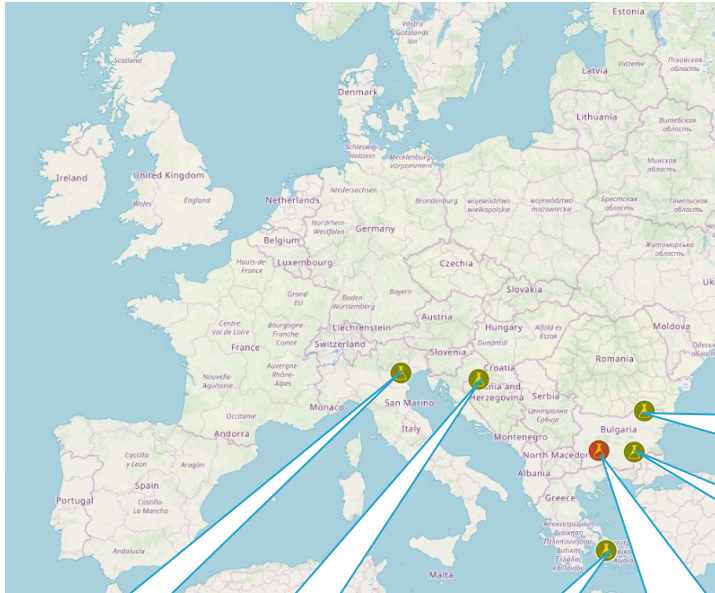
Promovarea utilizarii surselor regenerabile de energie în retelele de încălzire si racire

Calitatea si conformitatea lucrarilor de constructii



Certificarea viitorilor executanti (meseriasii) pentru realizarea cladirilor cu un consum minim de energie

Roadshow nZEB |
SMAFIN | CONGREGATE |
BLOOM | CA PED-EDU-NET | nZEB Ready



nZEB Roadshow

Bulgaria | Croatia | Romania | Greece | Italy

A Horizon 2020 project designed to increase the demand for skilled building professionals
1 june 2020 - 30 november 2022

WWW.NZEBROADSHOW.EU

This project has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement No 892370



Logic of the proposal

- **Topic:** Stimulation the demand for nZEB-relevant construction skills
- *Thesis: No skills demand without quality building*
- **Basis:** BUILD UP Skills EU Exchange sessions, outcomes from Technical Working Group on Market Acceptance, Train-to-nZEB and Fit-to-nZEB projects
- *Goal: To increase the understanding of the benefits of nZEB and skilled labour within the stakeholders' groups shaping the real estate market*



Logic of the proposal

The nZEB Roadshow

A Horizon 2020 project designed to increase the demand for skilled building professionals

The nZEB Roadshow endeavours to open up local markets by the simplest of tools – talking to people and letting them see, touch and feel the benefits of quality buildings.

Operating a successful network of training centres in Southeast Europe, partners from 5 countries hit the road to shape local markets and build communities able to get the ball rolling - so that good nZEBs are really ‘round the corner.

In the next 2 years, we’ll take care of no less than 15 dedicated nZEB weeks in Bulgaria, Croatia, Greece, Italy and Romania. If that’s not close enough for you, we’ll have online content worth checking at www.nzebreadshow.eu



Objectives

- To raise interest in nZEB construction by using appropriate channels across different audiences and personalized communication
- To illustrate and demonstrate the specifics of nZEB through interactive consoles, schemes, graphs and individual consultations for more than 100 clients
- To build a positive image of nZEB as a modern solution and as a comfortable and healthier alternative to standard construction

- To raise the interest in VET, by delivering of t large-scale events in 5 countries - the nZEB Weeks
- To provide wider opportunities for vocational training, career counselling and retraining/upskilling of professional builders
- Conducting training for hundreds of building specialists
- To improve the reputation of the construction profession among young generations, through closely relating it to the modern environmentally-responsible lifestyles



