

NOBATEK / INEF4: innovations in sustainable construction and solutions for climate change

NOBATEK / INEF4 in a few words:

NOBATEK is a private Research and Technology Organization (RTO). Its activities range from applied research to innovative services in the fields of sustainable development and construction.



Its multidisciplinary team works with every actors of a construction project: building contractors and civil engineering, materials producers, manufacturers, public and private contracting owners, developers, architects, design offices and local authorities.

NOBATEK is an INEF4's operator, Institute for energetic transition. INEF4 is a solution in the sector of the urban planning, sustainable construction and rehabilitation for climate change.

The objective of INEF4 is to assist companies and afford innovative solution to every actors of a building construction for the conception, production and implementation by bringing new technology solutions which enable the achievement of sustainable and efficient structures.

Immersive box, what is it?

NOBATEK/INEF4 is proposing an immersion into buildings or districts representing the future of sustainable construction with the help of a new innovative digital technology.



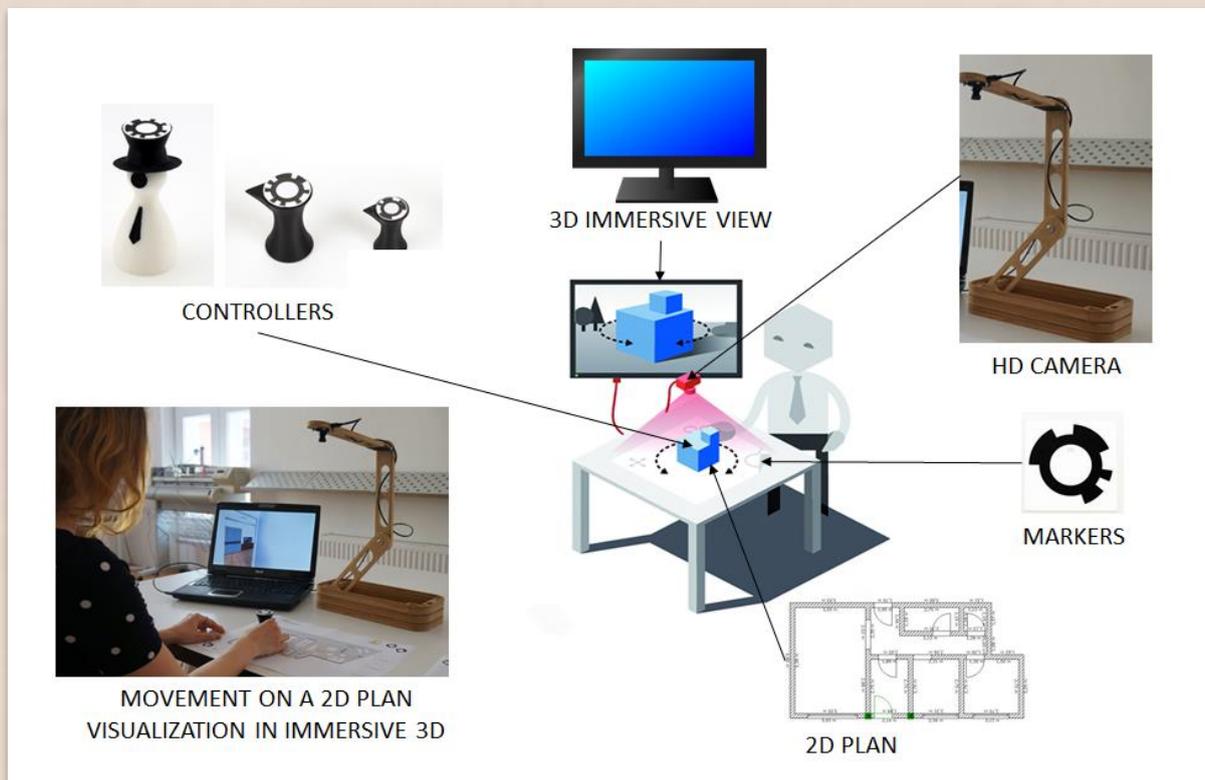
The “Immersive box” is a converted shipping container into which three digital workshops are presented. These workshops are based on digital tools such as the EDDDISON tool and make the user able to move and visualise 3D models and information without the need to manipulate the mouse or the keyboard of the computer.

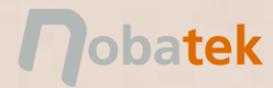
The highest objectives in terms of energy and environmental performance are highlighted through these three workshops representing real projects carried out by Nobatek at three different scales: one eco-district, one tertiary building NF HQETM certified and one prototype from the Solar Decathlon Europe 2012 (Positive energy housing competition).



EDDISON :

EDDISON is a tool which allows, by moving a “virtual character” on a paper plan, to represent movements and views directly into a 3D model (through a HD camera). It also allows to directly visualise additional information in the 3D model with the help of “markers”.





Presented projects:

You will have the opportunity to discover the 3 following projects through 3 different workshops :

Visit of the NOBATEK building: Built 6 years ago (2009), this building has been developed around simple principles namely bioclimatism and future users involvement to reduce its energy consumption. In this workshop, you will discover this building “as if you were in it” and understand its functioning as well as the manner it has been thought and designed.



Visit of the SUMBIOSI house: Designed by students from the city of Bordeaux (ENSAM engineers and ENSAPBX architects) with the support of building sector professionals, this positive energy house has participated to the 2012 edition of the Solar Decathlon competition in Madrid.

This competition between student teams aims at designing and building a positive energy house which is evaluated through a set of 10 sustainability criteria. With this visit, you should be able to find out the methodologies and systems used in order to limit the building energy consumption and maximise its energy production

Design of an urban development project with NEST: NEST (Neighborhood Evaluation for Sustainable Territories) is a tool which evaluates district sustainability, developed by Nobatek. It offers the possibility to calculate environmental, economic and social impacts of district development projects regarding 3 main indicators: greenhouse gas emissions, building/use costs and quality of life.



The coupling between NEST and EDDDISON will allow you to apprehend, through an immersive interface, the main constraints (environmental, economic and social) faced during an urban development project.