



Soustvarjanje slovenske nacionalne strategije prenove

KLJUČNE OVIRE PRI MNOŽIČNI CELOVITI ENERGIJSKI PRENOVI IN PRI STAVBNEM SKLADU

Uvod

BUILD UPON je največji svetovni sodelovalni projekt s področja prenove stavb – združuje preko 1.000 organizacij iz 13. držav, ki bodo v letu 2016/17 izvedle več kot 80 dogodkov. Njegov namen je, da s pomočjo državam, da do roka 30. aprila 2017 naredijo strategije za prenovo ob-

stojećih stavb v celotni Evropi, spodbudi prenovitveno revolucijo. Omenjene strategije so ključne za zmanjšanje porabe energije v Evropi in širše, zmanjšanje vpliva podnebnih sprememb ter ustvarjanje stavb, ki prav vsakomur zagotavljajo visoko kakovost življenja.

www.buildupon.eu



Kako vplivajo ovire na vrsto stavb ter njihove lastnike?

Ovire lahko povežemo s petimi glavnimi kategorijami: ozaveščenost, znanja in veščine, finance in gospodarstvo, administracija in politike. Zaznali smo devetnajst večjih ovir (oziroma skupin ovir), ki so skupne več državam EU, natančneje državam konzorcija. Stavbni skladi se med državami razlikujejo glede na tipe stavb ter lastništvo. Skladno s podatkovno bazo BPIE (Buildings Performance Institute Europe) smo opredelili štiri glavne tipe stavb in sicer: javne stavbe, komercialne stavbe, enodružinske stavbe ter večstanovanjske stavbe.

Ovire so bile vrednotene po presoji njihovega pomena za razmah celovite prenove in to glede na to, kako učinkujejo na vsak segment stavbnega sklada ter na njegovo velikost.

Vsaka država ima svojo zgodbo ter seveda prednostne naloge. Spodaj najdete tri primere, ki se nanašajo na Italijo, Finsko in Bolgarijo ter predstavljajo tri različne primere. Višji kot je odstotek, močnejša je ovira. Odstotki upoštevajo tako "višino" ovire kot zajet delež stavbnega sklada. Vsaka država potrebuje svojo lastno dolgoročno strategijo, to je splošno ogrodje pobud za gradnjo sistema.

Dinamična platforma RenoWiki portala BUILD UPON je oblikovana v podporo različnim soustvarjalcem prenove pri vrednotenju ter raziskovanju ponovitev najbolj uspešnih pobud, ki se spopadajo z najmočnejšimi ovirami v posameznih državah (<http://buildupon.eu/initiatives/>).



