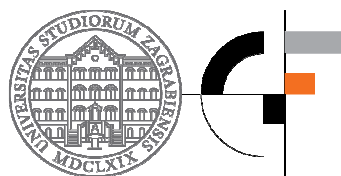


Primjeri uspješnih projekata projekti *Fit-to-Nzeb*, *Net-UBIEP*

Doc.dr.sc. Bojan Milovanović



Sveučilište u Zagrebu,
Građevinski fakultet



Financiranje

Prijedlog projekta prijavljen na poziv H2020-EE-2016-CSA / 15 Sep 2016

Topic: **EE-14-2016-2017 - Construction skills**



- Grant Agreement Number: 754059
- Trajanje: 15.6.2017. – 15.6.2019.
 - 24 mjeseca
- Ukupni budžet:
 - 1.013.848,75 €
- Udio za Građevinski fakultet:
 - 82.980,00 €

Ostali projekti u ovoj temi:

- Traju: BUStoB; ingREeS; MEnS; PROF-TRAC
- Počeli u 2017.: BIMplement; BIMEET; NEWCOM



- Grant Agreement Number: 754016
- Trajanje: 3.7.2017. – 2.1.2020.
 - 30 mjeseci
- Ukupni budžet:
 - 995.022,50 €
- Udio za Građevinski fakultet:
 - 50.437,50 €



Horizon 2020: General overview.
Video presentation by the EC



“ The most significant energy saving potential throughout Europe is in the renovation of existing buildings – so, then, why don't we try to get **better value for the money** we spend? Better value comes with qualified professionals able to implement quality renovation projects using the most efficient materials, components and technologies available on the market. It also means better understanding of the benefits of deep energy retrofit by both investors and occupants: the process in which **optimal energy savings lead to financial, health and comfort benefits** for all of us.



Policy framework-Winter package

ENERGY EFFICIENCY

ACHIEVING THE BINDING 30% ENERGY EFFICIENCY TARGET BY 2030



Energy Efficiency Directive

- Binding 30% energy efficiency target for 2030;
- Create 400,000 new jobs;
- Reduce gas imports by 12%;
- Save € 70 billion in fossil fuel imports;
- Empower consumers by granting access to information on their energy consumption.



Energy Performance of Buildings

- Clear vision for a decarbonised building stock by 2050;
- Smart & Efficient buildings through use of Information and Communication Technologies and Smart Technologies;
- Smart Finance for Smart Buildings Initiative:
 - More effective use of public funding
 - Aggregation of funds
 - De-risking
- Protect vulnerable groups & address energy poverty.



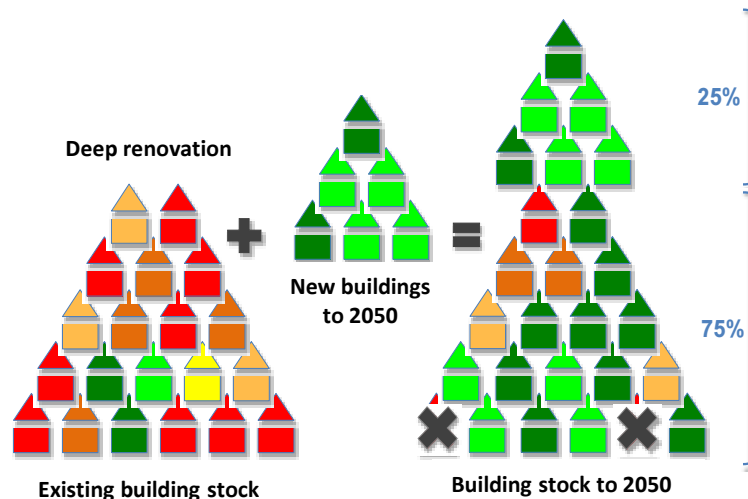
Ecodesign Working Plan 2016-2019

- List of new product groups;
- Outline on how ecodesign will contribute to circular economy objectives;
- Specific measures on air conditioning;
- Guidelines on voluntary agreements.

