BUILD UP Skills AUSTRIA Factsheet	
BUILD UP skills activities of the country	
BUS Pillar I project title (contract number)	BUILD UP Skills Austria (BUILD UP SKILLS AT) IEE/11/BWI/509-SI2.604358
BUS Pillar II project title (contract number)	Development of a qualification scheme for across-the-crafts training of professionals in the construction industry (BUILD UP Skills CrossCraft) IEE-12-BWI-349
Horizon 2020 Construction skills project title (contract number)	n/a
BUILD UP Skills CrossCraft	
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Project Partners	. Austrian Energy Agency (AEA) *(Consortium coordinator)* . Styrian Energy Agency (EAST) . 17&4 Consulting Ltd. (17&4) . innovative buildings Austria (IBA) . Building Academy Salzburg (BA Sbg)
Project website	http://buildupskills-crosscraft.at/moodle/
Keywords	nearly zero-energy buildings (NZEB), qualification, education, training, craftsmen
Duration	Start date: 01/11/2013 End date: 30/06/2016
Budget[1]	EUR 500.856 (EU contribution: 75%)
Context	
Summary description[2]	The objective of "BUILD UP Skills CrossCraft" was to develop a qualification scheme for across-the-crafts training of professionals in the construction industry (e.g. general foreman, foremen, skilled workers, craftsmen and helpers in building construction and building services). By providing this qualification scheme, the project aimed to improve the competence of skilled workers in the Austrian construction industry, which are necessary for the achievement of the nearly zero energy building standards. The developed qualification and training schemes complemented the great variety of on-going trainings in Austria. The developed training courses are a

[1] file:///C:/Users/Extra%202016/Downloads/intelligent_energy_europe_-_development_of_a_qualification_scheme_for_across-the-crafts_training_of_professionals_in_the_construction_industry_-_2016-11-07.pdf
[2] BUILD UP Skills CrossCraft, Annex I – Description of action

	relevant contribution to reach the targets of the EPBD (Austrian workforce is skilled according to the requirements of the EPBD) by the Austrian stakeholders. To warrant the large scale and long term approach the pilot courses got implemented, monitored and evaluated in pilot courses all over Austria (21 pilot courses got implemented during the action). Furthermore concepts for financing as well as strategies for establishing the training schemes within the continuing education and training sector were developed.
Objectives[3]	Development, implementation and evaluation of a qualification scheme for across-the-crafts training of professionals in the construction industry (e.g. general foreman, foremen, skilled workers, craftsmen and helpers in building construction and building services). By providing this qualification scheme, the project aims to improve the competence of skilled workers in the Austrian construction industry, which are necessary for the achievement of nearly zero energy building standards.
Target skills/ professions	Façade workers/ plasterer (building envelope), HVAC installers, general foreman, foremen, skilled across-the-crafts workers craftstmen (across the crafts), unskilled workers (across the crafts)
Project's results and impact	
Results[4]	. A solid basis for the implementation of the short on-site course modules was created. . New concepts for financing the new training courses were developed. . Based on the recommendations of the Austrian BUILD UP Skills roadmap a curriculum for modular national training courses was developed. . The following new course modules were developed, implemented and evaluated: . CrossCraft training on construction site (duration: 3 to 4 hours), . Basic CrossCraft module off-site training (duration: 16 hours/two days), . Advanced training modules off-site trainings (duration: 8 hours/one day), . Compact CrossCraft module off-site training (duration: 32 hours/four days), . On-site quality coach module off-site training (duration: 24 hours/three days); . Based on the new developed curricula 21 pilot courses were implemented at different locations in Austria (195 participants). . The implementation, funding and advertising/promotion of the pilot courses was analyzed and suggestions for the improvement developed – especially in order to ensure sustainability and scope ("large scale") of the action . 28 promotion events were organised all over Austria in order to reach relevant stakeholders and to guarantee the dissemination of the project results including advertising/promotion of the new trainings

[3] BUILD UP Skills CrossCraft, Annex I – Description of action
[4] https://ec.europa.eu/energy/intelligent/projects/en/projects/build-skills-crosscraft