Ozaveščevalne pobude v RenoWikiju

Barriers (based on the conceptual literature review with stakeholders)		Barriers / Recommendations Matrix					Recommendations - Proposed actions to be taken to remove barriers (where necessary supported, proposed solutions in case any relevant RRF funds is missing) New public information - for national project was at least at the beginning
		Barriers significance according to building types (percentage that shows "influence" of a barrier on buildings renovation + how much it prevents deep renovation happening) Note: This assessment replaces "Potential Impact" of literature					
Review categories (A to D different color compared to individual subcategory)	Specific barrier (continue to all countries)	Public buildings	Multi-family buildings	Single Family houses	Commercial buildings	Barriers Significance Score	
II Awareness: End-user awareness and motivation for deep renovation	Low awareness of deep renovation, insufficient energy-efficient, green/environmental thinking (understood as an opportunity), Lack of education or good practices and examples with similar capital models	42%	56%	45%	18,25%	47%	Media activity - news, TV spots, radio, social media, Obligations (Energy Performance Certificates to simple information sources, Workshops for public e.g. As part of relevant seminars, trainings, best practice identification and redistribution.
	Trade factors, employment, Lack of motivation and better options (e.g. - consistency to change because of short timeframe of decision and the coping of population and short expected occupancy), Complexity of solutions (measured)	44%	52%	40%	12%	38%	Free advisory network e.g. on-line or through energy specialists network (can be funded for good practice), Subsidy schemes (technical advice and/or quality increase, best to promote energy efficiency as complementary to energy value for mass (either internal environmental and comfort), another calls etc.), Education, information and participation of decision making, pilot projects and scientific resources, supported by the state and municipal authorities, (e.g. within BUILD UPON).
	Barriers Categories Score for different building types	52%	54%	50%	54%	47%	
III Administrative End-user decision making process / advice barriers	Individual not valuing social, environmental and environmental benefits of deep renovation	43%	54%	44%	14%	44%	Building codes and other national laws prescribe minimum (and optimum based) building performance
	Prohibit or slow an collective decision-making within businesses associations - low high-majority support, Conflicts, difficult negotiation and consensus among groups with divergent interests (in-between)	1%	4%	3%	1%	1%	Amend/revise the law to relax rules, legal setting and creation of homeowners associations with clearly defined legal position to make it more credible path for banks, Provide advice to the association how to set their internal rules using best practice examples.
	Partial external synergetic of separate dwellings (addictive to other external/external and deep renovation activities for the whole building)	10%	4%	3%	1%	1%	Motivate landlords to invest in their properties - e.g. progressive property tax incentives
	Complexified public procurement rules	5%	2%	3%	1%	1%	Simplify the rules, cooperate on future public procurement law amendments & create best practice guide for beneficiaries
	Prohibit or slow public debt ratio - Public debt increases when Energy Performance Certificate is involved in a project	4%	2%	3%	1%	1%	Change public debt ratio calculation
	High discounting of future benefits results in underinvestment - preference of these shallow solutions and "lock-in" effect	4%	3%	4%	1%	1%	Subsidy to shorten payback and require deep renovation, Minimize requirements or significantly higher support of complex renovation (e.g. renovation of more than 25% of envelope area or 30% energy demand)
	Short time frame for decisions - Administrations need to plan/budget their budgets on annual basis, however, decision procedure is relatively short term frame for decisions	1%	2%	1%	1%	1%	Align the legal, with planning according regional renovation plans, strategies needed
Barriers Categories Score for different building types	11%	10%	10%	14%	10%		
III Skills & Capacity Building: Value chain capacity - Design and Realization	Poor quality and low credibility in design phase, overlooking hidden costs - with a cost or loss of benefits that are not reflected in engineering models	4%	3%	4%	1%	1%	Adopt methodology for Energy Performance calculation & credible Energy Performance Certificates, better internal practices and quality in the design, design communication/regulation
	Poor quality and low credibility in realization phase (e.g. low performance in other phases than design), the difference is often not even divided, Lack of representation and active collaboration with construction team	4%	2%	2%	1%	1%	Enable certification of trades & reputation building system, Improvement of built-up design, for site technical supervision, Qualified building approval external assessment, Monitoring and verification rules and procedures, building operators/owner should have better knowledge how to behave - partly social issues, Campaign to promote sector's education with governmental benefits to these professions, Adequate professional guidance and/or curricula for expert buildings about "state-of-the-art know-how" (e.g. materials, processes and technical solutions), Trainings for "owners", Popularization of integrated design approach
	Diff. culture (don't pay well, resources cannot be directed, verified, reported anywhere, all to being done in grey economy)	1%	4%	1%	1%	1%	Campaign for "don't pay" using media and free advisory network, "Pay more than" - "don't pay" - information stands e.g. in hobby markets (news-R&D to promote from grey economy), Subsidy programs.
	Barriers Categories Score for different building types	4%	3%	3%	1%	1%	
IV Financial & Economic: Access to finance	High barriers leading to lower risk are not recognized by investors/bank (in banks monthly), State is over-invested which results in high rates & required collateral (collateralization of multiple business units), Investments scores and good buildings are understood as simple means-of-asset investment by bank	7%	3%	3%	1%	1%	Financial instruments to leverage private capital should be introduced, Data gathering and engagement of banks to build business case that make the benefits to banks, Publish the topics on buildings support can possibly be a new product that can be offered by banks (clients - benefits for banks in competitive environment)
	High initial costs and insufficient funds, because of relatively low income (both owners'/ payers) time and return on investments are relatively low	4%	3%	4%	1%	1%	Progressive subsidy (on energy design - deep renovations exceeding e.g. about subsidies, tax, levy, based on quality systems), Involvement of bank position examples with those of other state effects of deep renovation (better indoor comfort, increased property value etc.) Market transformation needed
	Underdeveloped ESCO market (EPC and ESCOs are often not a popular concept)	4%	3%	3%	1%	1%	Strong involvement of the government providing the necessary frame conditions, Introduction of market instruments to facilitate the development and implementation of ESCO business, Introduction of this mechanism support by government, Increase of monitoring and cooperation among ESCOs (e.g. association ESCO-Forum), Guaranteed funds (e.g. with a pool of revenues for banks)
	Barriers Categories Score for different building types	4%	3%	3%	1%	1%	
Policy: Cross-selling policy: Risks (putting more of policy environment in the country, i.e. kind of indicator for further specific initiatives)	Mixing or insufficient coordination and policy package related to renovations (e.g. energy, law, regulation) e.g. REEF, Lack of regulation on unaffiliated dwellings,		7%			7%	Support to policy makers, expertise provision, engagement and capacity building for policy makers to support sustainable/ambitious rule-making.
	Policy makers ignore potential of EE in buildings (i.e. not interesting topic for policy makers leading to not well targeted relevant capacity)			4%		4%	Government capacity building, Mandatory renovation measures - long term strategic/long-term oriented decision period, Regional renovation initiatives, Pilot-act continuously running subsidy schemes based on progressive criteria
	High inflation (e.g. in materials) once happened, not clearly defined position			4%		4%	Capacity building in industry, associations creation, getting together to push strategic research changes
Barriers Categories Score for different building types			7%		7%		