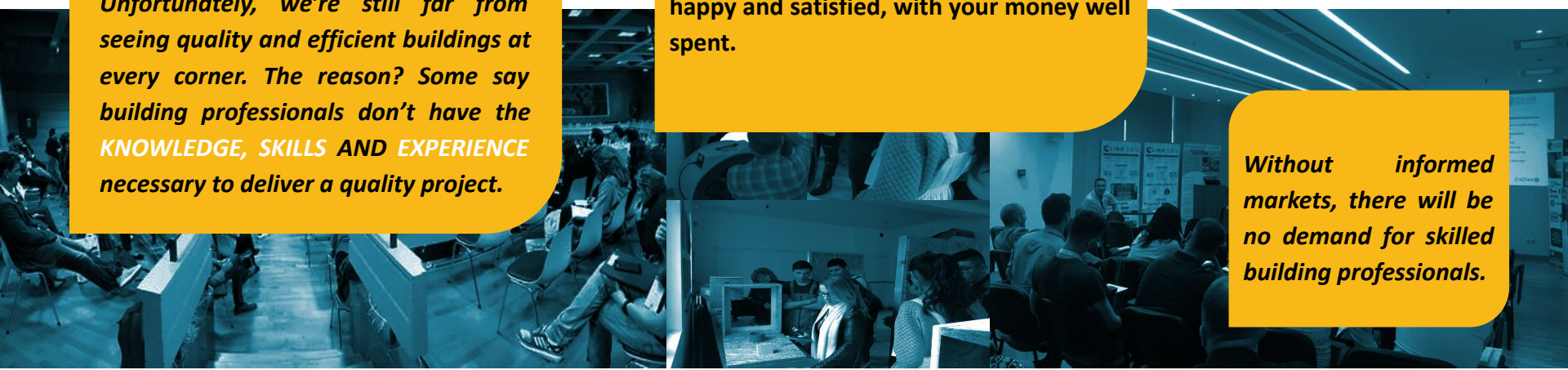
Local context

From 2021 the nZEB standard is mandatory in Romania for all new buildings.

*Too good to be true, right? Unfortunately, we're still far from seeing quality and efficient buildings at every corner. The reason? Some say building professionals don't have the **KNOWLEDGE, SKILLS AND EXPERIENCE** necessary to deliver a quality project.*

The truth is however different: yes, we still lack skilled professionals. But most of all, we lack **INFORMED LOCAL MARKETS**. What we really need are markets driven by the demand for quality buildings: ones that not only save energy, but improve for your comfort and health, make you feel happy and satisfied, with your money well spent.

*Without **informed** markets, there will be no demand for skilled building professionals.*