Lessons learnt	. The demand for short on-site trainings is currently high in Austria while there is less demand for the two-to-four days off-site trainings. Companies are not keen on letting their workers attend training courses as they need them continuously on-site. . "On-site training courses" should be organized together with an "air-tightness-test" (blowerdoor test) of the building so that craftsmen learn about the problems that can occur (with regards to achieving energy efficiency) if the quality of the performed work is poor. . "On-site training courses" provide the possibility of discussion and technical communication among the craftsmen of the different professions. This is rather uncommon, while it is imperative for the quality of the works. . A "direct marketing strategy" strengthens the bilateral exchanges with the SMEs whose workers get trained, and facilitates the successful implementation of the courses/trainings.
Barriers[5]	The implementation of voluntary two to four days off-site trainings proved to be exceptionally difficult all over Austria. A large number of already advertised courses had to be cancelled by the consortium due to a lack of registrations because of the impacts of the economic crisis in the Austrian construction sector. It turned out that usual dissemination activities at the moment were not enough to guarantee satisfactory number of registrations for two to four days off-site trainings in Austria.
Key needs[6]	The training content of the developed courses is directly related to the key findings of the prior project BUILD UP Skills Austria. BUILD UP Skills Austria identified that further qualification for professionals in the construction sector is needed majorly in the field of cross-craft understanding (understanding the interplay of trades to avoid the most common frequently made mistakes to guarantee the optimal construction of nearly zero energy buildings).
Recommendations[7]	To guarantee a satisfactory number of registrations for two to four days off-site trainings in Austria the consortium increased its efforts to identify building companies to enrol for in-house trainings by raising the bilateral negotiations with potentially interested companies. Only by strengthening bilateral exchanges with SMEs to advertise the pilot courses a raise of registrations could be achieved.
Replicability[8]	Through frequent examination of the course materials, evaluation of questionnaires, interviews with trainers and educational institutions and relevant stakeholders, the necessity of the content of the courses and placement of them into the education and trainings schemes of craftsmen in the building sector is evident. It could be observed that the courses were very well received by the participants and their contents comply with the requirements of the time and the market. As the most relevant method to ensure the sustainability of the training courses, the integration of their curricula in the learning materials of colleges and

[5] Input from Georg Trnka, November 2016
[6] Input from Georg Trnka, November 2016
[7] Input from Georg Trnka, November 2016
[8] Input from Georg Trnka, November 2016

	educational institutions such as the Austrian building academies and WIFI was identified. They could also be held as in-house courses for construction companies especially in rural areas and as required training for becoming a member of energy efficiency networks such as the klimaaktiv-network as well as for issuing energy performance certificates (EPC).		
Project indicators			
Common Performance Indicators	Ex ante target	Final result[9]	Target 2020
Number of training courses triggered by the action	20	21	321
Number of people that will be trained	400	195	3395
Number of hours taught in the frame of the courses triggered	310	244	3604
Estimated specific cost to qualify each trainee	1 740 € (3 days / 8 training hours per day) 520 € (1 day / three training hours)	401 € (4 days / 8 training hours per day) 316 € (3 days / 8 training hours per day) 99 € (1 day / eight training hours) 43 € (four training hours)	364 € (4 days / 8 training hours per day) 273 € (3 days / 8 training hours per day) 91 € (1 day /eight training hours) 41 € (1 day / four training hours)
Renewable Energy production triggered	5680 MWh	4670 MWh	307958 MWh
Primary energy savings compared to projections	127270 MWh	6641 MWh	481612 MWh
Reduction of greenhouse gas emissions	23110 t	796 t	68082 t
H2020 ingREeS			
Role in the project	Coordinator – The Slovak Chamber of Civil Engineers		
Country organisations involved	VIAEUROPA Competence Centre SRO (Slovakia) Association of Construction Entrepreneurs of Slovakia University of Natural Resources and Life Sciences Vienna (Austria) Association of Building Entrepreneurs of the Czech Republic SEVEn – Energy Efficiency Center (Czech Republic) National Institute of Lifelong Learning (Slovakia) Faculty of Civil Engineering of the Slovak University of Technology in Bratislava (Slovakia) Graz University of Technology (Austria)		
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Project's website	http://www.ingrees.eu/en/		
Keywords	energy efficiency, continuing training, construction professionals, skills, renewables in buildings		
Duration	Start date: 01/03/2015 End date: 28/02/2018		
Budget	EUR 1.399.622 (EU contribution 100%)		