Tabela 1: Ovine in stavbni tipi v Italiji



Barriers		Barrier Significance Matrix					Recommendations - Proposed actions to be taken to remove barriers (eventually expected solution, proposed solution to case any relevant NREDS is missing) Not public information - for internal project use at least at the beginning
(based on the summarized literature review with simplification)		Barrier significance according to building types (percentage that shows "influence" of a barrier on buildings renovation - how much it prevents deep renovation happening) Note: This assessment replaces "Perceived Impact" of initiatives					
Barrier Categories (A list of different codes compared to literature categories)	Specific barrier (common to all countries)	Public Buildings	Multi-family buildings	Single family houses	Commercial buildings	Bar for Significance Score	
		Building size (area or total building cost according to m ² or floor area (the value should be single if a barrier for given building type) LRT: see www.buildingskills.eu)					
1) Awareness and motivation for deep renovation	Low awareness of deep renovation, insufficient energy/efficiency/green/environmental thinking (Lack of trust in an approach)	42%	70%	92%	73%	42%	
	Lack of information on good practices and examples with similar scale of models	32%	76%	90%	74%	44%	
	Highly specific, not standardized, conflicting and/or complex regulations (i.e. - tendency to change because of short-liveness of decisions and slow buying of population and short expected CO2 savings)	32%	76%	90%	74%	44%	
Barrier Categories Score for different building types		42%	70%	92%	73%		
2) Administrative deep renovation enabling process / administrative barriers	Involvement of making social, macroeconomic and environmental benefits of deep renovations	32%	80%	100%	10%	36%	
	Procedural rules on collective decision-making within homeowners associations (i.e. - too high majorities required)	20%	80%			30%	
	Conflicts, difficult negotiation and consensus among groups with divergent interests (i.e. - owners), mutual external spending of separate dwellings is obstructive to other homeowners and deep renovation activities for the whole building	32%	80%	90%	10%	36%	
	Lack of trust in decision	32%	80%	90%	10%	36%	
	Complex public procurement rules	100%				9%	
	Prohibitive public debt ratio - Public debt increases when energy performance contracting is involved in a project	32%				4%	
	High discounting of future benefits results in shallow renovation - preference of these shallow solutions and "lock-in" effect	62%	80%	90%	10%	62%	
	Short time-pens for decisions - Homeowners need to pre-define their budgets at annual basis. However, elections periods occur to a relatively short time frame for decisions	82%	10%			9%	
	Barrier Categories Score for different building types		36%	84%	98%	17%	
	3) Skills & Capacity Building Value chain capacity - Design and Realization	Poor quality and low credibility in design phase, overlooking hidden costs - extra cost or loss of benefits due to a non-reflected in engineering models	82%	80%	90%	10%	84%
Poor quality and low credibility in realization phase (e.g. - lack of experience in offers lower than design), the difference is often not seen/shaded. Lack of transparency and active collaboration within interdisciplinary teams		82%	80%	90%	10%	84%	
DR culture (check you will, measures cannot be checked, verified, reported anywhere, as it being done in grey economy)			10%	90%		8%	
Barrier Categories Score for different building types		82%	84%	98%	40%		
4) Financial & Economic Access to Finance		All benefits leading to lower risk are not recognized in financial sector (by banks, landlords, risk is overestimated which results in high risk & required collateral (withholding of people access to bank), investments in EE and green buildings are understood as simple increase of total investment by bank)	82%	70%	90%	10%	78%
	High initial costs and insufficient funds, because of relatively low income/poor savings (payback time and/or returns are insufficient, see savings view)	32%	80%	90%	10%	32%	
	Isolated energy prices (i.e. - own subsidizing)					0%	
	Underdeveloped/EED market (EPC and EPCOs are often not a profitable company)	32%	20%		70%	30%	
	Barrier Categories Score for different building types		78%	17%	88%	17%	
Policy Cross-cutting policy issues (adding overall policy environment in the country, i.e. - kind of indicators for further specific initiatives)	Missing or insufficient comprehensive policy package related to renovations strategies			10%		8%	
	Lack of regulator on prohibited dwellings					8%	
	Policy makes ignore potential of EE in buildings (i.e. - not increasing steps for policy makers leading to not high enough relevant capacity)			80%		8%	
	DR industry (e.g. - associations) once fragmented, not clearly defined position		20%			30%	
Barrier Categories Score for different building types				20%			