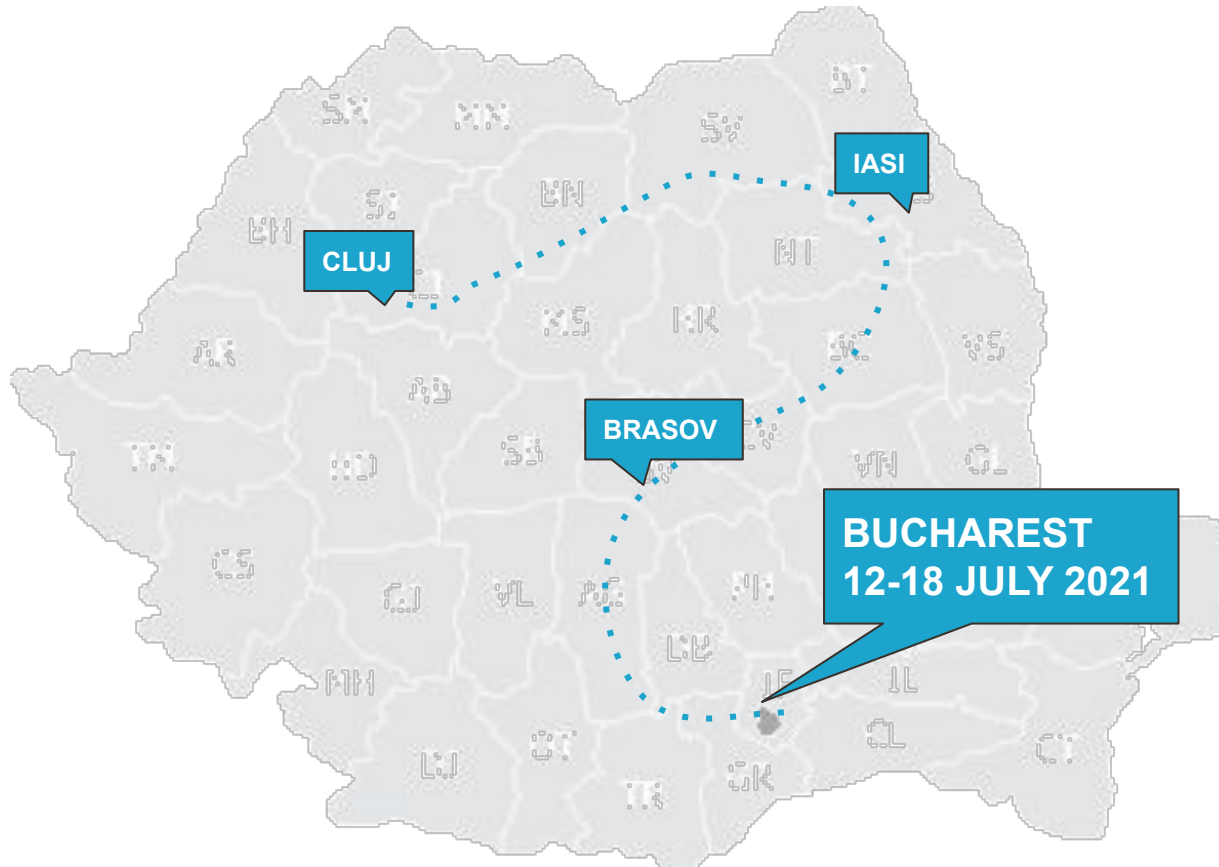


nZEB weeks

- Large-scale events with rich and attractive conference programme
- Construction fairs, live demonstrations and games
- Mobile demonstration and training units
- BIM-assisted VR demonstrations

- Design and build Mobile Containers aiming at training visitors about: energy efficiency, materials and comfort;
- Offer visitors the possibility to directly experience the high internal comfort;
- Demonstrate real-time energy efficiency performances.

- Training courses for designers, workers and investors
- On-site training and support for ongoing projects of local authorities
- Job fairs and career orientation events
- Demonstration & gamification simple physics experiments engaging children and adults alike

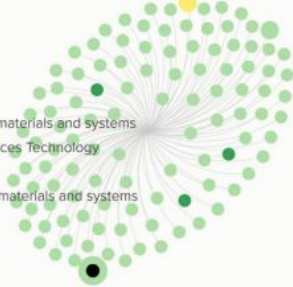


Stakeholders mapping

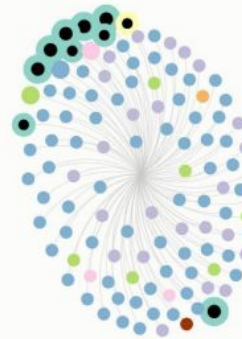
Legend

- 4 Producers and suppliers of insulation materials and systems
- 4 Producers & suppliers of Building Services Technology
- 4 Producers & suppliers / DIY Stores
- 4 Producers & suppliers of Construction materials and systems
- 2 Citizens and end users
- 3 Young people students' initiatives
- 6 VET providers
- 8 Real estate agency
- 10 General Media - TV, Radio, Online
- 10 Specialised Media - Construction
- Bullseye - level of influence
- 1 Public central authority
- 11 Professional chambers
- 1 Public regional authority
- 4 Producers & suppliers of RES installations (e.g. PV, solar collector)
- 1 Public local authority
- 5 Energy sector - business
- 7 Financial institutions
- 1 Public Agency
- 6 Research organisation
- 6 University
- 9 Environmental NGOs
- 9 Think Tanks and NGOs

