

ERASMUS+ PROJECT PROPOSAL

BUNG- Developing nearly zero energy building skills through game based learning

Key Action 2: Cooperation and Innovation for Good Practices

Type of Action: Strategic Partnerships in the field of education, training and youth

Field: VET

Horizontal Priority: Environmental and climate goals

Field specific priority: Supporting the uptake of innovative approaches and digital technologies for teaching and learning

Project Summary

Buildings are the single largest energy consumer in Europe, as they are responsible for approximately 40% of EU energy consumption and 36% of the CO2 emissions. At the same time, the existing buildings stock energy potential is extremely high, considering that at present, about 35% of the EU's buildings are over 50 years old and almost 75% of the building stock is energy inefficient.

To this end, energy performance of buildings is in the center of policies established by the EU, targeting on the EU's energy consumption reduction, with the most significant example to be the recently launched EU Green Deal.

The significant structural changes that are taking place as a result of such interventions are thus directly affect the building sector, having substantial impacts on labour markets, driving employment and generating new training needs and skills demands green oriented.

In this context, the BUNG project aims at delivering knowledge, developing zero energy building skills and encouraging energy efficient behavior amongst building occupants through the development of an nZEB (nearly Zero Energy Building) learning game (BUNG game) that maximizes the learning effect of individuals, as well by introducing innovative pedagogies and learning approaches.

More specifically the project anticipates to respond to current, emerging and growing needs of the construction sector for accelerating transition to a resource efficient and circular economy, as well as enhance its readiness to exploit its high potential in reaching the EU's energy and environmental goals. In parallel, the project's core scope is to enhance the VET system capacity building and attractiveness through introducing modern and innovative gamifying learning resources.

To achieve these, the BUNG project foresees to meet the following results and outputs:

- The development of a Best Practice and Competence Framework Analysis for nZEB Skills that will gather experience on relevant best practices and on nZEB skills needs.
- The BUNG learning game development, based on a curricula designed through game scenarios analyzed in learning outcomes and ensuring compatibility with EQF and ECVET.
- The BUNG game technical setting, integrating the game application, which will facilitate vocational learning and training processes in the building industry and increase learner's motivation towards training, through innovative pedagogical methodologies and digital tools
- The BUNG game Didactic Handbook oriented to VET educators interested in using digital games in their nZEB lessons.

The target groups addressed range from construction workers, to VET educators and providers, the educational sector, to stakeholders and associations in the construction, the building or the energy efficient sector as well as policy and decision-makers.

In this light, the project impact is expected to be on multiple levels from local to European/international one, as its principle idea is based on the development of digital game approach and the creation of a vibrant community that will engage multiple actors. In particular:

- Increased number of construction workers with professional skills and competences in the nZEB area.
- Increased number of VET educators/trainers with integrated innovative digital training tools and efficient ways of informal learning and consequently with increased capacity building.

- Modernized and greener local and regional labour market adapted to meet the growing skills needs of the nZEB sector.
- Construction and building works with limited environmental impact and advanced energy efficient performance.
- Raised awareness of experts and stakeholders on the skills mismatches that nZEB evolution in the building sector implies.
- Increased coordination of policy makers and public authorities to align their policies on education, training and skills provision with green building innovations in the market.
- Increased social dialogue for the need of nZEB building skills and a more sustainable globalized labour market.
- Strengthened cooperation and better synergies among partner organizations transnationally.

The aforementioned impact will be enabled through the involvement of 7 project partners (coming from 5 countries: France, Germany, Slovenia, Greece, Italy), allowing a significant and balanced geographical coverage, bringing contribution, perspectives and overview of different EU areas, in terms of learning needs, VET contexts and labour market skills demands. The partnership includes stakeholders, from the training and VET sector, associations representing the construction sector, highly engaged with the construction and VET sector's challenges and trends, preserving close proximity to the target groups addressed as well as great capacity in dissemination and exploitation activities. This complementarity of backgrounds and fields built on different expertise and common missions, will allow the effective implementation of all project activities and ensure the anticipated results.

Intellectual Outputs

IO1. Nearly Zero Energy Buildings Skills: A Best Practice and Competence Framework Analysis (Leader PEDMEDE)

IO2. BUNG learning game: The Development phase (Leader: SCVAP)

IO3: Technical Delivery and BUNG Training Material development (Leader: Cologne Game Lab)

IO4. BUNG Learning Game Demonstration (Leader: CCIS)

Project Duration

26 months, M1: 01/2020, M26: 11/2022

Budget Summary

Project Budget Summary

Budget Items	Grant
Project Management and Implementation	52.000,00 EUR
Transnational Project Meetings	13.595,00 EUR
Intellectual Outputs	235.770,00 EUR
Multiplier Events	21.000,00 EUR
Total Grant	322.365,00 EUR

Budget per Participating Organisation

Organisation	Country of Organisation	Grant
Coopérative pour le Développement de l'emploi dans les métiers du patrimoine (E10016966, FR)	France	55.205,00 EUR
PEDMEDE SOMATEIO (E10073108, GR)	Greece	50.165,00 EUR
SCUOLA COSTRUZIONI VICENZA ANDREA PALLADIO (E10046420, IT)	Italy	54.605,00 EUR
BILDUNGSZENTREN DES BAUGEWERBES EV (E10003376, DE)	Germany	48.155,00 EUR
TECHNISCHE HOCHSCHULE KOLN (E10199785, DE)	Germany	49.005,00 EUR
GOSPODARSKA ZBORNICA SLOVENIJE (E10208444, SI)	Slovenia	40.665,00 EUR
INSTITUTE OF SOCIAL SOLIDARITY AND WELL BEING: SOCIAL MIND (E10250650, GR)	Greece	24.565,00 EUR

Project Partners

1. Cooperative Petra Patrimonia Corsica (**Project Coordinator**)- France
2. PEDMEDE- Association- Greece
3. Social Mind, NGO- Greece
4. BZB, Germany, VET- Germany
5. Cologne Game Lab, Game Developer- Germany
6. CCIS, Association- Slovenia
7. SCVAP, SCUOLA COSTRUZIONI VICENZA ANDREA PALLADIO, VET provider, Italy

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