- 30 November 2016
- the European Commission published “Clean Energy For All Europeans” package, more commonly referred to as the “Winter Package”



The amendment of the EPBD II



- "Energy efficiency first" is a key element of the Energy Union
- About 75% of buildings are energy inefficient
- Only 0.4-1.2% of the stock is renovated each year
- The main objective is to **accelerate the cost-effective renovation** of existing building, which is a 'win-win' option for the EU
- Renovation work and energy retrofits add almost twice as much value as the construction of new buildings



The amendment of the EPBD II



- **Long-term strategies** for renovation of the building stock (Art. 4/EED becomes Art. 2a/EPBD)
- Mobilizing funding for carbon-free buildings: targets for 2030/2050: market signals to investors
- **ICT and smart technologies, automation and BIM, e-mobility**
- Link between public funding and EPCs; focus on microclimate and health (heating and ventilation)



10 principles for smart buildings in a decarbonised energy system



- All principles important separately, but most effectively considered together
- Apart from principle 1, the sequence is not in order of importance



TKO ĆE IZVESTI OBNOVU SVIH OVIH ZGRADA?

Europski strukturni i Investicijski fondovi

ZA ENERGETSKU OBNOVU ZGRADA JAVNIH USTANOVA KOJE OBAVLJAJU DJELATNOST ODGOJA I OBRAZOVANJA ZAPRIMLJEN JE 231 PROJEKT



22. veljače 2017. - Poziv za dostavu projektnih prijedloga 'Energetska obnova zgrada u javnim ustanovama koje obavljaju djelatnost odgoja i obrazovanja' službeno je zatvoren 21. veljače 2017. godine. Fond za zaštitu okoliša i energetske učinkovitost, u svojstvu Posredničkog tijela razine 2 (PT2), zaprimio je ukupno 231 projekt čija ukupna vrijednost investicija iznosi oko 800 milijuna kuna, a

traženi iznos bespovratnih sredstava oko 402 milijuna kuna.

Najveći broj zaprimljenih projekata dolazi iz Primorsko-goranske županije (29), zatim Osječko-baranjske županije (25), Grada Zagreba (17) i Vukovarsko-srijemske županije (16). Više...

HRT Vijesti

HRT UŽIVO HRT NA Ž

SPORT MAGAZIN RASPORED HRT POKAZUJE ORKESTRI / ZBOR



Odobreno 616 projekata za energetska obnova zgrada



07. 02. 2017. prije 2 tjedna





Fit-to-NZEB

*Innovative training schemes
for retrofitting to nZEB-levels*

www.fit-to-nzeb.com

Koordinator:



Center for Energy Efficiency EnEffect – Bulgaria

FIT-TO-NZEB



- Cilj projekta
 - je **povećanje kompetencija i vještina građevinskih djelatnika** u području obnove postojećih zgrada na razinu G0EZ
- Kako?
 - kroz jedinstvene programe edukacije razvijene od strane konzorcija
- Zašto?
 - Potrebno je povećati broj obnova i
 - Potrebno je povećati kvalitetu dubinske obnove postojećih zgrada.





QUALITY MATTERS!

*Customers should get
what they paid for!*



Fit-to-NZEB Goals



Partneri u konzorciju



Sveukupno 13 partnera



Sastav konzorcija



- 13 partnera
 - 4 Sveučilišta (fakulteta)
- Transfer iskustava i daljnje umrežavanje – nastavak BuildUP Skills inicijative
 - Obrazovane institucije
 - Industrija (proizvođači i izvođači)
 - Socijalni partneri
 - ...
- Transfer znanja i iskustava iz Passive House zajednice



WP4 - Training programmes for institutions of higher education

- Razvoj novih programa edukacije koji su u **skladu s EQF razinama 6 i 7**
- Razvoj potrebnog **nastavnog sadržaja** (learning content):
 - Definirati programsku povezanost,
 - Nastavni materijali
 - Prezentacije,
 - Praktične vježbe
 - 3D vizualizacije
 - Video materijali
 - E-learning
 - Način provođenja ispita
- Provesti **barem 3 pilot edukacije**



Razmišljanje zašto je prijedlog uspio...