Tabela 2: Oviere in stavbni tipi na Finskem



Barriers		Barriers / Recommendations Matrix				Recommendations - Proposed actions to be taken to remove barriers (eventually required solutions; proposed solution to ease any relevant barriers is missing) Not public information - for internal project use only at the beginning
Barriers (based on the current barriers review with simplification)		Barrier significance according to building types (percentage that shows "influence" of a barrier on buildings' renovation - low (light) or greater (deep) - how from happening) Note: This assessment explains "potential impact" of initiatives				
Barriers categories (A lot of different under compared to technical categories)	Specific barrier (common to all countries)	Public buildings	Multi-family buildings	Single-family houses	Commercial buildings	
		Building type share on total building stock according to floor area (the value equals to weight of a barrier for given building type) (L1) see more buildings data				
		35%	38%	43%	13%	
I Awareness: End-user awareness and motivation for deep renovation	Low awareness of deep renovation, insufficient energy efficiency renovation demand linking (unintentional or intentional) Lack of information on good practices and examples with similar structural elements	30%	70%	80%	10%	80%
	Market factors, myths, misconceptions Lack of motivation and inertia against change, i.e., reluctance to change because of short deadlines of decision and due to aging of population and short expected ROI period Complexity of solutions (measures)	50%	50%	70%	10%	70%
	Barrier: Category Score for different building types					
		30%	80%	80%	40%	
II Administrative: End-user decision making process / administrative barriers	Individuals not valuing social, macroeconomic and environmental benefit of deep renovations	80%	80%	80%	10%	70%
	Prohibitive rules on collective decision making within homeowners' associations - too high majority required Conflicts, difficult negotiation and consensus among groups with divergent interests (e.g. owners) Partial external cost shifting of separate decisions is obstructive to other owners/tenants and deep renovation activities for the whole building	80%	80%			80%
	Limited financial literacy	30%	80%	30%	10%	30%
	Complexified public procurement rules	30%	30%			30%
	Psychological barrier (L1) - Public debt increases when Energy Performance Contracting is included in a project	30%				30%
	High discounting of future benefits results in higher renovation - preference of these (follow-up) and "lock-in" effect	80%	80%	80%	10%	70%
Short time frame for decisions - Municipalities need to play a role in their budgets on annual basis. Moreover, elections perturbate a relatively short time frame for decisions	30%				4%	
Barrier: Category Score for different building types						
		33%	80%	80%	10%	
III Skills & Capacity Building: Public choice capacity - Design and Realization	Poor quality and low credibility in design phase, including EPC/DBO/DBF+ or lack of benefits that are not reflected in engineering models	80%	80%	80%	10%	80%
	Poor quality and low credibility in realization phase (e.g. final performance often lower than designed, the difference is often not well checked, lack of communication and active collaboration within interdisciplinary team)	80%	80%	80%	10%	70%
	ETI culture (not a general measure) same as in residential, not well regulated anywhere, still being done in grey economy		80%	80%		80%
	Barrier: Category Score for different building types					
		80%	70%	70%	10%	
IV Financial & Economic: Access to finance	EE benefit to lending is lower rate are not recognized in finance sector (by banks mostly), risks overestimated which results in high rates & required collateral (willingness of people to bear debt), incentives to EE and green buildings are understood as single increase of initial investment by bank	30%	70%	70%	10%	60%
	High initial costs and insufficient NPV, because of relatively low benefits (social policy) (payback time and return on investments are not very clear)	30%	20%	30%	10%	30%
	Underdeveloped energy prices (i.e. smart scheduling)	80%	80%	80%	10%	80%
	Underdeveloped EPC market, EPC and ESCOs are often not a popular concept					6%
	Barrier: Category Score for different building types					
		80%	50%	50%	10%	
V Policy: Cross-cutting policy issues (setting overall policy environment in the country, i.e. kind of indicators for further specific initiatives)	Missing or insufficient cross-sectoral policy design related to renovations (industrial, law, regulations (e.g. NBSAP) Lack of regulation on certified buildings		80%			80%
	Policy-makers ignore potential of EE in buildings (i.e. not interesting topic for policy-makers leading to not existing, but relevant requests)			80%		80%
	EE industry (e.g. associations) sector fragmented, not clearly defined position			80%		80%
Barrier: Category Score for different building types						
			30%			