[9] Input from Georg Trnka, November 2016

Summary description	The Project have extended the implementation of the Roadmap established and endorsed under BUILD UP Skills Pillar I project in Slovakia and the Czech Republic to middle and senior level professionals. These Roadmaps identified key measures for setting up a national qualification and training scheme and other measures for ensuring development of skills essential for the field of buildings to contribute to the fulfilment of the Europe 2020 energy targets. The project establishes necessary resources and prepare technical, organizational and financial conditions for training and re-training on energy efficiency and use of renewable energy sources for middle and senior level professionals in the field of buildings.
Context	
Objectives	• Development of 5 education and training programmes for further education and training of middle and senior professionals in the field of buildings; • Setting up permanent network of trainers delivering the training programmes developed under the project; • Training of trainers for delivery of the programmes; • Proposal for financial measures to be established to facilitate and motivate middle and senior level professionals in participating to training programmes and SMEs to invest into further education; • Proposals to Slovak Government for incentives boosting demand for highly qualified professionals; Reaching financing agreements using European Social Fund (ESF) for dissemination of training programmes.
Target skills/ professions	Middle and senior level professionals in buildings, skills related to energy efficiency and the renewable energy sources. Target groups: civil engineer – site manager, construction site supervisor, civil engineer – energy counsellor, architects and planners, assessors of the achieved energy efficiency of the buildings.
Results	• QS[10] matrix (deliverable D2.1) defining for each training programme and target professionals: o Competence profile in energy efficiency and use of renewable energy sources in buildings, as required by the Build Up Skills Pillar I Roadmap; o Role for the targeted professionals in increasing energy efficiency and use of renewable energy sources in buildings; o Goals of the training programmes; o Key targeted learning outcomes; o Recommended subjects to be included in the training programmes;

[10] QS = qualification standard

	• Inception workshop for developing ULOs[11] and validation workshop (deliverables D2.3 and 2.4); • 4 workshops to develop the content of the training programmes; • Draft content for 11 education modules in German and English that was used for training of trainers (deliverable D4.1) and as a basis for developing Slovak and Czech versions (deliverable D3.1): o AM1 – Energy Certification and Building Certification; o AM2 – Life Cycle Assessments; o BS1 – Integrated Buildings Design; o BS2 – Renewable Energy Technologies; o BS3 – Advanced Building Methods and Tools; o CD1 – Basic Climate Adaptive Design; o CD2 – Advanced Climate Adaptive Design; o CD4 – Green Construction Products; o LQ2 – Recycling and Waste Management On-site; o LQ3 – Quality Control; o LQ4 – Legal Requirements. • Draft content for 3 education modules in Slovak that will be used for training of trainers (deliverable D4.1) and as a basis for developing Czech versions: o CD3 – Internal Comfort and Indoor Air Quality; o CD5 – Building Physics and Energy Efficiency; o LQ1 – Project Life Cycle Management; • Draft content for 1 education module in Czech (LQ4 – Legal Requirements) that will be used for training of trainers (deliverable D4.1) and as a basis for developing Slovak version. • 3 Workshops of partners with main stakeholders and mobilised key market actors (deliverable D1.2), two on 14 January 2016 and 2 March 2017 in Prague, Czech Republic and one on 4 February 2016 in Bratislava, Slovakia; Training of Trainers plan was finalised and partners launched the training.
Key needs	• Develop and deliver education and training in Building Information Modelling (BIM) for all actors in the buildings construction and energy renovation value chain; • Develop and deliver training on smart concept and technologies brought about by 4th industrial revolution; • Develop and deliver education programmes at tertiary level for renovation managers and specialists; • Develop and deliver training on sustainable construction, reducing environmental footprint of buildings, decarbonise the energy mix for buildings and embed education and training on energy efficiency and use of renewable energy sources in building in university curricula.

[11] ULO = Unit of Learning Outcome

Recommendations	• More European standardisation is needed to harmonise description of required skills and knowledge (for example, through common set of descriptors) or developing European qualification standards that would facilitate harmonisation of the qualification requirements.
Replicability	• Highly replicable for other countries, translations would be needed from English, German, Czech and Slovak