- Logika prijedloga:
 - Rješavanje neodgodivog problema vezanog uz postizanje ciljeva EK
 - Povećanje mogućnosti obrazovanja o dubinskoj obnovi postojećih zgrada na lokalnoj razini
 - Pokrivanje cjelokupnog opsega kvalifikacija
 - visokoškolski i srednjoškolski sustav
 - HKO razine ishoda učenja 2 – 7
 - Komplementaran BuildUP Skills projektima
 - Osigurava njihovu održivost nakon završetka inicijative
 - **Umrežavanje**, razmjena iskustava i znanja, geografsko širenje ideje

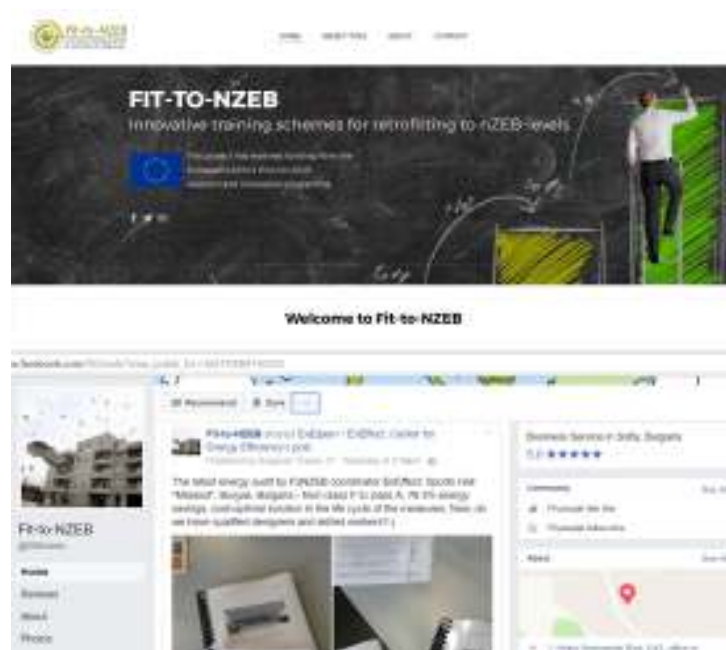


Communication



It's never, never enough...

- Web: www.fit-to-nzeb.com
- Facebook: <https://www.facebook.com/fit2nzeb>
- Twitter: <https://twitter.com/fit2nzeb>



COORDINATOR OF THE PROJECT

Center for Energy Efficiency EnEffect

Email: eneffect@eneffect.bg

Web: www.eneffect.bg

Contact person:

Dragomir Tzanev

dtzanev@eneffect.bg

Bojan Milovanović

bmilovanovic@grad.hr





Network for Using BIM
to Increase Energy Performance

www.net-ubiep.eu

Koordinator:



Center for Energy Efficiency EnEffect – Bulgaria

Partneri u konzorciju



Ciljevi projekta Net-UBIEP



- Net-UBIEP nastoji doprinijeti povećanju energetske učinkovitosti u zgradama promoviranjem korištenja BIM-a tijekom cjelokupnog životnog ciklusa zgrade.
- BIM – building information management