Tabela 3: Ovine in stavbni tipi v Bolgariji



Pomen merjenja učinkov pobud za določanje možnosti posnemanja pobud s podobno ali različno vsebino

Podatki o izvajanju ukrepov pri stavbnem skladu (npr. koliko stavb je zainteresiranih, koliko sredstev je odobrenih, katera je vrsta posega, ali se uporablja na posamezno enoto ali za celotno stavno ter glede na vrsto lastništva) so bistveni za razumevanje učinka določene pobude. Popolnost in zanesljivost podatkov sta odvisna od natančnosti analiz.

Podatki o učinkih predstavljajo osnovo za odločitev, ali je določena pobuda bolj ali manj učinkovita ter ali predstavlja bolj ali manj uspešno prakso. Nudijo tudi podatke za vrednotenje pogojev, pod katerimi se pobuda lahko posnema. Kajti tako investitorji kot oblikovalci politik ali soustvarjalci prenove - vsi bi bili bolj samozavestni pri posnemanju izkušenj drugih ude-

ležencev v procesu, če bi se lahko zanesli na z dokazi podprta vrednotenja uspešnosti pobud.

Zato je pomembno zagotoviti podatke o dejanskih učinkih pobud / programov. RenoWiki bi bil veliko bolj učinkovit, če bi se vsaka pobuda začela na osnovi na spletnih straneh javno objavljenih podatkov o njenih učinkih. Na žalost je na tej stopnji le malo pobud opredeljenih z zanesljivimi meritvami za vrednotenje učinkov. A RenoWiki se bo skozi celoten proces BUILD UPON posodabljal in izpopolnjeval v smeri izmenjave meritev učinkov in podatkov. Za maksimiranje učinkovitosti ponovitev najboljših praks je bistven skupni nabor meritev, ki bi se naj uporabljali za ocenjevanje učinkov podobnih pobud.



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Izjava: Odgovornost za vsebino tega gradiva nosijo njegovi avtorji. Gradivo ne predstavlja nujno stališč Evropske komisije ter ne EASME, ne Evropska komisija nista odgovorni za kakršno koli uporabo le-tega.