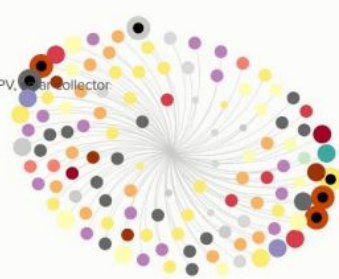
Campaigners



Influencers



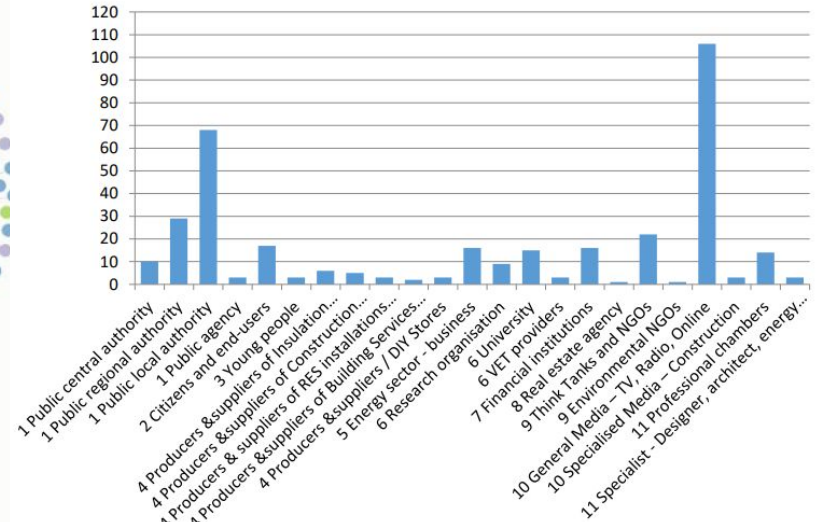
Supporters



Implementation experts

Collaborators

Number of stakeholders per group



MOBILE TRAINING UNIT

Demonstration equipment plays an important role in communicating and disseminating the benefits and specificities of nZEB, creating the necessary prerequisite for effective communication between stakeholders.

Demonstration equipments are designed and constructed as information and demonstration centers, to offer real life experiences of principles and quality of nZEB. We aim to involve several stakeholders groups from students to end-users, or from designers to construction product manufacturers, with the following main goals:

- Exhibition events
- Practical activities
- Training sessions



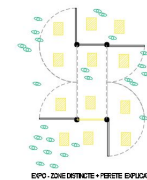
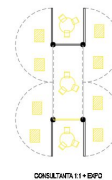
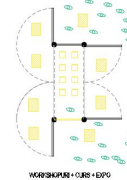
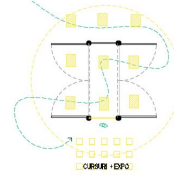
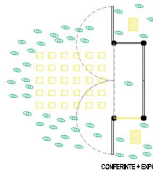
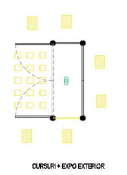
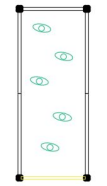
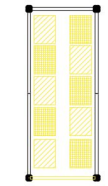
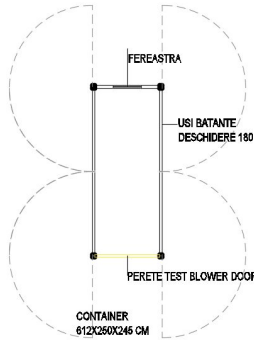
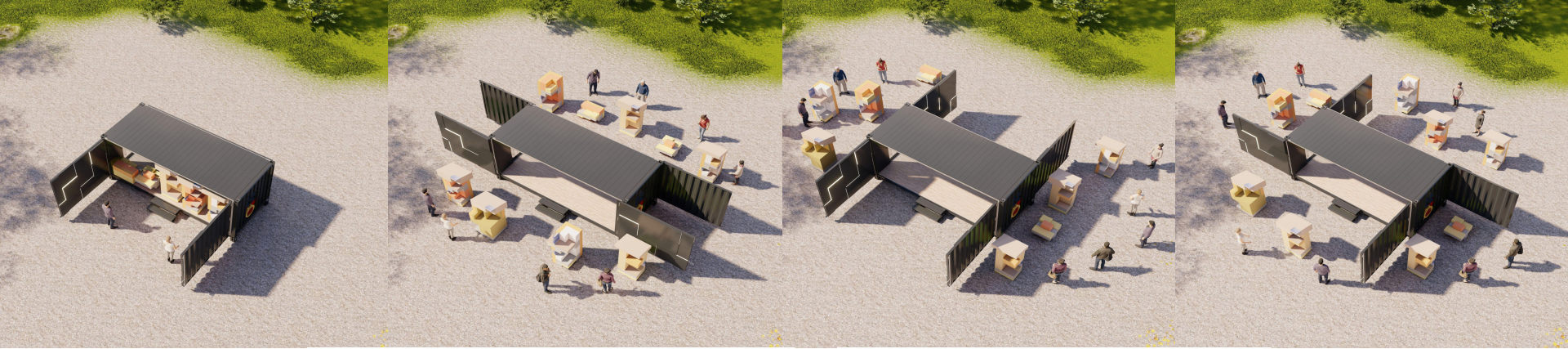
MOBILE TRAINING UNIT

All of them can be equipped with all necessary technologies to provide full information of the nZEB processes, with relevance to the building's performance in terms of comfort, internal air quality parameters, and energy consumption.



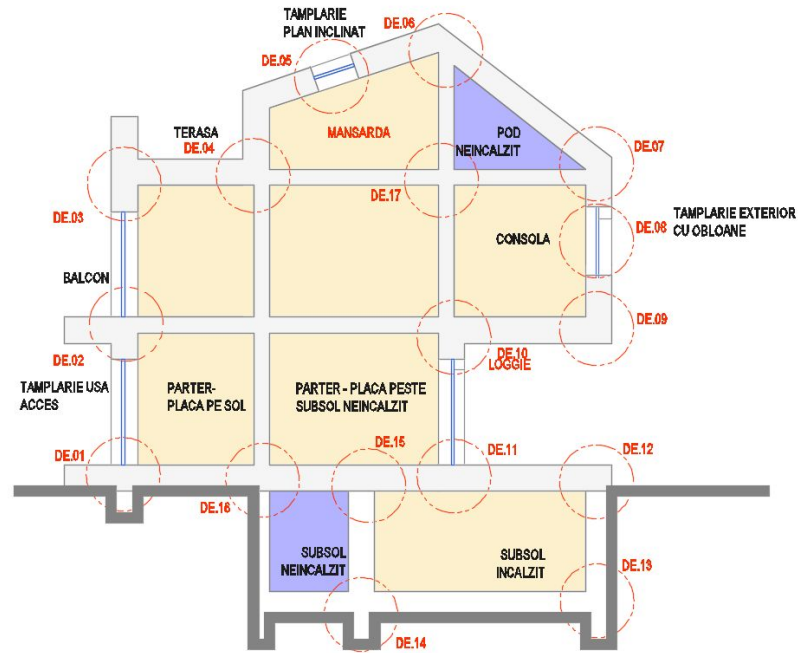
REUSABLE / REVERSABLE / TRANSPORTABLE / MULTITASKING / PRACTICAL

MOBILE TRAINING UNIT



MOCK-UPS

Section details at 1:1 scale exploring different materials and construction systems with the focus on investigating their use in achieving the nZEB target.