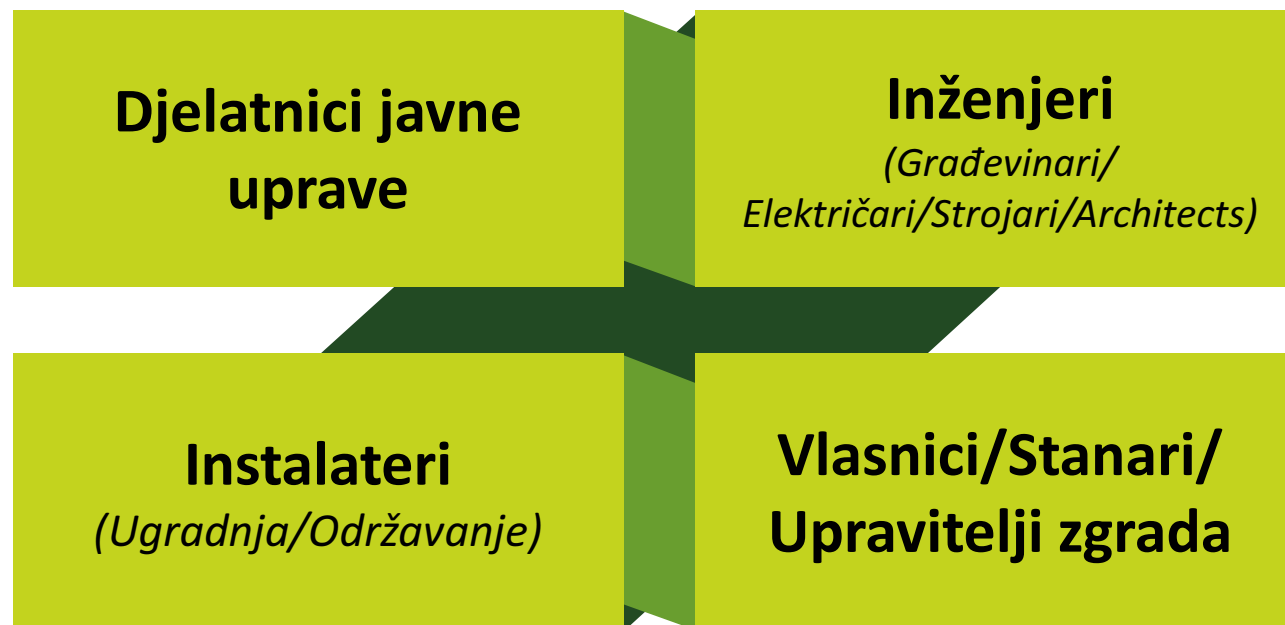
Better **management of the information** during the whole life cycle of the building is absolutely necessary in order to **avoid mistakes** and **have trustful information** at any time / when an intervention is necessary.



Ciljane skupine



- **Tehnologija, ali i ljudi!**
- Svi sudionici u gradnji i korištenju zgrada moraju biti svjesni svoje uloge u prikupljanju, upravljanju i čuvanju potrebnih informacija vezanih uz energetska učinkovitost



Razmišljanje zašto je prijedlog uspio...

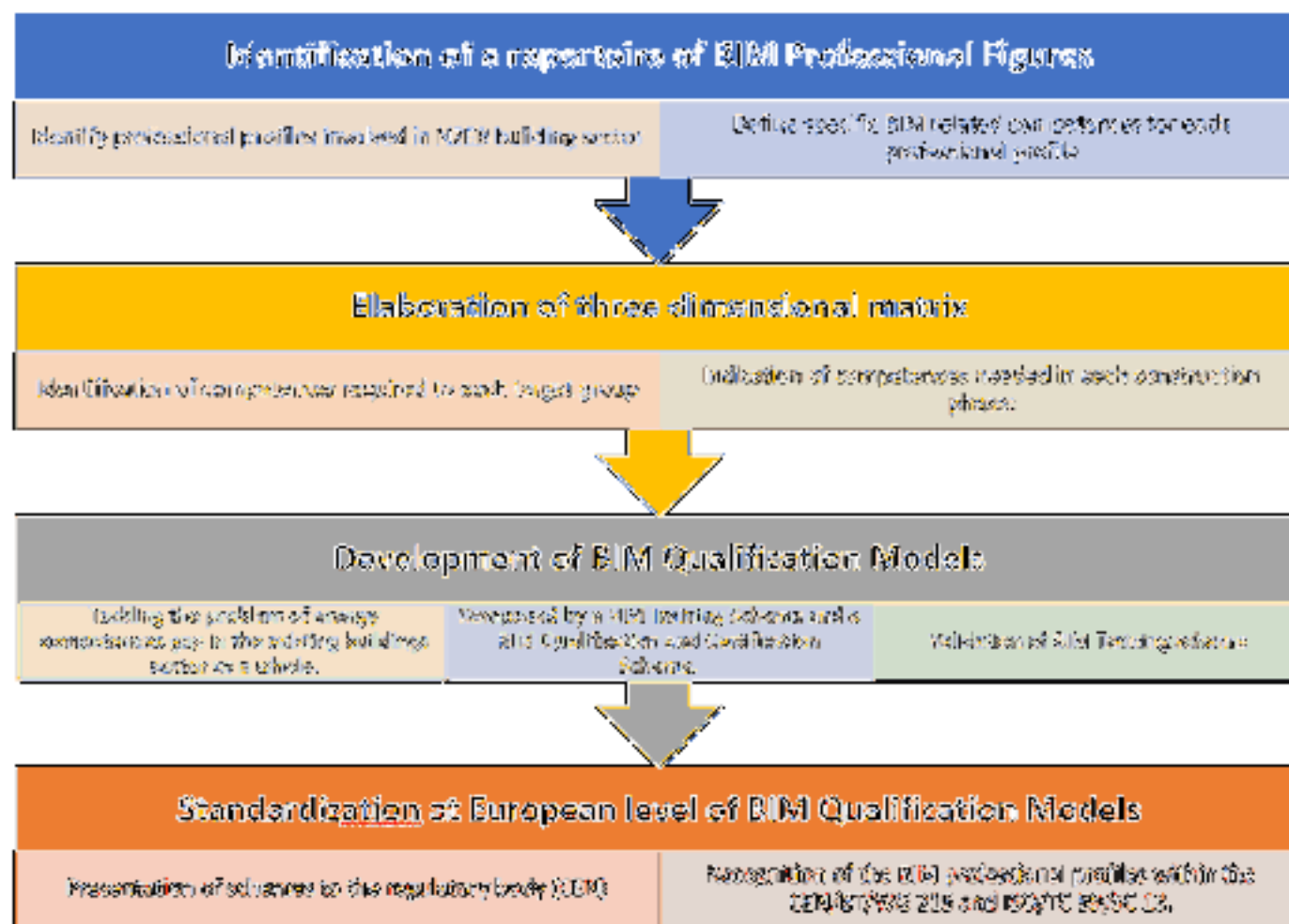


BIM Certification and Qualification Scheme intends to trigger a European process of definition of common BIM Professional Profiles.

The project will implement a BIM Training Scheme within a BIM Qualification Models to realize an up-skilling for 4 target groups within the building sector.



Radni plan



Provođenje



Seminari o strategijama
provedbe BIM-a

Tečajevi o implementaciji
energetske učinkovitosti
korištenjem BIM-a

Online tečajevi o korištenju
BIM-a kroz životni ciklus
zgrada

Seminari o poboljšanju
energetske učinkovitosti i
upravljanju sustavima pomoću
BIM-a



Umrežavanje?