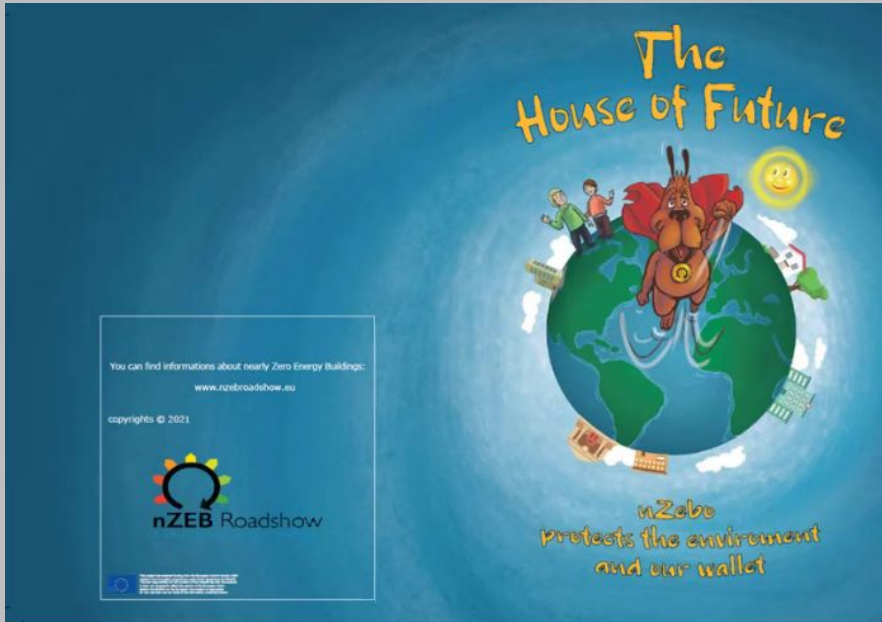


Mockup section-
exhibition activity

Equipped wall-
practical activity

Demonstration activity -
training tools





‘nZebo’

comic book with stickers
illustrating the basic
principles of nZEB

Demonstration & gamification simple physics experiments engaging children and adults alike

2. WP4.1 - Thermal Conductivity

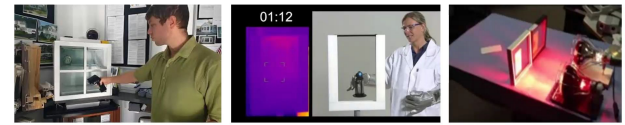
T 4.1.3: Through simple physics experiments we need to clarify basic physics principles such as thermal conductivity, by using various materials.

- Time of heat transfer inside different homogenous materials.
- Measurements of different glazing (double, triple) while heating the glazing edge and use surface calculator or thermal camera in order to explain the heat flow

Ready: Ideas and experimental configuration

Not ready:

- Guidelines



3. WP 4.2 - Workshop for children 7-12 y

T 4.2.1: Contents: 5 Basic Principles, Climate Change, Recycle and Healthy Materials

- Samples of different types of materials (natural materials, insulation materials etc)
- Combined with thermal conductivity 4.1.3

Mini ice box challenge



Thermal Conductivity



Online experiments or a



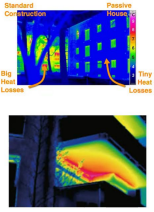
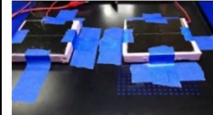
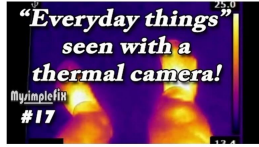
3. WP 4.2 - Workshop for children 7-12 y

More Experiments



3. WP 4.2 - Workshop for children 7-12 y

Thermal Bridges
Use of thermal camera live in buildings or create some very simple experiment Configuration such as for example. Insulation panel penetrated by a metal spoon While we are heating the one side.





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