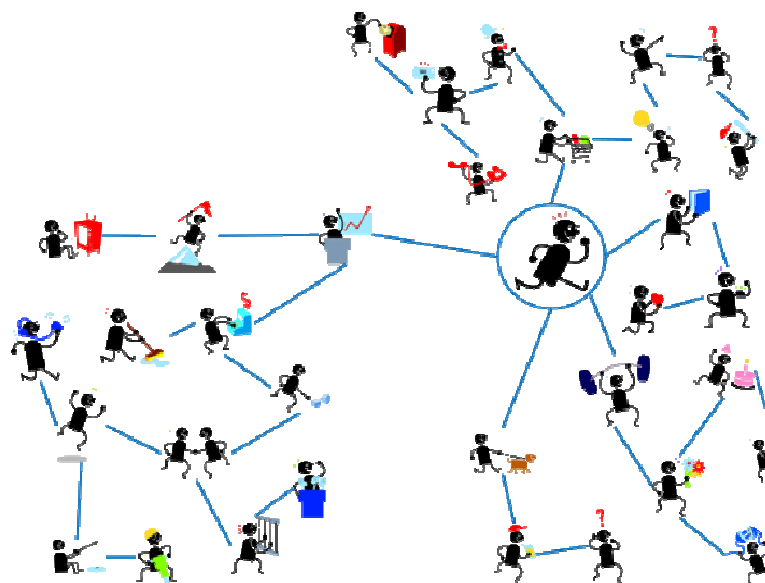


- Naslijeđe BuildUP Skills Inicijative (2011-2017)
- Unutar programa Intelligent Energy Europe
- Slični projekti u 30 zemalja Europe (EU28 + Norveška i Makedonija)
- EU exchange meetings
 - Aktivno sudjelovanje na sesijama
- Working groups
 - Mutual recognition



Umrežavanje?

- Projekt SEEDPass – Erasmus+
- Concerted Action EPBD IV
- Dugogodišnje praćenje razvoja politika EU i domaće regulative
 - Prepoznavanje problema
 - Predviđanje potreba



Praktični savjeti koji bi mogli biti korisni budućim prijaviteljima



- Napisati prijedlog koji se nastavlja na prijašnje projekte financirane od strane europskih poreznih obveznika
 - Citiram visokopozicioniranu osobu u DG Energy:
 - „Why the hell did we spent so much money for projects and without any replication? Nothing is being done and nothing is left after the end of the project...”
- Pratiti natječaje, ali i predviđati unaprijed što će se dogoditi
 - Pratiti politike
 - Razmišljati o problemima
 - **Prilagoditi sebe izvorima financiranja**



Primjer

- ECO-SANDWICH
 - Energy Efficient, Recycled Concrete Sandwich Facade Panel
- CIP Eco-innovation
 - First Application and market replication projects Call 2011
 - Enables co-financing of green products and green business





Poziv

- **EE-01-2014** **Deadline Date:** 2014-03-20 17:00:00 (Brussels local time)
 - Topic: **Manufacturing of prefabricated modules for renovation of building**
- **Expected impact:**
 - **Reduction in total buildings (primary) energy consumption** by at least a factor of 2 with respect to the current situation, and a cost-level better than traditional renovation activities.
 - Significant reduction of renovation operations while ensuring low intrusiveness and impact for users.
 - **Reduction in installation time by at least 30%**, compared to a typical renovation process for the building type.
 - **Better quality standard and performance guarantee** for the installed prefabricated modules and their integrated components, while enhancing indoor air quality.
 - Demonstration of the replicability potential.
 - A maximum return on investment below 10 years for end-users.
 - **Generation of new high-tech SMEs specialised in renovation with prefabricated modules.**
 - High-skill jobs for workers that could master innovative construction tools.

Praktični savjeti koji bi mogli biti korisni budućim prijaviteljima



- Jasno definirani ciljevi i način njihovog ostvarivanja
- Jasno definirani i **mjerljivi** učinci projekta
 - Postaviti jasnu metodologiju izračuna npr uštede u emisijama CO₂...
- Bodovi se dobivaju za **excellence** i za **impact**
 - Stvoriti ugledni i jaki konzorcij
 - uvjeriti ocjenitelje da će stvarno biti impacta i to na način da se napiše **kako** će se taj impact postići...
- **Moja procjena**
 - Ocjenitelji potroše cca 4 h po projektu dok ga čitaju!!!!
 - Tako da ga treba napisati da se stigne shvatiti prijedlog projekta unutar 4 h.
 - Identificirati ključne riječi u pozivu i njih koristiti



" We choose to go to the moon in this decade and do the other things, not because they are easy, but because they are hard, because *that goal will serve to organize and measure the best of our energies and skills*, because that challenge is one that we are willing to accept, one we are unwilling to postpone, and one which we intend to win."

September 12, 1962;
Rice University, Houston, Texas



Hvala na pažnji!

Bojan Milovanović
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